

SIP IP Phone

-- with PSTN Connectivity

User's Manual



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Chapter 1 Overview of the VIP-150T

VIP-150T is a full-featured IP-based telephone set via Ethernet base communication. Over the office LAN connection, it provides IP-PBX solution such as station-to-station call, IP call and local PSTN/PBX Extension call via PSTN Gateway.

VIP-150T provides two 10/100BaseT switch/hub RJ-45 ports allow connecting to office LAN and PC simultaneously. It is compatible with ADSL or Cable Modem provided by ITSP, ISP or Carrier Company to provide VoIP services to residential and SOHO application. VIP-150T is also an integrated Analog Phone provides IP call or PSTN call selection. When external power is down, it can be a Plain Old Telephone set (POTs).

It provides internal high-quality speakerphone, programmable keys and feature buttons. VIP-150T also embedded with a dot matrix of two lines 24 characters LCD, which can display date and time, calling party name, calling party number, and digits dialed and etc.

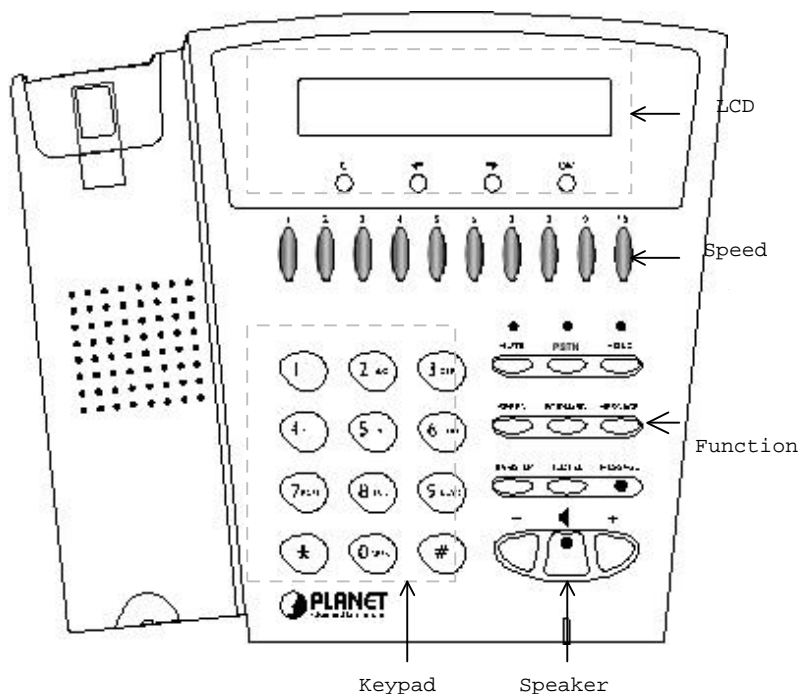


Note:

(**): May be not available right now, please contact with your distributor.

1.1 Hardware Overview

1.1.1 Front View and Keypad function



- ◆ **LCD:** 2 lines, 24 character Dot Matrix display.
- ◆ **C:** Jump out current LCD menu.
- ◆ **↶** : Move to previous selection or clear previous data.
- ◆ **→** : Move to right or next selection.
- ◆ **OK:** Press OK to confirm the modification.
- ◆ **Direct Line (DL) Button 1 – 10:** User press DL button after off-hook to do speed dial according to phone book data from 1-10 (please refer to LCD configuration-**3.Phone Book**; Advanced Configurations via Telnet- **5.[pbook] command**, or Web Configuration-Phone Book chapter.
- ◆ **Number 1 –10, * and #:** The function is as the same as the general phone set.

Corresponding list of keypad and symbol:

1	"1"
2	"A" ; "B" ; "C" ; "2"
3	"D" ; "E" ; "F" ; "3"
4	"G" ; "H" ; "I" ; "4"
5	"J" ; "K" ; "L" ; "5"
6	"M" ; "N" ; "O" ; "6"
7	"P" ; "Q" ; "R" ; "S" ; "7"
8	"T" ; "U" ; "V" ; "8"
9	"W" ; "X" ; "Y" ; "Z" ; "9"
*	"." ; "@" ; "-" ; " " ; " " ; " " ; "!" ; "?" ; "*" ; "
0	"0" ; "Space"
#	"#"

- ◆ **MUTE:** Mute the voice of MIC and let others can't hear from user in communication.
- ◆ **PSTN:** Press PSTN to switch VIP-150T as PSTN or IP Phone Mode. In PSTN mode, "PSTN" characters will be displayed on LCD left bottom side, then users can dial out as if standard telephone set in PSTN; in IP Phone mode, "PROXY" characters will be displayed on LCD left bottom side. (**)

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Note:

1. When VIP-150T is in PSTN mode, only **PSTN** and **SPEAKER** function key can work.
2. On LCD will display "...Incoming Call..." to inform user when VIP-150T has both IP and PSTN side incoming calls.
3. If in communication with IP side, user can press HOLD to hold IP side, then press PSTN to pick up PSTN side, after that can press HOLD again to retrieve IP side.
4. If in communication with PSTN side, user must hang up PSTN side before pick up IP side.

- ◆ **HOLD:** To hold a call, after press HOLD button, both sides will hear hold tone.
- ◆ **SPEED:** Press SPEED and number (Phone book index) after off-hook can do speed dial according to phone book data (please refer to 3.LCD configuration-6. **Phone Book** or Advanced Configurations via 4.Telnet- **5.[pbook] command**).
- ◆ **FORWARD:** Forward an incoming call to another IP device. (Please refer to *LCD configuration-Forward Type*) (**)

- ◆ **MESSAGE and its indicated LED light:** When having missed incoming calls, the MESSAGE LED will be flashing. User can check the information of missed calls by pressing the MESSAGE button. (**)

- ◆ **TRANSFER:**
 1. Transfer a call to the third site. When A and B are in communication, A wants to transfer this call to C, A can press TRANSFER button, now B will hear hold tone, and A will hear dial tone, then A can press phone number of C, after C picks up, A can talk with C, after A hangs up, B and C can be connected.



Note:

1. A cannot press phone number of C before **hearing dial tone**.
2. A cannot hangs up before C picks up.

2. Change characters to be capital or lowercase: when pressing TRANSFER before press letters can switch input type of letters.

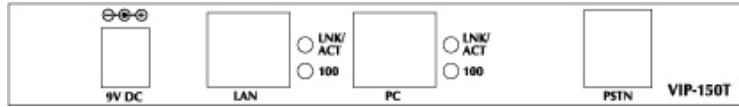
- ◆ **REDIAL:** Redial the last outgoing call.
- ◆ **+ And -:** Adjust the voice volume heard of communication.
- ◆ **SPEAKER:** Hand free mode. User can talk without picking up handset.



Note:

All function keys mentioned above (except dialing keypad) are effective only in IP Phone mode. (**)

1.1.2 Back View



- ◆ **DC 9V:** DC 9V power input outlet
- ◆ **LAN:** RJ-45 connector, connected directly to the **Hub** through the **straight** CAT-5 cable.
- ◆ **PC:** RJ-45 connector, connected directly to the **PC** through the **straight** CAT-5 cable
- ◆ **Line:** RJ-11 connector, connected directly to the PSTN analog line.

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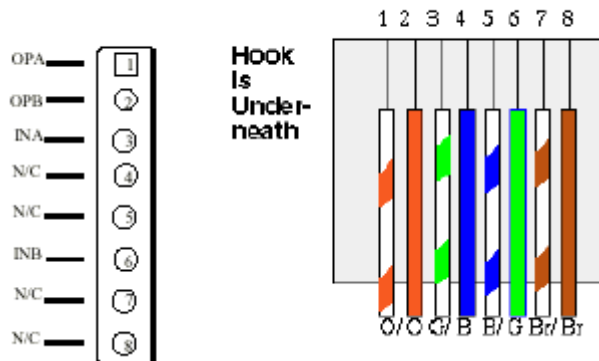
Note:

There are two LED indicated lights: LINK/ACT and 10/100 for LAN port and PC port. When network status is regular, LED of LINK/ACT will light on; when VIP-150T is transmitting or receiving data, LED will be flashing; when transmit rate is in 10 mbps or 100mbps, LED of 10/100 will light off or light on.

1.1.3 Specification of connector

1、 Ethernet Port :

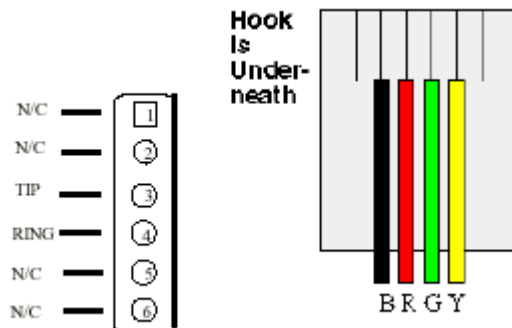
Ethernet port is for connecting VIP-150T to network, transmit rate supports 10/100 Base-T.



Ethernet connector (LAN)

2、 RJ11connector :

RJ11 connector is for connecting VIP-150T with PSTN.



RJ11connector

1.2 Software Features and Specification

Application:

- I ISP/ITSP (Internet Telephony Service Provider)
- I IP-PBX with office telephony services
- I Multi-nation enterprise communication
- I SOHO Telephony

Calling Features

- I Call Hold
- I Call Transfer
- I Call Forward (**)
- I 10 sets last number Redial
- I Ten configurable speed dials

Network Supported

- I Fixed IP
- I Dynamic Host Configuration Protocol (DHCP)
- I PPPoE connection (When PPPoE disconnect, VIP-150T can automatically re-connect)
- I Behind NAT IP Sharing Device
- I Support QOS by setting DSCP (Differentiated Service Code Point) parameters of VoIP packet
- I Support 802.1p1q (VLAN) (**)

Audio Features

- I G.711 a/ μ -Law, G.723.1, G.729, G.729a
- I VAD, CNG
- I G.165/G.168 compliant echo cancellation
- I Programmable Dynamic Jitter Buffer
- I Bad Frame Interpolation
- I Gain/Attenuation Settings

Provisioning and Configuration

- I SIP (RFC3261) compliance
- I LCD configuration password protection
- I Provide Proxy Mode or Peer-to-Peer Mode (Non Proxy Server needed) selection
- I Ring tone, Speaker and Handset volume adjustable
- I Dial path selection (PSTN or IP mode)
- I Support DNS server inquiry

Management Features:

- I Software Upgrade: TFTP/FTP download
- I Three easy ways for system configuration
 - LCD Front Panel
 - Web Browser
 - TELNET

Environmental

- I Humidity: 10 to 90 % (Non-condensing)
- I Operational Temperature: 0 to +40 °C

Chapter 2 Configuring the VIP-150T through LCD Phone menus



Note:

1. After any configuration is made for the VIP-150T, user has to do **Reboot** in the selection 7 “Reboot”.
2. **We suggest user to set IP address via LCD menu 5→2.3.4.5 first, then go to chapter 3 to do other detail configurations via web browser.**

2.1 Initialize VIP-150T

1. When power on the VIP-150T, the LCD screen shows as below. Now VIP-150T is running Boot sector program.

```
VIP-150T
Board Start Booting
```

2. When VIP-150T finishes boot program initialization. User can see flashing greeting as below:

```
System Initializing.....
```

3. Then VIP-150T get into standby mode:

```
VIP-150T
Proxy      10:10:10 AM
```

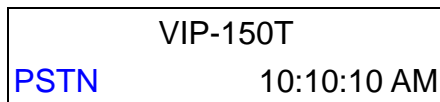
The main LCD screen would be shown as similar as above. “Proxy” means the VIP-150T is in Proxy Mode, and when VIP-150T is connected to SNTP server, on LCD will show current time captured from SNTP server.

