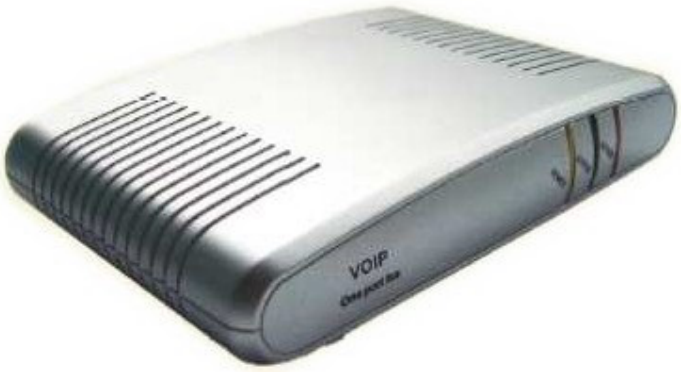
PERFECTONE

GW-200 VoIP Gateway



User Manual

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Breif Introduction and how-to-start information

GW-200 VoIP Gateway functions as an analog adaptor with an ordinary telephone. It has a power adapter interface, an RJ45 interface, an RJ11 interface and an “IP/SET” key. RJ45 interface is used to connect to LAN and RJ11 interface is used to connect the phone. The “IP/SET” key is to initiate the voice prompt stored to announce the local IP address; to enter safe mode to retrieve the firmware and to set the IP type and IP address.

To start, please connect your GW-200 VoIP Gateway with the LAN, a phone and the power supply properly. (see the following picture)The GW-200 will boot up. It takes 30 seconds until the Gateway is in working mode. Please press “IP/SET” key and pick up the phone’s handset, you should be able to hear dial tone or busy tone. Now let us configure it.

1. If you are using DHCP IP addressing

Please pick up the phone, press 12341, then press the “IP/SET” key on the gateway and hang up the phone. GW200 will then reboot and connect to DHCP server to get the IP address. After 30 second, press the “IP/SET” key and then pick up the phone, you will hear the voice prompt from the handset telling you the current IP address of the gateway.

2. If you are not using DHCP IP addressing

If your LAN does not use DHCP addressing, each device concurrently connected to it must be assigned its own unique IP address. To allocate an IP address for GW-200, for example 192.168.1.100, please pick up the phone, press 12340, then press the “IP/SET” key on the gateway and hang up the phone. After the

gateway has finished rebooting, it will be in static IP mode. Then you pick up the phone again, press 1234 192*168*1*100, then press the “IP/SET” key on GW-200 and hang up the phone. Gateway will reboot again. Now the phone’s IP address is 192.168.1.100, if you want to check it, please refer to the item 1.

Features

Hardware

- Main chip—pa1688 50MHz
- Data Memory—2MB SDRAM
- Program Memory—1 MB Flash memory
- Ethernet Jack—10/100M jacks
- AC/DC adapter—Input AC 230V or 120V，Output 9V DC, 500mA

Software

- DHCP support for LAN or Cable modem
- PPPoE support for ADSL or Cable modem
- Set phone by HTTP web browser (IE6.0) or Telnet
- Upgrade by FTP
- Support major G.7XX and gsm610 audio codec
- VAD(Voice Active Detect)
- CNG (Comfort Noise Generation)
- Dynamic voice jitter buffer
- G.168/165 compliant 16ms echo cancellation
- Tone generation and Local DTMF re-generation according with ITU-T
- E.164 dial plan and customized dial rules
- Voice prompt
- Hotline

Standard and Protocol

GW-200 supports following standard and protocol:

- IEEE 802.3 /802.3 u 10 Base T / 100Base TX
- Major G.7XX and gsm610 audio codec

- TCP/IP: Internet transfer and Control Protocol
- RTP: Real-time Transport Protocol
- RTCP：Real-time Control Protocol
- VAD/CNG : save bandwidth
- DHCP：Dynamic Host Configuration Protocol
- PPPoE：Point to Point Protocol over Ethernet
- DNS：Domain Name Server
- Telnet：Internet's remote login protocol
- FTP：File Transfer Protocol
- HTTP：Hyper Text Transfer Protocol
- Build in proxy

Operating requirements:

- Operation temperature: 0 to 50°C
- Storage temperature: -10° to 60°C
- Humidity: 10 to 90% no dew

Electric requirements:

- Voltage: 9V DC 500mA
- Power adapter: AC to DC Input 230VAC ,Output 9VDC, Current 500mA
- Network interface:1 RJ-45 Ethernet Connector
- FXS:1 FXS Connector

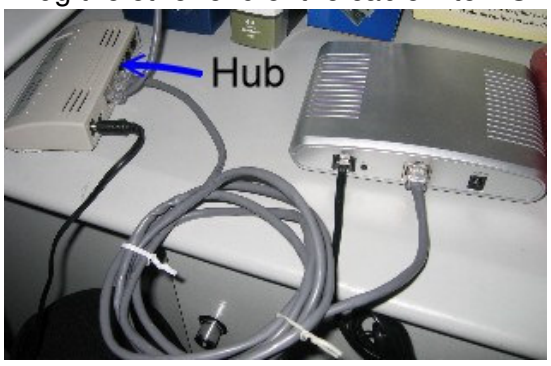
Size：

152 x 115 x 32 mm (L x W x H)

Installation:

1．Connect handset to base: insert handset cord into handset cord jack at the left side of the base.

2．Connect Gateway to Internet: plug the RJ-45 Ethernet cable into the Ethernet Jack. Plug the other end of the cable into HUB.

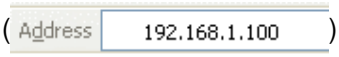


3．Power on Gateway: plug the power cord adapter into the Power Jack. Then plug the other end of the power cord adapter into the appropriate wall outlet.

Configuration

To configure GW-200, you can use web browser and Telnet commands.

Configure by Web browser

After you've got the local IP address of the gateway from the voice prompt, On a PC connecting with the gateway or at the same segment of the gateway, double click icon to open the IE browser. Input the IP address of the gateway into address bar (

), and then input password of the gateway into the following page. Default password 1234 is ordinary password. Then click

button. The following configured page will popup. Input the data by your computer's keyboard according to your LAN parameters under the "network settings", "protocol settings", "phone settings" and "audio settings". When finished, click "update" and quit the screen.

