SIP IP Phone

User's Manual

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Chapter 1
Overview of the VIP-152T

Based on the next-generation Internet telephony service demands--Session Initialization Protocol (SIP), the PLANET VIP-152T brings cost-effective solution for voice communications and interoperates with major other-vendor VoIP hardware and systems as well as the traditions of PLANET VoIP family. As a feature-rich IP Phone, the VIP-152T fulfills your needs. It's simple to use, and has additional features such as: built-in PPPoE/DHCP clients, large LCD display, hands-free speakerphone, telephone number phonebook, direct-dial hotkeys, last number redial, incoming message indicator, and user-intuitive web administration system.

PLANET VIP-152T is the perfect desktop IP phone for office or home use, as well as installation for Internet Telephony Service Provider (ITSP) from leading vendors. It's the delivery platform for IP voice services that makes plenty features extremely easy to use.

VIP-152T, which built-in a powerful, self-contained, integrated microprocessor — offers a intelligent phone features, and powerful voice procesing power. The PLANET VIP-152T can effortlessly deliver toll voice quality equivalent to regular PSTN connections utilizing cutting-edge Quality of Service, echo cancellation, comfort noise generation and voice compensation technology. Meanwhile, the dual Ethernet interfaces on the VIP-152T allow users to install in an existing network location without interfering with desktop PC network connections.

1.1 Hardware Overview

1.1.1 Front View and Keypad function

- ♦ **System Indication LED**: When VIP-152T didn't register to Proxy server or having incoming call, system indication LED will be blinking.
- ♦ **MENU:** Press to enter LCD Menu when in standby mode; if already in LCD Menu, press this button can return to standby mode
- ♦ **MUTE:**
  1. Mute the voice of Microphone and let others can't hear from user in communication.
  2. Change input mode to be digit or character mode: When configuration in LCD menu can change input mode to be input digit only or input character.
- ♦ **:** Move to up/down, left/right ; increase/decrease value.
- ♦ **OK:** Press OK to confirm the modification.
- ♦ **Flash:**
  1. Transfer a call. User A can press FLASH button when in communication with user B, then input phone number can make call to User C, after talk with C, A can hang up, User B and User C can communicate.
  2. Back to upper level of menu: when in LCD Menu, press FLASH button can jump to upper level of menu.

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- ♦ **REDIAL / HOLD:**
  1. Redial the last outgoing call or hold one call in communication.
  2. Upper-case/Lower-case character: change input character mode to be upper-case or lower-case.
- ♦ **SPEAKER:** Speaking without picking up handset.
- ♦ **5 Graphic Memory key:** User presses these keys to do speed dial according to phone book data 1-5 (please refer to LCD configuration-Phone Book, Configuring the VIP-152T through Telnet command lines - [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	"Space" ; "0"
#	"#"

1.1.2 Rear panel
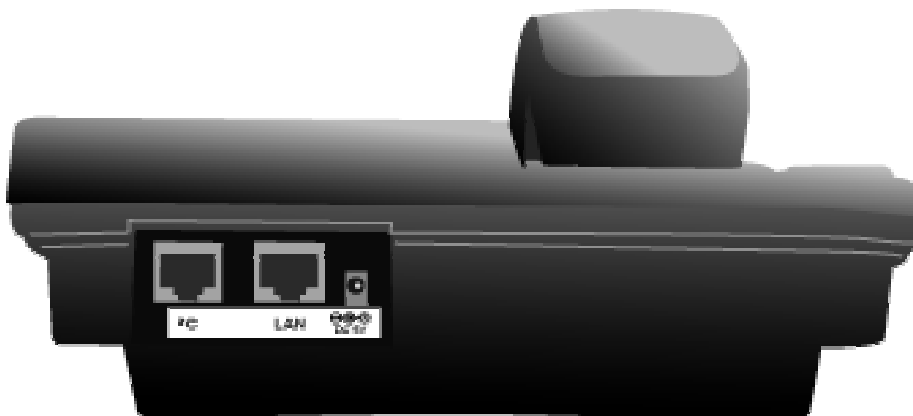
- ♦ **DC 5V:** DC 5V power input outlet
- ♦ **WAN:** 10/100 Base-T RJ-45 connectors, connected directly to the Hub through the straight CAT-5 cable.
- ♦ **LAN:** 10/100 Base-T RJ-45 connector, connected directly to the PC through the straight CAT-5 cable

