GSM-KEY-DC MANUAL

DC2000 VERSION 3.1

http://www.waferstar.com

GSM-KEY OPERATING INSTRUCTIONS

PRODUCT DESCRIPTION

WAFER GSM-KEY is an electronic board with an on-board GSM modem.The purpose of this device is to open an electric gate by means of a GSM phone.It has a door open relay whose contact has to be connected in parallel with the button which opens the gate. It has a White List of numbers who are enabled to open the phone, up to 2000. When the GSM-KEY receives a call, it will check to see if the calling number is in the list. If it is in the list it will reject the call (so there will be no charge -at least with today's charging procedures) and click the relay momentarily.

Also GSM-KEY has two alarm input port for the security detection including the intruder detection alarm and gate problem alarm.

CONNECTOR DESCRIPTION

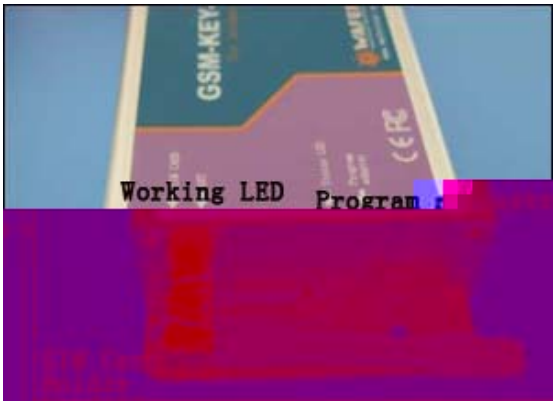
ADVANTAGES OF WAFER GSM-KEY

- 2000 Regular User Numbers memory.
- SHL250+PHL250+QHL250 ,total 750 Special Numbers memory for time zone.
- 5 Alarm Numbers memory.
- Up to 500 logs stored in database.
- No call charges to operate.
- No line rental using ‘Pay as You Go’.
- No key-fobs for children to lose.
- Let visitors and deliveries in remotely.
- Impossible to clone or intercept.
- Caller ID confirmation for security.
- Quick & easy number barring.
- Easy programming in minutes with your phone or PC software.

INSTALLATION

To install the GSM-KEY, you need to connect the 2 wires of the relay contact in parallel with the gate opening button. The relay contacts can stand **48V 0.5A maximum**, this is enough for its operation but **don't try to switch higher voltages or currents**. You should install the GSM-KEY in a place where there is GSM signal coming from the operator you want to use. Check it with a phone before proceeding with the installation. If you need to install the device in a place with little signal, you may consider using an external antenna that we may supply as an option to be purchased separately with 50cm cable.

You should then insert the SIM Card of the operator you want to use with the right direction as the left picure.



!Note! : You must remove the PIN request from the SIM before inserting it in the unit, otherwise the device will not work. In order to do so, insert the SIM in a phone and disable the PIN request (usually there is a security menu that enables you to do so).

GSM-KEY also comes with additional 2 Input.The inputs can be used to generate alarms when triggered.For examples,you can can connect the saftey beam output to the GSM-KEY Alarm1 and Alarm2 input.

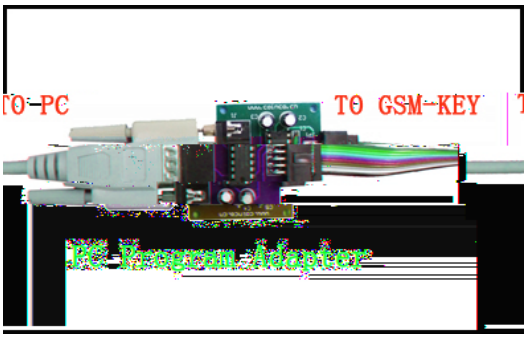
WAFER GSM-KEY PROGRAMMING

You can program the GSM-KEY with SMS commands using your phone. It is safe to do so because in addition to the fact that other people may not know the number of the SIM inserted in it, we also use a Password that makes it impossible for anybody who doesn't know it to access the system by chance.