4. When VIP-150T is under peer-to-peer mode, on LCD will show “P2P” instead of “Proxy”.

```
VIP-150T
P2P       10:10:10 AM
```

5. After pressing the **PSTN** button, the “Proxy” or “P2P” will be replaced by “PSTN”. Please notice that user must plug PSTN line in RJ-11 port when VIP-150T is in PSTN

mode. (**)



6. Press **☺** or **☹** to enter configuration mode then press **OK** button to enter sub menus; press **C** can jump out current menu to previous level.

1. Call List (**)
2. Forward Type
3. Phone Book
4. Ringer Settings
5. Network
6. Advanced Settings (protected by password)
7. Reboot

2.2 LCD Menu Configuration

User can set the following configurations by LCD keypad.

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Note:

1. Press **TRANSFER** before input data can switch characters to be capital or lowercase.
2. Press **SPEED** before input data can switch input mode as character mode or IP mode; for example, user wants to enter IP address, after pressing **SPEED** can enter digits directly.
3. When user is inputting data, press **C** will jump out to menu list, press **☺** will clear previous input data.

1. Call List (**)

If there is an unanswered IP call, it will be kept in message box. **MESSAGE** LED will be flashing until user press **MESSAGE** to check miss call and re-press **MESSAGE** to return to main screen.

- (1) **Missed Calls** : to see all missed calls in message box.
- (2) **Received Calls** : to see all received calls in message box.
- (3) **Dialed calls**: to see all dialed calls in message box.

2. Forward Type (**)

There are 3 selections in Forward type, user must select under which condition to forward calls.

(1) Busy

When VIP-150T is in busy status, the incoming call will be forwarded to the assigned phone number.

A. Activate

Enter a forwarded phone number to activate busy forward function.

B. Deactivate

Deactivate Busy Forward function.

(2) No Response

When VIP-150T hasn't been picked up for around 10 seconds, the incoming call will be forwarded to the assigned phone number.

A. Activate

Enter a forwarded phone number to activate no response forward function.

B. Deactivate

Deactivate No Response Forward function.

(3) Unconditional

It is included the above two types. Whether the VIP-150T is in which status, calls will be automatically forwarded to the assigned phone number.

A. Activate

Enter a forwarded phone number to activate Unconditional Forward function.

B. Deactivate

Deactivate Unconditional Forward function.

3. Phone Book

1. List

List all records of name, telephone number, and IP address in the phone address book.

2. Edit/Delete

Edit or delete a record of name, telephone number, and IP address of the phone address book.

3. New

Add a new record of name, telephone number, and IP address of the phone address book.

4. Ringer Settings

1. Volume

User can adjust ring volume by press **☺** or **☹** on the keypad to decrease or increase ringer volume.

2. Style

There are three tone styles for VIP-150T. Move the “>” symbol by press **☺** or **☹** on the keypad to select the tone style preferred, then press **OK** to confirm it.

5. Network

1. Information

User can press **☺** or **☹** to check current network status:

- (1) Mode:** Display current network connection mode of VIP-150T to be Static (Fixed IP), DHCP, or PPPoE.
- (2) IP, Mask, Gateway:** display current IP information.

2. Network Mode

Set network mode of VIP-150T to be Static (Fixed IP), DHCP, or PPPoE.

3. IP address

Set IP address of VIP-150T.

4. Subnet Mask:

Set subnet mask address of VIP-150T.

5. Default Gateway

Set default gateway address of VIP-150T.

6. Domain Name Server

Set IP address of Domain Name Server. Once VIP-150T can connect to DNS server, user can set URL address for Proxy server or Phone book instead of IP address.

7. PPPoE Configuration

(1) User Name

Set PPPoE connection authentication user name.

(2) Password

Set PPPoE connection authentication password.

(3) Auto Re-connect

Choose ON or OFF to enable or disable this function. If user enables this function, after PPPoE disconnected, VIP-150T will automatically reboot to re-connect, and after reboot, if VIP-150T still can't connect with server, VIP-150T will keep trying to connect. On the other hand, if user disables this function, VIP-150T won't reboot and keep trying to connect.

8. SNTP Configuration



(1) SNTP Mode:

User can set SNTP function to be on or off, which means VIP-150T will capture current time from SNTP server or not.

(2) SNTP Server:

User can specify a SNTP server for VIP-150T to capture current time.

(3) Time Zone:

User can set time zone via pressing  or  according to the location VIP-150T is. For example, in Taiwan the time zone should be set as GMT+8:00.

9. Behind IP-Sharing

(1) If VIP-150T is behind IP sharing or NAT device, on IP sharing must enable “**DMZ**” function or set “**Virtual Server**” to open ports (UDP port: 5060 and 16384).

(2) User must enter public IP address of IP sharing.

6. Advanced Settings (protected by password)

I Please Enter Password: (**)

User must key in password to enter this menu, selections under this command are all important ones, which can only be configured by advanced users.



Note:

1. Default Password to enter is **empty**, please press OK to enter sub-menus.
2. If user forget password, please contact with your distributor, we will generate a specific password according to your MAC address of VIP-150T.
3. User can also try to configure VIP-150T via Telnet or Web browser with default IP address: 192.168.0.1

1. SIP Settings

(1) Connect Mode

Select SIP connection mode to be peer-to-peer mode or Proxy mode.

(2) Proxy

A. Proxy

Set Proxy IP address or Domain Name.

B. Outbound proxy

Set Outbound Proxy IP address or Domain Name.

C. Proxy port

Set Proxy port for VIP-150T to send messages.

D. Expire (in seconds)

Set expire time of registration, in the duration of 2/3 expire time, VIP-150T will re-register to Proxy Server again.

(3) User Info

A. User Name

Set User Name of VIP-150T to register to Proxy Server. If Proxy server doesn't request specific User name, please enter Line number here.

B. Line Number

Set Line Number of VIP-150T to register to Proxy Server.

C. Password

Set User Password of VIP-150T to register to Proxy Server. This configuration is not necessary, if Proxy server doesn't request client to set password, user only has to set User Name the same as Line Number.

2. Firmware Update

(1) Download method

There are two methods to download new version file, please move the ">" symbol by press **↵** or **↵** on the keypad to select TFTP or FTP method, then press **OK** to confirm it.

(2) FTP/TFTP Sever

User has to offer one TFTP/FTP server IP Address and set this IP Address via keypad. The IP Address is necessary for upgrading VIP-150T new application rom file.

(3) Set FTP user account ()**

User has to input user name and password for FTP server login .It is necessary for upgrading VIP-150T new application rom file via FTP method.

(4) File Name

User has to press the file name of new application rom file prepared for upgrading

(5) Start to Upgrade

Select YES or NO to start upgrade. After download is finished, press OK then VIP-150T will ask if need to reboot. (**)

(6) Firmware Version

Show versions of all software and hardware. (**)



Note:

Download via LCD command can only upgrade new **application** rom file.

2. LCD Menu Password

Set entry password of phone LCD menu.

7. Reboot

Reboot machine. It is necessary and important for user to reboot VIP-150T after any configurations has been made. VIP-150T will ask user again before reboot.

Chapter 3 Configuring the VIP-150T through Web Pages

The HTTPD web management interface provides user an easier way to configure rather than command line method through TELNET.

The configuration function and steps are similar with the way through command line. Please refer to the chapter 4- Configuring the VIP-150T through Telnet command lines for more detail information. Below is a guide for user to configure via web interface.

Step 1. Browse the IP Address predefined via Keypad

Please enter IP address (user have to set via LCD menu first) of VIP-150T in web browser. If user failed to set IP address via LCD menu, the **default IP address of VIP-150T is 192.168.0.1**, user can try to connect to VIP-150T via this default IP via web interface.

Step 2. Input the login name and password

- n Login name: root / administrator
- n Password (The same with TELNET): Null (just press confirm, no need to key in password in default value)

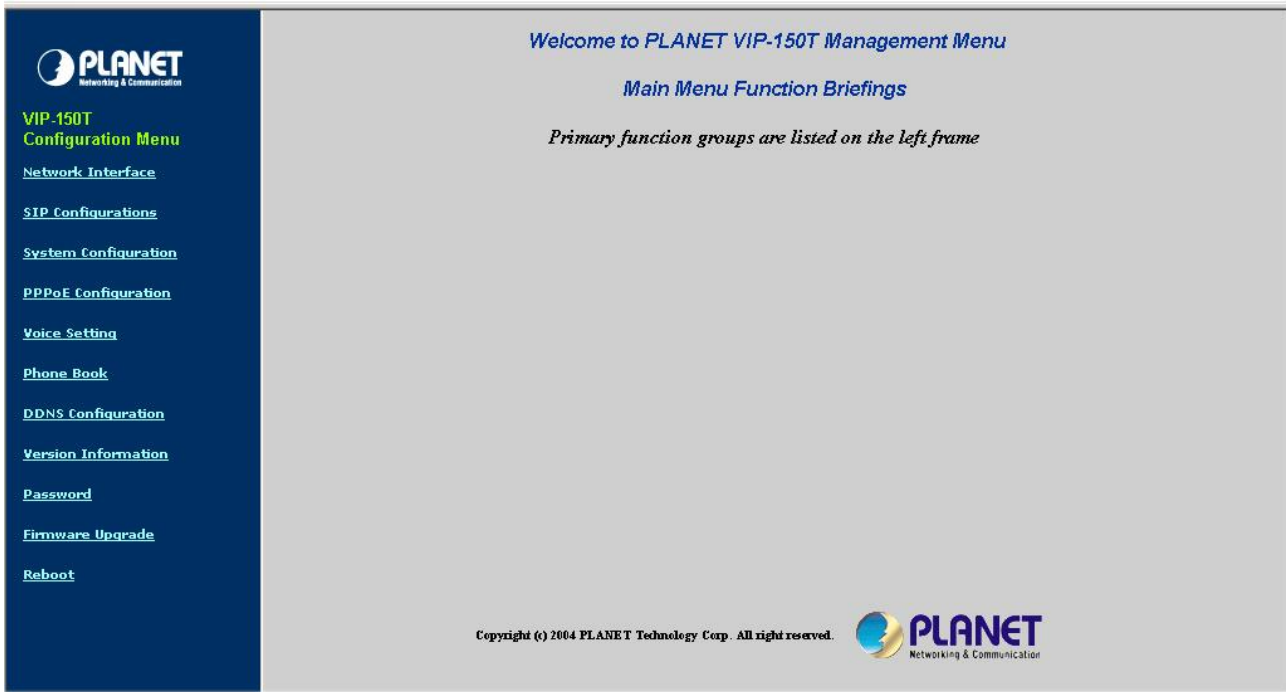


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Note:

User can set password later in **9.PASSWORD** via web interface.