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1.1.3 Specification

1. Ethernet Port

   Ethernet port is for connecting VIP-152T to network, transmit rate supports 10/100 Base-T.

Ethernet connector   LAN

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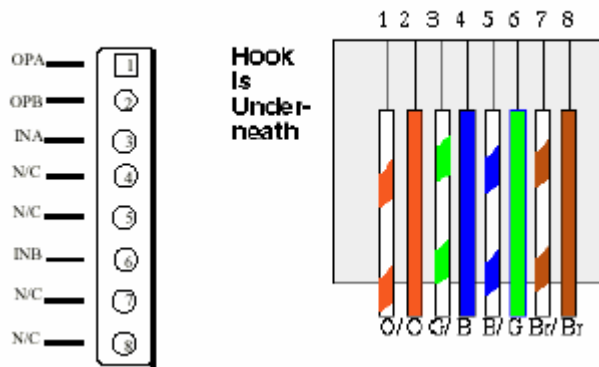
1.2 Software Features and Specification

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

Calling Features
- Call Hold
- Call Transfer
- Call Forward
- 5 configurable speed dials

Network Supported
- Fixed IP
- Dynamic Host Configuration Protocol (DHCP)
- PPPoE connection (When PPPoE disconnect, VIP-152T can automatically re-connect)
- Behind NAT IP Sharing Device
- Support QOS by setting DSCP (Differentiated Service Code Point) parameters of VoIP packet

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

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

Management Features
- Software Upgrade: TFTP/FTP download

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- Three easy ways for system configuration
- LCD Front Panel
- Web Browser
- Telnet

Environmental

- Operating and storage Humidity: 10 to 95 % (Non-condensing)
- Operational Temperature: 0 to +40 °C
- Storage Temperature: -10 to 60

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<div align="right">

Chapter 2

Configuring the VIP-152T through LCD Phone menu

</div>

	1. After any configuration has changed for the VIP-152T, user has to do reboot in the selection **"Reboot"**.
✍ Note:	2. It is suggested to setup IP address via LCD menu **Network Get IP mode / IP Address / Subnet Mask / Default GW** first, then go to chapter 3 to do other configurations via web browser. If user need to do more detail or advanced configurations, please refer to chapter 4 and use Telnet command lines.
	3. User can also try to enter web configuration via default IP address of VIP-152T: **192.168.0.1**

2.1 Initialize VIP-152T

1. After VIP-152T finish initializing, it will get into standby mode:

```
          VIP-152T
P2P
```
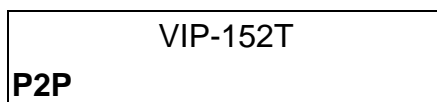
The main LCD screen would be shown above. **"P2P"** means the VIP-152T in Peer-to-Peer communication mode, and **"Proxy"** means the VIP-152T is in Proxy Mode.

✍ Note:	If VIP-152T didn't register to Proxy server, when VIP-152T been off-hook, user will hear busy tone instead of dial tone, also system LED indication will be blinking.

2. When VIP-152T is under peer-to-peer mode, on LCD will show **"P2P"** instead of **"Proxy"**.

```
          VIP-152T
P2P             10:10:10 AM
```

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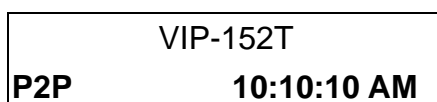
3. Press **MENU** to enter configuration mode then press **OK** to enter sub menus; press **FLASH** can jump out current menu to previous level.

