







**MobiGlobe**  
by speedflow

# Technical Manual



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Sign	Description
	Attention
	Example
	Notice
	Recommendation

# 1. Product description

## MobiGlobe:

- New generation membrane type IC Smart Card, which can adhere to the cellular phone SIM/USIM card intimately.
- Adopts FPCB membrane technical design. The product itself doesn't launch any power and the frequency. It will not cause any influence or damage on User's cellular phone and its SIM/USIM card.
- Supports all "CONTROL BY SIM CELLULAR PHONE", 100% complies with ISO 7816 standard and fully supports GSM 11.11~11.44 and 11.17.
- Doesn't require WAP/GPRS Internet connection.
- Allows User to enjoy the Calling Card Service or other Cost Effective Solution thru cellular phone without changing his normal dialing behavior.
- Can replace all complicated procedures that User originally need to go through Calling Card Service or other Cost Effective Solution system such as calling to Provider's Access number, following IVR menu, inputting PIN code and the destination number.

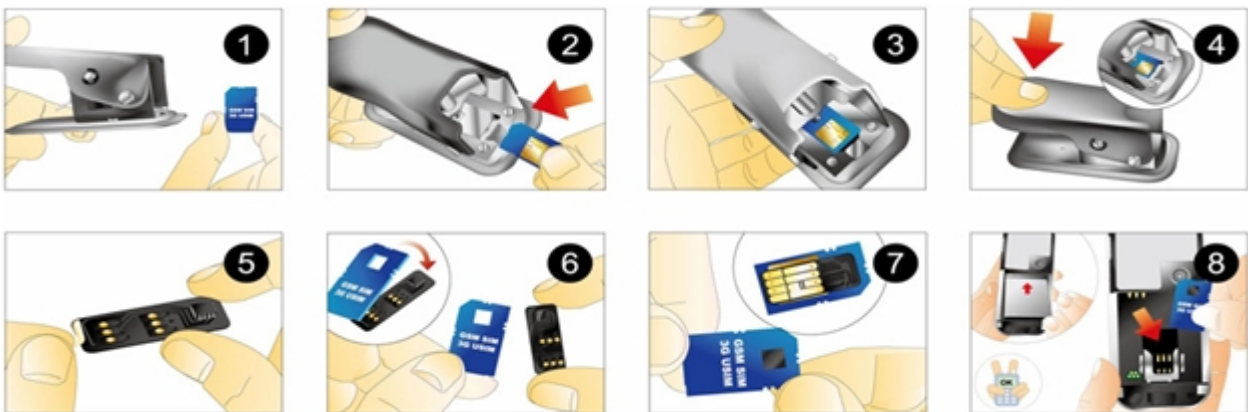


### Note:

The MobiGlobe can only be used in the service area or countries where the Calling Card or other Cost Effective Solution Provider offers VoIP services. If the users are in the area or countries that are not covered by the Provider, the MobiGlobe will turn off automatically.

# 2. Product installation

MobiGlobe can be easily installed. You can check the video instruction at the following link:  
<http://speedflow.com/index.php/en/products/voipformobiles>



1) Turn off the cellular phone and take out the SIM/USIM Card.

2) Take the Puncher and insert the SIM/USIM Card into the appointed SIM Card slot of the Puncher (such as Figure 1, 2, 3; Note: Must insert SIM/USIM card into the SIM Card slot of the puncher according to the direction, position as the Figures indicate).

