

# PA168S IP Phone User Manual

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➤ **Breif Introduction of Centrality PA168S IP phone**

IP is abbreviation of Internet Protocol. An IP phone is a telephone transporting voice using grouping data package of IP protocol. The networking using IP protocol such as LAN within the enterprise, LAN within a city and Internet work all support using IP phone.

The mostly significant features of IP phone is transporting voice message over data communication network at an extremely low price with excellent sound quality. Using IP phone, you will save dramatically on international calls and long distance calls.

Centrality PA168 series IP net phone uses unique generalized outline and inner line modes. It functions much like an ordinary telephone switching between inner line and out line, so it supplies great conveniences to the users. When Centrality PA168 series IP net phone is in generalized inner line mode, it can call another Centrality PA168 series IP net phone worldwide free. When Centrality PA168 series IP net phone is in generalized out line mode, it can places calls to ordinary telephones worldwide at a dramatically low price, because Centrality PA168 series IP net phone supports using prepaid card supplied by ISP such as Net2phone or eTalk. Moreover, it possesses excellent sound quality just like ordinary phones. PA168S phone has 2X16 English LCD and supports being set by keypad.

## ➤ **Suitable Uses of Centrality PA168S IP phone**

Centrality PA168S IP Phone is the ideal choice for those who always place international or long distance calls. If two parties both use Centrality PA168 serial IP Phone, they can communicate with each other even free.

- Telecom Service Provider and Internet Phone Service Provider;
- Foreign capital or joint venture companies; offices, representative offices or agencies of foreign companies in China;
- Abroad hotel( Can be arranged at guest rooms or commercial central ) ;
- Large enterprises, multinational enterprise(Used for international call and long distance call)
- Middle and small enterprise with import or export business, abroad travel agencies; study abroad or immigrant mid-agencies;
- Departments relating with international affairs, such as foreign trade department, association for friendship with foreign countries, turnvereins, athenaeums, foreign experts bureau and other departments involving foreign affairs
- Colleges and study institutions, such as dorm for abroad students, professors with close connection with foreign countries;

- Families or persons with close connection with foreign countries, such as foreigners in China and those who prepare the study abroad

➤ Centrality PA168S IP phone Appearance Introduction:

- PA168S IP Phone Front Illustration (Refer to Fig 1.1):

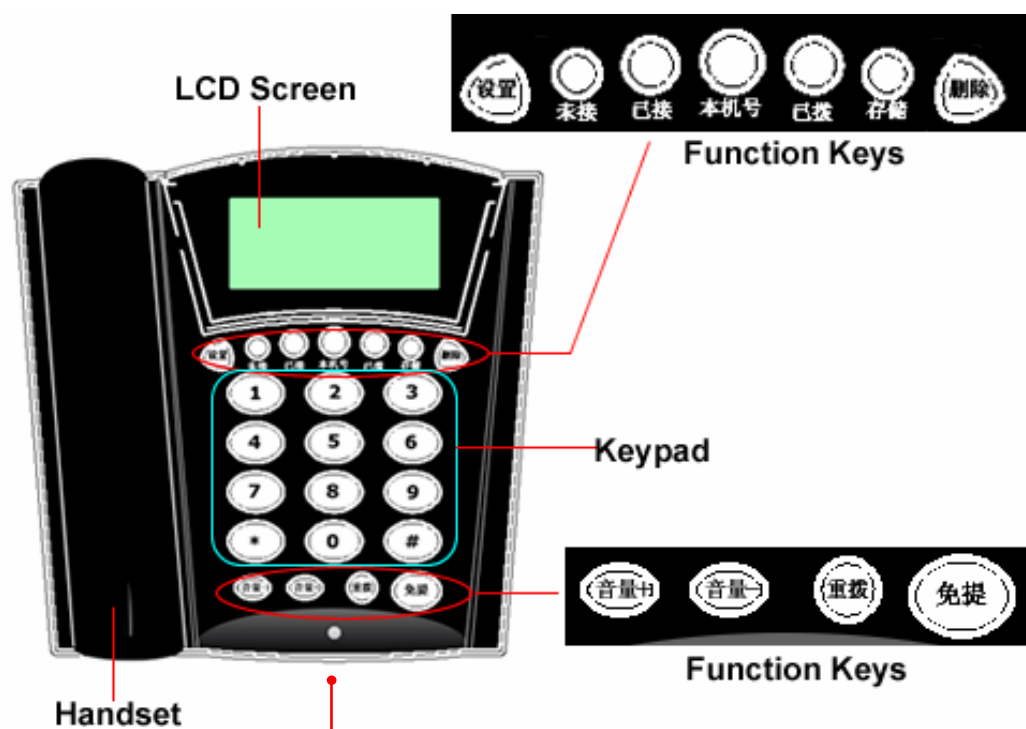
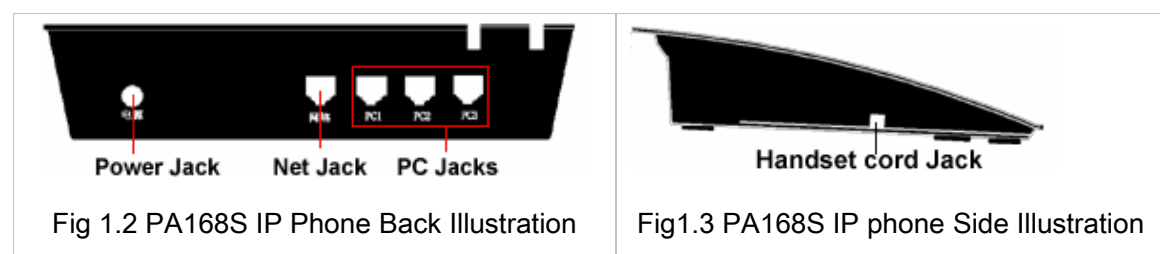


Fig 1.1 PA168S IP Phone Front Illustration

- PA168S IP Phone Back and Side Illustrations(Refer to Fig 1.2 and 1.3):



➤ **Function Keys of PA168S IP Phone Introduction (Normal State):**

<b>Keys</b>	<b>Function</b>
<b>Set</b>	With handset hung, press this key to get local IP address of the phone
<b>Missed</b>	With handset hung, press this key to review missed number
<b>Received</b>	With handset hung, press this key to review received number
<b>Phone number</b>	With handset hung, press this key to get phone number
<b>Dialed</b>	With handset hung, press this key to review dialed number
<b>Save</b>	Save speed dial number
<b>Delete</b>	While reviewing missed, received or dialed number, press this key to delete current number
<b>Redial</b>	While reviewing missed, received or dialed number, press this key to dial current number
<b>Speaker</b>	Press this key to have a call without lifting the handset
<b>Volume+</b>	Increase the volumes of handset or speaker; turn over the record backward
<b>Volume-</b>	Decrease the volumes of handset or speaker; turn over the record forward
<b>Keypad</b>	With handset picked or pressing speaker, press this key to dial number

➤ **Features**

➤ **Hardware**

- Main chip—PA1688 50MHz
- Data Memory—2MB SDRAM
- Program Memory—1 MB Flash memory
- Ethernet Jack—Four 10/100M jacks

- AC/DC adapter—Input AC100--- 230V , Output 9V DC, 1A

➤ **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
- 100 entries for quick dial
- 80 entries each for missed calls, answered calls and dialed calls
- Adjustable volume for both handset and speaker
- Voice prompt
- Hotline

➤ **Standard and Protocol**

**Centrality PA168S IP Phone supports following standard and protocol:**

- IEEE 802.3 /802.3 u 10 Base T / 100Base TX

- Major G.7XX and gsm610 audio codec
- H.323 V4
- MGCP RFC2705
- SIP RFC3261
- Net2phone private protocol
- 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 H.323 proxy

➤ **Operating requirements:**

- Operation temperature: 0 to 50° C (32° to 122° F)
- Storage temperature: -30° to 65° C (-22° to 149° F)
- Humidity: 10 to 90% no dew