    1.   Call List

    2.   Forward

    3.   Phone Book

    4.   Ringer

    5.   Network

    6.   Advanced Set (can be protected by password)

    7.   Reboot

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2.2 LCD Menu Configuration

User can set the following configurations via LCD keypad.

Note:

1. Press **REDIAL/HOLD** before input data can switch characters to be capital or lowercase.
2. Press **MUTE** before input data can switch input mode to be 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   will clear previous input data.

1. Call List

User can check all call records in this call list menu.

■ **Missed Calls**   to see all missed calls in message box.

■ **Received**   to see all received calls in message box.

■ **Dialed No.:** to see all dialed numbers in message box.

■ **Exit:** return to upper level of LCD Menu

2. Forward

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

■ **Busy**

When VIP-152T is in busy status, the incoming call will be forwarded to the assigned phone number.

◆ **Activate**

Enter a forwarded phone number to activate busy forward function.

◆ **Deactivate**

Deactivate Busy Forward function.

◆ **Exit**

Return to upper level of LCD Menu

■ **No Answer**

When VIP-152T has incoming call and hasn't been picked up for around 10 seconds, the incoming call will be forwarded to the assigned phone number.

◆ **Activate**

Enter a forwarded phone number to activate No Answer Forward function.

◆ **Deactivate**

Deactivate No Answer Forward function.

◆ **Exit**

Return to upper level of LCD Menu

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■ **Uncondition (Unconditional Forward)**

It is included the above two types. Whether the VIP-152T is in which status, calls will be automatically forwarded to the assigned phone number.

◆ **Activate**

Enter a forwarded phone number to activate Unconditional Forward function.

◆ **Deactivate**

Deactivate Unconditional Forward function.

◆ **Exit**

Return to upper level of LCD Menu

■ **Delete All:** Delete all forward activated data.

■ **Exit:** Return to upper level of LCD Menu.

3. **Phone Book**

1. **List**

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

2. **Edit/Del**

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. **Exit**

Return to upper level of LCD Menu

4. **Ringer**

1. **Volume**

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

2. **Exit**

Return to upper level of LCD Menu

5. **Network**

1. **Information**

User can press   or   to check current network status:

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- ■ **Mode:** Display current network connection mode of VIP-152T to be Static (Fixed IP), DHCP, or PPPoE.
- ■ **IP, Mask, Gateway:** display current IP information.

2. **Get IP Mode**

Set network mode of VIP-152T to be Fix (Fixed IP), DHCP, or PoE (PPPoE).

3. **IP address**

Set IP address of VIP-152T.

4. **Subnet Mask**

Set subnet mask address of VIP-152T.

5. **Default GW**

Set default gateway address of VIP-152T.

6. **DNS (Domain Name Server)**

Set IP address of Domain Name Server. Once VIP-152T can connect to DNS server, user can set URL address for Proxy server or Phone book instead of IP address.

(1) Primary

Set Primary DNS server IP address

(2) Secondary

Set Secondary DNS server IP address

(3) Exit

Return to upper level of LCD Menu

7. **PoE Config (PPPoE Configuration)**

(1) User Name

Set PPPoE connection authentication user name.

(2) Password

Set PPPoE connection authentication password.

(3) Reconnect

Select ON or OFF to enable or disable this function. If user enables this function, after PPPoE disconnected, VIP-152T will automatically reboot to re-connect, and after reboot, if VIP-152T still can't connect with server, VIP-152T will keep trying to connect. On the other hand, if user disables this function, VIP-152T won't reboot and keep trying to connect.

(4) Exit

Return to upper level of LCD Menu

8. **IP-Sharing**

- ■ If VIP-152T is behind IP sharing or NAT device, and VIP-152T is under

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Peer-to-Peer mode or Proxy mode (doesn't support endpoint behind NAT function), on IP sharing must enable "**DMZ**" function or set "**Virtual Server**" to open ports (**UDP port: 5060 and 16384, 16385**). VIP-152T must enable this IP sharing function.