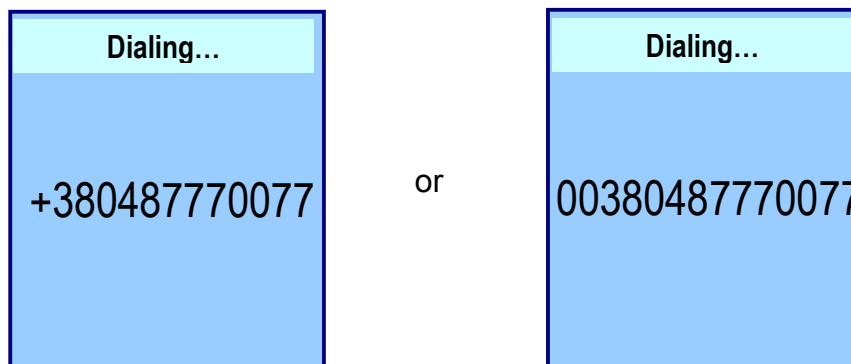


**ATTENTION: You must insert the SIM card completely (roll back and forth to confirm it is in the right position).**

- 3) Push down the puncher until you hear a “click” sound. A square hole is created. It’s done. Then take out the SIM/USIM Card from the SIM Card slot of the Puncher (such as Figure 4).
- 4) Tear off the sticker on the MobiGlobe (this sticker lies at the bottom of the chip) (such as Figure 5).
- 5) Put the outthrust part (small square IC) of MobiGlobe into the square hole of the SIM/USIM Card (such as Figure 6. Make sure the position and direction of MobiGlobe must be as Figure 6 shows).
- 6) Press the sticker of Mobile Dialer down to SIM/USIM Card to make sure they are tightly attached together (such as Figure 7).
- 7) Insert SIM/USIM Card with the attached MobiGlobe into the cellular phone SIM/USIM Card slot (such as Figure 8). Then power on the cellular phone.

### 3. Dialing method

MobiGlobe offers you to use Calling Card Service or other Cost Effective Solution without changing our dialing behavior. You can save time and trouble of entering extra numbers while using the Calling Card or other Cost Effective Solution Service. All you need is to dial an international number (starting either with + or with 00) or select the number you’d like to call to from the Phone Book in your Cellular Phone.



**Note:**

If User normally dials international numbers starting with “00” and the Provider can only receive numbers without 00 you need to use Prefix conversion feature described in “Dialing settings”.



Before you use the Calling Card or other Cost Effective Solution Service, please contact the Service Provider to confirm the following items:

- 1) Which kind of the dialing system is used: “Call Thru” or “Call Back”
- 2) Service Area covered: “Single country” or “Multi- countries”.

## 4. Product functions

MobiGlobe can offer you the following functions:

- MobiGlobe fully supports the Calling Card or other Cost Effective Solution Provider's with Call Thru, Call Back Systematic Platform. You can use these services through your cellular phone easily and quickly, but the most important is "you do not need to change the normal dialing behavior".
- It offers you thru "MobiGlobe Menu" (which will be located in your cellular phone STK Menu when you install the MobiGlobe on your SIM/USIM Card) or thru "MobiGlobe Software Application" to set up MobiGlobe to connect with the Calling Card or other Cost Effective Solution Provider's systematic platform.
- If you are not in the area that the Service Provider's services cover, this product will turn off the service "automatically". In this case you will follow the Local Telecom Operator's (such as Fixed Network Operator or Mobile Operator) normal Cellular Phone dialing mode.

## 5. MobiGlobe setting by MobiGlobe software

MobiGlobe can be set up via MobiGlobe software application with entering the system parameters required by the Service Provider.

### 5.1 MobiGlobe software & Smart Card Reader driver installation

To start the MobiGlobe software and Smart Card Reader driver installations double click on MobiGlobe\_Setup.exe file and follow the installation process.



MobiGlobe\_Setup.exe

As the result of the installation process you'll see a shortcut on your Desktop.



Attach MobiGlobe to SIM/USIM Card and insert it into Smart Card Reader. Connect the Smart Card Reader to PC via USB interface.

Go to My Computer > Properties > Device Manager > Ports (COM and LPT) and define the port number for "Prolific USB-to-Serial Comm Port (COM ?)". This port number is required to connect Smart Card Reader to MobiGlobe software application.

## 5.2 Operation instructions

To start MobiGlobe software double click on MobiGlobe\_Setup.exe file.

### 5.2.1 MobiGlobe software functions

#### Connect/Disconnect

“Connect” connects MobiGlobe application to Smart Card Reader.