➤ **Electric requirements:**

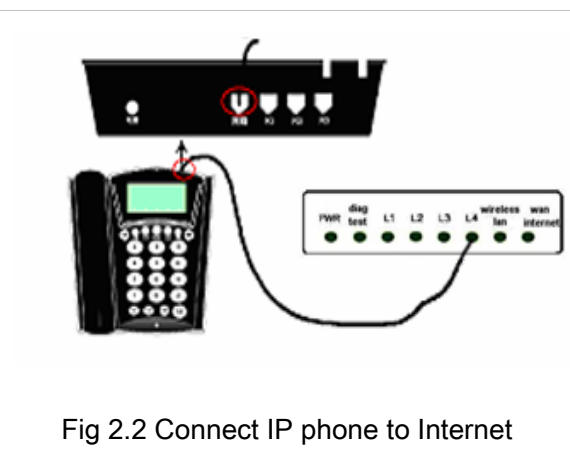
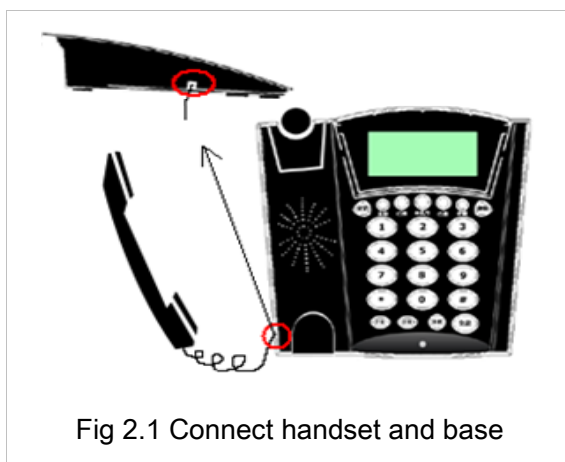
- Voltage: 9V DC
- Power: 9W (max.)
- Power adapter: AC/DC input 100-230V , output 9V 1A
- Network interface: 4X RJ-45 Ethernet Connectors

➤ **Size :**

170 x 175 x 85 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. Refer to Fig 2.1 please.



- 2 . Connect IP phone to Internet: plug the RJ-45 Ethernet cable into the Ethernet Jack. Plug the other end of the cable into HUB. Refer to Fig 2.2 please.
- 3 . Power on IP phone: plug the power cord adapter into the Power Jack. Then



plug the other end of the power cord adapter into the appropriate wall outlet. Refer to Fig 2.3.

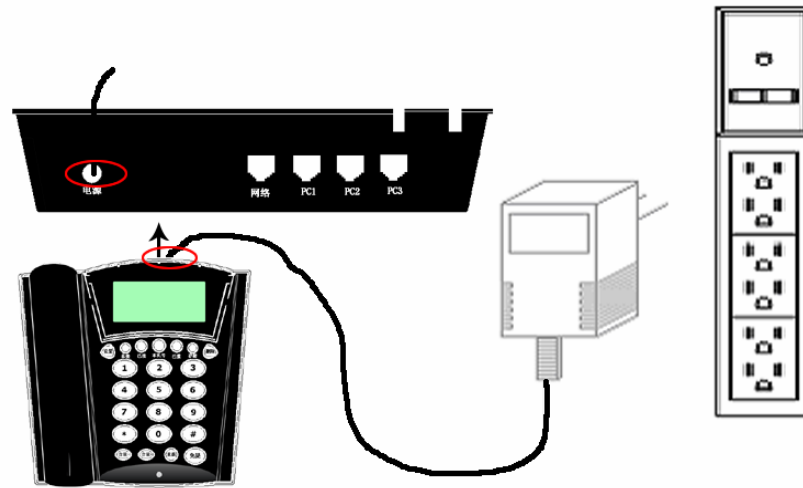


Fig 2.3 Power on IP phone

## ➤ Configuration

Four different ways can be used to configure Centrality PA168S IP phone: phone keypad set; web browser, Telnet commands and PalmTool configuration on computer.


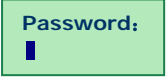

### ➤ Phone Keypad setup


- **Function Keys Introduction:** While using keypad and LCD to configure the setting of IP phone, following keys will be used:


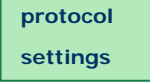

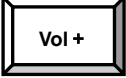
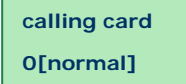

Keys	Function	Keys	Function
<b>Set</b>	Enter change mode	<b>Speaker</b>	Enter submenu; confirm change
<b>Vol +</b>	Turn over menu backward	<b>Vol -</b>	Turn over menu forward; move cursor back in change mode
<b>Keypads</b>	Modify values	<b>Redial</b>	Exit current menu; exit change mode



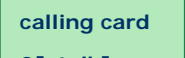
- **Configuration operation:** We tack enabling eTalk prepaid card and setting the ID and pin as an example to explain how to change setting:


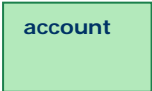

1. Enter setting mode: use the dial pad to enter the password of the phone (when debug is not set as 0[disable], default password is 1234; when debug is set as 0[disable], please use super password 19750407), and



then press , till  is displayed. Then enter the password again and press  to let the phone enter setting mode.

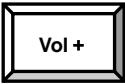



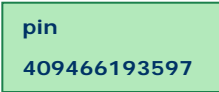

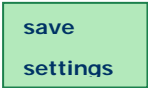
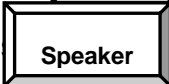
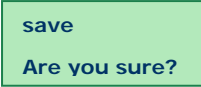

2. Enable eTalk: Once the phone enter setting mode,  will be

seen, then press  to turn over the menu, until  is displayed. Please press  to enter submenu and then continually press  to turn over the menu until  is displayed on the screen. Please press  to enter change mode, then you will

see a cursor flashing at the beginning of the second line. It indicates that you can change the setting of this item. Then press  to enable eTalk and then press  to confirm.  will be seen.