Step 3. Enter the web interface main screen

After enter login name and password, user can see web interface main screen as below.



Step 4. Start to configure

Most important items are [Network Interface](#), [SIP Configurations](#), and [Phone Book \(in Peer-to-Peer mode\)](#). Please remember to configure these commands before start to work with VIP-150T.

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Note:

After change any settings, please remember to **reboot** VIP-150T so that changes can take effect.

1. Network Interface

Please refer to chapter 4.9 [ifaddr] command.

Network Interface	
IP Address:	210 . 66 . 155 . 78
Subnet Mask:	255 . 255 . 255 . 0
Default routing gateway:	210 . 66 . 155 . 94
Get IP Mode:	<input checked="" type="radio"/> Fixed IP <input type="radio"/> DHCP <input type="radio"/> PPPoE
SNTP:	<input checked="" type="radio"/> enable <input type="radio"/> disable
SNTP Server Address:	192 . 43 . 244 . 18
GMT:	8
IP Sharing:	<input type="radio"/> enable <input checked="" type="radio"/> disable
UPnP:	<input type="radio"/> enable <input checked="" type="radio"/> disable
IP Sharing Server Address:	0 . 0 . 0 . 0
Primary DNS Server:	168 . 95 . 1 . 1
Secondary DNS Server:	168 . 95 . 1 . 2
<input type="button" value="DONE"/>	

- **IP Address:** Set IP Address of VIP-150T
- **Subnet Mask:** Set the Subnet Mask of VIP-150T
- **Default routing gateway:** Set Default routing gateway of VIP-150T
- **Get IP Mode:** User has to set VIP-150T to use which network mode.
 1. **Fixed IP:** User has to assign a fixed IP to VIP-150T.
 2. **DHCP:** When DHCP function enables, VIP-150T will automatically search DHCP server after reboot.
 3. **PPPoE:** If VIP-150T is working with PPPoE connection, user have to set related parameters in “**PPPoE Configuration**” page.

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Note:

If User set “Get IP mode” as DHCP or PPPoE, IP address, Subnet Mask, and Default routing gateway will become 0.0.0.0 and not allow to be configured.

Network Interface	
IP Address:	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>
Subnet Mask:	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>
Default routing gateway:	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>
Get IP Mode:	<input type="radio"/> Fixed IP <input checked="" type="radio"/> DHCP <input type="radio"/> PPPoE
SNTP:	<input checked="" type="radio"/> enable <input type="radio"/> disable
SNTP Server Address:	<input type="text" value="192"/> . <input type="text" value="43"/> . <input type="text" value="244"/> . <input type="text" value="18"/>
GMT:	<input type="text" value="8"/>
IP Sharing:	<input type="radio"/> enable <input checked="" type="radio"/> disable
UPnP:	<input type="radio"/> enable <input checked="" type="radio"/> disable
IP Sharing Server Address:	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>
Primary DNS Server:	<input type="text" value="168"/> . <input type="text" value="95"/> . <input type="text" value="1"/> . <input type="text" value="1"/>
Secondary DNS Server:	<input type="text" value="168"/> . <input type="text" value="95"/> . <input type="text" value="1"/> . <input type="text" value="2"/>
<input type="button" value="DONE"/>	

Network Interface	
IP Address:	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>
Subnet Mask:	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>
Default routing gateway:	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>
Get IP Mode:	<input type="radio"/> Fixed IP <input type="radio"/> DHCP <input checked="" type="radio"/> PPPoE
SNTP:	<input checked="" type="radio"/> enable <input type="radio"/> disable
SNTP Server Address:	<input type="text" value="192"/> . <input type="text" value="43"/> . <input type="text" value="244"/> . <input type="text" value="18"/>
GMT:	<input type="text" value="8"/>
IP Sharing:	<input type="radio"/> enable <input checked="" type="radio"/> disable
UPnP:	<input type="radio"/> enable <input checked="" type="radio"/> disable
IP Sharing Server Address:	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>
Primary DNS Server:	<input type="text" value="168"/> . <input type="text" value="95"/> . <input type="text" value="1"/> . <input type="text" value="1"/>
Secondary DNS Server:	<input type="text" value="168"/> . <input type="text" value="95"/> . <input type="text" value="1"/> . <input type="text" value="2"/>
<input type="button" value="DONE"/>	

- **SNTP:** Enable / Disable the Simple Network Time Protocol function

- **SNTP Server Address:** Set SNTP Server Address
When SNTP server is available, enable VIP-150T SNTP function to point to SNTP server IP address so that VIP-150T can get correct current time.
- **GMT:** Set time zone for SNTP Server time
User can set different time zone according to the location of VIP-150T. For example, in Taiwan the time zone should be set as 8, which means GMT+8.
- **IP Sharing:** Enable it if VIP-150T is behind IP Sharing router.
- **UPnP:** Enable it if IP sharing or NAT device supports UPnP function so that no need to configure IP sharing or VIP-150T when VIP-150T is behind NAT device.
- **IP Sharing Server Address:** Set Public IP Address of IP Sharing router for VIP-150T to work behind IP sharing.
- **Primary DNS Server:** Set Primary Domain Name Server IP address.
User can set Domain Name Server IP address. Once VIP-150T can connect with DNS server, user can specify URL address instead of IP address for Proxy and phone book IP address.
- **Secondary DNS Server:** Set Secondary Domain Name Server IP address.

2. SIP Configurations

Please refer to chapter 4.13 [sip] command

SIP Configurations	
Operation mode:	<input type="radio"/> Peer-to-Peer <input checked="" type="radio"/> Proxy
Proxy Server:	216.87.144.203
Outbound Proxy:	null
Proxy port:	5060
Phone Book Search:	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
Prefix String:	null
Line Number:	1001
Line Account:	1001
Line Password:	1001
SIP port:	5060
RTP Port:	16384
Expire Time:	60 (1-3600)
DONE	

- **Operation Mode:** Select VIP-150T to work under Peer-to-Peer mode or Proxy mode.
 - **Proxy Server:** Set Proxy Server or URL address (Domain Name Server must be configured. Please refer to **Network Interface**).
 - **Outbound Proxy:** Set IP Address or URL address (Domain Name Server must be configured. Please refer to **Network Configure**) of outbound Proxy server.
 - **Proxy port:** Set Proxy port for VIP-150T to send message, default value is 5060, if there is no special request of Proxy server, please don't change this value.
 - **Phone Book Search:** enable/disable phone book search function. If user enabled this function, VIP-150T will search dialed number in phone book to see if there is any matched table before send to Proxy server, and if there is a matched data in phone book, VIP-150T will make call to related IP address.
1. **Prefix String:** set prefix string. If user ID contains alphabets, user can set it as prefix string here. For example, if Account Name is 123, VIP-150T will sent out messages as Account Name @"IP address of Proxy", if user set prefix as abc, VIP-150T will set out as abc123@"IP address of Proxy". This function is for special proxy server.

- **Line Number:** identify one number for the VIP-150T to register to the Proxy.
- **Line Account:** set user name of VIP-150T for registering. User can set user name and password for registering. If password is no need, please set user name the same as line number or VIP-150T won't register successfully.
- **Line Password:** set password for registering.
- **SIP Port:** set SIP UDP port.
- **RTP Port:** set RTP port for sending voice data.
- **Expire Time:** set expire time of registration. VIP-150T will keep re-registering to proxy server before expire timed out

3. System Configuration

Please refer to chapter 4.12 [sysconf] command

System Configuration	
Keypad DTMF Type:	<input checked="" type="radio"/> In-Band <input type="radio"/> RFC2833
RFC2833 Payload Type:	<input type="text" value="96"/>
Interval between Dialstring Digits:	<input type="text" value="3"/> second
Terminal Digit:	<input type="radio"/> No end of dial <input type="radio"/> Button[*] <input checked="" type="radio"/> Button[#] <input type="radio"/> Button[OK]
<input type="button" value="DONE"/>	

- **Keypad DTMF Type:** set DTMF type. User can select DTMF type VIP-150T transmits.
- **RFC2833 Payload Type:** change RFC2833 Payload type. This is for special request from the other site, if RFC2833 payload type of 2 sites are different, it may cause some problem of connection.
- **Interval between Dialstring Digits:** Set the DTMF inter digit time (second)
To set the duration (in second) of two pressed digits in dial mode as timed out. If after the duration user hasn't pressed next number, VIP-150T will dial out all number pressed.
- **Terminal Digit:** select end of dialing key, e.g. set end of dial key as # button, after finished pressing dialing number then press # will dial out.

4. PPPoE Configuration

Please refer to chapter 4.10[pppoe] command

The screenshot shows the PLANET VIP-150T web interface. The left sidebar contains the following navigation links: [VIP-150T Configuration Menu](#), [Network Interface](#), [SIP Configurations](#), [System Configuration](#), [PPPoE Configuration](#) (highlighted), [Voice Setting](#), [Phone Book](#), [DDNS Configuration](#), [Version Information](#), [Password](#), [Firmware Upgrade](#), and [Reboot](#). The main content area is titled "PPPoE Configuration" and contains the following fields:

User Name:	<input type="text" value="pppoe"/>
Password:	<input type="password" value="*****"/>
Reboot After Remote Host Disconnection:	<input checked="" type="radio"/> On <input type="radio"/> Off
Authenticate:	<input type="text" value="PAP"/>
Protocol:	<input type="text" value="TCP/IP"/>
Device:	<input type="text" value="PPP/PPPoE"/>

At the bottom of the configuration area is a "DONE" button.