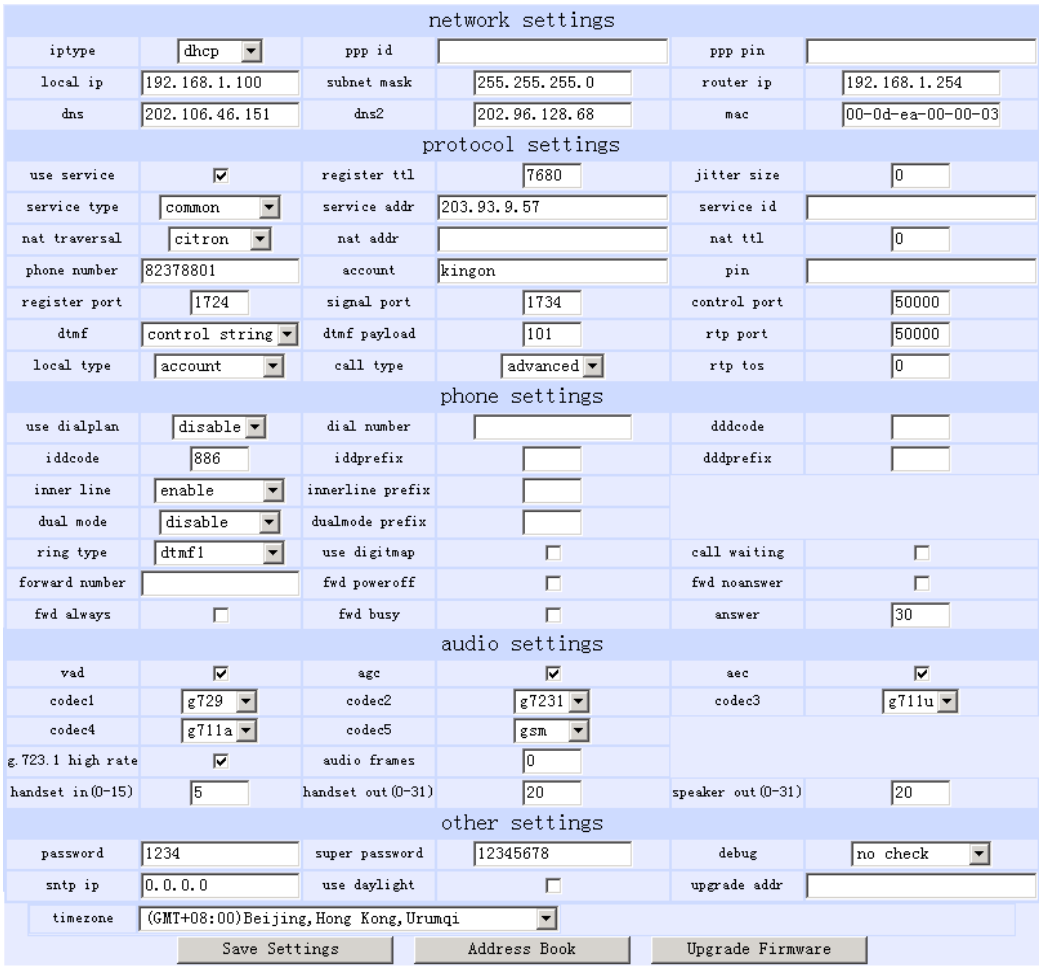


Fig 3.1 Http Setting

Network Setting：

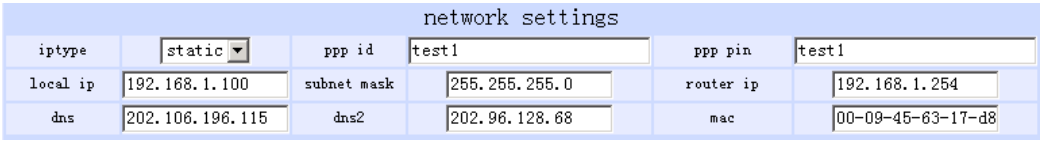


Fig 3.2 Network Setting

- **iptype**: Set how gateway gets relevant network parameters by selecting corresponding item from drop down list.

  - **static ip**: Select this item to authorize users set IP address, subnet

mask and router IP address of gateway manually.

- **dhcp**: Select this item to enable DHCP mode. With this system, your LAN or router automatically assigns all the required network parameters to any device connected to it when the device log on. GW-200 Gateway is shipped from the factory with DHCP on. So, if you're LAN or router is configured to use DHCP addressing, the gateway's LAN parameters will automatically be configured as soon as it is connected to the LAN or router and powered up.

- **pppoe** :Those ADSL and Cable Modem users please select this item for it is a protocol especially designed for them. With this system, ADSL ISP automatically assigns all the required IP parameters to any device connected to it when the device log on.

- **modem** : If the gateway used with modem, please select this item to get relevant network parameters auto. Then please fill ID and pin into ppp id and ppppin fields.

- **ppp id:** With **pppoe** or **modem** selected in **iptype** drop down list, please enter the user name here.

- **ppp pin:** With **pppoe** or **modem** selected in **iptype** drop down list, please enter the password here.

- **local ip:** With **static ip** selected in **iptype** drop down list, please enter IP address of gateway here.

- **subnet mask:** With **static ip** selected in **iptype** drop down list, please enter subnet mask of Gateway here.

- **router ip:** With **static ip** selected in **iptype** drop down list, please enter router IP address of Gateway here.

- **dns:** With **static ip** selected in **iptype** drop down list, please enter IP address of DNS server here.

- **dns 2:** With **static ip** selected in **iptype** drop down list, please enter IP address of backup DNS server here.

- **mac:** MAC address is the physical address supplied by the Ethernet NIC. GW-200 gateway is shipped from the factory with a unique algorism MAC address printed on the back of the base.