■ User must enter public IP address of IP sharing.

9. **Exit:** Return to upper level of LCD Menu

6. **Advanced Set (can be protected by password)**
   ● **Password:**
      User must key in password to enter this menu if password has been set, items under this command are all important ones, which can only be configured by advanced users. If password hasn't been set, user can enter this menu directly without entering password.

✎
Note:

1.	If user forget password, please contact with your distributor, we will generate a specific password according to your MAC address of VIP-152T.
2.	User can also try to configure VIP-152T via Telnet or Web browser with default IP address: 192.168.0.1. (If IP haven't been changed)

   ● **SIP**
      ■ **Mode**
         Select SIP connection mode to be peer-to-peer mode or Proxy mode.
      ■ **Proxy**
         ◆ **Proxy**
            Set Proxy IP address or Domain Name.
         ◆ **Outbound**
            Set Outbound Proxy IP address or Domain Name.
         ◆ **Px port**
            Set Proxy port for VIP-152T to send messages.
         ◆ **Expire (in seconds)**
            Set expire time of registration, in the duration of 2/3 expire time, VIP-152T will re-register to Proxy Server again.
         ◆ **Exit**
            Return to upper level of LCD Menu

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■ **User Info**

◆ **User Name (Mandatory)**

Set User Name of VIP-152T to register to Proxy Server. If Proxy server doesn't request specific User name, please enter Line number here.

◆ **Line No.**

Set Line Number of VIP-152T to register to Proxy Server.

◆ **Password**

Set User Password of VIP-152T 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.

◆ **Exit**

Return to upper level of LCD Menu

■ **Exit**

Return to upper level of LCD Menu

● **SW Update**

■ **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.

■ **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-152T new application rom file.

■ **Account**

User has to input user name for FTP server login .It is necessary for upgrading VIP-152T new application rom file via FTP method.

■ **Password**

User has to input user password for FTP server login .It is necessary for upgrading VIP-152T new application rom file via FTP method.

■ **File Name**

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

■ **Version**

Show versions of all software and hardware.

■ **Upgrade**

Select YES or NO to start upgrade.

■ **Exit**

Return to upper level of LCD Menu

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

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Note:

- **Menu Password**

  Set entry password of phone LCD menu.

- **Exit**

  Return to upper level of LCD Menu

7. **Reboot**

   Reboot machine. It is necessary and important for user to reboot VIP-152T after any configurations has been made. VIP-152T will ask user again before reboot.

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Configuring the VIP-152T through Web Pages

The VIP-152T 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-152T 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-152T in web browser. the **default IP address of VIP-152T is 192.168.0.1**, user can connect to VIP-152T with this default IP via standard web browser.

Step 2. Input the login name and password

■ Login name: **root** or **administrator**

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

1. **Password:** set password of login: **"root"** users.
2. **Flash clean**: clean all current configurations
3. **Rom configuration:** upgrade boot sector
4. **Rom configuration:** upgrade whole 2m software file

■ Password (The same with TELNET): Null (no need to key in password in default value)

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> ✎
> **Note:** User can set password later in **PASSWORD** configuration menu..

Step 3. Enter the web interface main screen

After logging in machine, user can see web interface main screen as below.

Step 4. Start configuration

Most important items are **Network Interface, SIP Information,** and **Phone Book (in Peer-to-Peer mode).**

Please remember to configure these commands before start to work with VIP-152T.

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Note: After change any settings, please remember to **reboot** (in **Reboot System**) VIP-152T so that changes can take effect.