- **User Name:** Set PPPoE authentication User Name.
- **Password:** Set PPPoE authentication password.
- **Reboot After Remote Host Disconnection:** Enable/Disable auto reboot after PPPoE disconnection
If user enables this function, after PPPoE being disconnected, VIP-150T will automatically reboot to re-connect, and after reboot, if VIP-150T still can't get contact with server, VIP-150T will keep trying to connect. After re-connected, VIP-150T will also restart system. On the other hand, if user disables this function, VIP-150T won't reboot and keep trying to connect.
- Other items: for reference only, cannot allow to be configured.

5. Voice Setting

Please refer to chapter 4.15 [voice] command

The screenshot shows the 'Voice Setting' configuration page for a PLANET VIP-150T device. The page is divided into a sidebar and a main configuration area. The sidebar contains the following links: PLANET Networking & Communication, VIP-150T Configuration Menu, Network Interface, SIP Configurations, System Configuration, PPPoE Configuration, Voice Setting (highlighted), Phone Book, DDNS Configuration, Version Information, Password, Firmware Upgrade, and Reboot. The main configuration area is titled 'Voice Setting' and contains the following settings:

Codec Priority:	1st	2nd	3rd	4th	5th
	G.723.1	G.729a	G.729	G.711mu-Law	G.711A-Law
Sending Packing Size:	G.723.1 30ms	G.729a 60ms	G.729 60ms	G.711mu 40ms	G.711A 40ms
G.723 Silence Suppression:	<input checked="" type="radio"/> enable <input type="radio"/> disable				
Volume:	voice 32 (0-45)	ring 32 (0-45)	input 32 (26-35)	DTMF 31 (0-31)	
Echo Cancelor:	<input checked="" type="radio"/> enable <input type="radio"/> disable				
Jitter Buffer:	Min. Delay 90		Max. Delay 150		
Optimized Factor (Jitter):	9				
<input type="button" value="DONE"/>					

- **Codec Priority:** set codecs priority in order. Please notice that user can set from 1 to 5 codecs as their need. For example, user can only set first priority as G.723.1, and set the others as x, that means only G.723.1 is available.
- **Sending Packing Size:** User can set different packet size for each codec.
- **G.723 Silence Suppression:** Enable / Disable sound compression and comfort noise generation. It is only for codec G.723.1
- **Volume:** Adjust the volume in "Voice" (sending out); "Input" (receiving); "DTMF" (DTMF sending out).
- **Echo Cancelor:** Enable / Disable (suggested always Enable this function).
- **Jitter Buffer:** Set Min. Delay and Max. Delay of Jitter Buffer for voice packets.
- **Optimized Factor (Jitter):** Set Optimized Factor of voice, this is for advanced user only, please contact with your distributor before making any change.

6. Phone Book

Please refer to chapter 4.5 [pbook] command

The screenshot displays the PLANET VIP-150T web interface. On the left is a dark blue navigation menu with the PLANET logo and various configuration options: VIP-150T Configuration Menu, Network Interface, SIP Configurations, System Configuration, PPPoE Configuration, Voice Setting, Phone Book (highlighted), DDNS Configuration, Version Information, Password, Firmware Upgrade, and Reboot. The main content area is titled 'Phone Book' and features a table with four columns: Index, Name, Destination, and E.164. Below the table is a 'New Entry' form with four input fields for Index, Name, Domain Name/IP Address, and E.164. There are 'Add Entry' and 'Delete Entry' buttons below the form. A link for 'Next 10 Records' is located at the bottom right of the form area.

- **Add Entry:** User can specify 20 sets of phone book via web interface. Please input index, Name, IP Address and E.164 number of the destination device.
- **Delete Entry:** User can delete any configured phone book data by index.

7. DDNS Configuration

Please refer to chapter 4.17 [ddns] command

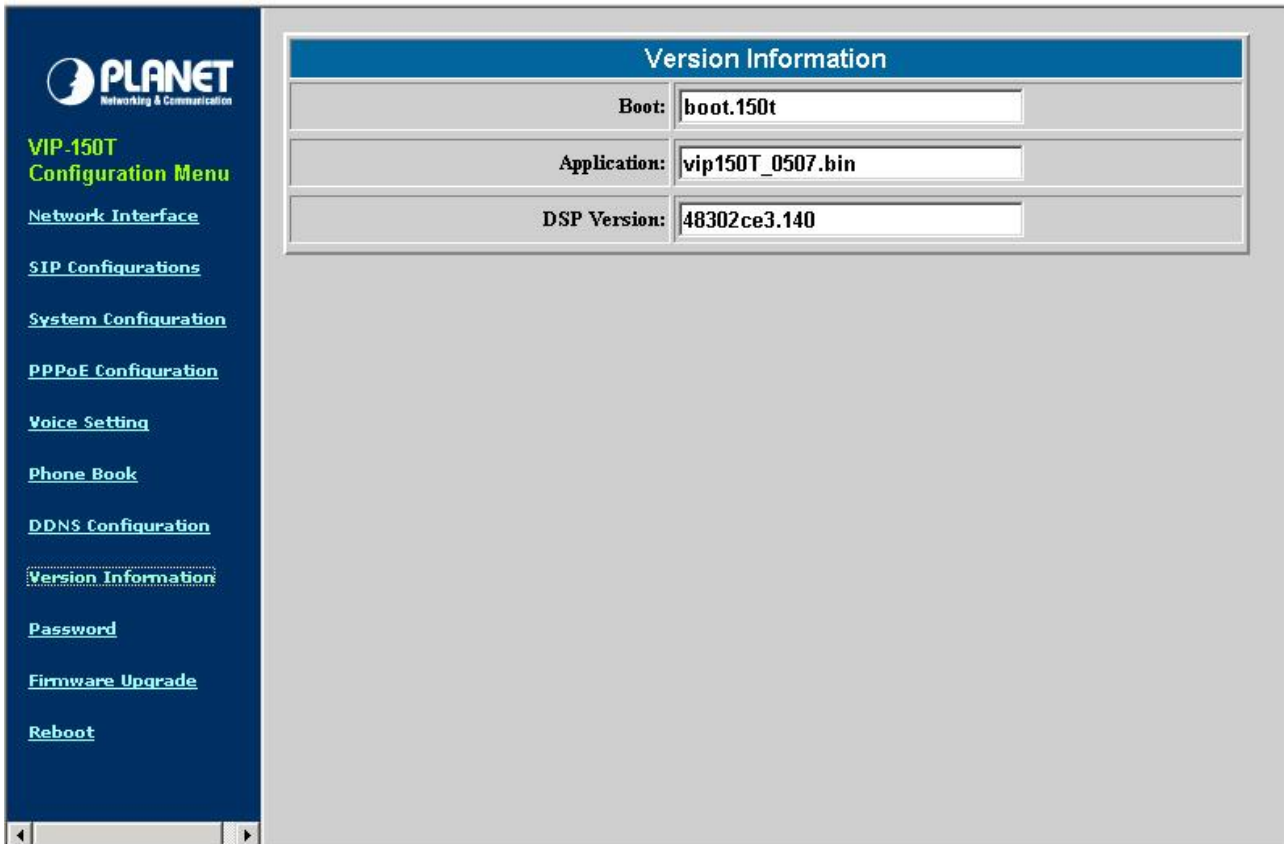
The screenshot shows the DDNS Configuration page of the PLANET VIP-150T router. The left sidebar contains a navigation menu with the following items: PLANET Networking & Communication, VIP-150T Configuration Menu, Network Interface, SIP Configurations, System Configuration, PPPoE Configuration, Voice Setting, Phone Book, DDNS Configuration (highlighted), Version Information, Password, Firmware Upgrade, and Reboot. The main content area is titled 'DDNS Configuration' and contains the following fields and controls:

Status:	<input type="radio"/> Enable <input checked="" type="radio"/> Disale
Server:	www.3322.org
Host Name:	planetvip.3322.org
ID:	planetvip
Password:	*****
Check IP:	<input checked="" type="radio"/> On <input type="radio"/> Off
IP Check Server 1:	checkip.dyndns.org
IP Check Server 2:	checkip.dyndns.org
Check every:	20 <input checked="" type="radio"/> mintues <input type="radio"/> hours <input type="radio"/> Off
<input type="button" value="DONE"/>	

- **Status:** Enabled/Disable the dynamic DNS service
- **Server:** Specify DDNS server address
- **Host Name:** Registered domain name
- **ID:** Registered account ID
- **Password:** Registered account Password
- **Check IP:** On/Off check the host current IP address
- **IP Check Server1:** Specify IP address check server
- **IP Check Server2:** Specify secondary IP address check server
- **Check every:** Setting the service delay time
(1~59 minutes / 1~24 hours / Off)

8. Version Information

Please refer to chapter 4.19 [rom] command

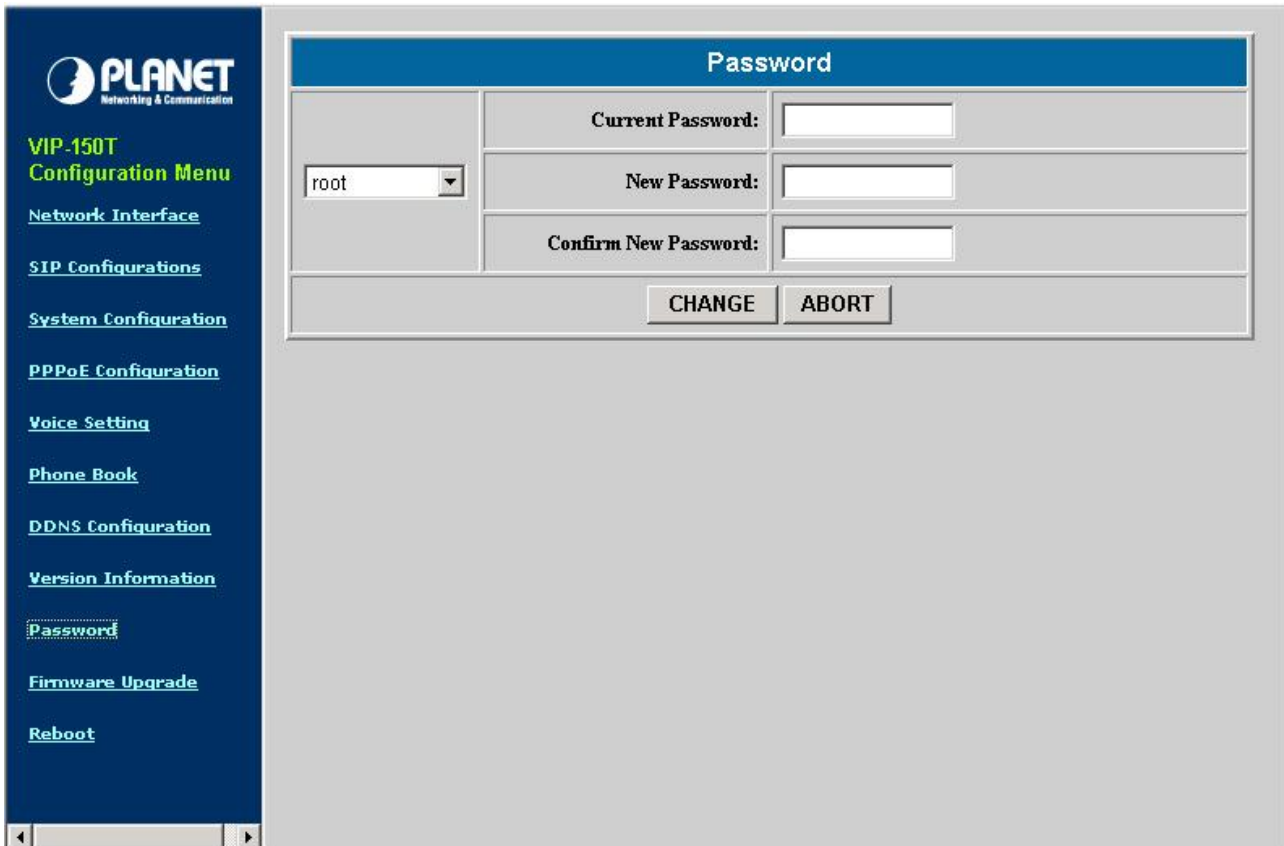


Version Information	
Boot:	boot.150t
Application:	vip150T_0507.bin
DSP Version:	48302ce3.140

