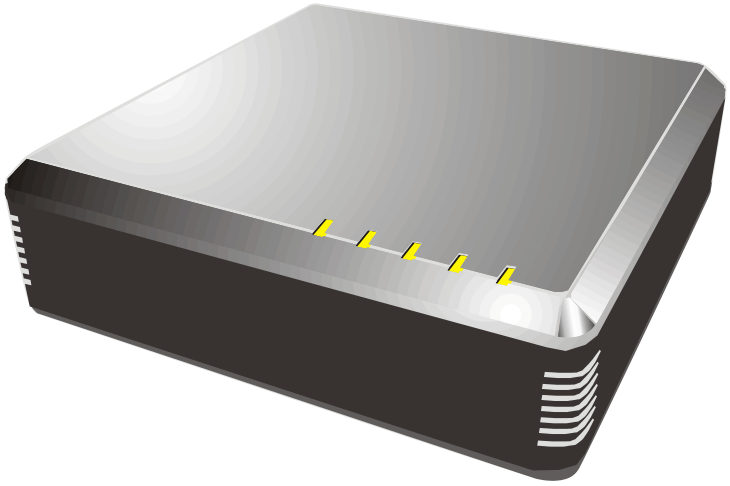
ATA-S / ATA-SP User Guide



CATALOG

Preface

About this User's Manual

This user's guide includes specifications, installation guide, web management and command line configuration interface for the ATA-S.

Revision History:

Version	Date	Author	Modified Contents
1.0	2005/6/15	Hunter	1st Revision for ATA-S
1.1	2005/10/31	Hunter	

I. ATA Overview

This part introduces the software/hardware specifications and default settings of the ATA.

1. Overview

The ATA is a one-port telephone extension and 1 ports SOHO Router to IP network ATA series. It provides Data transfer by 10/100Mbps, telephone services over IP network with easy operation and configuration. It is most suitable for SOHO and personal user in Internet communication environment.

The ATA provides IP telephone number for end users with FreeTalk voice service. User can make phone call via Internet now. No more long distance and international telephony fee! It also connects three computers without another IP sharing as showed as following diagram.

The ATA-SP provides two telephone numbers that one is IP telephone number and the other is PSTN telephone number in one device for end users. You can make phone call via Internet, and no more long distance and international telephony fee! Especially, User still can make phone call when external power is failure.

The ATA-S also can connect one computers with embedded IP sharing and DHCP server function.

2. Specification

2.1 Physical interface	2.1.1 RJ-45 A. WAN X 1 for internet connection B. LAN X 1 for PC connection 2.1.2 RJ-11 A. Phone X 1 for connect to regular phone. B. PSTN X 1 for connect to PSTN fixed line. 2.1.3 Power A. Voltage : DC 12 V B. Current : 1 A 2.1.4 LED A. WAN: WAN link status indication B. LAN: LAN link status indication C. Status: VoIP status indication D. Power: Power status indication E. Phone: Analog phone status indication 2.1.5 Dimension: 9.9 X 9.9 X 3.2 cm
2.2 Protocol	2.2.1 SIP RFC 3261 A. Outbound proxy B. Support IP or domain name for primary and secondary proxy address and auto switching is enabled.
2.3 Call function	2.3.1 Call Forwarding 2.3.2 Call Transfer 2.3.3 Un-connection LED alarm 2.3.4 Call Hold 2.3.5 Calling Number Delivery
2.4 Voice feature	2.4.1 Voice codec A. G.711(A-law/μ-law) B. G.723.1 C. G.729 D. G.711 FAX pass-through mode 2.4.2 RTP / RTCP 2.4.3 Echo Cancellation G.168 2.4.4 Silence Detection/Suppression 2.4.5 Comfort Noise Generation 2.4.6 DTMF Detection/ Generation

	2.4.7 Call Tone Generation
2.5 Network	2.5.1 Network connection A. PPPoE (RFC 2516) B. Account / password can be saved C. Auto reconnection after disconnection D. DHCP client (for LAN Port) E. Static IP 2.5.2 DHCP Server and NAT 2.5.3 Bridge for LAN interface 2.5.4 Diff Serv 2.5.5 Support SNTP
2.6 System management	2.6.1 Support Web, Telnet for remote control 2.6.2 Username / Password for login to make configuration
2.7 Firmware update / upgrading	2.7.1 TFTP / FTP / Web remote update
2.8 Environment	2.8.1 AC Power 2.8.2 110~220V ± 10V 2.8.3 60Hz ± 3Hz 2.8.4 Environment 2.8.5 Temprature：0°C~40°C 2.8.6 Hmidity：10%~90%RH
2.9 Certification	2.9.1 CE, FCC

3. Outlook

3.1 Indicator

The LEDs on the front panel indicate the operational status of the ATA series.

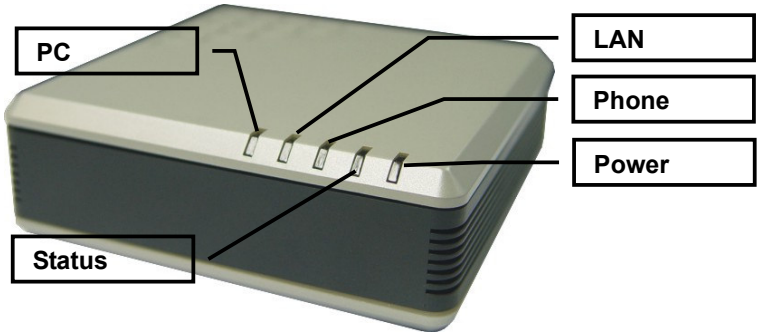


Figure 1

3.1.1 Power (Oringe):

A. Light on: Power OK
B. Light off: Power failed.

3.1.2 Status (Green):

A. Light on: Registration to proxy successful.
B. Light off: Peer-to-Peer mode was selected.
C. Light Blanking: Registration failed.