3. Set eTalk account (0117ETNS) : press  to turn over the menu, once  is displayed on the screen, please press  to

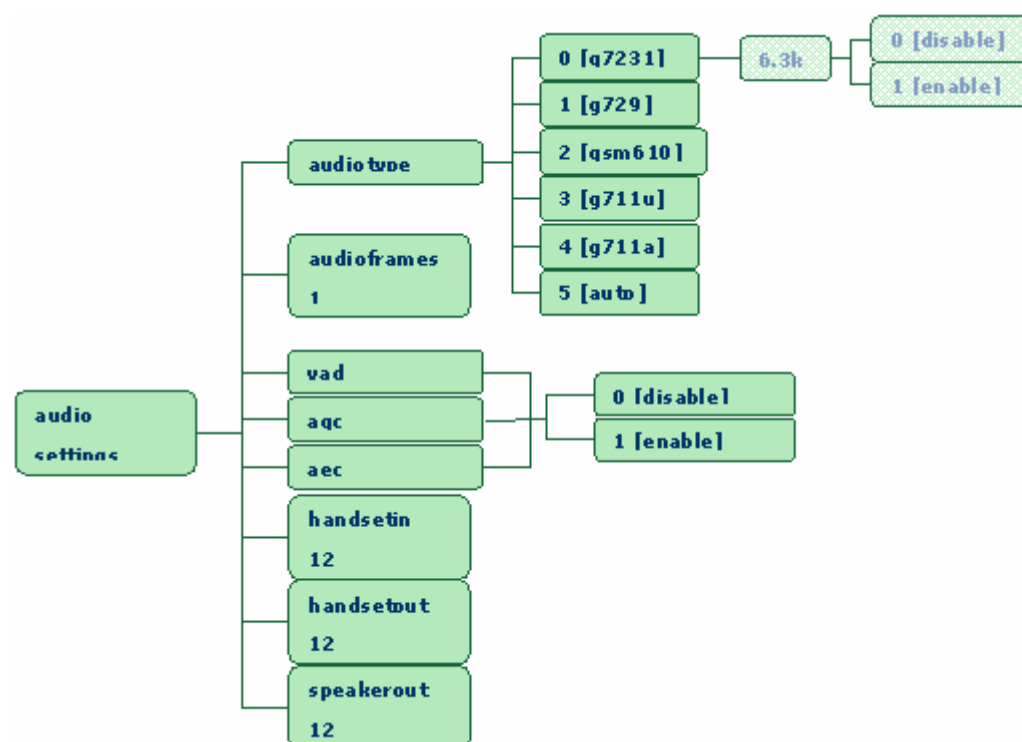
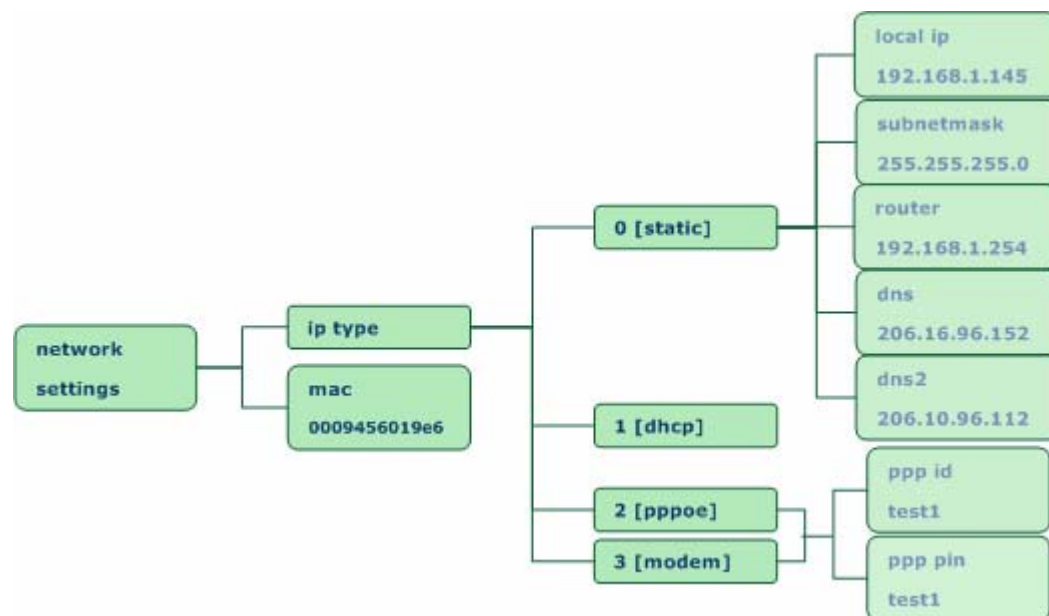
enter change mode, then you will see a cursor flashing at the beginning of the second line. It indicates that you can change the setting of this item. Then press 0117 keys once respectively, 3 key thrice, 8 key twice, 6 key thrice and 7 key quintic. Then press  to confirm. After above operation,  will be displayed on the LCD.

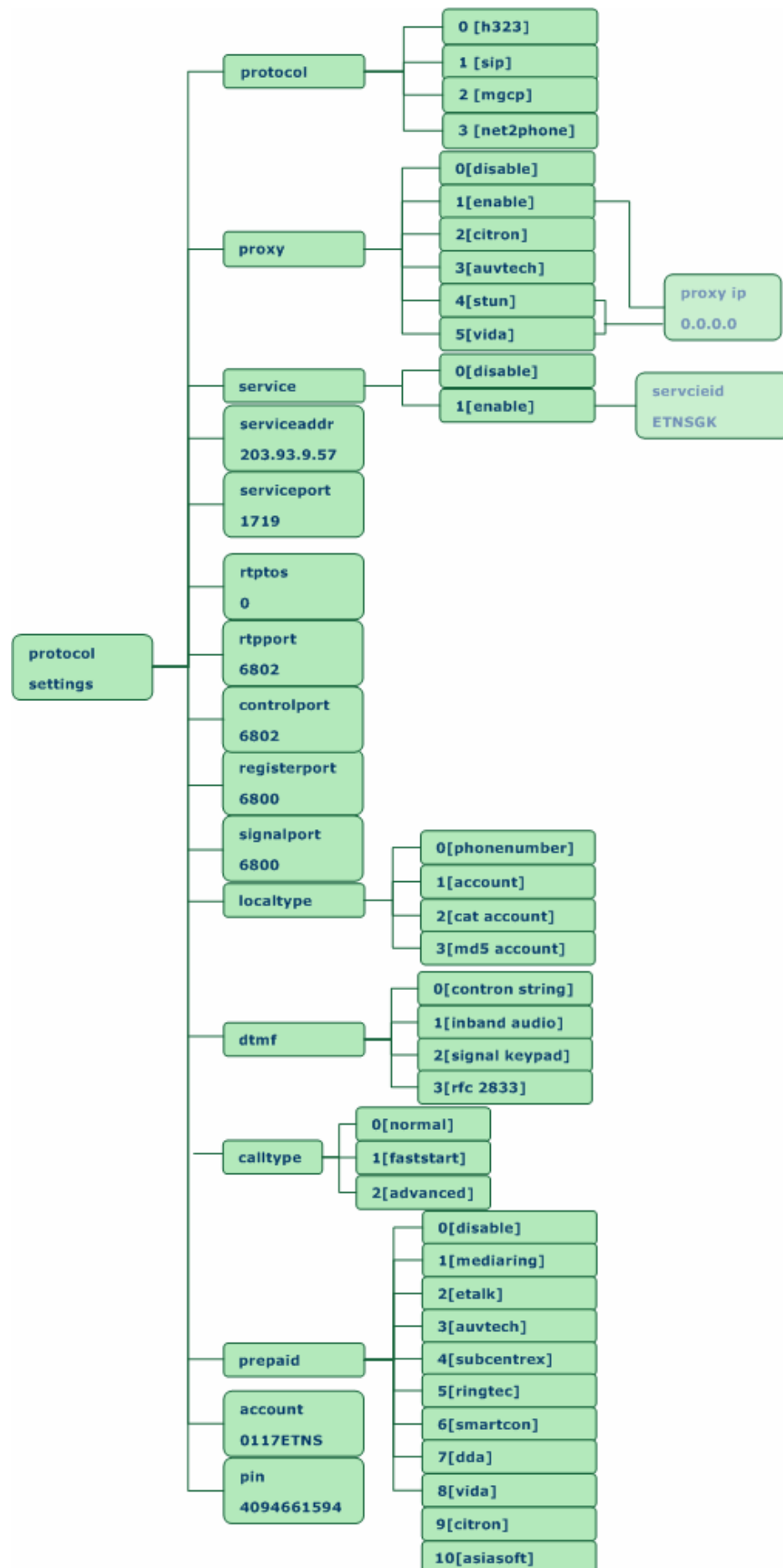
4. Set eTalk pin (409466193597) : press  to turn over the menu, once  is displayed on the screen, please press  to enter change mode, then you will see a cursor flashing at the beginning of the second line. It indicates that you can change the setting of this item. Then press 409466193597 keys once respectively to input the password, and then press  to confirm.  will be displayed on the LCD.
5. Save setting and exit setting: continually press  to reach save setting menu . Then please press  key to confirm the change. When the menu  is displayed on the LCD, press  again to confirm. Once the IP phone restart successfully, the new setting is effective.