“Disconnect” disconnects the application from the card reader after the programming process is complete.

The screenshot shows the 'MobiGlobe Settings' dialog box. The 'COM' port is set to 'COM1' and the baud rate is '9600'. The 'MobiGlobe' checkbox is checked. The 'Dialing settings' section includes fields for 'End dialing symbol' (set to '#'), 'Access settings' (set to 'Country1'), 'Mobile Country Code', 'Mobile Network Code', and 'International Country Code' (set to '1'). There are also checkboxes for 'CLI provided' and 'End dialing symbol provided', both of which are unchecked. The 'Bypass prefixes' table is empty. The 'About' section is also empty. At the bottom, there are buttons for 'Connect(C)', 'Reset(S)', 'Import(I)', 'Read(R)', 'Write(W)', and 'Exit(D)'.

The screenshot shows the 'MobiGlobe Settings' dialog box after configuration. The 'COM' port is now 'COM4' and the baud rate is '9600'. The 'STK Menu Title' is 'MobiGlobe2.0'. The 'MobiGlobe' checkbox is checked. The 'Dialing settings' section has 'End dialing symbol' set to '#', 'Access settings' set to 'Country1', 'Mobile Country Code' set to '255', 'Mobile Network Code' set to '03', and 'International Country Code' set to '1'. The 'CLI provided' and 'End dialing symbol provided' checkboxes are now checked. The 'Call Through Access' field contains '0961234567+', 'Customer Service' contains '0487770077+1+104', 'Prefix Convert' contains '00', and 'Substitute Prefix' contains '++'. The 'Bypass prefixes' table is populated with the following data:

Bypass ...	Bypass prefix
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	01
11	02
12	03
13	04
14	05
15	06
16	07
17	08
18	09

The 'About' section now displays: 'Speedflow Communications', 'www.speedflow.com +442030265765'. At the bottom, the 'Connect(C)' button has been replaced by 'Disconnect(D)'. Other buttons remain the same.

## Reset

Reset current settings in “MobiGlobe Settings” window.

## Import

This function allows you to retrieve/get the configuration saved file (INI file).

## Read/Export

“Read” allows reading the current configuration from the MobiGlobe chip.

“Export” saves the current configuration into INI file on the PC.

## Write

This function writes the configuration settings into MobiGlobe chip.

## Exit

This function ends the program after the card reader is disconnected.

### 5.2.2 Set up MobiGlobe relevant parameters.

Choose the COM port (check item 5.1) and define the Baud rate as 9600.

Input the Password (the default Password is 000000).

Click on “Connect” button.

For reading current MobiGlobe configuration click on “Read” button and wait until the configuration settings appear.

The screenshot shows the 'MobiGlobe Settings' application window. The interface includes the following elements:

- COM Port:** A dropdown menu set to 'COM4' and a baud rate dropdown set to '9600'.
- STK Menu Title:** A text field containing 'MobiGlobe2.0'.
- MobiGlobe:** A checked checkbox labeled 'Yes'.
- Password:** A text field with six asterisks.
- STK Menu Title:** A text field for PIN Code.
- Dialing settings:** A section with fields for 'End dialing symbol' (set to '#'), 'Access settings' (set to 'Country1'), 'Mobile Country Code' (set to '255'), 'Mobile Network Code' (set to '03'), and 'International Country Code' (set to '380').
- CLJ provided:** A checked checkbox labeled 'Yes'.
- End dialing symbol provided:** A checked checkbox labeled 'Yes'.
- Call Through Access:** A text field containing '0961234567+'. A red note '\* If null, set 0' is visible.
- Callback 1 Access:** An empty text field.
- Callback 2 Access:** An empty text field.
- Customer Service:** A text field containing '0487770077+1+104'.
- Prefix Convert:** A text field containing '00'.
- Substitute Prefix:** A text field containing '++'.
- Bypass prefixes:** A table with two columns: 'Bypass ...' and 'Bypass prefix'. It lists 18 entries from 1 to 18.
- About:** A text area containing 'Speedflow Communications', 'www.speedflow.com', and '+442030265765'.
- Result:** A text area showing 'Password OK', 'RMobiGlobe Read OK', 'RPinCode Read OK', and 'REndSymbol Read OK'.
- Buttons:** A row of buttons at the bottom: 'Disconnect(D)', 'Reset(S)', 'Import(I)', 'Export(E)', 'Write(W)', and 'Exit(X)'.