3.1.3 Phone (Orange):

A. Light On: Phone picked up.
B. Light Off: Phone is idle.
C. Light Blinking: Incoming call.

3.1.4 LAN (Green):

A. Light On: idle
B. Light Off: Connection failed or port leaved unused.
C. Light Blinking: Data is transmitting or receiving.

3.1.5 PC (Orange): (ATA-SP only)

A. Light On: Idle
B. Light Off: Connection failed or port leaved unused.
C. Light Blinking: Data is transmitting or receiving.

3.2 Physical interface

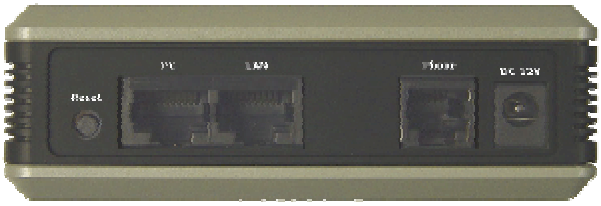


Figure 2. ATA-S

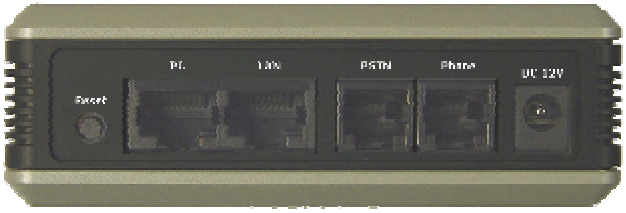


Figure 3. ATA-SP

3.3 PC Port:

- It's for PC to connect to network.

3.4 LAN Port:

- It's for ATA to connect to network.

3.5 Phone Port:

- For analog phone connect to ATA.

3.6 PSTN Port (ATA-SP Only):

- For ATA connect to PSTN via fixed line.

3.7 DC 12V Port:

- Power supply.

3.8 Reset

- The configuration value will return to factory default after reset button is pressed over 5 seconds.

Note:
If the ring voltage of PABX is lower than 24V DC, it's not recommended to connect PABX extension with ATA PSTN port.

II. Installation

This part explains how to configure essential and basic items before user can run ATA.

1. Installation Guide

This guide covers all essential configurations under different application, user can follow steps below to configure basic items to run ATA.

2. Before installation

2.1 Please check the following items before the installation that can avoid some unknown problems during installation:

2.1.1 Preparing the following equipment for installation:

A. A pc with network connection.
B. Ethernet RJ-45 cable
C. Phone and RJ-11 cable

2.1.2 Preparing 1 of the following Network connection:

A. Static IP:
   i. A valid fixed IP address
B. DHCP:
   i. Make sure the DHCP server is available.
C. PPPoE:
   i. Prepare a valid username and password, further more, confirm the XDSL modem is functional.
D. Power
   i. Make sure the power supply is adaptable.
E. Check the accessories (Figure 4)
   i. Please check the accessories after you open the packing, there should have the parts as list in below:
      - ATA mainframe X 1
      - 1M Ethernet RJ-45 cable with X 1
      - DC 12V, 1A Power adapter X 1
      - Document CD X 1, there is User guide and Quick guide is embedded.

Figure 4

3. Quick Installation

The following will show you how to install and configure the ATA-S/SP with step by step.

3.1 Scenario 1. XDSL connection

3.1.1 Connect to XDSL modem directly.

A. Please refer the following Figure 5 to install.

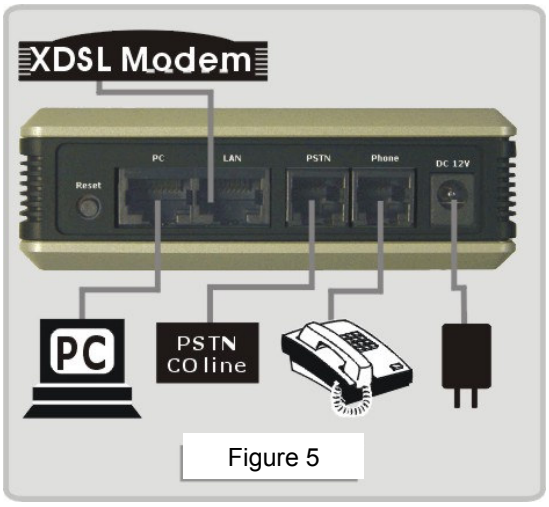


Figure 5

STEP 1. Plug RJ-45 cable for connecting from LAN port to XDSL modem.

STEP 2. Plug RJ-11 cable for connecting to a valid analog phone.

STEP 3. Plug RJ-11 cable CO PSTN line into PSTN port.

STEP 4. Plug the power adapter with valid power into DC 12V port for getting adaptable power to ATA.

STEP 5. Now, please check the LED indicator for make sure if the LED status as the following:

1. Power: ON
2. Status: Blinking
3. Phone: It should be off, if the handset of analog phone is not picked up
4. LAN: ON
5. PC: ON

STEP 6. Plug RJ-45 cable for connecting from PC port.Plug RJ-45 cable for connecting from PC port to a valid PC.

3.2 Scenario 1.1. Cordless connection

Also you can connect a cordless phone to ATA for instead of a cord phone as Figure 6 if you don't want to be limited by an annoying cord. There is no any special setting, you can refer to Figure 5.