- **Boot:** Boot loader version VIP-150T
Default: This field has no default value.
- **Application:** Application image version information of VIP-150T.
Default: This field has no default value.
- **DSP Version:** DSP image version information.
Default: This field has no default value.

9. Password

Please refer to chapter 4.20 [passwd] command



The screenshot displays the PLANET VIP-150T Configuration Menu. The left sidebar contains the following menu items: [Network Interface](#), [SIP Configurations](#), [System Configuration](#), [PPPoE Configuration](#), [Voice Setting](#), [Phone Book](#), [DDNS Configuration](#), [Version Information](#), [Password](#) (highlighted), [Firmware Upgrade](#), and [Reboot](#). The main content area is titled "Password" and features a dropdown menu with "root" selected, and three input fields labeled "Current Password:", "New Password:", and "Confirm New Password:". Below these fields are two buttons: "CHANGE" and "ABORT".

- **CHANGE:** First select login name as root or administrator, then enter current password, new password and confirm new password again to set new password.
- **ABORT:** Press abort will clean all inputs.

10. Firmware Upgrade

Please refer to chapter 4.19 [rom] command

Firmware Upgrade	
Server IP Address:	<input type="text"/> . <input type="text"/> . <input type="text"/> . <input type="text"/>
Target File name:	<input type="text"/>
Download Method:	TFTP ▾
FTP Login:	name <input type="text"/> passwd <input type="text"/>
Target File Type:	Application Image ▾
<input type="button" value="DONE"/>	

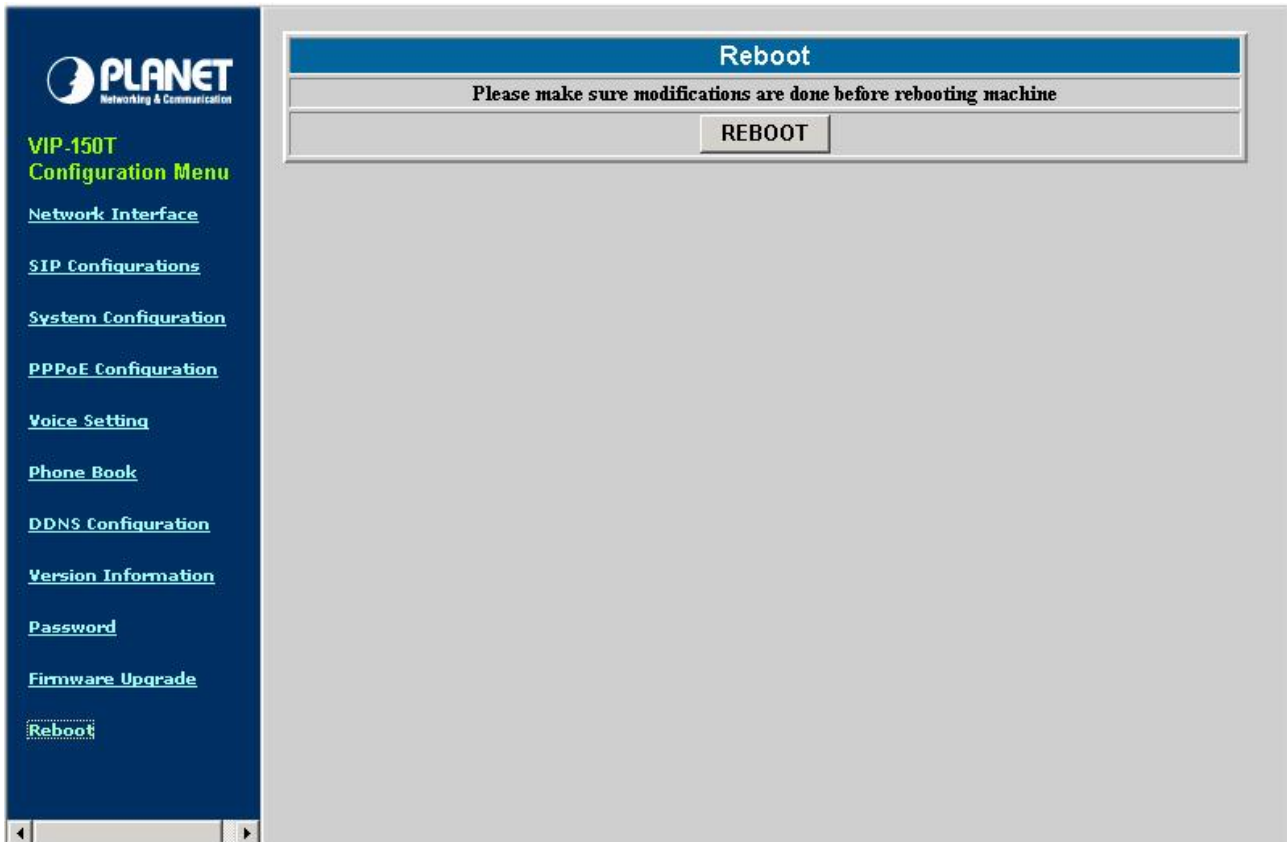
- **Server IP Address:** Set TFTP server IP address
- **Target File name:** Set file name prepared to upgrade
- **Download Method:** Select download method as TFTP or FTP
- **FTP Login:** Set FTP login name and password
- **Target File Type:** Select which sector of VIP-150T to upgrade

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Note:

1. After 2mb file download is finished, all configurations might change to default values, user has to configure again.
2. After upgrade Application, please remember to execute Flash Clean, which will clean all configurations become factory values except IP address.

11. Reboot

Please refer to chapter 4.4 [reboot] command



- Press reboot will reset VIP-150T.

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Note:

To execute reboot via web browser, VIP-150T will automatically save all data before reboot. To execute reboot via TELNET command.

Chapter 4 Configuring the VIP-150T through Telnet command lines

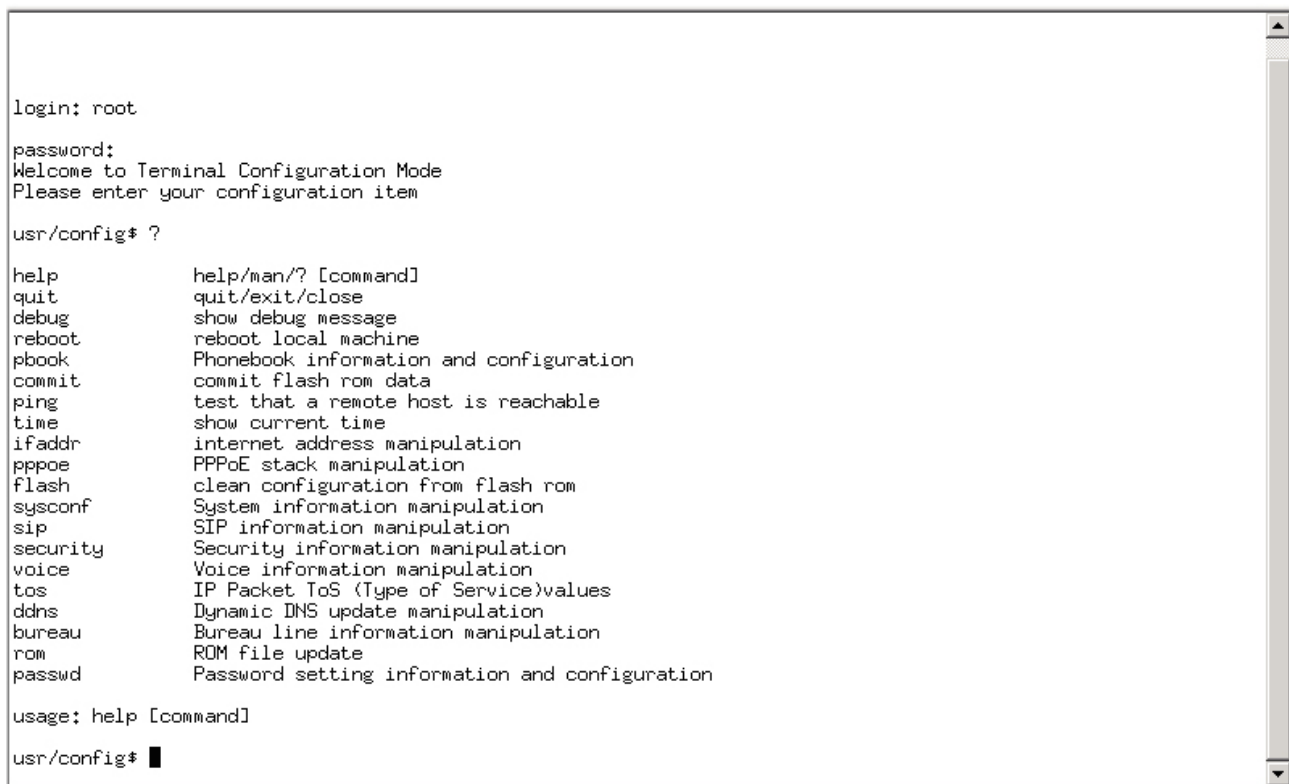
After setting the IP Address of VIP-150T and reboot, (please refer to LCD Menu: 5-3.4.5), user can enter into Telnet command lines.