Protocol Setting：

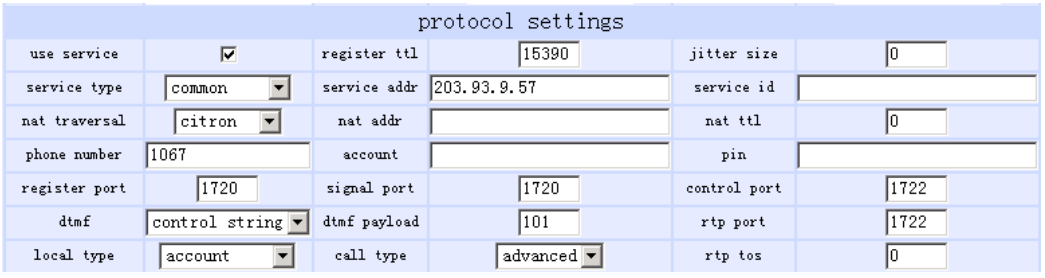


Fig 3.3 Protocol Setting

- **use service:** Enable/disable service by checking/clearing this box.

  To make calls through gatekeeper, please check this box; otherwise, gateway can only make IP-to IP calls.

- **register ttl :** The gateway will send a keep-alive registration message to gatekeeper every "**register ttl**" seconds. The value range is 10-65535. Default is 60.

- **jitter size :** Set buffer size of RTP package. The value range is 0-32.

- **service type**: This option is used to accommodate the miscellaneous requirements of the system providers. When gateway is connected to these systems, please select the corresponding service type.

  - **Common:** no special requirements

  - **Mediaring:** use Mediaring prepaid card

  - **Etalk:** use etalk prepaid card. When this is selected, please select "**dialnum**" from the "**Use dialplan**" list box and put "**00**" into "**dial number**".

  - **Auvtech:** use Auvtech's system. When connected with Auvtech's system, please select "**auvtech**" from the "**nat traversal** " list box, select "**account**" from the "**local type**" list box.

  - **Subcentrex:** Use Subcentrex's system

  - **Ringtec:** Use Ringtec's system. When this is selected, please select "**dialnum**" from the "**Use dialplan**" list box and put Ringtec account into "**dial number**".

  - **Smartcon:** Use Smartcon's system

  - **Dda:** Use Dda's system

  - **Vida:** Use Vida's system

  - **Citron:** Use Citron's system

  - **Asiasoft:** Use Asiasoft's system

  - **Huawei:** Use Huawei's system

  - **Asiainfo:** Use Asiainfo's system

  - **Lucent:** Use Lucent's system

- **IPN:** Use IPN's system
- **Yiyang:** Use Yiyang's system
- **Thinker:** Use Thinker's system
- **Suntek:** Use Suntek's system

- **service addr, service id**: Please put the URI (domain name/IP address) of the server into "**service addr**".

If "**use service**" is checked, please put the URI of gatekeeper into "**service addr**" .The default service port is 1719. If the gatekeeper has a GKID, please put it into "**service id**".

If "**use service**" is not checked, to make calls through gateway, please put the URI of the gateway into "**service addr**". To make IP-to-IP call, please clear this field. In both cases, the default service port is 1720.

- **nat traversal:** When the gateway with private IP address need communicate with other IP phones in a different LAN or on Internet, please select an item from dropdown list to set the proxy used by the gateway.
  - **disable:** Select this item when the log in server and gateway in the same LAN, or the log in system supports the gateway working behind the LAN.
  - **enable:** When the system does not support gaeway working behind the LAN, please select this item to search public IP address of the NAT device. With this item selected, "**nat addr**" field will be activated. Besides, port mapping (port forwarding) needs to be properly set up on NAT device.
  - **citron:** With Citron private protocol used, select this item to fit into the GnuGK system transferring the voice and signal by router.
  - **auvtech:** Select this item with Auvtech private system used.
  - **vida:** Select this item with Vida private system used.
  - **aivgr:** Select this item with aivgr private system used.
- **nat addr:** When "**nat traversal**" is set to "**enable**", please put the

domain name of the servers (These web server helps to find out the public IP of the IP phone) into "**nat addr**", such as **www.whatismyip.com.**

- **nat ttl:** When gateway sit behind a NAT device, it will send packets to server every "**nat ttl**" seconds to keep the port mapping on the NAT device alive. "**nat ttl**" is an integer between 10 and 65535 .default value is 20.

- **phone number:** The local phone number or username of this phone, usually is allocated by system.

- **account**: While calling card is set, please type the account of chosen card into this field; while **md5 account** item selected in **local type** dropdown list, enter ID here; while **account** is selected in **local type** dropdown list, enter ID here. While **prefix** item selected in **use dialplan** dropdown list, enter language indicating number, card number and # here, such as 14589653185 # .

- **pin:** While calling card is set, please type the password of chosen card into this field; while **md5 account** item selected in **local type** dropdown list, enter password here. While **prefix** item selected in **use dialplan** dropdown list, enter password and # here, such as 3185.

- **register port:** The local UDP port registered with server to accept incoming handshaking messages. any number between 1024 and 65535 is acceptable.

- **signal port:** This port is Q.931 port using TCP protocol, can be any number between 1024 and 65535.

- **control port:** This port is H.245 port using TCP protocol, can be any number between 1024 and 65535.

- **dtmf:** Set DTMF signal sending way by selecting **control string**, **inband audio**, **signal keypad** or **rfc 2833** from list box.

- **dtmf payload :** When DTMF select **rfc 2833**.This parameter can be used indicating type of RTP payload type. The value can be use integer 96-101.

- **rtp port:** RTP port is the port transferring and receiving voice packets using UDP protocol. This is an even number between 1024 and 65535,

can't be the same as "**register port**".