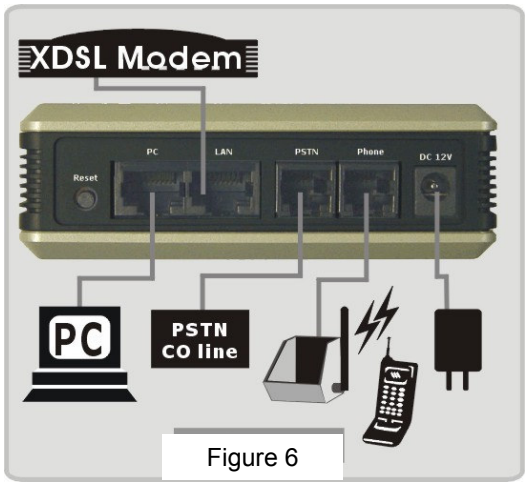


Figure 6

3.3 Scenario 2. HUB connection

Connect to HUB or switch HUB directly. Please refer the Figure 7 to install. All of steps of setup is same with scenario 1. Please follow steps in below to access ATA configuration interface:

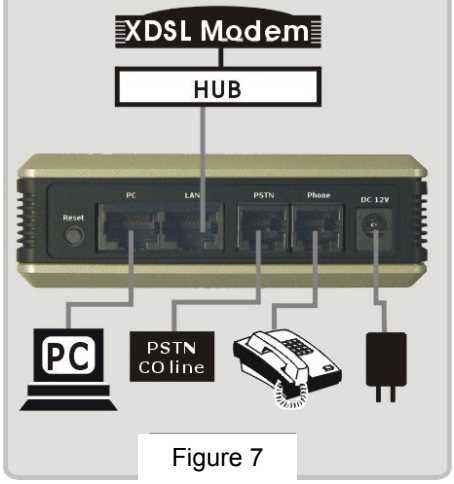


Figure 7

Caution:
To prevent damage to the ATA, please make sure you have connected with the correct power adapter.

4. Configuration steps for PC network setting

4.1 Section 1. Configure your PC

Figure 8

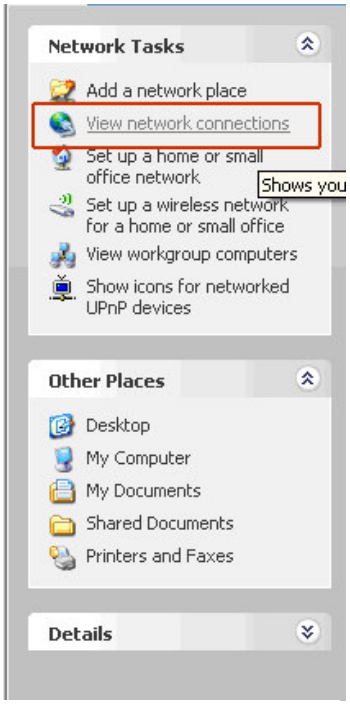


Figure 9

STEP 1. Step 1. Double click "My network places " (Figure 8).

STEP 2. Click "View network connections" (Figure 9)

STEP 3. Right -click "Local Area connection" then select "Properties" (Figure 10)

STEP 4. Click "Internet Protocol (TCP/IP)". (Figure 11)

STEP 5. Click Obtained an IP automatically then click "OK". (Figure 12)