### “MobiGlobe Yes”

Data Length: 1 Character

Data Type: Symbol

Default Value: [v] (ON)

Put “v” mark here to switch MobiGlobe on after its installation into mobile phone.

### “Password”

Password length: 6 Digits

Data Type: Numeric

Default value: 000000.

Password protects Dialing settings in MobiGlobe configuration.

## “STK Menu Title”

Length: 16 Digits

Data Type: Alpha

This title will appear in Mobile phone menu. MobiGlobe distributor can define the name of MobiGlobe in STK Menu.

Changing STK menu title is available only in this application. User can't change it via MobiGlobe menu in mobile phone.

## “PIN code”

PIN code length: up to 20 Digits

Data Type: Numeric

Normally the Service Provider will require you to enter a set of Pin Number they provide to pass the authorization check. However, the Service Provider sometimes uses the CLI (Call ID) number for the authorization check. In this case, no need to input any data into this field, simply leave it blank.



*For example:*

The procedure for using Calling Card Service is as follows:

1. Dial toll-free no. 0800-096-899. After connecting, press 3 for English Service.
2. Enter Calling Card PIN Number and press #.
3. The Pin Number: 496419461491.

In this case, please input “3+496419461491#” (do not include “+” symbol) in “PIN code” box.

[+] here represents pause, its function is to delay sending the PIN code for a short time. Its main purpose is to work with IVR (Voice Prompt System) system of the Service Provider to get the instruction to move on.

## “Dialing Settings”

### “Country 1-5”

There are 5 sets of settings can be programmed into MobiGlobe chip. Each set is defined by MCC and MNC codes. MobiGlobe automatically recognizes the mobile network the User's SIM card belongs to and if such network is preset it will apply appropriate set of settings. For each of these 5 sets you can define appropriate Dialing settings.

### “End dialing symbol”

End Dialing Symbol length: 1 Character

Data Type: Alpha Numeric

Default value: [#]

MobiGlobe will add the # sign to the calling number as the last digit. The Service Provider's system will treat [#] as END Dialing Symbol and send out the calling number.

### “Mobile Country Code” and “Mobile Network Code”

Set MCC and MNC for a specific country (mobile network).



To check the network's MCC and MNC please follow:

[http://en.wikipedia.org/wiki/Mobile\\_Network\\_Code](http://en.wikipedia.org/wiki/Mobile_Network_Code)

### “International Country code”

Choose your country code. This data is for information only. It doesn't affect MobiGlobe operation.

### “CLI provided Yes”

Put “v” mark here if the Cost Saving Service Provider offers CLI Authorization Service in the appointed country.

If Cost Saving Service Provider offers authorization check by PIN code then leave this box blank.

### **“End dialing symbol provided ☐ Yes”**

Put «v» mark here if the Cost Saving Service Provider requires End dialing symbol at the end of the destination number.

The End dialing symbol you should define in “End dialing symbol” box.



**There is only one “access number” can be programmed into MobiGlobe for each of 5 Countries. Please choose Call through or Callback box to input the “access number” of the Cost Saving Service Provider.**

### **“Call Through Access”**

Input Call through gateway number and add [+] to the number as the last digit.



As it was mentioned before, + plays as pause. Usually one + is enough. If the Cost Saving Service Provider system requires a longer pause to follow IVR menu, like for skip welcoming message, you can add more +.

### **“Callback 1 Access” or “Callback 2 Access”**

Input Callback number of the Cost Saving service provider which Service Provider offers in the appointed country.