- **local type:** This parameter refers to how gateway authenticate itself to the gatekeeper. The meaning of each item is as follow:
  - **phone number:** Use phone number as E.164 and ID to login the GK.
  - **account:** Use phone number as E.164 and designated ID filled in account field as ID to login GK.
  - **auto:** Use support automated negotiate authentication account and pin about MD5 or CAT .
  - **md5:** Use MD5 authentication account and pin.
  - **cat:** Use CAT authentication account and pin.
  - **sha1:** Use SHA1 authentication account and pin.
- **call type:** Set call type by selecting the items in drop down list.
  - **normal:** Call out in normal way by selecting this item.
  - **advanced:** Call out in faststart and tunneling way by selecting this item. It is a recommended way with protocol used.
- **rtp tos:** Set the TOS field of the IP header of the RTP packets. The bigger this value is 0, the higher priority the packet is .

phonesettings:

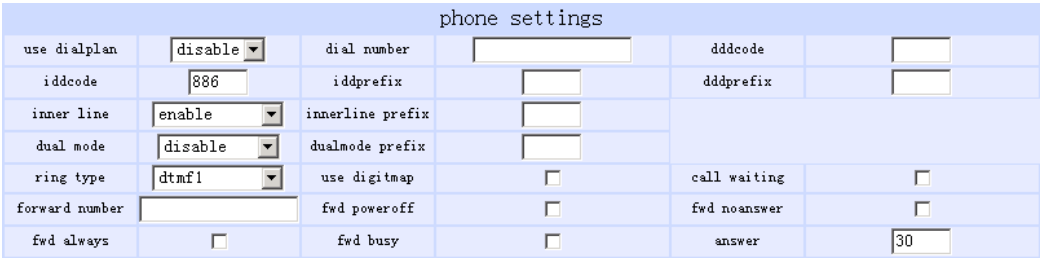


Fig 3.4 Phone Setting

- **use dialplan:** Set whether use dial plan or use dial number by selecting the corresponding item in drop down list.
  - **disable:** Do not use dial plan or dial number by selecting this item.
  - **enable:** Use dial plan by selecting this item.
  - **dialnum:** Use dial number by selecting this item. With this item selected, please enter the dial prefix into **dial number** field.
  - **prefix:** Use 179XX service by selecting this item.
  - **Hotline:** Use Hotline function by selecting this item. With this item selected, please enter the hotline number into **dial number** field.

✎**Note** With 179xx service used, please set as follows: fill call prefix into dial number field, such as 17930; type; language indicating number, card number and # into account field; fill password and # into pin field.

- **dial number:** With **dialnum** selected in **use dialplan** drop down list, please enter the dial prefix into this field according to requirement of log in server. For example, with eTalk card used, enter 00 here.
- **ddd code:** With **enable** or **dialnum** selected in **use dialplan** drop down list, set area code according to E.164 dial rule. For example,

Beiing 10; Shanghai 21.

- **idd code:** With **enable** or **dialnum** selected in **use dialplan** drop down list, set country code according to E.164 dial rule. For example, China 86; U.S.A .1.
- **idd prefix:** With **enable** or **dialnum** selected in **use dialplan** drop down list, set international call prefix according to E.164 dial rule, such as 00.
- **ddd prefix:** With **enable** or **dialnum** selected in **use dialplan** drop down list, set long distance call prefix according to E.164 dial rule, such as 0.

✎**Note** With **dialnum** seletcted in use **dialplan** drop down list, you can also set dddcode, iddcode, iddprefix and dddprefix according to requirement of system.

- **innerline:** Enable/disable innerline call by selecting corresponding items from dropdown list.
  - **disable:** Disable call innerline by selecting this item.
  - **enable:** enable call innerline by selecting this item.
- **innerlineprefix:** With **enable** selected in **innerline** dropdown list, please fill the number prefix to pick up innerline , such as 0.
- **Dual mode :** This setting no need to set at moment.

- **Dualmode prefix:** This setting no need to set at moment.

  - **ring type:** This setting no need to set at moment.

  - **Use digitmap:** Enable/disable digit map by checking/unchecking the box.

  - **Call waiting:** Enable/disable call waiting by checking/unchecking the box.

  - **forward number:** Enter receiving forwarded calls phone number into this field.

  - **fwd poweroff:** Forward calls if power off by checking this box. Please enter receiving forwarded calls phone number into **fwd number** field.

  - **fwd noanswer:** Forward calls without replying by checking this box. Please enter receiving forwarded calls phone number into **fwd number** field.

  - **fwd always:** Forward all calls by checking this box. Please enter receiving forwarded calls phone number into **fwd number** field.

  - **fwd busy:** Forward calls if busy by checking this box. Please enter receiving forwarded calls phone number into **fwd number** field.

  - **answer:** Enter a number from 0 through 60 to set the entries of the seconds before the phone answer the call auto or forward the calls.

Audio settings:

audio settings					
vad	☑	agc	☐	aec	☑
codec1	g7231	codec2	g729	codec3	g711u
codec4	gsm	codec5	null		
g.723.1 high rate	☑	audio frames	2		
handset in	7	handset out	20	speaker out	20

Fig 3.5 Audio Setting

- **vad:** Enable/disable VAD (voice activity detection).
- **agc:** Check for enable the Auto Gain Coctrol.
- **aec:** Check for enable Auto Echo Cancellation.
- **codec1:** Set the priority 1of the audio compression algorithm. The options are **g729** , **g7231** , **g711u** , **g711a** and **gsm**.
- **codec2:** Set the priority of the audio compression algorithm. The options are **g729** , **g7231** , **g711u** , **g711a** and **gsm**.
- **codec3:** Set the priority 3of the audio compression algorithm. The options are **g729** , **g7231** , **g711u** , **g711a** and **gsm**.
- **codec4:** Set the priority 4of the audio compression algorithm. The options are **g729** , **g7231** , **g711u** , **g711a** and **gsm**.
- **codec5:** Set the priority 5of the audio compression algorithm. The options are **g729** , **g7231** , **g711u** , **g711a** and **gsm**.
- **g.723.1 high rate:** enable/disable g.723.1 high rate. G.723.1 high rate is 6.3kbps, low rate is 5.3kbps.
- **audio frame:** Set audio frames in RTP package. Minimum is 1 and maximum is 8.
- **handset in:** Drag the slider to adjust the volume of handset input. Drag it to the left to reduce the volume; while drag it to the right to increase the volume.
- **handset out:** Drag the slider to adjust the volume of handset output.
- **speaker out:** This setting no needed to set at this moment.

