4G Gate, Barrier, Shutter, Garage Door and Door opener
Open gate or garage door with a FREE call from your mobile phone!
Remote switching machines with a FREE call from your mobile phone!

User Manual

WH-200   V2.0

I Preface

Thank you for using the WH-200.You will know well about the functions and operation methods of this product quickly through this User Manual.

This product is mainly used for remote control application based on 4G network.Please use it according to the parameters and technical specification in the User Manual.Meanwhile,the Notes shall be considered for usage of radio-control products,especially 4G products.Our Company bear no liability for property loss or bodily injury arising from abnormal or incorrect usage of this product.

Packing List

II Induction

The 4G Gate Opener WH-200 is a very simple device which can be used for authorized door access, controlling gates, switching of remote equipment, car parking systems. WH-200 can be used in places which requires turning ON/OFF your system, machines, equipment remotely with a FREE call from your mobile phone .

Just dial from Authorized User number then the Barrier and doors are opened, or the machines are turned on or off. There are no call costs, WH-200 rejects the call from authorized number then carries out the turn ON/OFF action.

Features

- 4G Quad-band, can work in the worldwide 4G networks.
- No call charges. The 4G Gate Opener rejects the call from authorized number, then the relay will turn ON/OFF on the first ring.
- Secure - Using caller ID for identification, unknown callers are ignored.
- Can be operated from anywhere, no distance limit.
- Add or remove users by SMS Text command or APP.
- Up to 200 (Optional 1200) authorized phone numbers can be configured.
- Time limitation for access,user can call in to control only during the pre-set time period.
- Automatically report current status by SMS or call to the 1 st number.
- The relay close or open time is programmable.

- The SMS Feedback confirmation is programmable.
- Remember relay status when power failure.
- One output with relay for connecting the switch of the door or machines.
- The relay action will return a SMS confirmation to the owner, this function is editable.
- One wired switch:we can control it under manual control mode.
- Based on 4G Network, applied to many application.
  (gates, bollards,barriers, garage doors,shutters and access doors or machines).

Technical specifications

Parameter item	Reference scope	Parameter item	Reference scope
4G Frequency	**4G-EU(For EMEA):** QYJ2KII Gfsix? G64G84G:4G<4G=4G754G7= QYJ2YII Gfsix?G8=4G954G96 LXR ?=:54>5546=5546>55R M¡ **4G-AU(**KtwQfyns Fr jwhf4Fzxywfqf4Sj| _jfqfsi**):** QYJ2KII Gfsix?G64G74G84G94G:4G<4G=4G7= QYJ2YII Gfsix?G95 \ HIR F?G64G74G94G:4G= LXR ?=:54>5546=5546>55R M¡	Wired Switch	Supports
DC Power Supply	9-36V DC/1A	Relay Type	NO/NC
Power consumption	Max. 50mA/Average 25mA	Relay Time	Max. 9999s
SIM Card	Nano type, 3V	Operating Temp	- 10℃ ～ ＋60℃
Antenna	50Ω SMA	Relative Humidity	10% ～ 90%RH
Relay Specification	3A/250V AC | 20A/14V DC	Dimension	85×61.5×25mm
Users	200	Net Weight	208g

Physical Layout

Interface Instruction

INDICATORS		
ANT		Connect to 4G antenna
Signal		Flash per 1 second (quickly): registering to cellular network. Flash per 2 seconds: Normal status. OFF: can not connect to SIM card or unregistered to the cellular network.
Relay		Relay Status, calling in, the relay will work, this LED indicator will on.
Reset		Press and hold the Reset button until the Run LED is always on, then after 5 seconds,,it will reset the WH-200 to factory default.If reset successfully,it will auto restart after 8 seconds
Run		Flash per 1 second: Connected the cellular network successfully. OFF: can not connect to SIM card or unregistered to the cellular network.
Connection Terminals		
12V DC	+	Power supply input, Positive wire.
	-	Power supply input, Negative wire.
Relay Output	NO	Normally Open port. 3A/240VAC. Connect to the switch of the electric lock or device.
	COM	Common port. 3A/240VAC. Connect to the switch of the electric lock or device.
	NC	Normally Close port. 3A/240VAC. Connect to the switch of the electric lock or device.
Switch		Dry contact, used to be connected with wired switch, like push button. Notice: It should not be connected with voltage input.