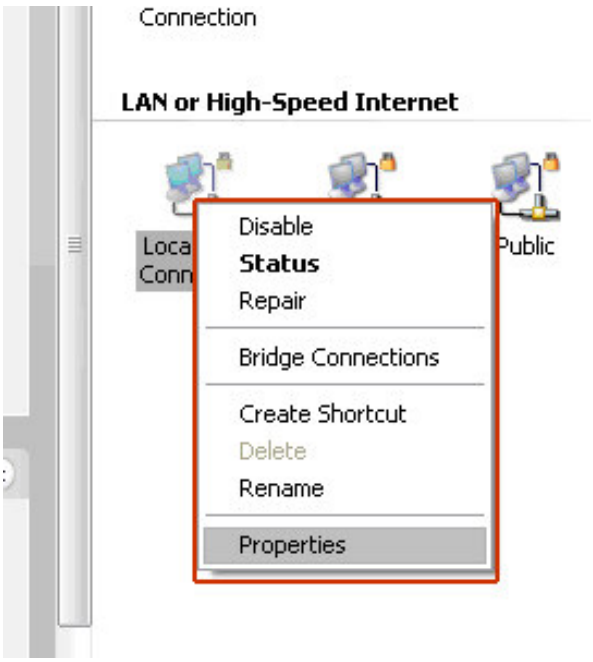


Figure 10

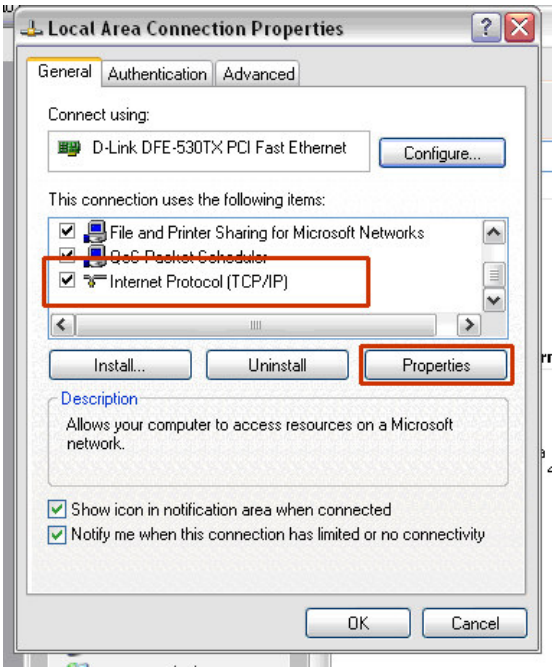


Figure 11

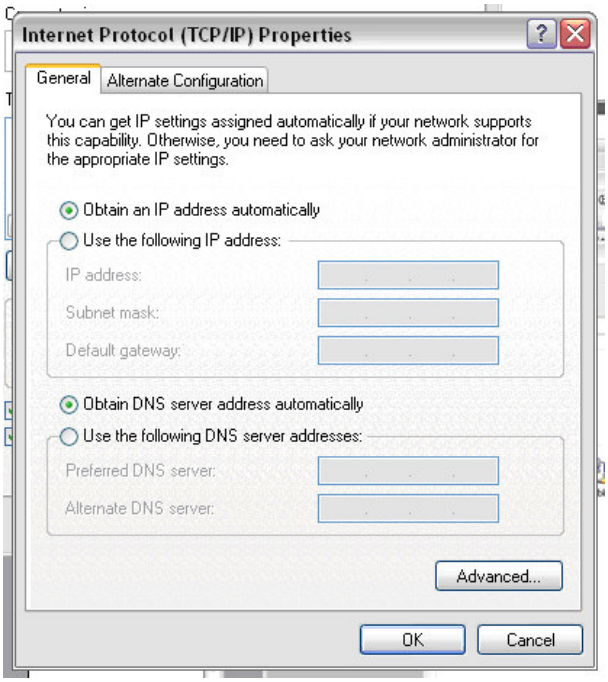


Figure 12

4.2 Section 2. Setup via Installation Wizard

The Installation Wizard is a guiding mode installation method that can help user to setup ATA step by step in an easy way.

STEP 1. Run Internet Explorer (錯誤! 找不到參照來源。)

Figure 13

Figure 14

STEP 2. Input 192.168.123.123 (Figure 14)

STEP 3. A pop-up window (Figure 15) showed for login.

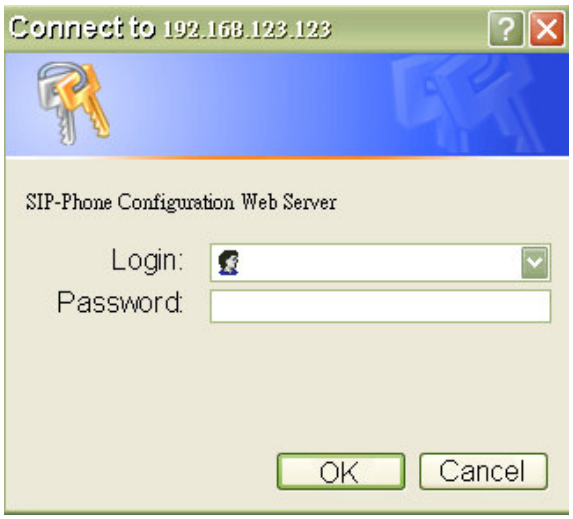


Figure 15

Note:

The following description will assist you to get a valid IP address that if the Login window which in above is not displayed properly.

1. Click 「start」→ 「run」 then type 「cmd」 in the field.
2. Then a 「black screen」will appear on your display like Figure 16.

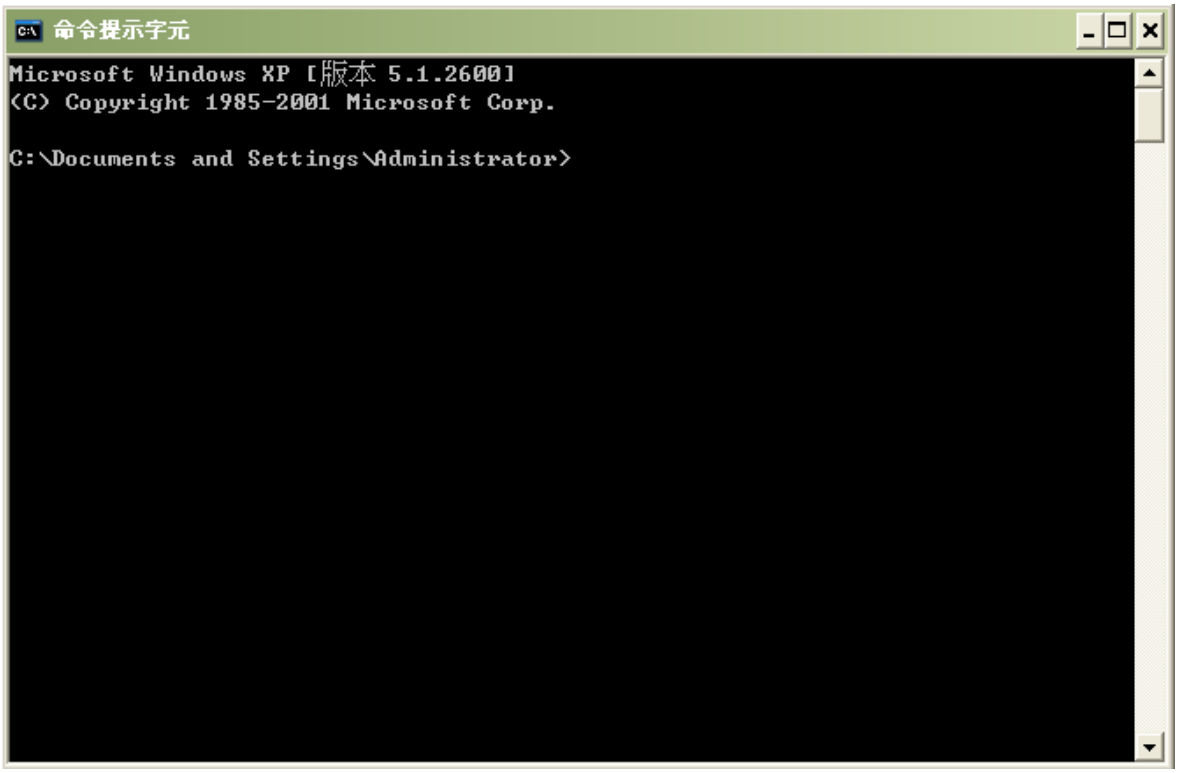


Figure 16

3. Type 「ipconfig」

Some of message will show on the screen (Figure 17).