1. Network Interface

Network Configuration

IP Address:	192 . 168 . 0 . 1
Subnet Mask:	255 . 255 . 255 . 0
Default routing gateway:	192 . 168 . 0 . 254
Get IP Mode:	⊙ Fixed IP ○ DHCP ○ PPPoE
SNTP:	⊙ enable ○ disable
SNTP Server Address:	192 . 43 . 244 . 18
GMT:	8
IP Sharing:	○ enable ⊙ disable
IP Sharing Server Address:	0 . 0 . 0 . 0
Primary DNS Server:	168 . 95 . 192 . 1
Secondary DNS Server:	168 . 95 . 1 . 1
	DONE

- **IP Address:** Set IP Address of VIP-152T
- **Subnet Mask:** Set the Subnet Mask of VIP-152T
- **Default routing gateway:** Set Default routing gateway of VIP-152T
- **Get IP Mode:** User has to set VIP-152T to use which network mode.
    1. **Fixed IP:** User has to assign a fixed IP to VIP-152T.
    2. **DHCP:** When DHCP function enables, VIP-152T will automatically search DHCP server after reboot.
    3. **PPPoE:** If VIP-152T is working with PPPoE connection, user have to set related parameters in "**PPPoE Configure** "page.

**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.

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

  When SNTP server is available, enable VIP-152T SNTP function to point to SNTP server IP address so that VIP-152T can get correct current time.

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- **GMT:** Set time zone for SNTP Server time

  User can set different time zone according to the location of VIP-152T. For example, in Taiwan the time zone should be set as 8,which means GMT+8.
- **IP Sharing:** Enable it if VIP-152T 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-152T when VIP-152T is behind NAT device.
- **IP Sharing Server Address:** Set Public IP Address of IP Sharing router for VIP-152T 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-152T 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.

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2. SIP Information

- **Run Mode:** Select VIP-152T to work under Peer-to-Peer mode or Proxy mode.
- **Proxy IP Address:** Set Proxy IP Address 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-152T 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-152T 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-152T will make call to related IP address.
- **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-152T will sent out messages as Account Name @"IP address of Proxy", if user set prefix as abc, VIP-152T will set out as abc123@"IP address of Proxy". This function is for special proxy server.
- **Line Number:** identify one number for the VIP-152T to register to the Proxy.
- **Line Account:** set user name of VIP-152T 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-152T won't register successfully.
- **Line Password:** set password for registering.
- **SIP Port:** set SIP UDP port.

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- **RTP Port:** set RTP port for sending voice data.
- **Expire:** set expire time of registration. VIP-152T will keep re-registering to proxy server before expire timed out

3. System Configuration

- **Keypad DTMF Type:** set DTMF type. User can select DTMF type VIP-152T transmits.
- **RFC2833 Payload Type:** change RFC2833 Payload type. This is for special request from the other site, if RFC2833 payload types of 2 sites are different, it may cause some problem of connection.
- **Inter Digit Time:** 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-152T will dial out all number pressed.
- **End of Dial 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.

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4. PPPoE Configure

- **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-152T will automatically reboot to re-connect, and after reboot, if VIP-152T still can't get contact with server, VIP-152T will keep trying to connect. After re-connected, VIP-152T will also restart system. On the other hand, if user disables this function, VIP-152T won't reboot and keep trying to connect.
- **Other items:** for reference only, cannot allow to be configured.

5. Voice Setting

- **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.
- **Frame 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.

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6. Phone Book

Phone Book			
Index	Name	IP_Address	e164

New Entry			
Index	Name	Domain Name/IP Address	E164 No.
	Add Entry	Delete Entry	

Next 10 Records

- **Add Data:** User can specify only 10 sets of phone book via web interface. Please input index, Name, IP Address and E.164 number of the destination device. From Telnet command line can set up to 100 sets of phone book data.
- **Delete Date:** User can delete any configured phone book data by assign index.

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7. Password

- **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.

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

   1. **Password:** set password of login: "root" users.

   2. **Flash clean**: clean all current configurations

   3. **Rom configuration:** upgrade boot sector

   4. **Rom configuration:** upgrade whole 2m software file

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8. Firmware Upgrade

- - **FTP/TFTP Server IP Address:** Set TFTP server IP address
- - **Target File name:** Set file name prepared to upgrade
- - **Method:** Select download method as TFTP or FTP
- - **FTP Login:** Set FTP login name and password
- - **Target File Type:** Select which sector of VIP-152T to upgrade

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9. Version Information

Version Information

Application:	vip152t_1215.bin

-

- **Application:** Application image version information of VIP-152T.