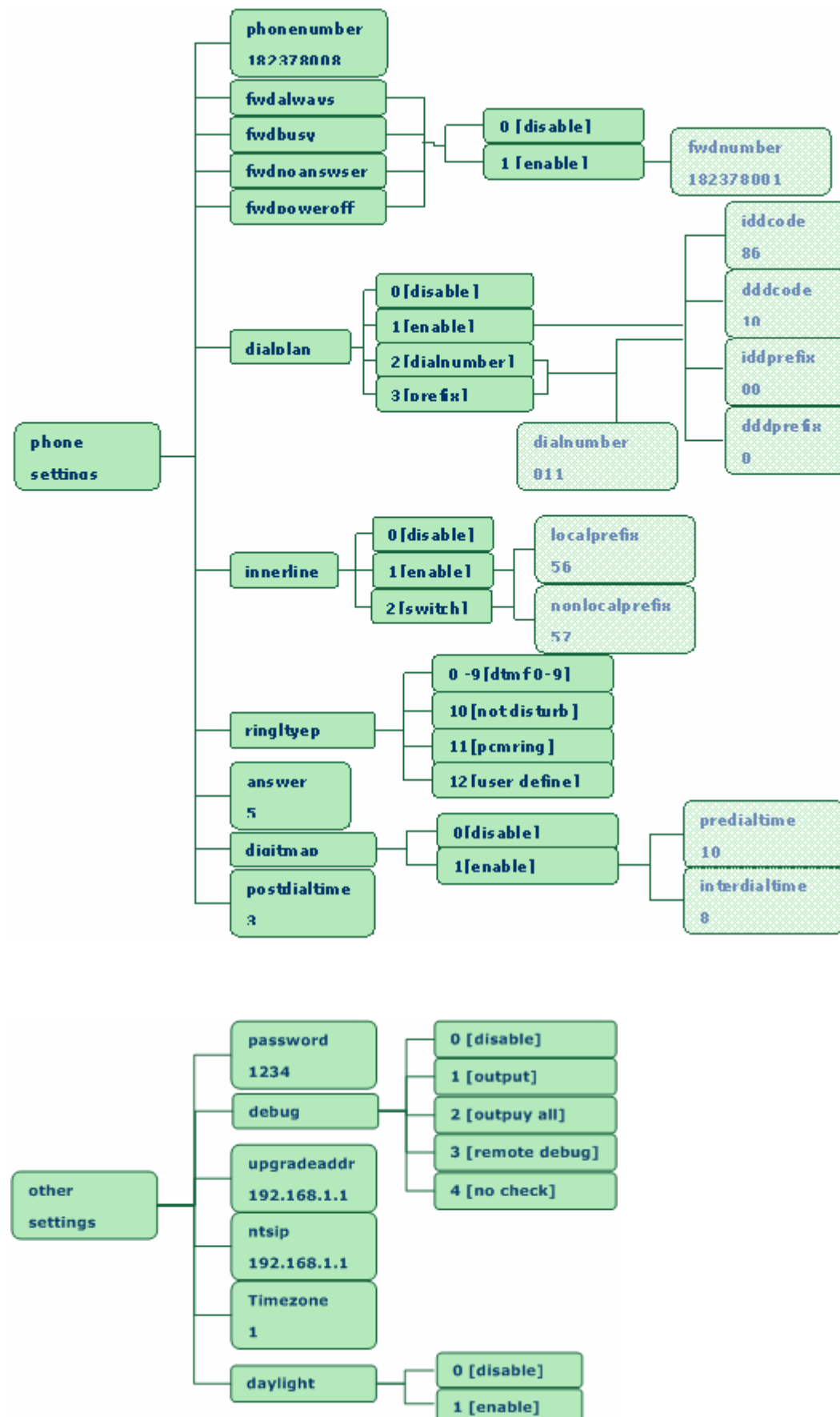
Refer to above operation; you can reach any menu to modify any value.

Please refer to following structure illustrations to learn the values of each menu item. As for the meaning of each item and value, please refer to *Web Browser Setting* chapter.


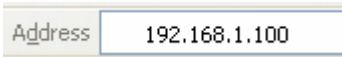
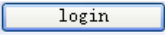
- **Menu Structure:**







➤ **Configured by WEB**

On a PC connecting with the phone or at the same segment of the phone, double click  icon to open the IE browser. Input the IP address of the phone into address bar (  ), and then input password of the phone into the following page. From version 1.24, there are two passwords for the IP phone: ordinary password and super password. Default password 1234 is ordinary password and super password is 19750407 (the super pin for some PINGHE phone is not 19750407, please ask for the provider of the IP phone). With Debug set 0[disable], please input super password; while Debug is not set as 0[disable], please input ordinary password. Then click  button. The following configured page will popup. Refer to Fig 3.1 please.

network settings					
iptype	<input type="text" value="static"/>	ppp id	<input type="text" value="test1"/>	ppp pin	<input type="text" value="test1"/>
local ip	<input type="text" value="192.168.1.67"/>	subnet mask	<input type="text" value="255.255.255.0"/>	router ip	<input type="text" value="192.168.1.254"/>
dns	<input type="text" value="202.106.196.115"/>	dns2	<input type="text" value="202.106.196.115"/>	mac	<input type="text" value="00-09-45-6f-ae-f0"/>
protocol settings					
protocol	<input type="text" value="h323"/>	proxy	<input type="text" value="enable"/>	proxy ip	<input type="text" value="0.0.0.0"/>
use service	<input checked="" type="checkbox"/>	service id	<input type="text" value=""/>	service addr	<input type="text" value="67.120.9.11"/>
service port	<input type="text" value="1080"/>	rtp tos	<input type="text" value="0"/>	rtp port	<input type="text" value="8020"/>
register port	<input type="text" value="1820"/>	signal port	<input type="text" value="5066"/>	control port	<input type="text" value="5068"/>
local type	<input type="text" value="phonenumber"/>	call type	<input type="text" value="advanced"/>	dtmf	<input type="text" value="control string"/>
service type	<input type="text" value="common"/>	account	<input type="text" value="1058046"/>	pin	<input type="text" value="477457"/>
phone settings					
phone number	<input type="text" value="1058046"/>	forward number	<input type="text" value=""/>	fwd poweroff	<input type="checkbox"/>
fwd always	<input type="checkbox"/>	fwd busy	<input type="checkbox"/>	fwd noanswer	<input type="checkbox"/>
use dialplan	<input type="text" value="disable"/>	dial number	<input type="text" value=""/>	ddcode	<input type="text" value="10"/>
iddcode	<input type="text" value="86"/>	iddprefix	<input type="text" value="00"/>	dddprefix	<input type="text" value="0"/>
innerline	<input type="text" value="disable"/>	local prefix	<input type="text" value="22"/>	nonlocal prefix	<input type="text" value="23"/>
use digitmap	<input type="checkbox"/>	ring type	<input type="text" value="dtmf0"/>	answer	<input type="text" value="0"/>
predial time	<input type="text" value="30"/>	interdial time	<input type="text" value="10"/>	postdial time	<input type="text" value="5"/>
audio settings					
audio type	<input type="text" value="g7231"/>	audio frames	<input type="text" value="3"/>	g.723.1 high rate	<input type="checkbox"/>
vad	<input type="checkbox"/>	agc	<input type="checkbox"/>	aec	<input type="checkbox"/>
handset in	<input type="text" value="12"/>	handset out	<input type="text" value="24"/>	speaker out	<input type="text" value="23"/>
other settings					
password	<input type="text" value="1234"/>	debug	<input type="text" value="output all"/>	upgrade addr	<input type="text" value="203.93.9.57"/>
nts ip	<input type="text" value="0.0.0.0"/>	use daylight	<input type="checkbox"/>		
timezone	<input type="text" value="(GMT+08:00)Beijing,Hong Kong,Urumqi"/>				
<input type="button" value="Update"/> <input type="button" value="Phone Book"/> <input type="button" value="Update Program"/> <input type="button" value="Update Digitmap"/>					

Fig 3.1 Http Setting Page

## Network Setting :

network settings					
iptype	<input type="text" value="static"/>	ppp id	<input type="text" value=""/>	ppp pin	<input type="text" value=""/>
local ip	<input type="text" value="192.168.1.100"/>	subnet mask	<input type="text" value="255.255.255.0"/>	router ip	<input type="text" value="192.168.1.254"/>
dns	<input type="text" value="202.106.196.152"/>	dns2	<input type="text" value="202.106.196.115"/>	mac	<input type="text" value="00-09-45-65-a3-e6"/>

Fig 3.2 Network Setting Page

- **iptype:** Set how IP phone 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 IP phone 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. Centrality PA168S IP phone is shipped from the factory with DHCP on. So, if your LAN or router is configured to use DHCP addressing, the IP phone'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 IP phone 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 IP phone here.
- **subnet mask:** With **static ip** selected in **iptype** drop down list, please enter subnet mask of IP phone here.
- **router ip:** With **static ip** selected in **iptype** drop down list, please enter router IP address of IP phone 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. Centrality PA168S phone is shipped from the factory with a unique algorithm MAC address printed on the back of the base.