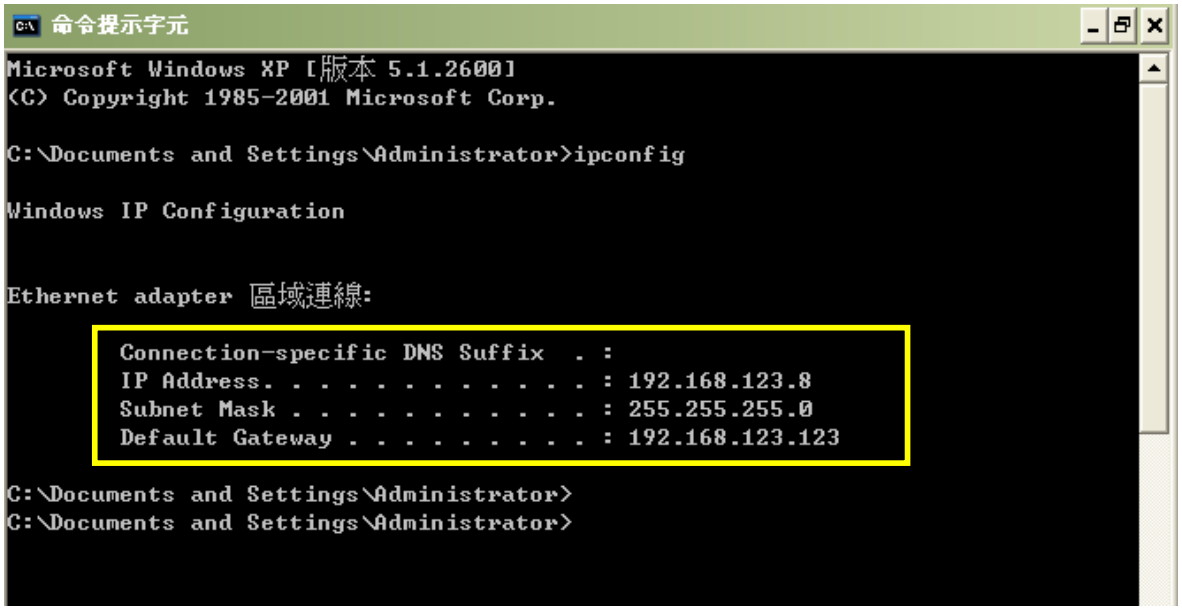


Figure 17

4. Please check if the PC get a valid IP address 「192.168.123.XXX」like the Figure 17 on above.
5. Normally the PC will get a valid IP address like Figure 17 then you can goto STEP 4, otherwise please continue the next step.
6. Type ipconfig /release then enter.