The difference between Callback 1 and Callback 2 is in the procedure of sending the destination number and PIN code for authorization check if required. With Callback 1 MobiGlobe sends all required data before the call is aborted by the provider’s gateway, with Callback 2 – after the provider’s VoIP system calls back to User’s cellular phone number.



For Callback, User must set Mode 2 or Mode 3 as the dialing mode. This setting is available only in MobiGlobe menu in the cellular phone.



User should not make another call or receive a new incoming call except form the provider’s gateway while waiting for Callback.

### **“Customer Service”**

Input Customer Service Hotline telephone number which Service Provider offers in the appointed country.

To make a call to Customer Service number User can go to MobiGlobe menu in his cellular phone, select Customer Service submenu.

### **“Prefix Convert” and “Substitute prefix”**

The main purpose of this function is to change the various international call prefixes into the Service Provider’s international call prefixes without changing International Call Dial Prefix and users’ Dialing Behavior.



Example:

User’s normal dialing is 00380487770077, but Provider can accept 380487770077 only. Input 00 as “Prefix convert” and ++ as “Substitute prefix”.

If User’s normal dialing is as +380487770077, no prefix conversion is required. In this case + will be accepted by the provider’s system as pause.

## “Bypass prefixes”

Data Length: 20 Digits

Data Type: Numeric

Total number: 40 prefixes

Input Format:

1) telephone number:

[Area Code + Tel No.] e.g. 0487770077 or

[“+” + Country Code + Area Code + Tel No.] e.g. +380487770077

2) country area code:

[Country’s Area Code] e.g. 048 or

[“+” + Country Code + Area Code] e.g. +38048

3) country code: e.g. +380 or 00380.

This function allows you to set up to 40 Prefixes/Phone Numbers/Pointed Country’s Area Codes to avoid using the service of the Cost Saving service provider.

To add a Bypass prefix, double click on any of 1-40 lines in Bypass prefixes table and input required prefix.



The prefixes that must be put Bypass prefixes table can be defined basing on each and every country’s local Telecom Operator (Fixed Network Operator and Mobile Operator) rule.

Bypass ...	Bypass prefix
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	01
11	02

## “About”

Length: 60 Digits (including spaces)

Data Type: Alpha & Numeric

Here you can input your company’s info such as contact details.