  This field has no default value.

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10. Reboot System

Reboot

Please make sure modifications are done before rebooting machine.

REBOOT

- Press reboot will reset VIP-152T.

✍ To execute reboot via web browser, VIP-152T will automatically save all data before reboot.

Note: To execute reboot via TELNET command, please remember to do **commit** before **reboot.**

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Chapter 4

Configuring the VIP-152T through Telnet command lines

After setting up the network parameters of VIP-152T, you may now enter the Telnet command lines for more options in machine configuration.

✍ Note:	• After user enter VIP-152T configuration via telnet, please use login: "**root**", password: null, press enter to enter command lines.
	• User must input lower-case command, but contents of configurations such as SIP alias or user name etc, user can set as capital case.
	• 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-152T.

```
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
bureau          Bureau line information manipulation
rom             ROM file update
passwd          Password setting information and configuration

usage: help [command]

usr/config$
```

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4.2. [quit] command

Type **quit/exit/close** will logout VIP-152T and Telnet Program.

4.3. [debug] command

This command is for engineers to debug system of VIP-152T. User can add debug flag via command

debug –add "debug flags", and then start debug function via command **debug –open**. When

VIP-152T 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-152T.

Sometimes after user type reboot, on terminal screen will display: "Data modified, commit to flash rom?"

which means VIP-152T 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-152T will dial out IP address.

1. **-print:** display phone book data. User can print all data in phone book by command

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(**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. **-delete**: delete a record of certain listed index in phone book table. (**pbook –delete "index number"**)

4. **-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 [-delete index]
pbook [-modify [index] [ip ipaddress] [name Alias] [e164 phonenumber]]

    -print        Display phonebook data.
    -add          Add an record to phonebook.
    -delete       Delete an record from phonebook.
    -modify       Modify an exist record.
Example:
    pbook -print 1 10
    pbook -print 1
    pbook -print
    pbook -add name Test ip 210.59.163.202 e164 1001
    pbook -delete 3
    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-152T.

```
usr/config$ commit


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

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

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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 168.95.1.1

PING 168.95.1.1: 56 data bytes
64 bytes from 168.95.1.1: icmp_seq=0. time=50. ms
64 bytes from 168.95.1.1: icmp_seq=1. time=50. ms
64 bytes from 168.95.1.1: icmp_seq=2. time=50. ms
64 bytes from 168.95.1.1: icmp_seq=3. time=50. ms
----168.95.1.1 PING Statistics----
4 packets transmitted, 4 packets received, 0% packet loss
round-trip (ms)    min/avg/max = 50/50/50
usr/config$
```

4.8. [time] command

When VIP-152T enables 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 WED DEC 08 10:44:23 2004

usr/config$
```

4.9. [ifaddr] command

Configure and display the VIP-152T IP information.

1. **–print:** print out all current configurations of ifaddr command.
2. **-ip, -mask, -gate:** Set VIP-152T IP Address, subnet mask and default gateway respectively.
3. **-ipmode:** Set VIP-152T 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-152T 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**.

4. **-sntp:** When SNTP server is available, enable VIP-152T SNTP function and assign SNTP server IP address so that VIP-152T can capture current time from SNTP server. **(ifaddr –sntp 1 "xxx.xxx.xxx.xxx")**

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5. **-dns:** User can set primary and secondary Domain Name Server IP address. Once VIP-152T can connect with DNS server, user can specify URL address instead of IP address for Proxy Server and phone book IP address...etc. **(ifaddr –dns 1 "primary DNS server address" –dns 2 "secondary DNS server address")**

6. **–timezone:** User can set different time zone according to the location VIP-152T is. For example, in Taiwan the time zone should be set as 8,which means GMT+8. (GMT-8: **ifaddr –timezone -8**)

7. **-ipsharing:** If VIP-152T 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)

✎
Note:

Some Proxy servers support endpoint behind NAT function, in this case VIP-152T doesn't have to enable IP sharing function, please contact with the local service provider (Proxy Server vendor for detail information).