Remember that commands must be CAPITAL LETTERS. It is PWD not pwd, CAP not Cap etc. Don't add spaces or any other character.

Some complicated Instructions,that cann’t be programmed by the phone SMS. That would need to use the PC software to program and inquire the status of the terminal.

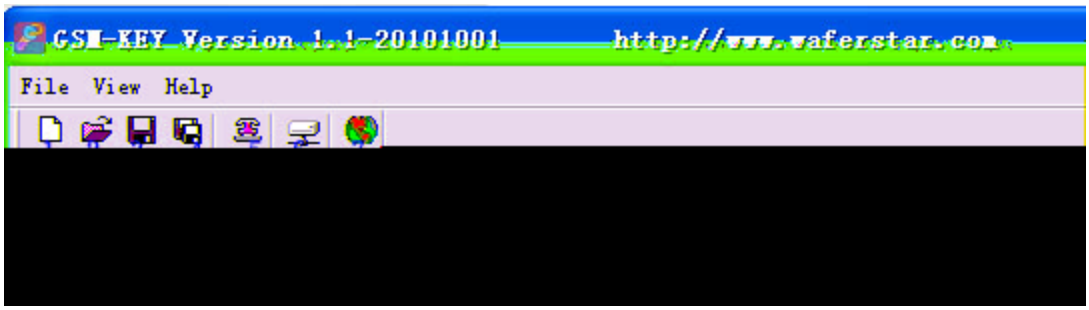
The bellow wire picture is to show how to connect the cable to the PC program connector with the Program adapter.Please connect it in the right direction with the picture.



Simple RS232 program card (Standard)

USB program adapter box (Optional Parts)

GSM-KEY PC Program Software interface



1. Setting and Log page switch
2. Open saved file
3. Save units phone numbers in your computer for future changes
4. Save in a new file name
5. Communitcaton selection ,Com port configuration
6. Connect to the unit
7. Select Language
8.

The standard default one, when the device comes from the factory, is 123456.
We suggest that you change it, using the #CAP command.
In all the following examples we will use 123456 as an example of password.

#CAP *Change Password*.

Use this command to change the password with a new one that you will chose for your device (don't forget it or you will have to send the unit back to us to reset it, and this has a cost)
The #CAP command must be issued 2 times to be sure you don't digit a wrong one.
OF course it must be preceded by the old password.
For example, to change the password 123456 into the new password 333444 you need to send the following SMS:

#PWD123456#CAP333444#CAP333444

Acknowledge SMS: PWD SETUP OK
If you wrote correctly, or an Error message if you made a mistake.
If the old password is error,then conformation would be : Error Old Password
If you input two different new password,then reply would be : Error New Password,Please Check the input again

#WHL *White List*.

This is the command that you will use most. it is used to add or remove numbers that are enabled to open the gate into the White List. You can add up to 200 numbers in the list. Every position must be indicated in the command and we advise you to keep a list written somewhere to know which numbers are in and in which position.

• To add a number, the syntax of the command is the following:

#PWD123456#WHL0001=61143815

Acknowledge **would be : WHL0001 SET TO 61143815 OK**
Where 01 is the position in the list and 61143815 is the number enabled.
Please note that it is possible to program up to a maximum of 10 digits for a number. If it has more digits you should use the rightmost ones. For example, if your number is 33446665555 you should program 3446665555. If your number appears as +85261143815 you should not program the country code (+852). If your number has only 9 digits or less, it is not a problem. The important thing is that you don't exceed 10 digits.

• To check which is the number in a place of the list:

#PWD123456#WHL0001?

Acknowledge **: WHL0001 IS 61143815 OK**

• To erase a number:

#PWD123456#WHL0001=0000000

(or you can write over it another number you wish to add)
Acknowledge : **WHL0001 SET TO 00000000**

List All numbers in the List

#PWD123456#WHL=ALL? **(Instruction Only for PC)**

Acknowledge **:**
WHL0001 IS XXX

WHL0003 IS XXX
WHL0008 IS XXX
……

#SHL, #PHL, #QHL *Special List.*
Set from what time to what time you want these numbers operate
#PWD123456#SHL001=13564121668:1357(8:32-23:59)
Acknowledge : SHL001 SETUP TO **61143815**:1357(8:32-23:59)
SHL001 number would operate from 8:32 to 23:59 in Mon,Wen,Fri,Sun in every week.