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Note:

1. After user enter VIP-150T configuration via telnet, please use login: "root", password: null, press enter to enter command lines.
2. User must input lower-case command, but contents of configurations such as SIP alias or user name etc, user can set as capital case.
3. After any change of configuration, please remember to do **commit** command to save changes and then **reboot** command to reboot system.

4.1 [help] command

Type **help** or **man** or **?** to display all the command lists. The following figure is shown all commands of VIP-150T.



```
login: root
password:
Welcome to Terminal Configuration Mode
Please enter your configuration item

usr/config# ?

help          help/man/? [command]
quit          quit/exit/close
debug         show debug message
reboot        reboot local machine
pbook         Phonebook information and configuration
commit        commit flash rom data
ping          test that a remote host is reachable
time          show current time
ifaddr        internet address manipulation
pppoe         PPPoE stack manipulation
flash         clean configuration from flash rom
sysconf       System information manipulation
sip           SIP information manipulation
security       Security information manipulation
voice         Voice information manipulation
tos           IP Packet ToS (Type of Service)values
ddns          Dynamic DNS update manipulation
bureau        Bureau line information manipulation
rom           ROM file update
passwd        Password setting information and configuration

usage: help [command]

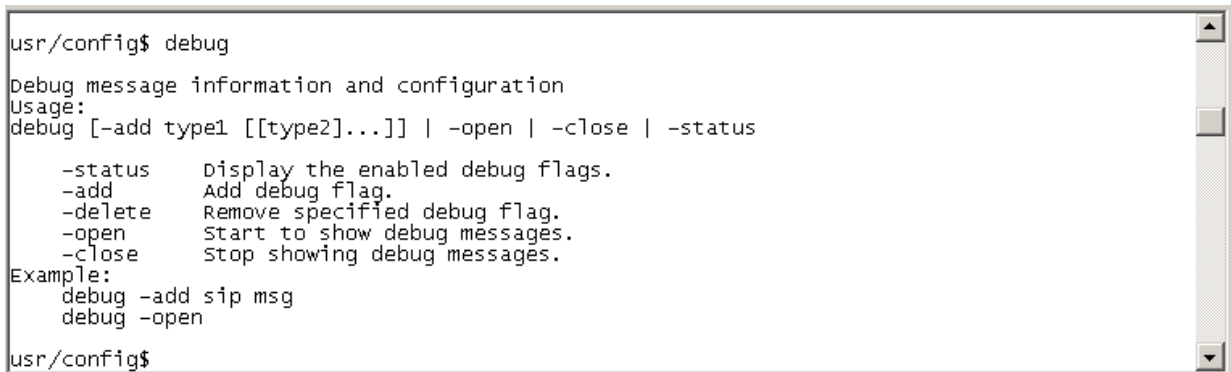
usr/config# █
```

4.2 [quit] command

Type **quit/exit/close** will logout VIP-150T and Telnet Program.

4.3 [debug] command

This command is for engineers to debug system of VIP-150T. User can add debug flag via command **debug –add “debug flags”**, and then start debug function via command **debug –open**. When VIP-150T is working on screen will display related debug messages. Most frequently used debug flag are “sip”, “fsm”, “msg”...etc.



```
usr/config$ debug
Debug message information and configuration
Usage:
debug [-add type1 [[type2]...]] | -open | -close | -status

  -status    Display the enabled debug flags.
  -add       Add debug flag.
  -delete    Remove specified debug flag.
  -open      Start to show debug messages.
  -close     Stop showing debug messages.
Example:
  debug -add sip msg
  debug -open
usr/config$
```

4.4 [reboot] command

After typing **commit** command, type **reboot** to restart the VIP-150T.

Sometimes after user type reboot, on terminal screen will display: "Data modified, commit to flash rom?" which means VIP-150T will record call history or not. (Ex. REDIAL, outgoing and incoming call data)

4.5 [pbook] command

This command is functional both in Proxy mode and Peer-to-Peer mode. In proxy mode, use speed dial or 10 DL button will dial out e.164 number in phone book. In the other hand, in peer-to-peer mode, VIP-150T will dial out IP address.

1. **-print**: display phone book data. User can print all data in phone book by command (**pbook –print**). Furthermore, user can also print only a section of data by indicate parameter “start index” and “end index” (**pbook –print “start index” “end index”**). If parameter “end index” is omitted, only record “start index” will be displayed. (**pbook –print “start prefix”**).
2. **-add**: add a new record in phone book table by giving name, IP address, and e.164 number of callee endpoint. (**pbook –add name “X” ip “xxx.xxx.xxx.xxx” e164 “X”**)
3. **-search**: search any record in the phone book according to IP address, name or e164 number
4. **-delete**: delete a record of certain listed index in phone book table. (**pbook –delete**

“index number”)

5. **-insert**: insert an record in specified index of phone book.
6. **-modify**: modify record of a certain index in phone book . Please notice that the name, IP address and e164 number must be modified together; user cannot just modify one parameter only.

(pbook -modify “index” name “X” ip “xxx.xxx.xxx.xxx” e164 “X”)

```
usr/config$ pbook
Phonebook information and configuration
Usage:
pbook [-print [start_record] [end_record]]
pbook [-add [ip ipaddress] [name Alias] [e164 phonenumber]]
pbook [-search [ip ipaddress] [name Alias] [e164 phonenumber]]
pbook [-insert [index] [ip ipaddress] [name Alias] [e164 phonenumber]]
pbook [-delete index]
pbook [-modify [index] [ip ipaddress] [name Alias] [e164 phonenumber]]

    -print      Display phonebook data.
    -add       Add an record to phonebook.
    -search    Search an record in phonebook.
    -delete    Delete an record from phonebook.
    -insert    Insert an record to phonebook in specified position.
    -modify    Modify an exist record.
Note:
    If parameter 'end_record' is omitted, only record 'start_record' will be display.
    If both parameters 'end_record' and 'start_record' are omitted, all records will be display.
Range of ip address setting (0.0.0.0 ~ 255.255.255.255).
Range of index setting value (1~100),
Example:
pbook -print 1 10
pbook -print 1
pbook -print
pbook -add name Test ip 210.59.163.202 e164 1001
pbook -insert 3 name Test ip 210.59.163.202 e164 1001
pbook -delete 3
pbook -search ip 192.168.4.99
pbook -modify 3 name Test ip 210.59.163.202 e164 1001
usr/config$
```

4.6 [commit] command

Save any changes after configuring the VIP-150T.

```
usr/config$ commit

This may take a few seconds, please wait....

Commit to flash memory ok!
usr/config$
```

4.7 [ping] command

Command **ping** can test which the IP address is reachable or not.

Usage: **ping “IP address”**

The message will display packets transmitting condition or no answer from the IP address.

```
usr/config$ ping
usr/config$ ping 192.168.2.107
PING 192.168.2.107: 56 data bytes
64 bytes from 192.168.2.107: icmp_seq=0. time=5. ms
64 bytes from 192.168.2.107: icmp_seq=1. time=0. ms
64 bytes from 192.168.2.107: icmp_seq=2. time=0. ms
64 bytes from 192.168.2.107: icmp_seq=3. time=0. ms
----192.168.2.107 PING Statistics----
4 packets transmitted, 4 packets received, 0% packet loss
round-trip (ms)  min/avg/max = 0/1/5
usr/config$ ping 192.168.99.99
PING 192.168.99.99: 56 data bytes
no answer from 192.168.99.99
usr/config$ █
```

4.8 [time] command

When VIP-150T enable SNTP function and be able to connect with SNTP server, type **time** command will show the current time retrieved from SNTP server.

```
usr/config$ time
Current time is TUE FEB 03 14:50:08 2004
usr/config$
```

4.9 [ifaddr] command

Configure and display the VIP-150T IP information.

1. **-print:** print out all current configurations of ifaddr command.
2. **-ip, -mask, -gate:** Set VIP-150T IP Address, subnet mask and default gateway respectively.
 1. **-ipmode:** Set VIP-150T network mode to be Fixed IP, DHCP or PPPoE.
When User set IP mode to be fixed IP, please set IP, subnet Mask, default gateway as mentioned in item 2.
If User set IP mode to be DHCP, VIP-150T will search for DHCP server to capture IP address after reboot.
If user set IP mode to be PPPoE, please remember to set related parameters under **[pppoe] command.**
2. **-sntp:** When SNTP server is available, enable VIP-150T SNTP function and assign SNTP server IP address so that VIP-150T can capture current time from SNTP server. (**ifaddr -sntp 1 "xxx.xxx.xxx.xxx"**)
3. **-dns:** User can set Domain Name Server IP address. Once VIP-150T can connect with DNS server, user can specify URL address instead of IP address for Proxy Server and phone book IP address...etc.
4. **-timezone:** User can set different time zone according to the location VIP-150T is. For example, in Taiwan the time zone should be set as 8, which means GMT+8.

(GMT-8: **ifaddr -timezone -8**)

5. **-ipsharing**: If VIP-150T is behind a IP-sharing , user must enable IP sharing function and specify public IP address.(**ifaddr -ipsharing 0/1 “public IP address of IP sharing”** , 0 for disable and 1 for enable)

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Note:

Some Proxy servers support endpoint behind NAT function, in this case VIP-150T doesn't have to enable IP sharing function, please contact with your Proxy Server vendor.

6. **-upnp**: enable/disable UPnP function. If the IP sharing or NAT device supports UPnP, user can enable UPnP function so that VIP-150T will automatically connect with NAT device without configuration in VIP-150T and NAT device.

```
usr/config$ ifaddr
LAN information and configuration
Usage:
ifaddr [-print][[-dhcp used]][-sntp mode [server]]
ifaddr [-ip ipaddress] [-mask subnetmask] [-gate defaultgateway]
ifaddr [-dns index [dns_server address]]

-print      Display LAN information and configuration.
-ip         Specify ip address.
-mask      Set Internet subnet mask.
-gate      Specify default gateway ip address
-ipmode    Set get IP mode(0:Fixed IP/1:DHCP/2:PPPoE)
-sntp     Set SNTP server mode and specify IP address.
-dns      specify IP address of DNS Server.
-timezone  set local timezone.
-ipsharing Specify usage of an IP sharing device and specify IP address.
-upnp     Specify the upnp mode of ipsharing(0:off/1:on)
Note:
Range of ip address setting (0.0.0.0 ~ 255.255.255.255).
SNTP mode (0=no update, 1=specify server IP, 2=broadcast mode).
Example:
ifaddr -ip 210.59.163.202 -mask 255.255.255.0 -gate 210.59.163.254
ifaddr -ipmode 1
ifaddr -sntp 1 210.59.163.254
ifaddr -ipsharing 1 210.59.163.254
ifaddr -upnp 1
ifaddr -dns 1 168.95.1.1
usr/config$
```

4.10 [pppoe] command

1. **-print**: display all current configurations and information.
2. **-id**: to set PPPoE authentication user name.
3. **-pwd**: to set PPPoE authentication password.
4. **-reboot**: Choose enable or disable this function. If user enables this function, after PPPoE disconnected, VIP-150T will automatically reboot to re-connect, and after reboot, if VIP-150T still can't connect with server, VIP-150T will keep trying to connect. On the other hand, if user disables this function, VIP-150T won't reboot and keep trying to connect. (**pppoe -reboot 0/1**)

```
usr/config$ pppoe
PPPoE device information and configuration
Usage:
pppoe [-print]
pppoe [-id username][-pwd password]

    -print      Display PPPoE device information.
    -id         Connection user name.
    -pwd        Connection password.
    -reboot     Reboot after remote host disconnection.

usr/config$
```

4.11 [flash] command

This command will clean the configuration stored in the flash rom to default value and reboot the VIP-150T.