```
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.
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 -dns 1 168.95.192.1

usr/config$
```

4.10. [pppoe] command

1.**-print:** display all current configurations and information.

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2.**–id:** to set PPPoE authentication user name.

3.**–pwd:** to set PPPoE authentication password.

4.**–reboot:** Select enable or disable this function. If user enables this function, after PPPoE disconnected, VIP-152T will automatically reboot to re-connect, and after reboot, if VIP-152T still can't connect with server, VIP-152T will keep trying to connect. On the other hand, if user disables this function, VIP-152T 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 can be used to clear the existing machine settings, and load the factory default parameters into machine.

✎ Note:	• After firmware upgrade, it is suggested to execute this command to make sure new software work well on VIP-152T.
	• To execute the command **flash –clean,** all configuration of VIP-152T 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-152T will dial out all number pressed.

3. **-keypad:** set DTMF type .User can select DTMF type VIP-152T 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)
 -service           Specify lanphone service type. (0: Normal service,
                     1: HotLine service.)
 -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: #)
 -privacy           Privacy Number Type(0: NONE, 1: Japan)
Example:
   sysconf -keypad 0 -eod 2

usr/config$
```

4.13. [sip] command

1. **–print:** display all current configurations.

2. **–mode**: enable VIP-152T in SIP 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-152T 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-152T will sent out messages as Account Name @"IP address of Proxy", if user set prefix as abc, VIP-152T will set out as abc123@"IP address of Proxy". This

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function is for special proxy server.

7. **–line**: identify one number for the VIP-152T to register to the Proxy **(SIP –line "line number").**

✎

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-152T 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-152T will make call to related IP address.

9. **–expire:** set expire time of registration. VIP-152T will keep re-registering to proxy server before expire timed out.

10. **–port:** set listening UDP port or VIP-152T.

11. **–rtp:** set RTP port number. VIP-152T 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$
```

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4.14. [security] command

1. **–print**: display all current configurations.
2. **-name**: set user ID of VIP-152T 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-152T won't register successfully.
3. **–pwd**: set account password for registering.

```
usr/config$ security

Secuirty 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 2298353 -pwd 123

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-152T 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-152T, DTMF means DTMF transmitting volume. (**voice –volume voice "value of**

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volume", voice –volume input "value of volume", voice –volume dfmt "value of volume")

✎
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)

✎
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 [G729 ms] [G723 ms] [G711U ms] [G711A ms] ]
      [-volume line [voice level] [ring level] [input level] [dtmf    level]]
      [-nscng [G711U used1] [G711A used2] [G723 used3]]
voice -print
voice -priority [G729] [G723] [G711U] [G711A]

    -print          Display voice codec information and configuration.
    -send           Specify sending packet size.
                    G.729   (20/40/60 ms)
                    G.723   (30/60/90 ms)
                    G.711U (20/40/60 ms)
                    G.711A (20/40/60 ms)
    -priority       Priority preference of installed codecs.
                    G.729
                    G.723
                    G.711U
                    G.711A
    -volume         Specify the following levels:
                    voice volume (0~9, default: 7),
                    ring volume (0~9, default: 7),
    -nscng          No sound compression and CNG. (G.723.1 only, On=1, Off=0).
Example:
    voice -send g729 60 g723 60 g711u 60 g711a 60

    voice -volume voice 7 ring 7

1

usr/config$
```

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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.

Expected Forwarding (EF)	101110	====>	46 (Decimal System)
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. **–siptype:** set DSCP value of RTP packets from 0 to 63

✍
Note:
This command won't be functional until whole network environment support DSCP function, e.g. all routers or switches in your network have enabled DSCP feature.