#PWD123456#PHL001=13564121668:100324-101012(8:32-18:26)
Acknowledge : PHL002 SETUP TO **61143816**: 100324-100812(8:32-18:26)
PHL001 number would operate from 8:32 to 18:26 from Mar.24th to Oct.12

#PWD123456#QHL001=13564121668:12
Acknowledge : QHL003 SETUP TO **61143817**:12
QHL001 number would operate total 12 times,then would be expired.

• To check which is the number in a place of the list:
#PWD123456#SHL001?
Acknowledge **: SHL01 IS 61143815 OK**
Or #PWD123456#PHL001? #PWD123456#QHL001?
• To erase a number:
#PWD123456#WHL01=0000
Or #PWD123456#PHL01=0000 #PWD123456#QHL01=0000
(or you can write over it another number you wish to add)

List All numbers in the List
#PWD123456#SHL=ALL? **(Instruction Only for PC)**
Acknowledge **:**
SHL01 IS XXX
SHL03 IS XXX
QHL08 IS XXX
……

#GOT *Gate pulse delay time.*
This command is useful in case you need to keep the button pressed longer. The standard time is 0,3 seconds (300 ms). You can change it with the GOT command.
• The syntax of the command is the following:
#PWD123456#GOT500
Acknowledge**: DELAY TIME SET TO 0500MS**
With the above command the opening time has been set to 500 ms (0,5 seconds).
• You can check what the current pulse time is with the command
#PWD123456#GOT?

Acknowledge**: DELAY TIME IS 0500 MS**

#ALARM Alarm setup

(1)You can setup the alarm phone number when have the alarm information input

#PWD123456#ALARM01=13818120592

Where 01 is the position in the list

Acknowledge**: ALARM01 SET TO 61143815 OK**

When the number is seted to 000000,that means delete the number in this position

(2) check which is the number in a place of the alarm phone list:

#PWD123456#ALARM01?

Acknowledge**: ALARM01 IS 61143815 OK**

(3) List all numbers in the alarm phone list:

#PWD123456#ALARM=ALL?

Acknowledge**: ALARM IS XXXXX:XXXX:XXXXXXX:0000:0000**

(Will show total five numbers, if no effective number,that will be replaced with 0000)

(4) Alarm mode setup

There are two alarm input ,you can set at PHONE or SMS

#PWD123456#ALARM-IN1=ON:PHONE:10,ALARM-IN2=OFF

Acknowledge**: ALARM_IN1=ON:PHONE:10,ALARM_IN2=OFF**

#PWD123456#ALARM-IN1=ON:SMS:2,ALARM-IN2=ON:PHONE:3

Acknowledge**: ALARM_IN1=ON:SMS:2, ALARM_IN2=ON:PHONE:3**

If at phone mode: when receive the alarm input,then will phone the number in the alarm phone list until you reject the phone call or that will continue to phone the number again after the minutes setted.

If at SMS mode: When receive the alarm input,then will send the SMS to the number in the alarm phone list until you send the SMS to PAUSE the alarm .

In this instruction,that **ALARM-IN1=ON:SMS:2,ALARM-IN2=ON:PHONE:3**

That means that alarm1 signal would be triggered when the alarm1 is shorted to The alarm input1 and last to 2 seconds.

That means that alarm2 signal would be triggered when the alarm2 is shorted to The alarm input2 and last to 3 seconds.

(5) Config the SMS TEXT :

#PWD123456#UDI1:XXXXXX, UDI2:XXXXXX

Acknowledge**: UDI1:XXXXXX, DI2:XXXXXX OKAY**

(When the Alarm input is triggered,then will send the SMS you already setted with this UDI command)

#CSQ *Check GSM signal quality*.