III Configuration guide of SMS

Please refer to the document of *WH-200 SMS Command   Set*

Such as one of simple application：

just setup 1 parameter:
1.Setup Authorized phone number
example:
Authorized phone number:987654321
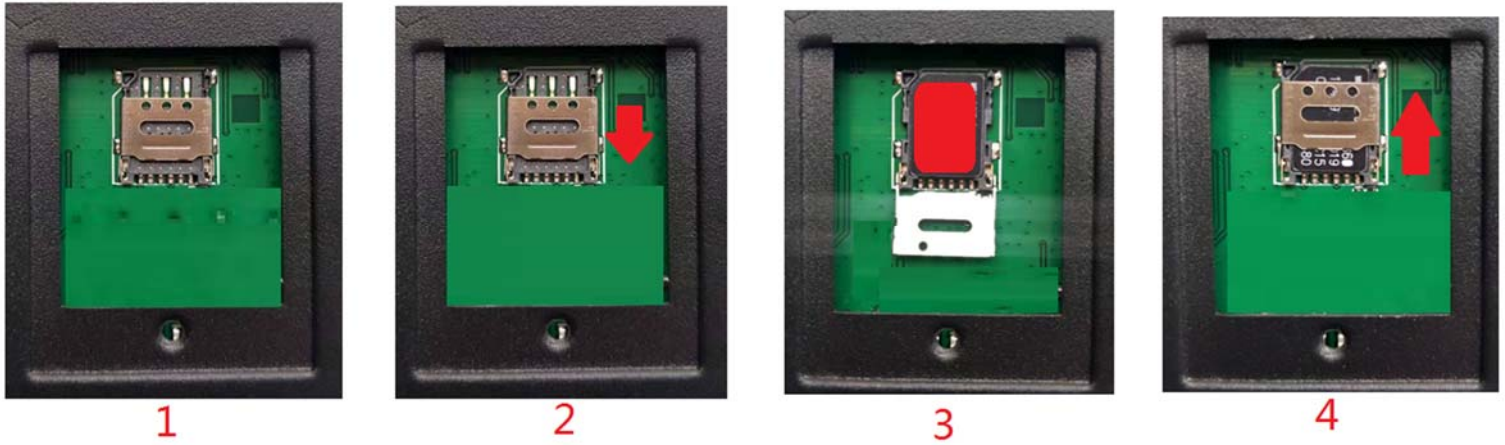Send this command to WH-200 by SMS:
1234#TEL987654321#001#
So we can use phone number(987654321) to call WH-200 to control it

IV Installation

Before installing the control unit, please test the system firstly, including power supply, 4G signal, etc.