Other settings:

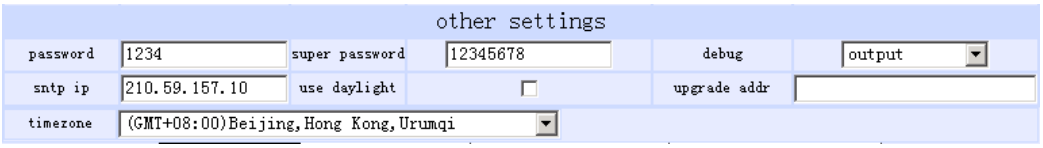


Fig 3.6 Other Setting

- **password:** Set the password of the phone. (Default password is 1234).
- **super password:** Set the super password of the phone.(Default super password is 12345678).
- **debug:** Set the debug level of the phone.
  - **disable:** Disable output the debug message by selecting this item.
  - **output:** Output the operation information to the window, such as register, input by selecting this item.
  - **output all:** Output all debug information and data in test window by selecting this item.
  - **remote debug:** Save the debug information in SDRAM of IP phone by selecting this item.
  - **no check:** Disable checking firmware tags when upgrading. This is not suggested, because it will increase the risk of upgrading the wrong firmware into the phone.
- **upgrade addr:** Put IP address or domain name obtained by ISP of FTP server supplying upgrade program into this field.
- **nts ip:** No needed to set for the Gateway(GW-200).

- **use daylight:** No needed to set for the Gateway(GW-200).

- **timezone:** No needed to set for the Gateway(GW-200).

When debug set as 0[disable], if input ordinary password (default one is 1234), then following page will pop up after clicking login. And only those parameters can be modified.

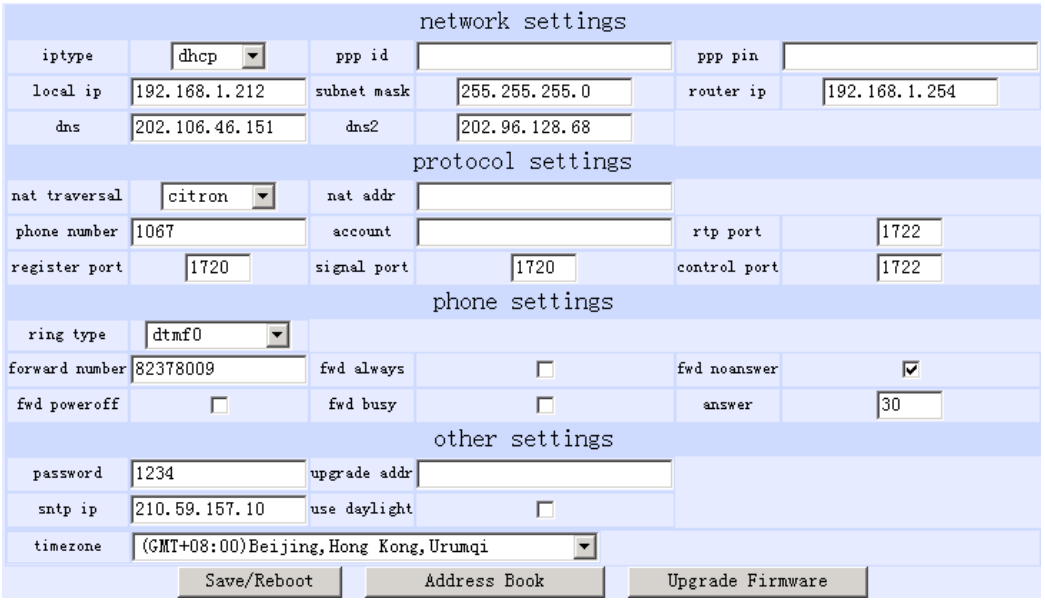


Fig 3.7 Setting Page using ordinary pin with Debug set as 0 [disable]

- **Update:** Click this button to save the configuration and the phone will reboot. Once the phone reboots successfully, the new configuration is effective.

✎**Note** After entering set page, if **Update** button is not clicked within 5 seconds, then when you click it again, the index page asking for pin will pop up again. Then please input the password again to enter the set page and then click **Update** button to confirm the modification.

Phone Book: Click this button to open the speed dial settings page. Please refer to Fig 3.7. In this page, you can set and save the speed dial number by

typing the name into the **Name** field and then entering the corresponding number following the name. For example, input Jack in Name field following 001, and then input 5989426454 into Phone number field. Then Jack's number 5989426454 is saved in phone book. Then please click **Save/Back** button. In normal state, you can use speed dial to call numbers saved in phone book.

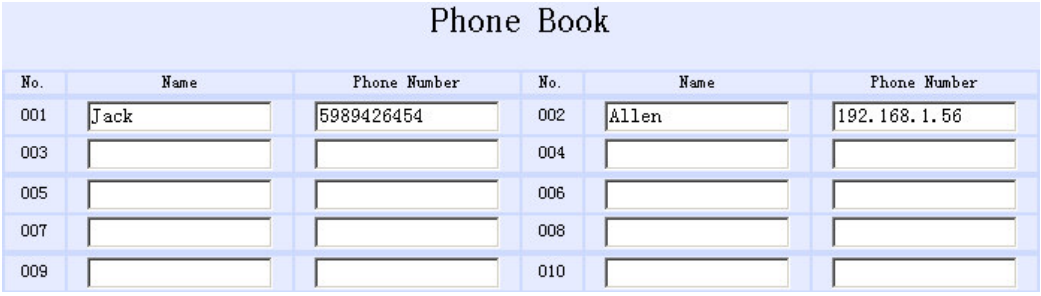


Fig 3.8 Phone Book Illustration

Upgrade Program: Click this button to update the program of gateway. Before updating, please fill IP address of FTP server into **upgrade addr** field, and then click this button. Then the gateway will read the corresponding bin files from the server and then load into the gateway.

Update Digitmap: Click this button to update the digitmap of the gateway. Before updating, please fill IP address of FTP server into **upgrade addr** field, and then click this button. Then the gateway will read the corresponding map files from the server and then load into the gateway.

- **Telnet Configuration**

  - On the PC choose **Start>Run**, and then type **telnet 192.168.1.100** into **Run** field in popuping Run dialog. Or input **telnet 192.168.1.100** in the DOS window. Then the following information will be displayed.