### protocol settings :

protocol settings					
protocol	<input type="text" value="h323"/>	proxy	<input type="text" value="enable"/>	proxy ip	<input type="text" value="0.0.0.0"/>
use service	<input checked="" type="checkbox"/>	service id	<input type="text" value=""/>	service addr	<input type="text" value="67.120.9.11"/>
service port	<input type="text" value="1080"/>	rtp tos	<input type="text" value="0"/>	rtp port	<input type="text" value="8020"/>
register port	<input type="text" value="1820"/>	signal port	<input type="text" value="5066"/>	control port	<input type="text" value="5068"/>
local type	<input type="text" value="phonenumber"/>	call type	<input type="text" value="advanced"/>	dtmf	<input type="text" value="control string"/>
service type	<input type="text" value="common"/>	account	<input type="text" value="1058046"/>	pin	<input type="text" value="477457"/>

Fig 3.3 Protocol Setting Page

- **protocol:** Select an item from dropdown list to set the protocol used by the phone.
  - **h323:** Select this item to set the phone use H323 protocol.
  - **sip:** Select this item to set the phone use SIP protocol.
  - **mgcp:** Select this item to set the phone use MGCP protocol.
  - **n2p:** Select this item to set the phone use Net2phone private system.

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 **Note** With Net2phone selected here, please set other necessary parameters: check **use service** option, and then fill IP address or domain name of designated server into **service addr** field; then set **service port** as **6801**; fill account and password of Net2phone card into **account** and **pin** fields.

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- **proxy:** When the IP phone 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 phone.
  - **disable:** Select this item when the log in server and IP phone in the same LAN, or the log in system supports the IP phone working behind the LAN.
  - **enable:** When the login system does not support IP phone working behind the LAN, please select this item to search public IP address of the NAT device. With this item selected, **proxy ip** field will be activated, please type IP address of server finding public IP into **proxy ip** field, such as **209.68.27.16**; if do not know server IP, just remain it as

default value 0.0.0.0. Then please make port mapping 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.
- **stun:** Select this item with SIP protocol used according to requirement of system. With this item selected, **proxy ip** field is activated, please type an IP here according to the requirement of the system or just remains as default 0.0.0.0.
- **vida:** Select this item with Vida private system used. With this item selected, **proxy ip** field is activated, please type an IP here according to the requirement of the system or just remains as default 0.0.0.0.
- **aivgr:** Select this item with aivgr private system used. With this item selected, **proxy ip** field is activated, please type an IP here according to the requirement of the system or just remains as default 0.0.0.0.
- **proxy ip:** With **use** selected in **proxy** dropdown list, please type IP address of server finding public IP into **proxy ip** field, such as 209.68.27.16; if do not know server IP, just remain it as default value 0.0.0.0. With **stun** or **vida** selected in **proxy** dropdown list, please input proxy IP into **proxy ip** field according to system. If there is no any special


requirement, just remain it as default value 0.0.0.0.

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

Different service responses different protocol as follows:

- With H323 protocol used, the protocol service refers to the gatekeeper searching the address. To let IP phone call each other by E.164 number, please check this box and then fill the IP address or domain name of corresponding gatekeeper into **service addr** field. Without this check box being selected, the phone can call by gateway or just by dialing IP address of other IP phone or H323 device (such as Netmeeting) at the same network segment.
- With MGCP protocol used, the protocol service refers to Call Agent. Please check this box according to system, and then fill **service addr** field with Call Agent IP address or domain name.
- With SIP protocol used, the protocol service refers to SIP Proxy Server. Check this box according to system, and then fill **service addr** field with SIP Proxy Server IP address or domain name.
- With Net2phone protocol used, the protocol service refers to designated server. Please check this box, and then fill the designated IP address or domain name into **service addr** field.

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 **Note** Designated Net2phone server IP address are: 216.53.3.52; 4.43.114.39; 4.43.114.38 or 05.228.245.8. Domain names are: call1.net2phone.com; call2.net2phone.com; skip1.net2phone.com; skip2.net2phone.com; skip1.f8g9h0.net or skip2.f8g9h0.net.

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- **service id:** Set service ID according to requirement of system. For example, when eTalk card is used, the ID should be ETNSGK, so please type ETNSGK into this field.
- **service addr:** With **use service** check box checked, please fill IP address or domain name of server as the requirement of the service system.
- **service port:** According to different protocol, set the detect port of server point.
  - With H323 protocol used, if IP phone log in a GK, please set this port as 1719; if IP phone does not log in a GK, please set this port as 1720.
  - With MGCP protocol used, please set this port as 2727.
  - With SIP protocol used, please set this port as 5060.
  - With Net2phone protocol used, please set this port as 6801 or 7000.
- **rtp tos:** Fill TOS segment of IP head package in RTP digital follow here.
- **rtp port:** RTP port is the port transferring and receiving voice flow using

UDP protocol. Please fill an even number between 1024 and 65535 into this field.


- **register port:** According to used protocol, set as follows:
  - With H323 protocol used, please enter a number from 1024 through 65535 into this field.
  - With MGCP protocol used, please enter 2427 here.
  - With SIP protocol used, please enter 5060 here.
  - With Net2phone protocol used, this port could be any number.
- **signal port:** With H323 protocol used, signal port is Q.931 port using TCP protocol. It is arranged from 1024-65535.
- **control port:** With H323 protocol used, this port is H.245 port using TCP protocol. Please enter a number from 1024 through 65535.
- **local type:** With H323 protocol used, this parameter refers to how IP phone log in gatekeeper. The meaning of each item is as follow:
  - **phone number:** Use phone number as E.164 and H323 ID to login the GK.
  - **account:** Use phone number as E.164 and designated H323 ID filled in **account** field as H323 ID to login GK.

- **cat account:** Select this item to use cat ( Cisco Access Talk ) authentication. With this item selected, please fill the user name and password into **account** and **pin** fields respectively.
- **md5 account:** With H323 protocol used, according to the log in gatekeeper, enable/disable H235 encryption by selecting/deselecting this item. With this item selected, please fill the user name and password into **account** and **pin** fields respectively.
- **call type:** Set call type by selecting the items in drop down list.
  - **normal:** Call out in normal way by selecting this item.
  - **faststart:** Call out in faststart way by selecting this item.
  - **advanced:** Call out in faststart and tunneling way by selecting this item.  
It is a recommended way with H323 protocol used.
- **dtmf:** Set DTMF signal sending way by selecting **control string**, **inband audio**, **signal keypad** or **rfc 2833** from dropdown list.
- **Service type:** Set prepaid card and service system by selecting corresponding item in dropdown list.
  - **disable:** Do not use any prepaid card by selecting this item.
  - **mediaring:** Use Mediaring prepaid card by selecting this item.



- **etalk:** Use eTalk prepaid card by selecting this item. With eTalk selected here, please select **dialnum** in **dial plan** drop down list and then fill **00** into **dial number** field.


---

 **Note** When eTalk card is used, besides above configuration, please set other parameters as follows: **service addr: 202.91.230.91**; **service id: ETNSGK**; **account: 0117ETNS**. If IP phone can not log in 202.91.230.91, please try to use 202.91.230.93. And if IP address of the phone is a private one, please do port mapping on NAT device. Please refer to build in proxy document to get detailed operation.

---

- **auvtech:** Use Auvtech private system by selecting this item.

---

 **Note** With Auvtech selected here, please choose **auvtech** in **proxy** drop down list; check **use service** option and fill service id and service address into **service id** and **service addr** fields according to system; then select **account** in **call type** drop down list, and fill the account into **account** field.