This command is useful to see what is the GSM network signal level your GSM-KEY is receiving. It ranges from 0 to 32 (if it is 0 we doubt it will ever answer...). You should have a signal above 12 to be sure of being able to open the gate in any condition. Better if above 16. You should add an external antenna if this is not the case, or eventually even change operator with another that serves your area better.

#PWD123456#CSQ?
Acknowledge: CSQ IS 26

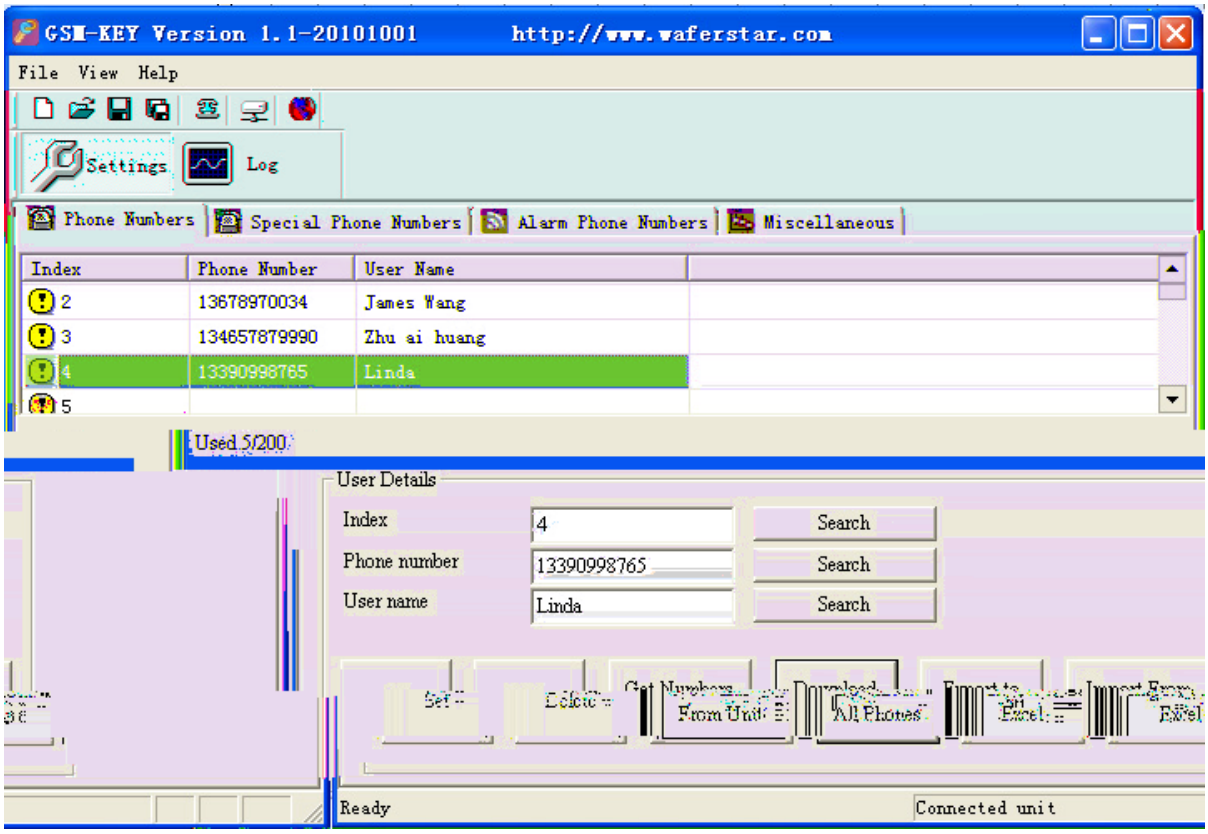
#MODE Relay Operation Mode SETUP
#PWD123456#MODE0 Acknowledge: **RELAY SET TO MODE0**
#PWD123456#MODE1 Acknowledge: **RELAY SET TO MODE1**
If set to MODE0,that is Momentary pulse and If Config to MODE1,that is Ratchet relay