1) Insert SIM card into Control unit

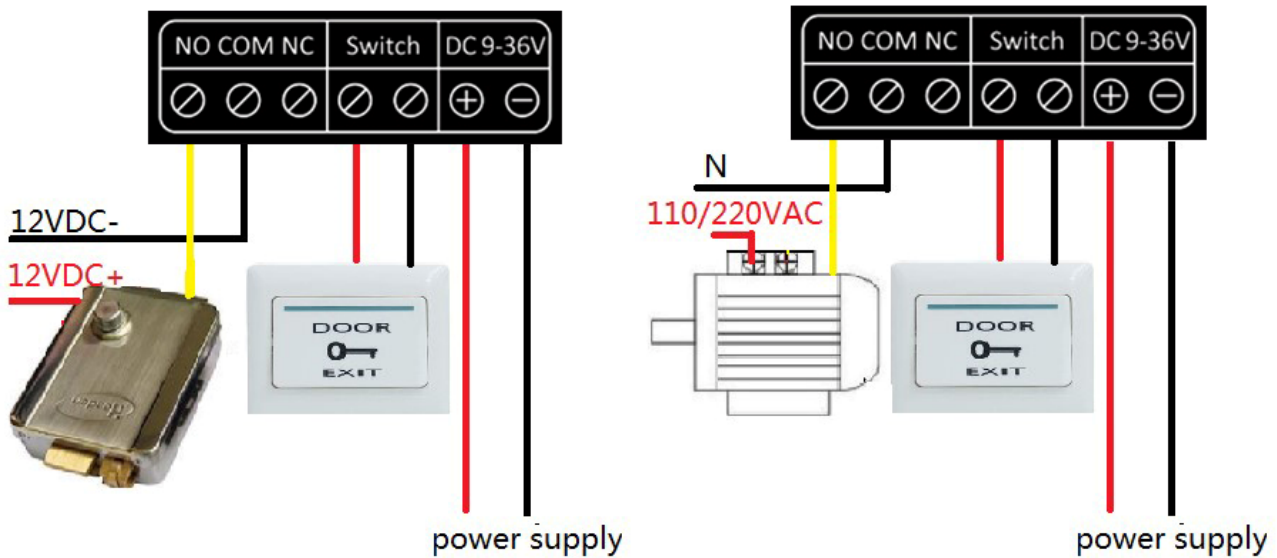In the backside of the unit ,please install the 4G SIM card

2) Connecting the Electronic Lock or Electric equipment

V FAQ

- **The WH-200 fail to register the net.Please affirm the following parameters**
  1 The unit cannot support PIN Code Protected SIM Card
  2 Sim card supports SMS and voice function.
  3 Contact the local network to check whether to support the device's frequency band
  4 The 4G Signals are enough,Not too low .above 10
    If the problem cannot be solved, please contact the distributor or manufacturer.
- **The WH-200 can work normally ,but fail to send SMS to the first user number**
  you can try to add the country code before the first number(refer to *WH-200 SMS Command Set*).When we add country code,we should add 00 or + before country code.Such as 44(country code in UK),we should use 0044 or +44 as country code in UK ,not 44.

WH-200 List of SMS Commands(briefly)

1 Introduction

1.1. Scope of the Document

This document presents the SMS Commands Set for *gate opener WH-200*

1.2. SMS Command Syntax

The **pwd** in the commands means the password, when you use it, please in stand of it by the digital number; All commands must be CAPITAL Lock LETTERS .Don't add spaces or any other character. Add your country code before the phone number, such as "0044" in UK

- **Basic syntax**

pwd<N><X>
N:some fixed character(the red letters in the following SMS commands)
X:the parameter that users set or control

1.3. SMS Command category

- **Read Command**
This command mainly inquire parameter values
- **Write Command**
This command sets the user-definable parameter values
- **Execution Command**
This command will control or reboot the device

Notice:
- The unit cannot support PIN Code Protected SIM Card
- If the command is incorrect, the WH-200 will return: **Command error, please resend command**

2 General SMS Commands

2.1 (MUST STEP)Set the SIM card number of the device

Syntax

Write Command
pwd#TELSIMcard Number#201#
Response(s)
201:SIMcard Number

Parameter Description

SIMcard Number

- **The SIM Card Number of the device**

Example:

1234#TEL66668888#201#	SIMcard Number:66668888

2.2 Set new password

Syntax

Write Command
pwd#Pnewpassword#
Response(s)
New Password:xxxx

Parameter Description

xxxx

- **The original password is 1234**
- **Password must be 4 digits**

Example:

1234#P6666#	change 1234 to 6666

2.3 Set authorized number

- **Inquire authorized user's information**
Syntax

Read Command
1.By serial number: **pwd#TELSerial Number?**
2.By Phone number: **pwd#TELPAuthorized User's Phone Number?**
3.By user's name: **pwd#TELAuthorized User's Name?**
4.By batch serial number: **pwd#TELserial number start#serial number end?**