---

- **subcentrex:** Use subcentrex service by selecting this item.
- **ringtec:** Use Ringtec service by selecting this item. With this service used, please select **dialnum** in **dial plan** drop down list and then fill account of Ringtec into **dial number** field.
- **smartcon:** Use smartcon service by selecting this item.
- **dda:** Use dda service by selecting this item.
- **vida:** Use Vida service by selecting this item.
- **citron:** Use citron service by selecting this item.
- **asiasoft:** Use asiasoft service by selecting this item.
- **aivgr:** Use aivgr service by selecting this item.
- **account:** With H323 protocol used, 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 H323 ID here. While **prefix** item selected in **use dialplan** dropdown list, enter language indicating number, card number and # here, such as 14589653185 # . With MGCP protocol used, please enter local name here. With Net2phone system used, enter account of Net2phone card here.

- **pin:** With H323 protocol used, 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 # . With MGCP protocol used, please enter domain name here. With Net2phone system used, enter password of Net2phone card here.

---

 **Note** When MGCP protocol is used, some system requires adding "[ ]" outside the domain name. So please fill the domain name with "[ ]" into pin fields, such as [voiptest.com] .

---

**phone settings:**


phone settings					
phone number	178	forward number		fwd poweroff	<input type="checkbox"/>
fwd always	<input type="checkbox"/>	fwd busy	<input type="checkbox"/>	fwd noanswer	<input type="checkbox"/>
use dialplan	disable	dial number		dddcode	10
iddcode	86	iddprefix	00	dddprefix	0
innerline	disable	local prefix	0	nonlocal prefix	0
use digitmap	<input type="checkbox"/>	ring type	user define	answer	60
predial time	30	interdial time	30	postdial time	4

Fig 3.4 Phone Setting Page

- **phone number:** With H323, MGCP and Net2phone protocol used, enter an 8 or 9 digits number to set the phone number of IP Phone. With SIP protocol used, enter local ID here.
- **fwd number:** Enter receiving forwarded calls phone number into this field; If the IP phone used with modem, with **modem** item selected in **iptype** dropdown list, and then fill ISP 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 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.
- **fwd noanswer:** Forward calls without replying by checking this box. Please enter receiving forwarded calls phone number into **fwd number** field.

- **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, Beijing 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** selected in **use dialplan** drop down list, you can also set dddcode, iddcode, iddprefix and dddprefix according to requirement of system.

---

- **innerline:** Enable/disable multi-settings by selecting corresponding items from dropdown list. PA168S IP phone allows saving 5 settings totally.
  - **disable:** Disable multi-settings by selecting this item, then the phone will call out using current setting.
  - **enable:** Use designated system to place calls by selecting this item.
  - **switch:** Enable multi-settings by selecting this item. Then please fill the prefix switching to backup setting 1 and backup setting2 into **local prefix** and **nonlocal prefix** fields.

---

 **Note** To modify the parameters of backup settings, please use Telnet commands.

---

- **local prefix:** With **enable** or **switch** selected in **innerline** dropdown list, please fill the number switching to backup setting 1 here, such as 56.
- **nonlocal prefix:** With **enable** or **switch** selected in **innerline** dropdown list,

please fill the number switching to backup setting 2 here, such as 57.

- **use digitmap:** Enable/disable digitmap by checking/unchecking the box.
- **ring type:** Set ring type by selecting corresponding item from drop down list.
  - **dtmf 0-9:** Set ring as ordinary rings in different frequency
  - **not disturb:** Set the phone do not ring by selecting this item.
  - **pcmring:** Set ring as music shipped from factory by selecting this item.
  - **user define :** Set ring as music saved by user by selecting this item.
- **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. To disable auto answer function, please set this parameter as 0.
- **predial time:** Set time limit from picking up the speaker to dialing the first the number.
- **interdial time:** Set time limit between dialing two numbers.
- **postdial time:** Set time limit from dialing the last number to placing a call.  
If the next number is not dialed within the post dial time limit, then the phone will call the dialed number auto.

#### **Audio settings:**

audio settings					
audio type	<input type="text" value="g7231"/>	audio frames	<input type="text" value="1"/>	g.723.1 high rate	<input checked="" type="checkbox"/>
vad	<input checked="" type="checkbox"/>	agc	<input type="checkbox"/>	aec	<input checked="" type="checkbox"/>
handset in	<input type="text" value="8"/>	handset out	<input type="text" value="12"/>	speaker out	<input type="text" value="11"/>

Fig 3.5 Audio Setting Page

- **audio type:** Set audio type of the phone by selecting item from drop down list. The options are **g7231** , **g729** , **gsm610** , **g711u** , **g711a** and **auto**.
- **audio frame:** Set audio frames in RTP package. With G723 audio codec used, set it as 1; with G729 audio codes used, set it as 2.
- **g.723.1 high rate:** With g.723.1 selected in audio type dropdown list, enable/disable g.723.1 high rate by checking/ unchecking this option.
- **vad:** Enable/disable VAD (voice activity detection) by checking/ unchecking this box.
- **agc:** Enable/disable AGC by checking/unchecking this box.
- **aec:** Enable/disable VEC by checking/unchecking this box.
- **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. Drag it to the left to reduce the volume; while drag it to the right to increase the

volume.

- **speaker out:** Drag the slider to adjust the volume of handfree output.

Drag it to the left to reduce the volume; while drag it to the right to increase the volume.

### Other settings:

other settings				
password	<input type="text" value="1234"/>	debug	<input type="text" value="output"/>	upgrade addr <input type="text"/>
nts ip	<input type="text" value="210.59.157.10"/>	use daylight	<input type="checkbox"/>	
timezone	<input type="text" value="(GMT-03:00)Greenland"/>			

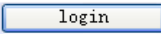
Fig 3.6 Other Setting Page

- **password:** Set the password of the phone. (Default password is 1234).
- **debug:** Set the debug level of the phone.
  - **disable:** Disable output the bug 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 bug information and data in test window by selecting this item.
  - **remote debug:** Save the bug information in SDRAM of IP phone by selecting this item.
  - **no check:** Disable checks the mark by selecting this item.
- **upgrade addr:** Enter IP address or domain name obtained by ISP of FTP



server supplying updated program here.

- **nts ip:** Fill IP address of time server here.
- **use daylight:** Enable/disable daylight by checking/unchecking this box.
- **timezone:** Select correct time zone in dropdown list.


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

network settings			
iptype	<input type="text" value="static"/>	ppp id	<input type="text" value=""/>
local ip	<input type="text" value="192.168.1.178"/>	subnet mask	<input type="text" value="255.255.255.0"/>
dns	<input type="text" value="202.106.196.152"/>	dns2	<input type="text" value="202.106.196.115"/>
		ppp pin	<input type="text" value=""/>
		router ip	<input type="text" value="192.168.1.254"/>
protocol settings			
account	<input type="text" value=""/>	pin	<input type="text" value=""/>
phone settings			
forward number	<input type="text" value=""/>	fwd always	<input type="checkbox"/>
fwd busy	<input type="checkbox"/>	fwd noanswer	<input type="checkbox"/>
ring type	<input type="text" value="user define"/>	answer	<input type="text" value="0"/>
		fwd poweroff	<input type="checkbox"/>
audio settings			
handset in	<input type="text" value="8"/>	handset out	<input type="text" value="12"/>
		speaker out	<input type="text" value="11"/>
other settings			
password	<input type="text" value="1234"/>	upgrade addr	<input type="text" value=""/>
nts ip	<input type="text" value="210.59.157.10"/>	use daylight	<input type="checkbox"/>
timezone	<input type="text" value="(GMT-03:00)Greenland"/>		
<input type="button" value="Update"/>		<input type="button" value="Phone Book"/>	<input type="button" value="Update Program"/>
		<input type="button" value="Update Digitmap"/>	

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


- **Update:** Click this button to save the configuration and restart the phone.

Once the phone restarts 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.