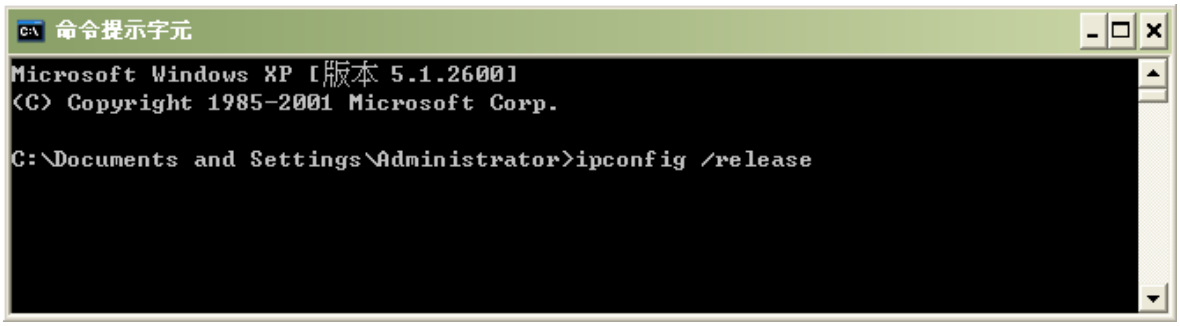


Figure 18

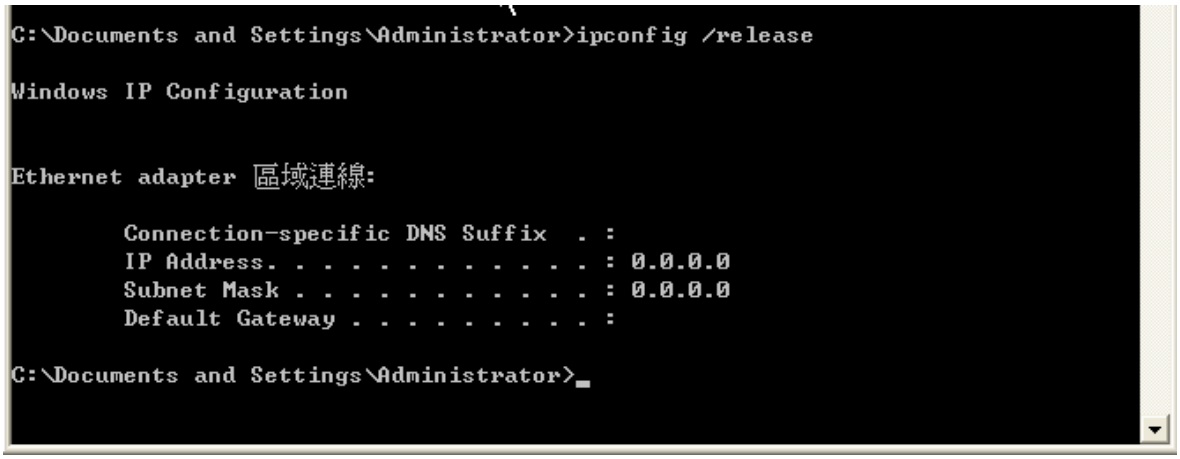


Figure 19

7. Type ipconfig /renew then enter.

Figure 20

8. The screen will show you a new valid IP address which assigned by ATA.

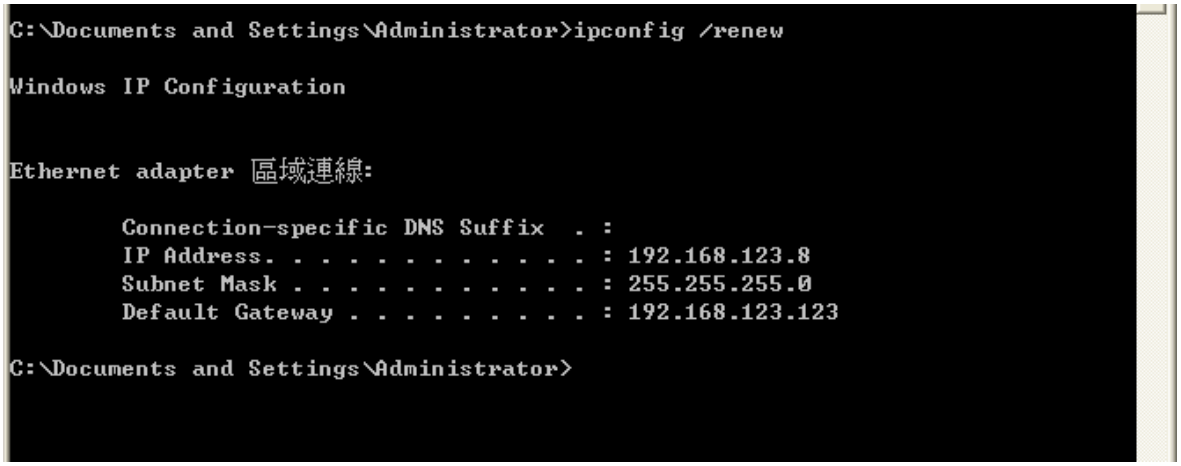


Figure 21

STEP 4. Please input "root" as a username then enter, then you will login into the configuration WEB page. (Figure 22)

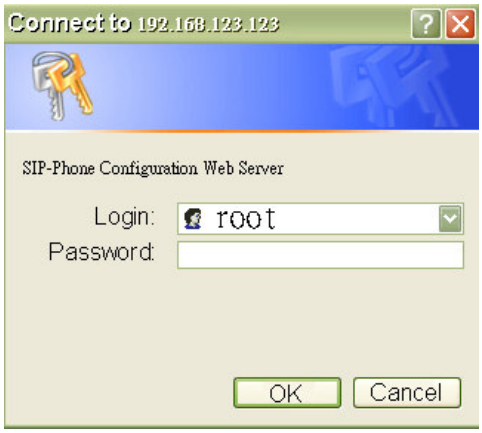


Figure 22

5. Installation Wizard for proxy mode

5.1 Network configuration

STEP 1. Click "Installation wizard" (Figure 23)

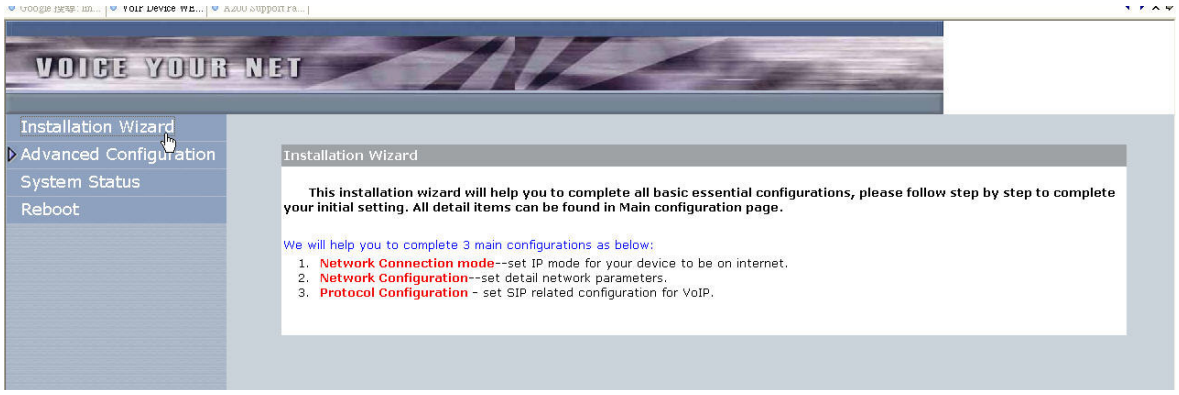


Figure 23

STEP 2. Click "next" which on right-button of the screen.

STEP 3. There are 3 options for you to select (Figure 24). Please follow the step which behind the option.