GW-200 V1.40 settings
Password :

Then please type password. With debug is set as 0[disable], if type ordinary password (default one is 1234), after Retun, you will see :

Password : ****

```
P:\>
```

If you type super password, then you will see:

```
Password : ********
P:\>
```

Above information indicates that gateway is under setting mode, and then you can set the GW-200 gateway by using the telnet commands.

- **GW-200 Gateway Telnet Commands Explanation**

GW-200 gateway Telnet Commands

Command	Function
?	Supply command name and parameters
get	Display basic parameters of the GW-200 gateway
set	Set parameters of the GW-200 gateway
store	Save current settings to designated position
load	Load designated settings to current position
exit	Exit from the setting mode without saving the configuration
write	Exit with saving all configurations and restart GW-200 gateway
ping	Ping other net parameter
ftp	The gateway connects to FTP server and then get the files

Detail description of GW-200 Telnet commands

Command ?

Syntax description: No optional parameter

Usage: Type command name and parameters following P:\> . Be used as the keyword to supply keyword and parameters of the relevant commands.

Relevant usage: None

Detailed description:

? List help of all commands

For example:

```
P:\>?
set
get                 list settings
store x             store current to xth settings
load x              load xth settings to current
exit
write               save settings
```

Command get

Syntax description: No optional parameter of keywords

Usage: Display basic parameters of the GW200 gateway

Relevant usage: None

Detailed description:

get Display basic running parameters of the GW-200 geatway. Input ordinary password without debug being set as 0[disable], or input super password with debug set as 0[disable], then following parameters of gatway will be displayed:

```
GW-200 V1.40 .014 settings
Password: ********
P:\>get
iptype 0[static]
ip  192.168.1.100                subnetmask  255.255.255.0    router
192.168.1.254
dns  202.106.196.152          dns2  202.106.196.115              mac
00-09-45-65-a3-e6
service 1[enable]
servicetype  0[common]   serviceaddr  203.93.9.57          serviceid
```

[empty]
nattraversal 1[enable] nataddr www.showmyip.com natttl 30
phonenumber 182378009 account [empty] pin [empty]
registerport 6800 signalport 6800 controlport 6802
registerttl 60 rtptos 0 rtpport 6802
jitter size 0
calltype 1[advanced] localtype 0[phonenumber] dtmf 0[control string]
dtmfpayload 101
dialplan 2[dialnum] dialnumber 17911 dddcode [empty]
iddcode [empty] iddprefix [empty] dddprefix [empty]
innerline 1[enable] innerlineprefix [empty] digitmap 0[disable]
dualmode 0[disable] callwaiting 0[disable]
answer 5 ringtype 0[dtmf0]
fwdnumber [empty] fwdpoweroff 1[enable]
fwdalways 0[disable] fwdbusy 0[disable] fwdnoanswer 0[disable]
audiotype 0[g7231] audioframes 1 6.3k 1[enable]
vad 1[enable] agc 0[disable] aec 1[enable]
handsetin 9 handsetout 21 speakerout 21
codec1 1[g7231] codec2 0[g729] codec3 2[g711u]
codec4 4[gsm] codec5 5[null]
password 1234 superpassword 19750407
debug 1[output]
upgradeaddr [empty]
sntpip 0.0.0.0 daylight 0[disable]
timezone 55[(GMT+08:00)Beijing,Hong Kong,Urumqi]

Input ordinary password with debug set as 0[disable], following information will be seen:

GW-200 V1.40 settings

```
Password:****
P:\>get
iptype 0[static]
ip   192.168.1.100        subnetmask   255.255.255.0          router
192.168.1.254
dns 202.106.196.152       dns2 202.106.196.115
nattraversal 1[enable]   nataddr                    rtpport 5144
registerport 5142         signalport 5142          controlport 5144
account [empty]           pin [empty]
phonenumber 182378009 fwdpoweroff 0[disable]
fwdalways  0[disable]      fwdbusy  0[disable]        fwdnoanswer
0[disable]
ringtype 0[dtmf0]         answer 5
password 1234
upgradeaddr [empty]
sntpip 0.0.0.0            daylight 0[disable]
timezone 55[(GMT+08:00)Beijing,Hong Kong,Urumqi]
```

Command set

Syntax description: set keywords value

Usage: Used to configure password and other running parameters of GW-200 gateway.

Detailed description:

set iptype X

Set how gateway gets relevant network parameters. X ranged from 0 through 3: 0: authorize users set IP address, subnet mask and router IP address of gateway manually; 1: use DHCP mode. With this system, your LAN or router automatically assigns all the required network parameters to any device connected to it when the device log on. GW-200 gateway is shipped from the factory with DHCP on. So, if your LAN or router is configured to use

DHCP addressing, the gateway's LAN parameters will automatically be configured as soon as it is connected to the LAN or router and powered up; 2: use PPPoE mode. Those ADSL and Cable Modem users please select this item for it is a protocol especially designed for them. With this system, ADSL ISP automatically assigns all the required IP parameters to any device connected to it when the device log on; 3: use modem mode. Those who use gateway with modem, please set the value as 3.

set pppid XXX

With **iptype** set as **2**, use this command to set ADSL ID; with **iptype** set as **3**, use this command to set Modem ID.

set ppppin XXX

With **iptype** set as **2**, use this command to set ADSL pin; with **iptype** set as **3**, use this command to set Modem pin.

set ip XXX.XXX.XXX.XXX

With **iptype** set as **0**, use this command to set IP address of gateway .

set subnetmask XXX.XXX.XXX.XXX

With **iptype** set as **0**, use this command to set subnet mask of gateway.

set router XXX.XXX.XXX.XXX

With **iptype** set as **0**, use this command to set router IP of network

with gateway.

set dns XXX.XXX.XXX.XXX

With **iptype** set as **0**, use this command to set IP address of DNS server.

set dns2 XXX.XXX.XXX.XXX

With **iptype** set as **0**, use this command to set IP of backup DNS server.

set mac XX-XX-XX-XX-XX-XX

Set MAC address of the GW-200 gateway. Parameter xx-xx-xx-xx-xx-xx must be an HEX number.

set service X

Set register the gatekeeper or not. X ranged from 0 through 1. 0: do not register; 1: register.