 **Note** With H323 protocol used, if the phone dose not login Gatekeeper or Gateway; or with SIP protocol used, the phone dose not login Server Proxy, you can save IP address of other phone into phone number field.


Phone Book					
No.	Name	Phone Number	No.	Name	Phone Number
001	Jack	5989426454	002	Allen	192.168.1.56
003			004		
005			006		
007			008		
009			010		

Fig 3.8 Phone Book Illustration

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

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


---

 **Note** Please refer to *PalmTool User Guide* to learn how to write digitmap or just download TXT file from our site. Then please save it as “phone type.map” file, such as pa168S.map.

---

### ➤ Configured by PalmTool

PalmTool is a tool designed especially to configure and upgrade the PA168 IP phone. You can visit <http://www.centralitycomm.com/solutions/Download/Program/PalmTool.zip> to download the latest version of PalmTool. Then please unzip the downloaded file and save them.

- a) On a PC connecting with the phone or at the same segment of the phone, double click  icon to open the PalmTool. The index page of PalmTool will popup.
- b) Input the IP address of the phone into **Local IP** field (such as 192.168.1.100), and then click “Phone Settings” button.

From Version1.24, use PalmTool to set the IP phone, please set debug as output or output all firstly, or PalmTool cannot connect IP phone. The parameters of PalmTool is same as the parameters in HTTP, so please refer to HTTP set chapter to learn how to set IP phone.

## ➤ Telnet Configuration

- On the PC connecting with the phone or on the same segment with the phone, 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.

---

```
PA168S V1.32 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 IP phone is under setting mode, and then you can set the Centrality PA168S IP phone by using the telnet commands.

## ➤ Centrality PA168S Telnet Commands Explanation

### Centrality PA168S Telnet Commands

Command	Function
?	Supply command name and parameters

<b>get</b>	Display basic parameters of the Centrality PA168S IP phone
<b>set</b>	Set parameters of the Centrality PA168S IP phone
<b>store</b>	Save current settings to designated position
<b>load</b>	Load designated settings to current position
<b>exit</b>	Exit from the setting mode without saving the configuration
<b>write</b>	Exit with saving all configurations and restart Centrality PA168S
<b>ping</b>	Ping other net parameter
<b>ftp</b>	The phone connects to FTP server and then get the files

## Detail description of Centrality PA168S 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 Centrality PA168S IP phone

**Relevant usage:** None

**Detailed description:**

**get** Display basic running parameters of the Centrality PA168S IP phone. Input ordinary password without debug being set as 0[disable], or input super password with debug set as 0[disable], then following parameters of IP phone will be displayed:

---

### PA168S V1.32 settings

Password: \*\*\*\*\*

P:\>get

ip type 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

protocol 0[h323] proxy 1[enable] proxyip 0.0.0.0

service 1[enable] serviceid [empty]

serviceaddr 203.93.9.57

serviceport 1719 rtptos 0 rtpport 6802

registerport 6800 signalport 6800 controlport 6802

calltype 2[advanced] localtype 0[phonenumber] dtmf 0[control string]

servicetype 0[common]

account [empty]

pin [empty]

phonenumber 182378009 fwdnumber [empty] fwdpoweroff 1[enable]

fwdalways 0[disable] fwdbusy 0[disable] fwdnoanswer 0[disable]

dialplan 3[prefix] dialnumber [empty] dddcode 10

iddcode 86 iddprefix 00 dddprefix 0

innerline 1[enable] localprefix 0 nonlocalprefix 0

digitmap 1[enable] ringtype 12[user define] answer 0

predialtime 30 interdialtime 30 postdialtime 4

audiotype 0[g7231] audioframes 1 6.3k 1[enable]

vad 1[enable]	agc 0[disable]	aec 1[enable]
handsetin 8	handsetout 12	speakerout 11
password 1234	debug 0[disable]	
upgradeaddr [empty]		
ntsip 210.59.157.10	daylight 0[disable]	
timezone 20[(GMT-03:00)Greenland]		

---

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

---

```

PA168S V1.32 settings
Password:****
P:\>get
ip type 0[static]
ip 192.168.1.178    subnetmask 255.255.255.0    router 192.168.1.254
dns 202.106.196.152    dns2 202.106.196.115
account [empty]
pin [empty]
fwdpoweroff 0[disable]
fwdalways 0[disable]    fwdbusy 0[disable]    fwdnoanswer 0[disable]
ringtype 12[user define]    answer 0
handsetin 8    handsetout 12    speakerout 11
password 1234
upgradeaddr [empty]
ntsip 210.59.157.10    daylight 0[disable]
timezone 20[(GMT-03:00)Greenland]
    