1. Static IP (STEP 4)
2. DHCP (STEP 5)
3. PPPoE (STEP 6)

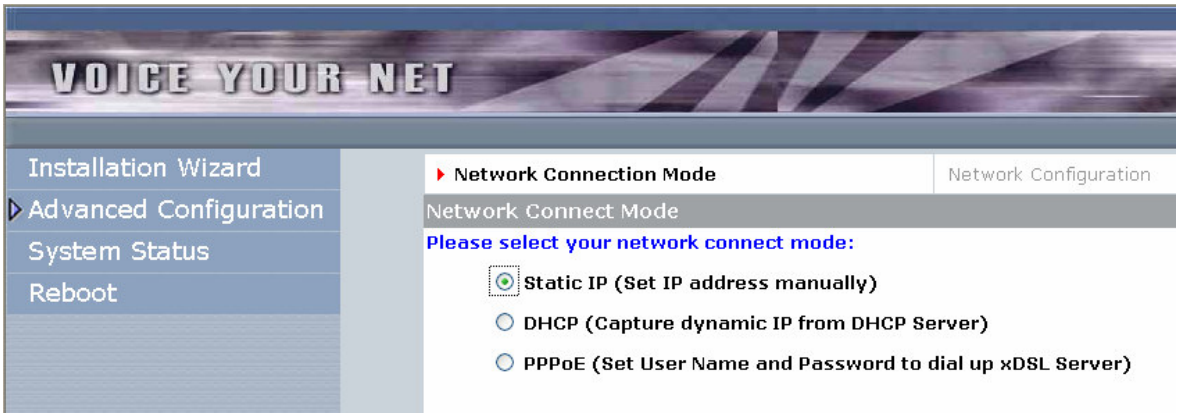


Figure 24

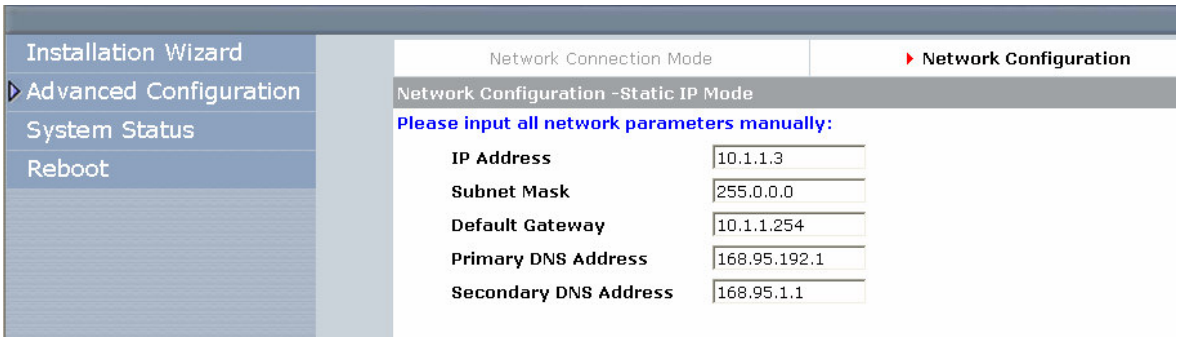


Figure 25

STEP 4. The first option is for you to configure a valid static IP. You can fill the IP address, Subnet mask and ATA series IP here (Figure 24 and Figure 25). Please goto STEP 9.

Figure 26

STEP 5. DHCP mode (Figure 26) is for you to configure the ATA that if you used dynamic IP already, the option will be better for you. Please goto STEP 9.

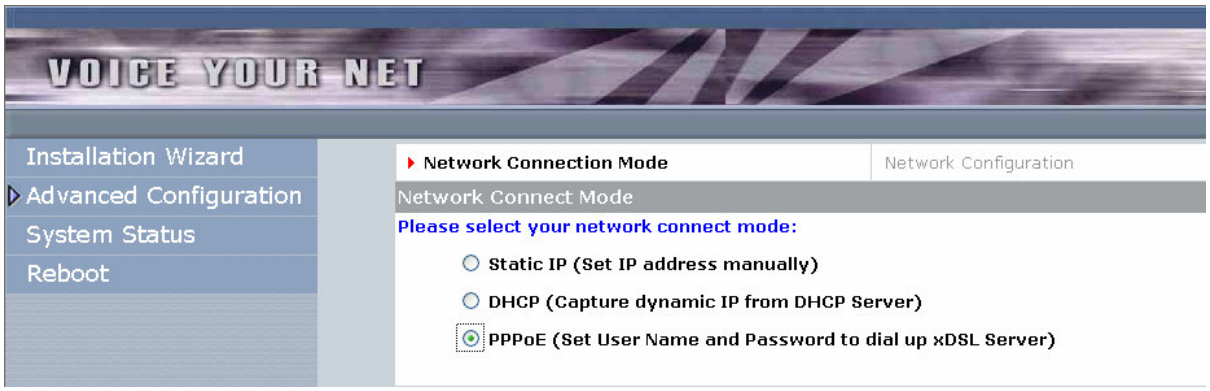


Figure 27

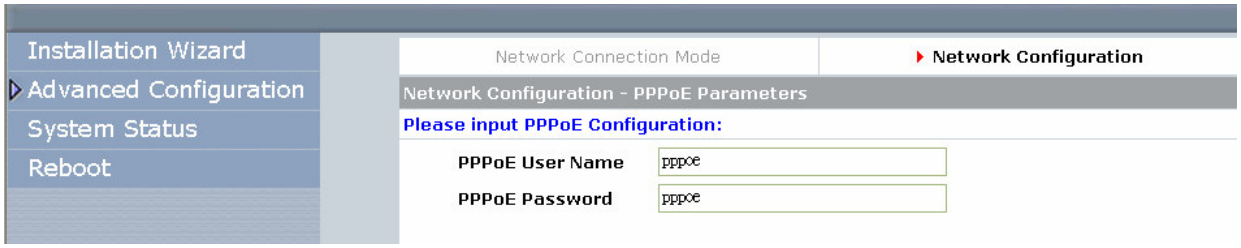


Figure 28

STEP 6. PPPoE (Figure 27)mode is another option if you had got a account and password from your ISP.