set service type X

Enable/disable the repaid and service system .choose the repaid server provider. Parameter x ranged from 0 through 29:

0: common: disable repaid card; 4: use Mediaring service; 2: use eTalk card; 3: use Auvtech system; 5: use Ringtec service; 6: use Smartcon service; 7: use dda service; 8: use vida service; 9: use citron system; 10: use asiasoft system; 12: use zte system; 13: use huawei system; 16: use asiainfo system; 17: use Lucent system; 19: use IPN system; 20: use yayuang system; 21: use

thinker system; 22: use suntek system; 28: use txtc system.

set serviceaddr XXXX

Set IP address or domain name of gatekeeper.

set serviceid XXXXX

Set service ID according to required by service system.

set nattraversal X

Set NAT traversal or not. X ranged from 0 through 7: 0: do not use. When the log in server and gateway in the same LAN, or the log in system supports the gateway working behind the LAN; 1: Use NAT traversal. When the login system does not support gateway working behind the LAN, please use this value to search public IP address of the NAT device. With this item selected, please make port mapping on NAT device; 2: With Citron private protocol used, use this value to fit into the GnuGK system transferring the voice and signal by router; 3: use this value with Innopath private system used; 5: use this value with vida private system used; 6: aivgr use this value with aivgr private system used; 7: use this value with Eproxy private system used.

set nataddr XXXXX

Set IP address of NAT device wan port or URI of free assistant service (Such as www.showmyip.com etc.) in Internet.

✎ **NOTE** The free service list of Internet： www.ip-calculator.com;

www.ipchicken.com;
www.ipchicken.com;www.showmyip.com;www.whatismyip.com;
www.myipaddress.com; www.whatismyipaddress.com;
ip.sbbs.net;
www.whatismyipaddress.net;checkip.dyndns.org

set natttl XX

Set NAT TTL XX is an integer between 10 and 65535 sec. default value is 20 sec.

set phonenumber XXXXXXXX

Set a phone number of GW-200 gateway. Value xxxxx must be an Arabic numeral and no longer than 16 characters.

set account XXXXXX

While calling card is set, set account of chosen card; while **local type** is set use authentication type, set user ID; while **set localtype** is set as 1, set ID.

set pin XXXXXXXXXX

While calling card is set, set password of chosen card; while **local type** is set authentication type, set password.

set registerport XXXX

Set register port. XXXX is range from 1024 through 6553.

set signalport XXXX

This port is Q.931 port using TCP protocol. **XXXX** is range from 1024 through 65535.

set controlport XXXX

This port is H.245 port using TCP protocol. XXXX is range from 1024 through 65535.

set registerttl X

Set register TTL. X is range from 10 through 65535 Sec. default value is 60 Sec.

set rtptos X

Set TOS segment of IP head package in RTP digital follow.

set rtpport XXXX

RTP port is the port transferring and receiving voice flow using UDP protocol. XXXX is range from 1024 through 65535.

set jittersize X

Set buffer size of RTP package. X is range from 0-32.

set calltype X

Set call type of the phone. X is ranged from 0 through 2: 0: call out in normal way; 1: call out in faststart and tunneling way. It is a recommended way.

set localtype X

This command used to set how gateway log in gatekeeper. X is ranged from 0 through 6: 0: use phone number as E.164 and ID to login the GK; 1: use phone number as E.164 and designated ID by set **account XXX** command; 2:use support automated negotiate about MD5 or CAT authentication system.3:use MD5 authentication account and pin;4: use CAT authentication account

and pin; 5: use SHA1 authentication account and pin.

set dtmf X

Set DTMF relay type. X is ranged form 0 through 3: 0:control string ; 1:inband audio ; 2: signal keypad ; 3:rfc 2833.

set dtmf payload X

When **dtmf X** select 3(**rfc 2833)**.This parameter can be used indicating type of RTP payload type. The value can be use integer 96-101.

set dialplan X

Enable/disable dial plan and dial number. Parameter X ranged from 0 through 4: 0: disable dial plan; 1: enable dial plan; 2: use dial number; 3: use 179XX service; 4: use hotline function.

set dialnumber XX

When **set dialplan** value set as 2, please use this command to set **dial number.** For example, with eTalk card used, please set it as 00. When **set dialplan** value set as 4, please use this command to set **hotline number.**

set dddcode XX

Set the area code when set **dialplan** value set as **1** or **2**. For example, the area code of Beijing is 10; the area code of Shanghai is 21, and the area code of Chengdu is 28, etc. Parameter xxx must be an Arabic numeral and no longer than 3 characters.

set iddcode XXX

Set the country code when set **dialplan** value set as **1** or **2**. For example, the country code of China is 86; the country code of USA is 1, etc. Parameter xxxx must be an Arabic numeral and no longer than 4 characters.

set iddprefix XX

Set IDD service prefix number when set **dialplan** value set as **1** or **2**. For example, IDD service prefix number of china is 00; IDD service prefix number of USA is 1, etc. Parameter xxx must be an Arabic numeral and no longer than 3 characters.

set dddprefix XX

Set DDD service prefix number when set **dialplan** value set as **1** or **2**. For example, DDD service prefix number of china is 0; DDD service prefix number of USA is 1, etc. Parameter xxx must be an Arabic numeral and no longer than 3 characters.

set innerline X

Set use innerline call or not. X ranged from 0 through 1: 0: disable; 1: enable innerline call.

set innerlinepreifx X

With **innerline** set as **1[enable]** , please set the prefix to pick up inner line, such as 0.

set answer X

Set the ring seconds before the phone answers the call auto or forward the calls. X is ranged from 0 through 60.

set ringtype X

This setting no need to set at moment.

set digitmap X

Set whether to use digitmap. X ranged from 0 to 1: 0: do not use digitmap; 1: use digitmap.

set fwdnumber XXXXXXX

Set receiving forwarded calls phone number. XXXX must be an Arabic numeral and no longer than 16 characters

set fwdpoweroff X

Enable/disable forward calls if power off. X is ranged from 0 through 1. 0: do not forward calls if power off; 1: forward call if power off.

set fwdalways X

Enable/disable forward all calls. X is ranged from 0 through 1. 0: do not forward all calls; 1: forward all calls.