#STATUS Check the config information of the terminal
#PWD123456#STATUS?
You will receive a Acknowledge with:
ALARM1=ON:SMS:10,ALARM2=ON:SMS:20,GOT=1000,WHL=85,ALARM1=H,ALARM2=H,BCPW=34,CSQ=20,RELAY=ON

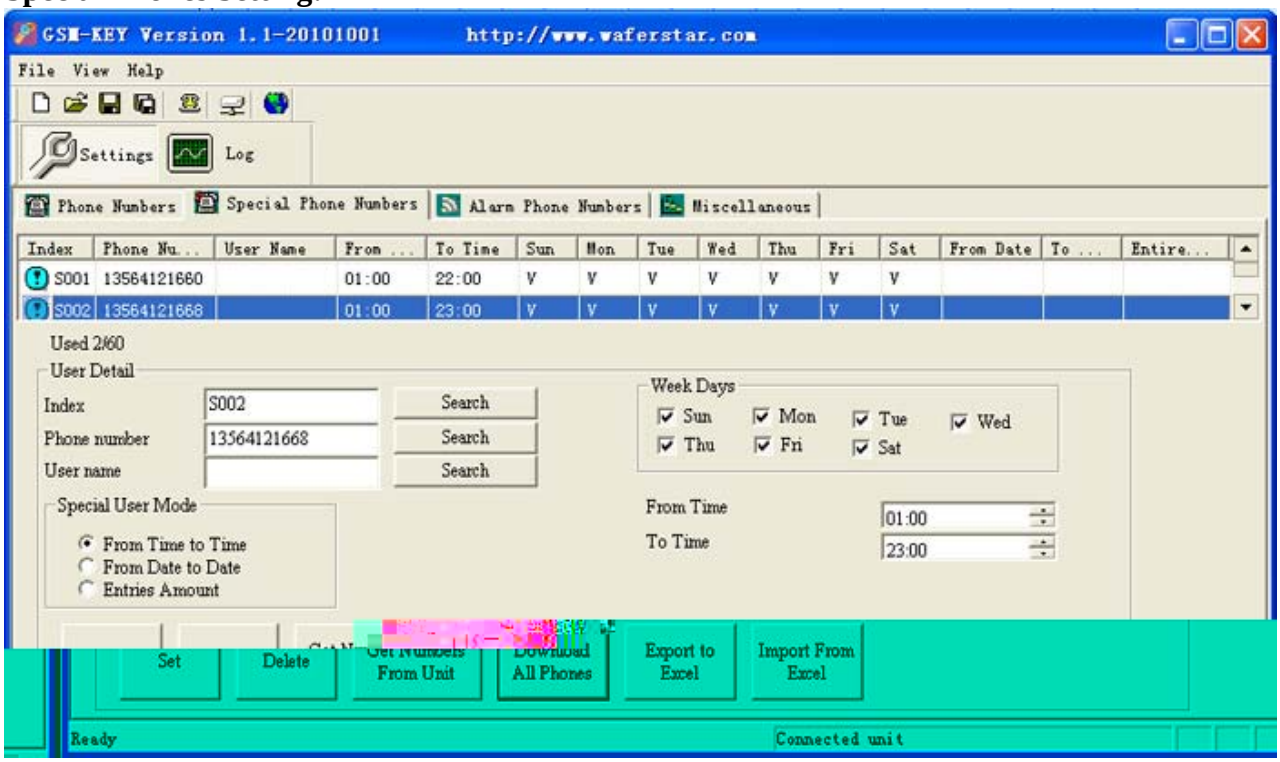
#PWD123456#TIMER-UPDATE: 96754667
This is used to setup the phone number that is used to update the device inside working clock
You will receive a Acknowledge with:
#PWD123456#TIMER-UPDATE: 96754667 OK
#PWD123456#CLOCK (Only the Timer update phone number can be effective with this)
That is used to update the device clock with the specified update phone number
Acknowledge: **CLOCK UPDATE TO 2010-10-18,16:58:10**

Software interface:

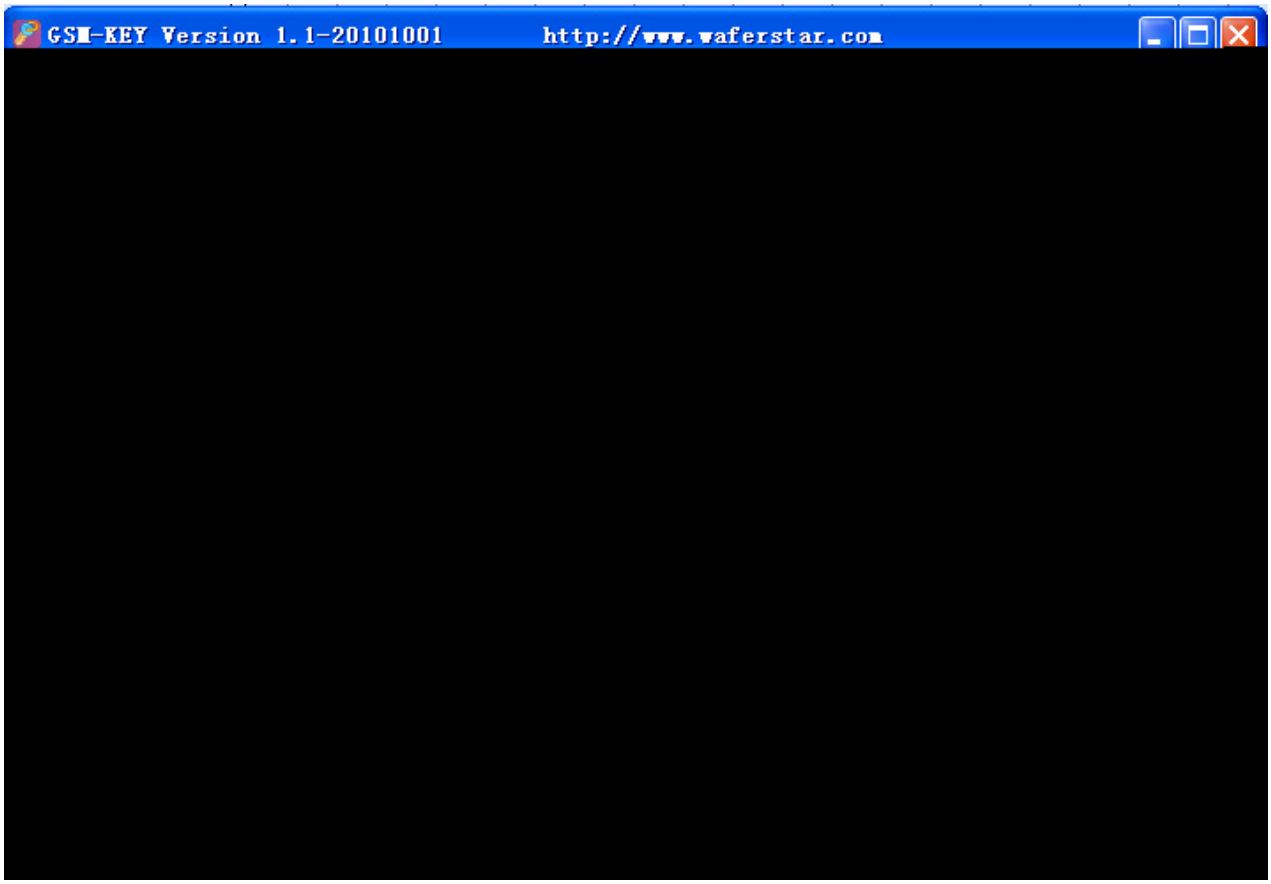
Phone Numbers Setting interface:



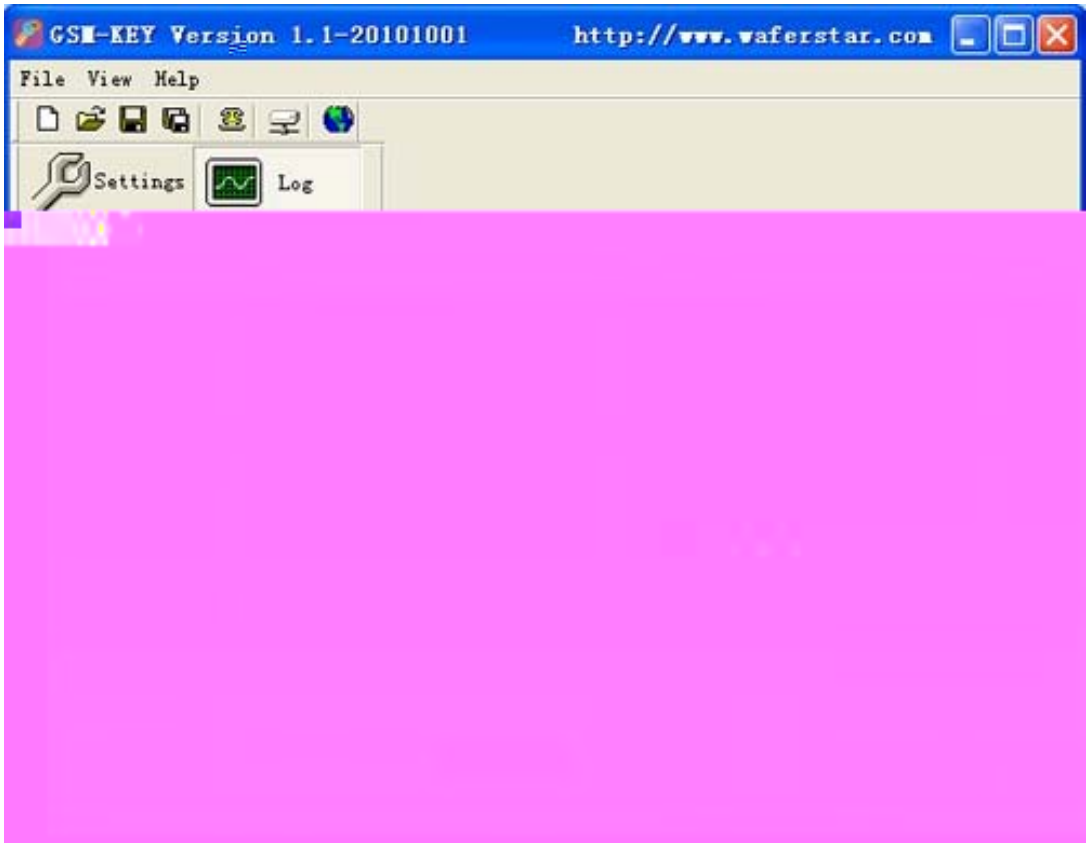
Special Phones Setting:



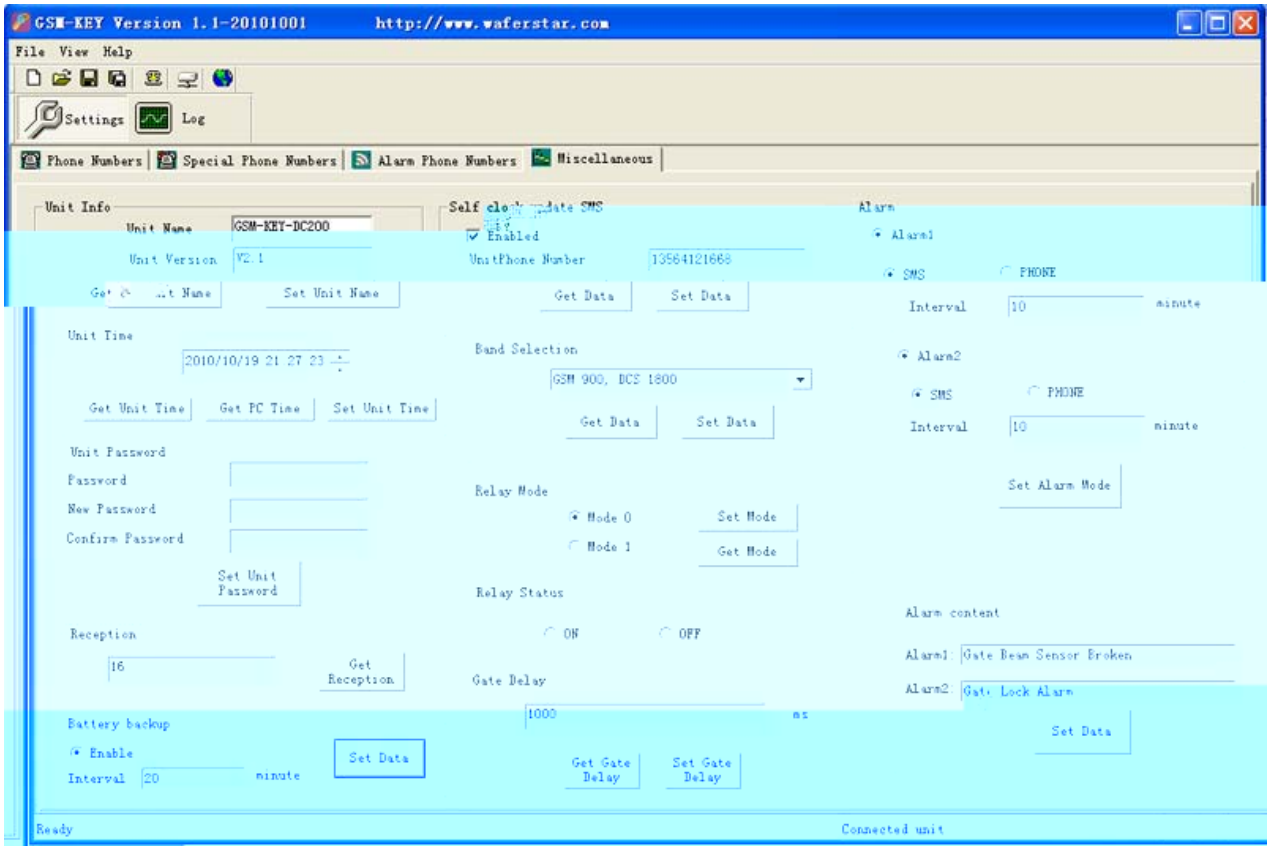
Alarm Phone Numbers Setting:



Log Interface



Miscellanelous Parameters Setting Page:



Unit Info:	That is showing the Device edition of the design,you don’t need to change it
Unit Time;	That is used to setting the timer of the GSM-KEY Device
Unit Password:	That is used to change the control password
Reception:	That is used to test the GSM signal quality of the site
Battery backup:	That is used to setup the Power off alarm when power off.
Self clock update SMS:	That is used to setup the phone number that is used to update the clock
Band selection:	Not available
Relay Mode:	That is used to setup the working mode
Relay Status:	That is used to test the device through ON or OFF the on board relay
Alarm:	That is used to setup the alarm mode of the two alarm channel
Alarm content:	That is used to setup the alarm SMS content.

Troubleshooting

No LED is on after power up
- Check the power supply.

GSM LED is not flash slowly
- GSM Signal is not good and cann't register to GSM
- Check the SIM card.
- Check the PIN.
- Check the antenna connection.
- Select a place with a good GSM signal.

MCU LED is not flash slowly
- MCU is not working properly,Check the syster power

No tone can be heard after line off-hook
- Check the telephone line connection.
- GSM-KEY is not initialized properly upon start (approx. 10s after power up).
- GSM-KEY is not supplied with power.

EasyGate does not communicate with PC
- Check the serial cable connection.
- Check the COM number setting on PC.
- Check the COM parameters (1200-115200 bps, 8N1).
- An incoming call is ringing on GSM-KEY
- An incoming Alarm is on processing by GSM-KEY

This brochure provides an overview of the products and services of WEIFU GSM Modules, For further information and queries kindly contact:

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