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Note:

1. After user upgrade new software version, suggested to execute this command to make sure new software work well on VIP-150T.
2. To execute the command **flash -clean**, all configuration of VIP-150T stored in flash will be cleaned. It is authorized for the user whose login name is "root" only.

```
usr/config$ flash
Flash memory information and configuration
Usage:
flash -clean

Note:
  This command will clean the configuration stored in
  the flash and reboot it.

usr/config$
```

4.12 [sysconf] command

1. **-print**: display all current configurations.
2. **-idtime**: set the duration(in second) of two pressed digits in dial mode as timed out. If after the duration user hasn't pressed next number, VIP-150T will dial out all number pressed.
3. **-keypad**: set DTMF type .User can select DTMF type VIP-150T receive and transmit.(**sysconf -keypad 0/1** , 0 for in band ,1 for RFC2833.)
4. **-2833type**: change RFC2833 Payload type.
5. **-eod**: select end of dialing key, e.g. set end of dial key as "*" button , after finished pressing dialing number then press "*" will dial out. (**sysconf -eod 0/1/2** , 0 for no end of dial key , 1 for "*" button, 2 for "#" button)

```

usr/config$ sysconf
System information and configuration
Usage:
sysconf [-idtime digit] [-keypad dtmf]
        [-2833type type] [-eod digit]
sysconf -print

-print          Display system overall information and configuration.
-idtime         Inter-Digits time.(1~10 sec)
-keypad         Select DTMF type: 0=In-band,
                1=RFC2833.
-2833type       RFC2833 Payload Type (range:96~128 inter-used:100,102~105)
-eod            End of Dial Digit setting(0: NONE, 1: *, 2: #)
Example:
  sysconf -keypad 0 -eod 2
usr/config$

```

4.13 [sip] command

1. **-print:** display all current configurations.
2. **-mode:** configure VIP-150T as Proxy or Peer-to-Peer Mode.
Usage: **sip -mode 0/1**(1 for Proxy mode, 0 for Peer-to-Peer mode)
3. **-px:** set proxy server IP address or URL address (**sip -px "IP address or URL of Proxy server"**).
4. **-pxport:** set listening port of Proxy server.
5. **-outpx:** set IP address of outbound proxy server. After user set outbound proxy, all packets form VIP-150T will be sent to outbound proxy server.
6. **-prefix:** set prefix string. If user ID contains alphabets, user can set it as prefix string here. For example, if Account Name is 123, VIP-150T will sent out messages as Account Name @"IP address of Proxy", if user set prefix as abc, VIP-150T will set out as abc123@"IP address of Proxy". This function is for special proxy server.
7. **-line:** identify one number for the VIP-150T to register to the Proxy (**SIP -line "line number"**).

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Note:

In proxy mode please remember to set user account information under security command.

8. **-pbsearch:** enable/disable phone book search function under Proxy Mode. If user enabled this function, VIP-150T will search dialed number in phone book to see if there is any matched table before send to Proxy server, and if there is a matched data in phone book, VIP-150T will make call to related IP address.
9. **-expire:** set expire time of registration. VIP-150T will keep re-registering to proxy server before expire timed out.
10. **-port:** set listening UDP port or VIP-150T.
11. **-rtp:** set RTP port number. VIP-150T will use this port to send and receive voice.

```

usr/config$ sip

SIP stack information and configuration
Usage:
sip [-mode pxmode]
sip [-px address] [-prefix prefixstring]
  [-pxport ProxyPort] [-outpx address] [-line number]
  [-expire t1] [-port udpPort] [-rtp rtpPort]
sip -print

  -print      Display SIP stack information and configuration.
  -mode       Configure as Proxy mode or Peer-to-Peer mode.
  -px        Proxy server address. (Proxy IPv4 address or Proxy dns name)
  -pxport    Proxy server port. (the port of proxy)
  -outpx     OutBound Proxy server address. (Proxy IPv4 address or Proxy dns name)
             specify as null)
  -prefix    Specify prefix string, use it when UserID contains alphabets
             (if UserID uses numerals, specify as null)
  -line      TEL Phone number.
  -pbsearch  Search phone book      0:off/1:on.
  -expire    The relative time after which the message expires(0 ~ (2^31-1))
  -port      SIP local UDP port number (5060~5070), Default: 5060
  -rtp       RTP receive port number (2326~65534), Default: 16384
Example:
  sip -mode 1
  sip -px 210.59.163.171 -line 70
usr/config$

```

4.14 [security] command

1. **-print**: display all current configurations.
2. **-name**: set user ID of VIP-150T for registering. User can set user name and password for registering. If password is no need, please set user name the same as line number or VIP-150T won't register successfully.
3. **-pwd**: set account password for registering.

```

usr/config$ security

Security information and configuration
Usage:
security [-name username] [-password password]
security [-print]

  -print      Display system account information and configuration.
  -name       Specify user name.
  -pwd        Specify password.
Example:
  security -name 1001 -pwd 1001
usr/config$

```

4.15 [voice] command

The voice command is associated with the voice codec setting information.

1. **-print**: display voice codec information and configuration.
2. **-send**: three voice packet size can be configured as 20 ms, 40 ms or 60 ms.(only 30 and 60 ms for G.723.1)
3. **-priority**: set codecs priority in order. Please notice that user can set from 1 to 5 codecs as their need, for example, **voice -priority g723** or **voice -priority g723**

711a g711u g729 g729a means VIP-150T can support only one codec or four codecs.

4. **-volume**: There are three types can be adjustable, voice volume, input gain and DTMF volume. Voice volume means the volume user can hear, input gain means the volume the other side can hear from VIP-150T, DTMF means DTMF transmitting volume. (**voice -volume voice "value of volume"**, **voice -volume input "value of volume"**, **voice -volume dfmt "value of volume"**)

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Note:

If value of volume set as 0 means -32db, 1 means -31db...etc.

5. **-nscng**: enable or disable sound compression and comfort noise generation. It is only for codec G.723.1. (0 for off, 1 for on)
6. **-echo**: enable or disable echo cancellation function .
7. **-mindelay**: set minimum delay of jitter buffer(0~150)
8. **-maxdealy**: set maximum delay of jitter buffer(0~150)

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Note:

It is for advanced administrator use only. Please ask your distributor before changing any settings of this command.

```
usr/config$ voice
Voice codec setting information and configuration
Usage:
voice [-send [G723 ms] [G729 ms] [G711U ms] [G711A ms] [G729A ms] ]
      [-volume line [voice level] [input level] [dtmf level]]
      [-nscng [G711U used1] [G711A used2] [G723 used3]]
      [-echo used] [-mindelay t1] [-maxdelay t2] [-optfactor f]
voice -print
voice -priority [G723] [G729] [G711U] [G711A] [G729A]

  -print      Display voice codec information and configuration.
  -send       Specify sending packet size.
              G.723 (30/60/90 ms)
              G.729 (20/40/60 ms)
              G.711U (20/40/60 ms)
              G.711A (20/40/60 ms)
              G.729A (20/40/60 ms)
  -priority   Priority preference of installed codecs.
              G.723
              G.729
              G.711U
              G.711A
              G.729A
  -volume     Specify the following levels:
              voice volume (0~63, default: 30),
              input gain (0~63, default: 30),
              dtmf volume (0~31, default: 23),
  -nscng      No sound compression and CNG. (G.723.1 only, on=1, off=0).
  -echo       Setting of echo canceller. (on=1, off=0, per port basis).
  -mindelay   Setting of jitter buffer min delay. (0~150, default: 90).
  -maxdelay   Setting of jitter buffer max delay. (0~150, default: 150).
Example:
voice -send g723 60 g729 60 g711u 60 g711a 60 g729a 60
voice -volume 1 voice 20 input 32 dtmf 27
voice -echo 1
usr/config$
```

4.16 [tos] command

TOS/DiffServ (DS) priority function can discriminate the Differentiated Service Code Point (DSCP) of the DS field in the IP packet header, and map each Code Point to a corresponding egress traffic priority. As per the definition in RFC2474, the DS field is Type-of-Service (TOS) octet in IPv4. The recommended DiffServ Code Point is defined in RFC2597 to classify the traffic into different service classes. The mapping of Code Point value of DS-field to egress traffic priorities is shown as follows.