set fwdbusy X

Enable/disable forward calls if busy. X is ranged from 0 through 1. 0: do not forward calls if busy; 1: forward call if busy.

set fwdnoanswer X

Enable/disable forward calls without replying. X is ranged from 0 through 1. 0: do not forward calls without replying; 1: forward call

without replying.

set audioframes X

Set audio frames in RTP package. X is Arabic numerals between 0 and 7.

set 6.3k X

With G.7231, set PA168X IP phone to use 6.3K rate or not. X is ranged from 0 through 1: 0: use 6.3K rate; 1: use 5.3K rate.

set vad X

Enable/disable VAD. X is ranged from 0 through 1: 0: disable VAD; 1: enable VAD.

set agc X

Enable/disable AGC. X is ranged from 0 through 1: 0: disable AGC; 1: enable AGC.

set aec X

Enable/disable AEC. X is ranged from 0 through 1: 0: disable AEC; 1: disable AEC.

set handsetin X

Set initial volume of handset. X is ranged from 0 through 15.

set speakerin X

Set initial volume of microphone of the base. X is ranged from 0 through 15.

set handsetout X

Set initial volume of handout. X is ranged from 0 through 31.

set codec1 X

Set the priority 1of the audio compression algorithm. X is range from 0 through 4: 0: g729; 1:g7231; 2: g711u; 3: g711a; 4: gsm.

set codec2 X

Set the priority 2 of the audio compression algorithm. X is range from 0 through 4: 0: g729; 1:g7231; 2: g711u; 3: g711a; 4: gsm.

set codec3 X

Set the priority 3 of the audio compression algorithm. X is range from 0 through 4: 0: g729; 1:g7231; 2: g711u; 3: g711a; 4: gsm.

set codec4 X

Set the priority 4of the audio compression algorithm. X is range from 0 through 4: 0: g729; 1:g7231; 2: g711u; 3: g711a; 4: gsm.

set codec5 X

Set the priority 5 of the audio compression algorithm. X is range from 0 through 4: 0: g729; 1:g7231; 2: g711u; 3: g711a; 4: gsm.

set password XXXX

Set password of the GW-200 Gateway. XXX must be ASCII characters.

set superpassword XXXX

Set super password of the GW-200 Gateway . XXX must be ASCII characters.

set debug X

Set open debugging message output grade for special tool. X is ranged from 0 through 5: 0: close debugging output; 1: output the operation information to the window; 2: output all the bug information and data in test window; 3: save the bug information into SDRAM; 4: disable checks the mark.

set upgradeaddr XXX.XXX.XXX.XXX

Set IP address or domain name of FTP server supplying upgraded program of GW-200.

set nt XXX.XXX.XXX.XXX

No needed to set for the Gateway(GW-200).

set daylight X

No needed to set for the Gateway(GW-200).

set timezone XX

No needed to set for the Gateway(GW-200).

Command store

Syntax description: no keyword. Parameter ranged from 0 through 4.

Usage: Save the current settings to the designated position.

Relevant Usage: store 1

Command load

Syntax description: no keyword. Parameter ranged from 0 through 4.

Usage: Load the designated settings to the current position.

Relevant Usage: load 1

Command exit

Syntax description: no keyword and parameter

Usage: Exit from Telnet command window without saving the configuration.

Relevant usage: None
Command write

Syntax description: No keyword and parameter

Usage: Save the configuration and restart the GW-200 gateway.

Command ping

Syntax description: **ping IP address**

Usage: ping IP address of other NAT device

Relevant usage: In telnet window, input ping xx.xxx.xx.xx (an IP address) and return, then the result will be displayed. If the address is effective, "ping OK" will be seen; if the address is ineffective, nothing will be seen. Fox example:

```
P:\>ping 203.93.9.57
P:\>
ping OK
P:\>ping 27.56.120.56
P:\>
```

Note Usually, the echo time of ping command is no more than 1 second. So if the result is not displayed in 5 seconds, ping command is fail.

ftp command

Syntax description: **ftp value**

Usage: the system connects to the FTP server auto to get the corresponding file and deal with it.
Relevant usage: ftp X
X ranged from 0 through 2:

X-0: Connect to FTP Server to get the file of updating program and save it to the SDRAM of the gateway. Then the file can be read by PalmTool. This operation aims at testing.

X-1: Connect to FTP Server to get the file of updating program and update program Flash. This operation aims at updating program.

X-2: Connect to FTP Server to get the file of updating dial rules and update program Flash. This operation aims at updating dial rule.

✎**Note** When you use ftp 0 and ftp 1 commands, if the file get from FTP server is too large or the net speed is too slow, then the process will not be seen in telnet window. Please be patient. Using ftp command in telnet to get file spends almost same minutes as getting file using gateway. So if nothing is displayed after too long time, it means that ftp is fail.

✎**Note** All the Telnet commands of GW-200 gateway should be written in low case and the password is case sensitive.

- **Usage of the phone**

  - **Receiving calls:**

GW-200 gateway can receive incoming calls from other IP Phone or another IP Gateway which and support the protocol. It works just like an ordinary phone. When it rings, pick up the handset to answer the incoming calls and finish, put the handset back.

  - **Place a call**

    - **Call another IP Gateway or IP phone under the same Gatekeeper:**

Pick up the handset and listen for the Internet dial tone. Then dial the phone number you wish to call and press [#] to end the dialing. Once the call connection has been established and the ring tone has sounded, wait

for the other party to answer. When the other party answers, you can begin speaking. When the call is finish, put back the handset.

- **Place a call with Fix IP Address**

If GW-200 Gateway which with the Fix IP address and without used the Gatekeeper service, you can place a call to which also with Fix IP and without used the Gatekeeper service. Pick up the handset and then entering the IP address with the number key, pressing the [*] key as a "."(dot) and press the [#] key end the dialing. Wait for the other party answer. When the call is finish, put back the handset.

- **Dial out the number from phone book**

Pick up the handset and listen for the dialing tone. Pressing the [#] and then press the Phone Book memory number (2 digits). Then pressing the [#] key to end the dialing. The Gateway will automatically dial out the number which stored before.

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