Response(s)
Serial Number:Authorized Number
Authorized User's Name
Fr:Start Time
To:End Time

- **Set authorized phone number(4 methods)**

Write Command
1. Only Authorized phone number:
pwd#TELAuthorized Number#Serial Number#
2. Authorized phone number & user name:
pwd#TELAuthorized Number#Serial Number#Authorized User's name#
3. Authorized phone number & Start/End Time:
pwd#TELAuthorized Number#Serial Number#Start Time#End Time#
4. Authorized number & Start/End Time & user name
pwd#TELAuthorized Number#Serial Number#Start Time#End Time#Authorized User's name#

Response(s)
Serial Number:Authorized Number
Authorized User's Name
Fr:Start Time
To:End Time

- **Remove the authorized number(2 methods)**

Write Command
1. Just remove one user:
pwd#TEL#Serial Number#
2.Remove batch the Authorized Number:
pwd#TEL#Serial Number Start#Serial Number End#

Response(s)
Serial Number:Empty   or
Serial Number Start-Serial Number End:none

Parameter Description

Authorized Number

- **Authorized number means the one which can dial to control WH-200. Country code must be needed，before the country code we should add 00 or +,00 or + cannot be omitted.**

- **Highly recommend that the serial number of 001 is admin's cellphone number, because the relay action message and self-check auto report SMS message will be sent to the first position cellphone number.**

Serial Number

- **Serial Number is the position to store the authorized number, from 001~200**
- **Serial Number must be 3 digits**

Authorized User's name

- **It is be regarded as remarks of the authorized phone number**
- **Authorized User's name must be CAPITAL Lock LETTERS,Max:10**

Start Time & End Time

- **Start Time:the start time of this number can call in to control**

- **End Time:the end time of this number can call in to control**

- **End Time must be more than Start Time**

- **Start /End Time format:YYMMDDHHmm**

  YY:year   MM:month
  DD:day   HH:hour
  mm:minute

Notice:If authorized number is without start time and end time. Means this authorized number always can call in to control
Eamples:

1234#TEL003?	**Inquiry the authorized number at position 3**
003:008613500003333	
1234#TELSAM?	**Inquiry authorized number and name has**
003:00861350003333	**the letters of SAM**
SAMPLE	
1234#TELP123456789?	**Inquiry authorized number and numbers**
003:66123456789	**have 123456789**
1234#TEL001#010?	**Inquiry authorized numbers from the**
001:00861350003333	**position 1 to 10**
1234#TEL008613500008888#001#	**Set 13500008888 as the first user number.**
001:008613500008888	**Password is 1234.The 86 is country**
	code.00 cannot be omitted
1234#TEL008613500008888#002#AB#	**Set 13500008888 as the second user**
001:008613500008888	**Name:AB**
AB	
1234#TEL8888#003#2006080901#	**Set 8888 as the third user number**
2006081002#	**20:year,2020 06:month**
003:8888	**08:day 09:hour**
Fr:20/06/08,09:01	**01:minute**
To:20/06/08.10:02	**Start Time :2006080901**
	End Time :2006081002
1234#TEL6666#005#2006080901#	**Set 6666 as the fifth user number**
2006081002#JACK#	**20:year,2020 06:month**
003:8888	**08:day 09:hour**
JACK	**01:minute**
Fr:20/06/08,09:01	**Start Time :2006080901**
To:20/06/08.10:02	**End Time :2006081002**
	Name:JACK
1234#TEL#004#	**Remove the authorized number at position 4**
004:Empty	
1234#TEL#001#010#	**Remove the authorized numbers from the**
001-010:none	**position 1 to 10**

2.4   Set the authorization of phone number

Syntax

Write Command(Any phone number can dial to access the device)   **pwd#AA#**
Response(s)   **C-Type:ALL**

Write Command(Only authorized number can access it (Default)) **pwd#AU#**
Response(s) **C-Type:AUT**