1. High priority with DS-field.

(1) Expected Forwarding (EF)	101110	====>	46 (Decimal System)
(2) Assured Forwarding (AF)	001010	====>	10 (Decimal System)
	010010	====>	18 (Decimal System)
	011010	====>	26 (Decimal System)
	100010	====>	34 (Decimal System)

2. Low Priority with DS-field:

Assured Forwarding (AF)	001100	====>	12 (Decimal System)
	010100	====>	20 (Decimal System)
	011100	====>	28 (Decimal System)
	100100	====>	36 (Decimal System)
	001110	====>	14 (Decimal System)
	010110	====>	22 (Decimal System)
	011110	====>	30 (Decimal System)
	100110	====>	38 (Decimal System)
	000000	====>	0 (Decimal System)

1. **-print** : display all current configurations.
2. **-rtptype**: set DSCP value of signaling packets from 0 to 63
3. **-sigtype**: set DSCP value of RTP packets from 0 to 63



Note:

1. This command won't be functional until network environment can be capable with DSCP function.
2. `tos -rtptype 14 -sigtype 10` is top priority of package.

```
usr/config$ tos
IP Packet Tos(type of Service)/Differentiated Service configuration
Usage:
tos [-rtptype dscp]
tos [-sigtype dscp]
tos -print
tos [-rtpreliab mode]
tos -print

Example:
tos -rtptype 10 -sigtype 0

usr/config$ █
```

4.17 [ddns] command

```
usr/config# ddns

The dynamic DNS service information and configuration
Usage:
ddns [-print]
ddns [-enable 0/1]
ddns [-serve Address] [-hostname Name] [-id ID]
    [-passwd Password]
    [-checkip option] [-checkipsvr Address]
    [-delay time]
    [-force IP]

-print          Display Dynamic DNS information and configuration.
-enable        1:Enabled/0:Disable the dynamic DNS service.
-server        Specify DDNS server address.
-hostname      Registered domain name.
-id           Registered account ID.
-passwd       Registered account password.
-checkip      1:Enabled/0:Disable check the host current IP address.
-checkipsvr1 Specify IP address check server.
-checkipsvr2 Specify secondary IP address check server.
-delay        Setting the service delay time.(1~59 minutes or 1~24 hours)
-force        Force execute the dynamic DNS service.

Example:
ddns -print
ddns -enable 1
ddns -server member.dyndns.org -hostname ipphone.dyndns.org
ddns -delay 30 m (30 minutes)
ddns -delay 12 h (12 hours)
ddns -force 11.22.33.44
usr/config#
```

1. **-print**: display DDNS overall information and configuration.
2. **-enable**: to enable/disable DDNS function.(**ddns -enable 0/1**, 0 for disable and 1 for enable).
3. **-server**: to set IP address of DDNS login server.
4. **-hostname**: to set the registered Domain Name of VIP-150T. (ex. **ddns -test.ddns.org**)
5. **-id**: to set login ID of registered account to log in DDNS server.
6. **-passwd**: to set password of registered account to log in DDNS server.
7. **-checkip**: to enable/disable check IP function. If VIP-150T is behind IP sharing, when this function is enabled, VIP-150T will check it's public IP address by asking IP address check server and send to DDNS server to update DDNS data. If this function is disabled, when VIP-150T is behind IP sharing, it will send it's private IP address to DDNS server.
8. **-checkipsvr**: to set IP address of IP address check server.
9. **-delay**: to set the update interval time. VIP-150T will re-update it's IP address in this time. (**ddns -delay 1-59m/1-24h** , m means minute, h means hour)
10. **-force**: to force to execute DDNS update. Once user enter this command , VIP-150T will update DDNS data immediately. (**ddns -force "IP address of VIP-150T"**)

4.18 [bureau] command

```
usr/config# bureau
Bureau line setting information and configuration
Usage:
bureau [-hotline [Port DestIP TELnum]]
bureau -print

    -print    Display Bureau line information and configuration.
    -hotline  Set Hot line information.
Note:
Hotline feature should be used together with:
    $sysconf -service 1 (HotLine service)
    $sip -mode 0 (peer-to-peer mode)
Example:
    bureau -hotline 192.168.4.69 628
usr/config# █
```

1. **-print**: Display Bureau line information and configuration
2. **-hotline**: Set Hot line information

4.19 [rom] command

3. **-print**: show all current configurations and version information.
4. **-app, -boot, -dspstest, -dspcore, -dspapp**,: upgrade main boot code, main application code, DSP testing code, DSP kernel code, DSP application code, Ring Back Tone PCM file and Hold Tone .

?

Note:

After upgrade Application, please remember to execute flash **-clean** command, which will clean all configurations become factory values except IP address.

5. **-boot2m**: to upgrade 2mb rom file, which includes all firmware file mentioned in item 2.
6. **-s**: it is necessary to prepare TFTP/FTP server IP address for upgrading firmware rom file.
7. **-f**: the file name prepared for upgrading is necessary as well.
8. **-method**: specify download method to be TFTP or FTP(0 for TFTP.1 for FTP)
9. **-ftp**: specify user name and password for FTP download method.

For example: User prepares to upgrade the latest app rom file – vip150t.100, the TFTP server is 192.168.4.1.1.

rom -app -s 192.168.1.1 -f vip150t.100

```

usr/config$ rom
ROM files updating commands
Usage:
rom [-print][-app][-boot][-dsptest][-dspcore][-dspapp]
-s TFTP/FTP server ip -f filename
rom -print
-print          show versions of rom files. (optional)
-app           update main application code(optional)
-boot         update main boot code(optional)
-boot2m       update 2M code(optional)
-dsptest      update DSP testing code(optional)
-dspcore      update DSP kernel code(optional)
-dspapp       update DSP application code(optional)
-s            IP address of TFTP/FTP server (mandatory)
-f            file name(mandatory)
-method       download via TFTP/FTP (TFTP: mode=0, FTP: mode=1)
-ftp         specify username and password for FTP
Note:
This command can run select one option in 'app', 'boot',
, 'dsptest', 'dspcore', and 'dspapp'.
Example:
rom -method 1
rom -ftp vwusr vwusr
rom -app -s 192.168.4.101 -f app.bin
usr/config$

```

Command **rom -print** can show current version installed in VIP-150T.

```

usr/config$ rom -print
Download Method : TFTP
  Boot Rom      : boot.150t
Application Rom : vip150T_0507.bin
  DSP App       : 48302ce3.140
  DSP Kernel    : 48302ck.140
  DSP Test Code : 483cbt.bin
usr/config$

```

4.20 [passwd] command

For security protection, user has to input the password before entering **application user/config mode**. Two configurations of login name/password are supported by the system.

1. **-set**: set password of “root” users or “administrator” users. (**passwd -set root/administrator “password”**)
2. **-clean**: clean up password restored before, and user can login :”root/administrator”, password: ”press enter”.

User who requests authorization to execute **all** configuration commands needs to login with “root”. If a user login with “administrator”, two commands are not functional:

1. **passwd -set root**: set password of login : “root”.
2. **passwd -clean**: clean up password restored before, and user can login :”root/administrator”, password: ”press enter”.

```
usr/config$ passwd
Password setting information and configuration
Usage:
passwd -set Loginname Password
passwd -clean
Note:
1. Loginname can be only 'root' or 'administrator'
2. passwd -clean will clear all passwd stored in flash,
   please use it with care.
Example:
passwd -set root Your_Passwd_Setting
usr/config$
```

Chapter 5 Upgrading Software on the VIP-150T

VIP-150T supports three methods to upgrade the new version. All methods are necessary to prepare the **TFTP** or **FTP** program on the host PC as **TFTP/FTP server**. After installing **TFTP/FTP** program on one PC and connecting to network, VIP-150T is ready to be upgraded.

1. LCD Panel Control
2. Remote Control: Telnet
3. Web Management

5.1 From LCD Phone Menu

Please choose the 6→2 selection-**Firmware Upgrade**. Press **OK** to enter into the sub-selection as below.

1. Firmware Update

(1) Download method

There are two methods to download new version file, please move the ">" symbol by press **↶** or **↷** on the keypad to select TFTP or FTP method, then press **OK** to confirm it.

(2) FTP/TFTP Sever

User has to offer one TFTP/FTP server IP Address and set this IP Address via keypad. The IP Address is necessary for upgrading VIP-150T new application rom file.

(3) Set FTP user account

User has to input user name and password for FTP server login .It is necessary for upgrading VIP-150T new application rom file via FTP method.

(4) File Name

User has to press the file name of new application rom file prepared for upgrading

(5) Start to Upgrade

Select YES or NO to start upgrade. After download is finished, press OK then VIP-150T will ask if need to reboot.

(6) Firmware Version

Show versions of all software and hardware. (**)



Note:

Download via LCD command can only upgrade new **application** rom file.

5.2 Web Management

Please refer to chapter 4.18 [rom] command

The screenshot displays the PLANET VIP-150T web management interface. On the left is a dark blue sidebar with the PLANET logo and a menu of configuration options: Network Interface, SIP Configurations, System Configuration, PPPoE Configuration, Voice Setting, Phone Book, DDNS Configuration, Version Information, Password, Firmware Upgrade (highlighted), and Reboot. The main content area is titled 'Firmware Upgrade' and contains the following fields:

Server IP Address:	<input type="text"/>
Target File name:	<input type="text"/>
Download Method:	TFTP ▾
FTP Login:	name <input type="text"/> passwd <input type="text"/>
Target File Type:	Application Image ▾

At the bottom of the form is a 'DONE' button.

- **Server IP Address:** Set TFTP server IP address
- **Target File name:** Set file name prepared to upgrade
- **Download Method:** Select download method as TFTP or FTP
- **FTP Login:** Set FTP login name and password
- **Target File Type:** Select which sector of VIP-150T to upgrade



Note:

1. After 2mb file download is finished, all configurations might change to default values, user has to configure again.
2. After upgrade Application, please remember to execute Flash Clean, which will clean all configurations become factory values except IP address.

5.3 Remote Control: Telnet

Please refer to chapter 4.17 [rom] command

1. **-print:** show all current configurations and version information.

2. **-app, -boot, -dsptest, -dspcore, -dspapp**,: upgrade main boot code, main application code, DSP testing code, DSP kernel code, DSP application code, Ring Back Tone PCM file and Hold Tone .

?

Note:

After upgrade Application, please remember to execute flash `-clean` command, which will clean all configurations become factory values except IP address.

3. **-boot2m**: to upgrade 2mb rom file, which includes all firmware file mentioned in item 2.
4. **-s**: it is necessary to prepare TFTP/FTP server IP address for upgrading firmware rom file.
5. **-f**: the file name prepared for upgrading is necessary as well.
6. **-method**: specify download method to be TFTP or FTP(0 for TFTP.1 for FTP)
7. **-ftp**: specify user name and password for FTP download method.

For example: User prepares to upgrade the latest app rom file `-vip150t.100`, the TFTP server is 192.168.4.1.1.

rom -app -s 192.168.1.1 -f vip150t.100

```
usr/config$ rom
ROM files updating commands
Usage:
rom [-print][-app][-boot][-dsptest][-dspcore][-dspapp]
-s TFTP/FTP server ip -f filename
rom -print
-print          show versions of rom files. (optional)
-app           update main application code(optional)
-boot          update main boot code(optional)
-boot2m        update 2M code(optional)
-dsptest       update DSP testing code(optional)
-dspcore       update DSP kernel code(optional)
-dspapp        update DSP application code(optional)
-s             IP address of TFTP/FTP server (mandatory)
-f            file name(mandatory)
-method        download via TFTP/FTP (TFTP: mode=0, FTP: mode=1)
-ftp          specify username and password for FTP
Note:
This command can run select one option in 'app', 'boot',
, 'dsptest', 'dspcore', and 'dspapp'.
Example:
rom -method 1
rom -ftp vwusr vwusr
rom -app -s 192.168.4.101 -f app.bin
usr/config$
```

Command **rom -print** can show current version installed in VIP-150T.

```
usr/config$ rom -print
Download Method : TFTP
  Boot Rom      : boot.150t
Application Rom : vip150T_0507.bin
  DSP App       : 48302ce3.140
  DSP Kernel    : 48302ck.140
  DSP Test Code : 483cbit.bin
usr/config$
```

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