```
usr/config$ tos

IP Packet ToS(type of Service)/Differentiated Service configuration
Usage:
tos [-rtptype dscp]
tos [-sigtype dscp]
tos -print
     [-rtpreliab mode]
tos -print

Example:
    tos -rtptype 7 -sigtype 0

usr/config$
```

4.17. [bureau] command

1. **-print**: display all current configurations.

2. **–hotline**: set hotline IP and remote phone number. If user has enable Hotline function, once VIP-152T been off-hook, it will automatically dial out to assigned IP and phone number. (**bureau –hotline "IP of destination" "Phone number of destination"**)

✍ Note:	To set VIP-152T under hotline mode must set following configurations: 1. Peer-to-Peer mode: **sip –mode 0** 2. Hotline service: **sysconf –service 1**

```
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$
```

4.18. [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 .

3.

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

4. **-boot2m**: to upgrade 2mb rom file, which includes all firmware file mentioned in item 2.

5. **-s**: it is necessary to prepare TFTP/FTP server IP address for upgrading firmware rom file.

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6. **-f**: the file name prepared for upgrading is necessary as well.

7. **–method**: specify download method to be TFTP or FTP(0 for TFTP.1 for FTP)

8. **–ftp**: specify user name and password for FTP download method.

    For example: User prepares to upgrade the latest app rom file – vip152t.100, the TFTP server is

    192.168.0.10, User has to input command as below:

    rom –app –s 192.168.0.1 –f vip152t.100

```
usr/config$ rom

ROM files updating commands
Usage:
rom [-print][-app][-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)
    -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',
    , '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-152T.

```
usr/config$ rom -print


Download Method   :   TFTP

        Boot Rom   :   boot.152t
Application Rom    :   vip152t_1208.bin
usr/config$
```

4.19. [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"**)

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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", commands below are not functional:

B. **password –set root**: set password of login : **"root".**

C. **passwd –clean**: clean up password restored before, and user can login :**"root/administrator"**, password: "press enter".

D. **flash –clean**: clean all current configurations

E. **rom –boot**: upgrade boot sector

F. **rom –boot2m**: upgrade whole software file

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Chapter 5

Upgrading Software on the VIP-152T

VIP-152T 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-152T is ready to be upgraded.

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

5.1 From LCD Phone Menu

Please select the **Advanced Set** **SW Upgrade.** Press **OK** to enter into the sub-selection as below.

- **SW Update**

    - **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.

    - **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-152T new application rom file.

    - **Account**

    User has to input user name for FTP server login .It is necessary for upgrading VIP-152T new application rom file via FTP method.

    - **Password**

    User has to input user password for FTP server login .It is necessary for upgrading VIP-152T new application rom file via FTP method.

    - **File Name**

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

    - **Version**

    Show versions of all software and hardware.

    - **Upgrade**

    Select YES or NO to start upgrade.

    - **Exit**

    Return to upper level of LCD Menu

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5.2 Web Management

Firmware Upgrade

FTP/TFTP server IP Address:	[ ] . [ ] . [ ] . [ ]
Target File name:	[ ]
Method:	TFTP ▾
FTP Login:	name [ ] passwd [ ]
Target File Type:	Application Image ▾
	OK

- **FTP/TFTP Server IP Address:** Set TFTP server IP address

- **Target File name:** Set file name prepared to upgrade

- **Method:** Select download method as TFTP or FTP

- **FTP Login:** Set FTP login name and password

- **Target File Type:** Select which sector of VIP-152T 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 Telnet command lines

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.

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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 – vip152t.100, the TFTP server is 192.168.0.10, User has to input command as below:

   rom –app –s 192.168.0.1 –f vip152t.100

```
usr/config$ rom

ROM files updating commands
Usage:
rom [-print][-app][-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)
    -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',
    , 'dsptest', 'dspcore', and 'dspapp'.
Example:
    rom -method 1
    rom -ftp vwusr vwusr
    rom -app -s 192.168.4.101 -f app.bin

usr/config$
```

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