Parameter Description

- **Warning! With the command(pwd#AA#), it will allow anyone to access the device**

Examples:

1234#AU# C-Type:AUT 1234#AA# C-Type:ALL

2.5   Set the relay close time

Syntax

Write Command **pwd#GOTClose Time#**
Response(s) **R-Time:xxxs**

Parameter Description

Close Time

- **Range:000-999.Unit:second.Default:1**

  0:relay will always keep close(ON) after call in until the next time the same phone number call in

Examples:

1234#GOT02# R-Time:02s 1234#GOT00# R-Time:00s

2.6 Enable/Disable return SMS confirmation when relay activated

Syntax

Write Command(Return ON/OFF SMS confirmation when relay activated) **pwd#R#**
Response(s) **R-SMS:ON**

Write Command(Not return ON/OFF SMS confirmation when relay activated (Default)) **pwd#N#**
Response(s) **R-SMS:OFF**

Write Command(Only return ON SMS confirmation when relay activated **pwd#C#**
Response(s) **R-SMS:C**

Write Command(Only return OFF SMS confirmation when relay activated **pwd#F#**
Response(s) **R-SMS:F**

Parameter Description

• **With the command(pwd#R#), when the relay action(close or open), the unit will return a SMS confirmation to you(the first user number)**
Examples:

1234#R# R-SMS:ON 1234#N# R-SMS:OFF

2.7 Enable/Disable remember relay status when power failure
Syntax

Write Command(Enable this function) **pwd#ER#**
Response(s) **R-Rem:ON**

Write Command(Disable this function (Default)) **pwd#DR#**
Response(s) **R-Rem:OFF**

Parameter Description

● **With the command(pwd#ER#), when the device re-power on,the relay will remain in the state before power lost**
Notice:If you want to use this function ,The relay close time must be set 00

Examples:

1234#ER# R-Rem:ON 1234#DR# R-Rem:OFF

2.8   Enable/Disable SMS feedback when setting SMS command
Syntax

Write Command(Enable this function) **pwd#FON#**
Response(s) **F-Back:ON**
Write Command(Disable this function(Default)) **pwd#FOFF#**
Response(s) **F-Back:OFF**

Parameter Description

● **With the command(pwd#FON#).When you set the write command,if this command is be set successfully,the SMS confirmation will be sent to you.If you do not want to receive these SMS feedback,you can disable this function(pwd#FOFF#)(When you send the write command ,if the command works.the Run Led will flash three times quickly.if not work,the Run led will not flash quickly). if the command you set is read command.The device will send SMS feedback to you,no matter the function is enable or disable**
Examples:

1234#FON# F-Back:ON 1234#FOFF# F-Back:OFF

2.9 Inquiry version number
Syntax

Write Command
pwd**#IMEI#**

Response(s)
IMEI: imei number of device **Version : WH-200 V2.0**

2.10 Set the device description
Syntax

Write Command
pwd**#DT**Description**#**

Response(s)
description

Parameter Description

Description

- **You can add description with WH-200(such as install position,user information),the description will show in SMS which WH-200 send to you.Max:20**

Examples:

1234#DTMachine Room# Machine Room

2.11 Enable/Disable self-check auto report SMS or dial to the 1 st number

Syntax

Write Command
pwd**#C**xx**#**yyy**#**z**#**

Response(s)
C:xx,yyy,SMS/Call/None

Parameter Description
The function is interval to report the current status by SMS or call to the 1st Authorized number

xx

- **The start time of sending the current status's SMS ,unit:hour,range:00~23,must be 2 digits. Default:08.**

yyy

- **The interval report time of sending current status's SMS.Unit:hour. Range:000~999,must be 3 digits,000:disable this function,default:000**

z

- **The report type.range:0-3. 0:none 1:SMS ,2:Call, 3:SMS & Call.Default:1**

Notice:If you select call ,if triggered,The device will call to the 1st Authorized number,if we answer it,it automatically hang up the phone after 3~5 second ,if we do not answer it ,it will call three times until we answer it