```

---

## Command set

**Syntax description:** set keywords value

**Usage:** Used to configure password and other running parameters of Centrality PA168S IP phone.

**Detailed description:**

**set ip type X**

Set how IP phone gets relevant network parameters. X ranged from 0 through 3: 0: authorize users set IP address, subnet mask and router IP address of IP phone 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. Centrality PA168S IP phone is shipped from the factory with DHCP on. So, if your LAN or router is configured to use DHCP addressing, the IP phone'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 IP phone 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 Centrality PA168S IP phone.

**set subnetmask XXX.XXX.XXX.XXX**

With **iptype** set as **0**, use this command to set subnet mask of Centrality PA168S IP phone.

**set router XXX.XXX.XXX.XXX**

With **iptype** set as **0**, use this command to set router IP of network with Centrality PA168S IP phone.

**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 Centrality PA168S IP phone. Parameter xx-xx-xx-xx-xx-xx must be an HEX number.

**set protocol X**

Set protocol of the Centrality PA168S IP phone. Parameter X ranged from 0 through 3: 0 – H323 protocol; 1 -- Sip protocol; 2 -- Mgcip protocol; 3- Net2phone private service.

**set proxy X**

Set use proxy or not. X ranged from 0 through 6: 0: do not use proxy. When the log in server and IP phone in the same LAN, or the log in system supports the IP phone working behind the LAN; 1: Use proxy. When the login system does not support IP phone 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 Auvtech private system used; 4: stun. Use this value with SIP protocol used according to requirement of system; 5: use this value with vida private system used; 6: aivgr use this value with aivgr private system used.

**set proxyip XX.XXX.X.XX**

According to system, set IP address of proxy.

**set service X**

According to different protocol, set use protocol service or not. X ranged from 0 through 1. 0: do not use service; 1: use service.

**set serviceid XXXXX**


Set service ID according to required by service system.

**set serviceaddr XXXX**

According to protocol used, set IP address or domain name of log in server. With H323 protocol used, set IP address or domain

name of gatekeeper; With MGCP protocol used, set IP address or domain name of Call Agent; With SIP protocol used, set IP address or domain name of SIP Proxy Server; With Net2phone protocol used, set IP address or domain name of designated server.

---

 **Note** With **H323** protocol used, if value of **set service** is **0**, then **set serviceaddr** command can be used to set IP address of gateway.

---

### **set serviceport XXX**

Set the monitor port of service. With H323 protocol, if GK is used, please set it as 1719; if GK is not used, please set it as 1720; with MGCP protocol is used, please set it as 2727 ; with SIPP protocol is used, please set it as 5060; With Net2phone is selected, please set it as 6801 or 7000.

### **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 ranged from 1024 through 65535.

### **set registerport XXXX**

Set register port. According to used protocol, set as follows: With H323 protocol used, XXXX is ranged from 1024 through 6553; With MGCP protocol used, please set is as 2427; With SIP

protocol used, please set it as 5060; With Net2phone protocol used, this port could be any number.

#### **set signalport XXXX**

With H323 protocol used, signal port is Q.931 port using TCP protocol. XXXX is arranged from 1024 through 65535.

#### **set controlport XXXX**

Set control port. With H323 protocol used, this port is H.245 port using TCP protocol. XXXX is ranged from 1024 through 65535.

#### **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 way; 2: call out in faststart and tunneling way. It is a recommended way with H323 protocol used.

#### **set localtype X**

With H323 protocol used, this command used to set how IP phone log in gatekeeper. X is ranged from 0 through 4: 0: use phone number as E.164 and H323 ID to login the GK; 1: use phone number as E.164 and designated H323 ID by set **account XXX** command; 2: use cat account, with cat authentication being supported, set value as 2; 3: md5 account, with encryption being supported by GK, set value as 3.

#### **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 service type X**

Enable/disable the repaid and service system .choose the repaid server provider. Parameter x ranged from 0 through 16: 0: disable repaid card; 1: use Mediaring service; 2: use eTalk card; 3: use Auvtech system; 4: use Subcentrex service; 5: use Ringtec service; 6: use Smartcon service; 7: use dda service; 8: use vida service; 9: use citron system; 10: use asiasoft system; 11: use uptech system; 12: use zte system; 13: use huawei system; 14: use kaiman system; 15: use voipack system; 16: use asiainfo system.

### **set account XXXXXX**

With H323 protocol used, while calling card is set, set account of chosen card; while **local type** is set as 3[md5 accoutn] or 4[cat account] , set ID; while **set localtype** is set as 1, set H323 ID. With MGCP protocol used, please set local name by this command. With Net2phone system used, set account of Net2phone card by this command.

### **set pin XXXXXXXXXXX**

With H323 protocol used, while calling card is set, set password of chosen card; while **local type** is set as 3[md5 accoutn] or 4[cat

account] , set password. With MGCP protocol used, please set domain name by this command. With Net2phone system used, set password of Net2phone card by this command.

**set phonenumber XXXXXXXX**

Set a number of Centrality PA168S IP phone according to systems. Value xxxxx must be an Arabic numeral and no longer than 16 characters.

**set fwdnumber XXXXXXXX**

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 dialplan X**

Enable/disable dial plan and dial number. Parameter X ranged from 0 through 3: 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 multi-settings or not. X ranged from 0 through 2: 0: disable multi-settings; 1: designated system to place calls; 3: enable multi-settings.

#### **set localpreifx X**

With **innerline** set as **1[enable]** or **2 [switch]**, please set the number switching to backup setting 1 here, such as 56.

#### **set nonlocalprefix X**

With **innerline** set as **1[enable]** or **2 [switch]**, please set the number switching to backup setting 2 here, such as 57.

#### **set digitmap X**



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

**set ringtype X**

Set types of ring. X is ranged from 0 to 12: 0-9: ring as ordinary rings in different frequency; 10: do not ring; 11: ring as music shipped from factory; 12: ring as music saved by user

**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 predialtime X**

Set time limit from picking up the speaker to dialing the first the number.

**set interdialtime X**

Set time limit between dialing two numbers.

**set postdialtime X**

Set time limit from dialing the last number to placing a call. If the next number is not dialed within the post dial time limit, then the phone will call the dialed number auto. X ranged from 0-255.

**set audiotype X**

Set audio type. X is ranged from 0 through 5: 0: g7231; 1: g729; 2: gsm610; 3: g711u; 4: g711a; 5: auto.

### **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 Centrality PA168S 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 password XXXX**

Set password of the Centrality PA168S IP phone. XXX must be ASCII characters and no longer than 7 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 Centrality PA168S IP phone.

**set ntsip XXX.XXX.XXX.XXX**

Set IP address of time server.

**set daylight X**

Set use daylight or not. X ranged from 0 through 1: 0: do not use daylight; 1: use daylight.

**set timezone XX**

Set time zone.

### **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 Centrality PA168S IP phone.

### **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 phone. 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 phone. So if nothing is displayed after too long time, it means that ftp is fail.

---

---

**Note** All the Telnet commands of Centrality PA168S IP phone should be written in low case and the password is case sensitive.

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## ➤ Upgrade Centrality PA168S IP phone

### ➤ Set FTP server

FTP server can be supplied by the server provider as well as setup by the users in LAN. Please set the IP address of FTP server.


### ➤ Prepare Updated program


You can ask the server provider for the latest version of program or visit [www.aredfox.com](http://www.aredfox.com) to download the latest version.

### ➤ Operation

If you have got the IP address of the FTP server from ISP, please do as follows:

- a) Use keypad to enter setting mode
- b) Use keypad to input the IP address of FTP server

- c) Press  , then No19 light will blink twice a second. Once the phone restarts successfully, the new program is effective.

 **Note** Please do not change the name of the upgraded program, or the operation will be fail.



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## ➤ Usage of the phone


### ➤ Receiving calls:

Centrality PA168S IP phone can receive incoming calls from other Centrality PA168S IP phone and devices that support the H.323 protocol. It works just like an ordinary phone for incoming calls. When it rings, you can receive the call by following methods:


① Use handset: Lift the handset and begin speaking. When the call is over, put the handset back.

② Handset to hand free: While receiving call with handset, press  on the keypad and then put down the handset. When the call is over, press  again.

③ Hand free: Press  to speak to the other party. When the call is over, press  again.

④ Hand free to handset: While receiving the call with  pressed, pick up the handset to continue the call. When the call is over, put back the handset.







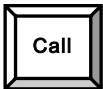


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 **Note** When you communicate with the other party without lifting the handset, please do not exceed 40 CM from speaker.

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

### ➤ Place a call

- **Call another Centrality PA168 IP phone under the same Gatekeeper:**


1. Handset: Pick up the handset and listen for the Internet dial tone. Then dial the phone number you wish to call and press  or  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 over, put back the handset. The dialed number has been saved into the buffer.
2. Hand free: Press  and listen for the Internet dial tone. Then input the phone number you wish to call and press  or  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 over, Press  again. The dialed number has been saved into the buffer.
3. Blind dialing: Use the keypad to enter the phone number you wish to call and then press  or  to make the call. 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 over, Press  again. The dialed number has been saved into the buffer.

- **Place a call without login the Gatekeeper**



If Centrality PA168s IP phone does not login the Gatekeeper, you can place a call by lifting the handset or pressing  and then inputting the IP address of the other party, and then pressing  or .

- **Place a call through Gateway**

If Centrality PA168S IP phone does not login the Gatekeeper, you can place a call through Gateway directly by lifting the handset or pressing and then inputting the IP address of the other party, and then pressing or .


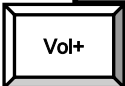

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**Note** When you place a call without Gatekeeper or with Gateway, please log off Gatekeeper. To get the detailed operation please refer to Configuration chapter.


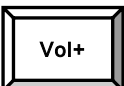

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## ➤ View Records




- View missed calls


Click , then you will hear the record of missed call. Click  to turn the numbers orderly; click  to turn the numbers reservedly. If there is no record, you will hear nothing.


- View received call

Click , then you will hear the record of the received call. Click  to turn the number orderly; click  to turn the numbers reservedly. If there is no record, you will hear nothing.

- View dialed number

Click  , then you will hear the record of the dialed call. Click  to turn the number orderly; click  to turn the numbers reservedly. If there is no record, you will hear nothing.

- When you hear the number you want to dial, please press  to place a call directly.

 **Note** Centrality PA168S IP phone supports saving 127 entries unanswered call, dialed call and received call ranged from 0-126 at best. When the entries arrives 127, the latest record will cover the first one. The record will be lost when the phone restarts or turned on.

**Appendix Table :** PA168S IP phone digital-character key map:

Keys	Press Once	Press Twice	Press Thrice	Press quartic	Press quintic
1	1	.	,	?	!
2	2	A/a	B/b	C/c	
3	3	D/d	E/e	F/f	
4	4	G/g	H/h	I/i	
5	5	J/j	K/k	L/l	
6	6	M/m	N/n	O/o	
7	7	P/p	Q/q	R/r	S/s
8	8	T/t	U/u	V/v	
9	9	W/w	X/x	Y/y	Z/z
*	.				
0	0	space	:/@	;/-	'/&
#	Case change				

*Reserves the right to make changes in technical and product specification  
without prior notice.*

*Centrality PA168S IP Net Phone User Manual (V1.32)*  
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