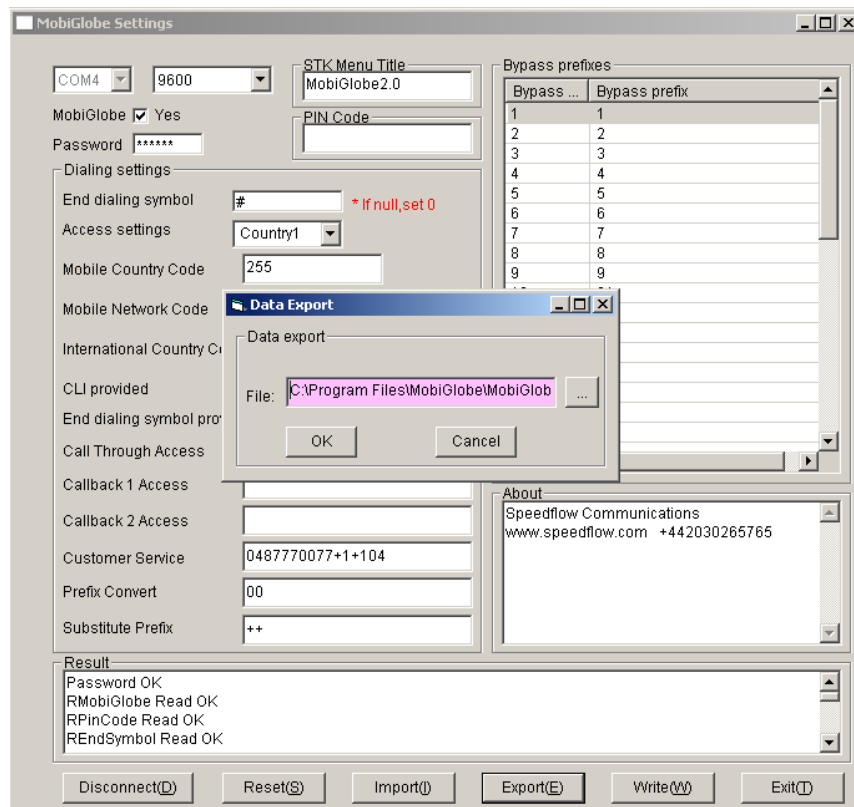
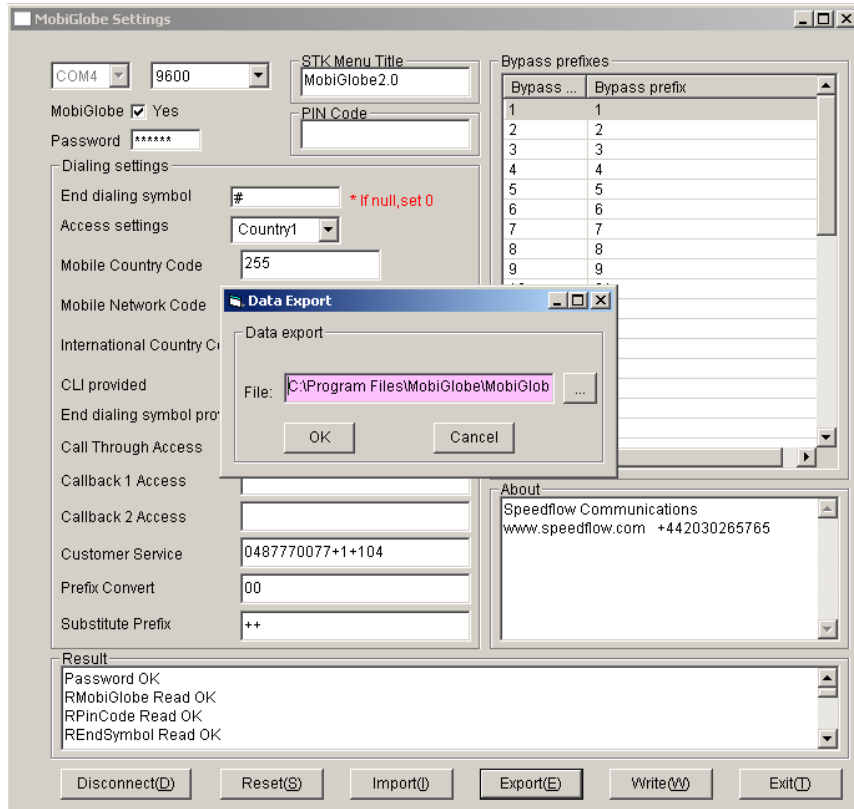
## “Result”

While reading or writing the MobiGlobe configuration the operation result will be displayed in this box.

### 5.2.3 Operating with configuration .INI files

Having completed with defining the MobiGlobe parameters and written them on MobiGlobe you can save the configuration in INI file so next time you can just retrieve the required configuration from the file saved on your PC hard drive.


To save the configuration click on “Read” button and wait until the configuration is read. Then click on “Export”. In “Export data” window define the file name and click on “OK”.



Next time when you need to write the same configuration, you can retrieve the appropriate INI file by clicking on “Import” button and selecting it in “Data import” window. After clicking on ”OK”, the chosen configuration will be displayed. To write it on MobiGlobe you just need to click on “Write” button and wait for the operation being completed.

## 6. Setting MobiGlobe parameters via menu in cellular phone

After adjusting SIM card with the attached MobiGlobe into cellular phone the MobiGlobe menu will appear in cellular phone STK menu.

 The title of MobiGlobe menu can be defined while programming MobiGlobe via the Smart Card Reader.

MobiGlobe menu depending on the model of User’s cellular phone can appear in the main STK menu, Applications or Entertainment submenu.