Examples:

1234#C08#024#0#	Start Time:08:00. Interval:24 hour
C:08,024,None	Execute:Nothing
1234#C08#024#1#	Start Time:08:00. Interval:24 hour
C:08,024,SMS	Execute:send SMS to 1st Authorized number
1234#C08#024#2#	Start Time:08:00. Interval:24 hour
C:08,024,Call	Execute:call to 1st Authorized number
1234#C08#024#3#	Start Time:08:00. Interval:24 hour
C:08,024,SMS/Call	Execute:send SMS and call to 1st Authorized number

2.12 Inquire current status

Syntax

Read Command
pwd#EE#

Response(s)
Current time of the device
GSM signal value
Current relay status
Total authorized numbers
Enable/disable self-check auto report SMS or dial to the 1 st number
The authorization of phone number
Enable/Disable remember relay status when power failure
The relay close time
Enable/Disable return SMS confirmation when relay activated
Enable/Disable SMS feedback when setting SMS command
Enable/Disable automatically delete expired authorized phone numbers
The device description

Parameter Description

GSM signal value

- **Range:0~31,GSM signal quality. we suggest to keep the signal level above 12. If it is below 12, please make sure you had connected with an external GSM antenna, or take the device to a better open area where has a better GSM signal.**

Current relay status

- **ON:close.OFF:open**

Total Authorized number

- **Total number of Authorized numbers**

Example:

1234#EE#	20:year,2020. 05:month.06:day
20/05/06,10:18:08	10:hour 18:minute 08 :second
S:19	GSM signal value:19
R-ON	The relay is closed
Usage:021	The device have 21 authorized number
C:08,012,SMS	Refer to the text above
C-Type:AUT	...
R-Rem:OFF	
R-Time:01s	
R-SMS:OFF	
F-Back:OFF	
A-Del:OFF	
Machine Room	

2.13 Control the relay ON/OFF by SMS command

Syntax

Exec Command(Control the relay close) **pwd#ON#**
Response(s) **R-ON**
Exec Command(Control the relay open) **pwd#OFF#**
Response(s) **R-OFF**

Examples:

1234#ON#
R-ON
1234#OFF
R-OFF

2.14 Reset all parameters to factory default
Syntax

Write Command
pwd#RESET#

Response(s)
Reset OK! It will auto restart after 8 seconds

Examples:

1234#RESET#
Reset OK! It will auto restart after 8 seconds

Notice:The other way to reset all parameters to factory default is like this:
You can press and hold the RESET button for several seconds until the Run Led is always ON, and then after 5 seconds ,it will reset the WH-200 to factory default.If reset successfully,it will auto restart after 8 seconds

2.15 Inquire the Serial Number of authorized number

Syntax

Read Command
pwd#USER?

Response(s)
Serial Number

Example:

1234#USER?
001   the Serial Number of authorized number :
003-005   001,003,004,005,012
012

Notice:When you do not know which serial number has authorized number ,This command is useful

3 List of SMS Commands(briefly)

Function	SMS Command	Meaning
Change password	1234#P6666#	Default is 1234 (4 characters)
Add new user	1234#TEL0044777777#002#	Add phone number to 2nd position of the user list. From 001 – 200. The "001" is the Admin.
Check user's position	1234#TEL005?	Check the 5th User's Phone
Delete the user	1234#TEL#005#	Delete the 5th user in the user list.
Set the authorization	1234#AA#	Anyone could open the door by CALL
	1234#AU#	Only authorized users could open the door
Set the relay close time	1234#GOT10#	The relay will close for 10 s.Relay time:000-999.Default:1;Unit:second
Operate The door by SMS	1234#ON#	Open the door by SMS
	1234#OFF#	Close the door by SMS
Inquire Current Status	1234#EE#	Inquire Current Status
Reset all parameters	1234#RESET#	Reset all parameters

Notice:There are also many functional instructions, if you need please refer to the   text above