The structure of MobiGlobe menu is as following:

1. Turn ON
2. Turn OFF
3. PIN Code
4. Dialing settings (secured with Password):
  - 4.1 End Dialing Symbol
  - 4.2 Change Password
  - 4.3 Access settings (for 5 countries):
    - 4.3.1 Country 1:
      - 4.3.1.1 MCC (Mobile Country Code)
      - 4.3.1.2 MNC (Mobile Network Code)
      - 4.3.1.3 ICC (International Country Code)
      - 4.3.1.4 CLI provided YES/NO
      - 4.3.1.5 End dialing symbol provided YES/NO
      - 4.3.1.6 Call Through Access #
      - 4.3.1.7 Callback 1 Access #
      - 4.3.1.8 Callback 2 Access #
      - 4.3.1.9 Customer Service #
      - 4.3.1.10 Prefix Convert
      - 4.3.1.11 Bypass prefixes (40 prefixes):
        - 1.
        - 2.
        - 3.
        - .
        - .
        - 40.
    - 4.3.2 Country 2
    - 4.3.3 Country 3
    - 4.3.4 Country 4
    - 4.3.5 Country 5
  5. Dial Mode
    - 5.1 MODE 1
    - 5.2 MODE 2
    - 5.3 MODE 3
  6. Customer Service
  7. About



The difference in MODE 1, 2 and 3 is in the way of sending DTMF signals with the data (PIN code and the destination number). Most model of cellular phones support MODE 1, however some can work in MODE 2 or 3 only.



The data in “About” can be changed via Smart Card Reader only.

## 7. Q&A

**1. When I put the SIM/USIM card with the attached MobiGlobe into the cellular phone SIM/USIM Card slot and then power it on, the cellular phone can't detect the SIM card. Why is that?**

- 1) Please check and make sure the MobiGlobe is properly adhered to the SIM card. Please refer to Product Installation.
- 2) Please consult the Customer Service Center of the MobiGlobe.

**2. After properly installation of the MobiGlobe, I still can't connect and use the Calling Card Service. Why is that?**

- 1) Please check if you turn on the MobiGlobe.
- 2) Please contact your Calling Card Service Provider to make sure if their services cover the area you're located in.
- 3) Please enter MobiGlobe Menu and choose Dial Mode, you will see the auto-dial mode that MobiGlobe uses now. If it is "MODE 1", please switch to the "MODE 2", and make a test call again. If it still can't connect to the provider's gateway, please try "MODE 3". If after change MobiGlobe auto-dial mode one by one, you still can't make call thru the MobiGlobe that means your cellular phone is not compatible with MobiGlobe, please change to another cellular phone.

**3. Can I use the MobiGlobe with the Calling Card Service when I travel to other country?**

Please contact your Calling Card Provider's Customer Service Center to check if their service area covers the country you travel to.

**4. When I travel to certain country, do I need to reset my MobiGlobe?**

- 1) You don't need to do any changes or reset to the MobiGlobe when you travel.
- 2) MobiGlobe will automatically check your settings and locate the country you're in.
- 3) Make sure that the country you travel to be in the service area of your Calling Card Provider so that you can still use the MobiGlobe. Otherwise the MobiGlobe will automatically switch off.

**5. How can I set up local telephone numbers not to use the Calling Card or other Cost Effective Solution Service?**

Please go to MobiGlobe Bypass prefix sections for detail explanation.

**6. How can I set cost saving G/W when a country has more than one MCC?**

If the country has more than one MCC you need to program the set of Dialing settings for each MCC.

**7. What if I have a contact phone no. (Ex: 091722612345) which needs to be bypassed from cost saving platform and to be called through original mobile operator network, how should I set bypass prefix?**

You can set the no 091722612345 directly in bypass prefix table.



For more Q&A please check MobiGlobe FAQs by following the link:  
<http://speedflow.com/index.php/en/products/voipformobiles/mobiglobe-faq>