STEP 7. Please input the account and password here which given by your ISP. (Figure 28)

STEP 8. Click "Next"

STEP 9. There are 2 of operation mode for you to choose (Figure 29), one "Proxy mode", another is "P2P mode". You can choose "Proxy mode" if you can get service from a voice service provider or there is a valid service platform in your place already, otherwise we recommend you to choose "P2P" mode. Follow the steps if the "Proxy mode" is chosen.

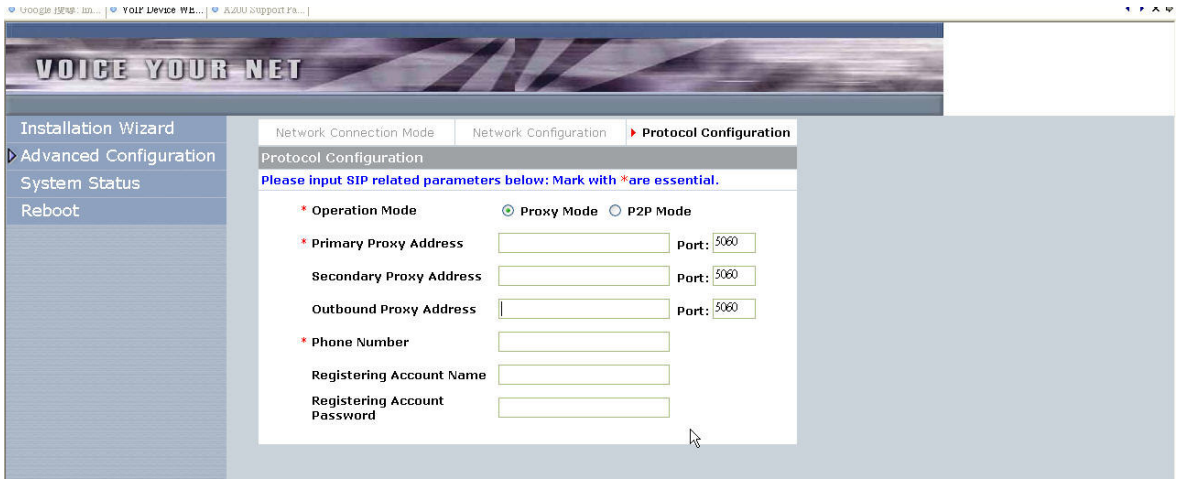


Figure 29

STEP 10. To fill the Primary Proxy Address with a valid IP address which given by your provider.

STEP 11. You can ignore to fill the secondary proxy address if it is not provided.

STEP 12. The Outbound proxy is same with last step, unless the provider has offered such configuration, otherwise you can ignore it directly.

STEP 13. Input the phone number, registration account and password which issued by your provider.

STEP 14. Click "OK"

STEP 15. Normally. all of the port configuration can be ignored if the provider has not specified.

6. Configuration for P2P mode

STEP 1. Follow the steps if the "P2P mode" is selected.

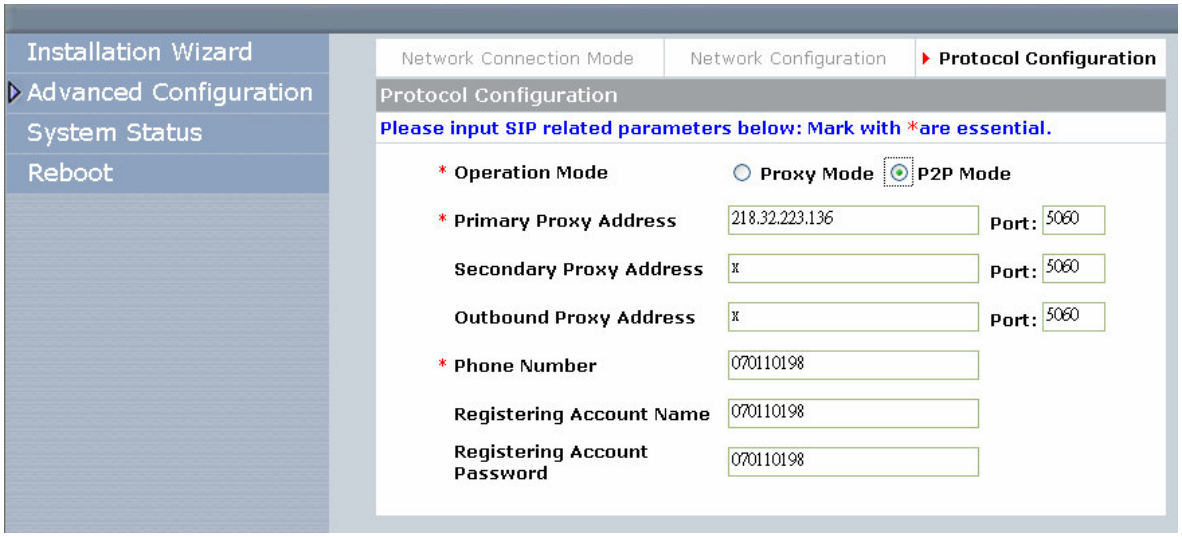


Figure 30

Notice:

Basically, in proxy mode the provider will record the number of ATA into a database after the registration is successful. So you can pick-up the phone then dial a number directly.

But there is no any provider if "P2P mode" is selected, so you need to configure the number which you will dial in the future by manual.

STEP 2. Please configure the number which you will dial via the following steps.

STEP 3. Click "Advanced Configuration" (Figure 31) then click "Number configuration". (Figure 32)

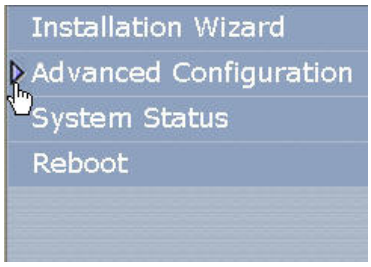


Figure 31

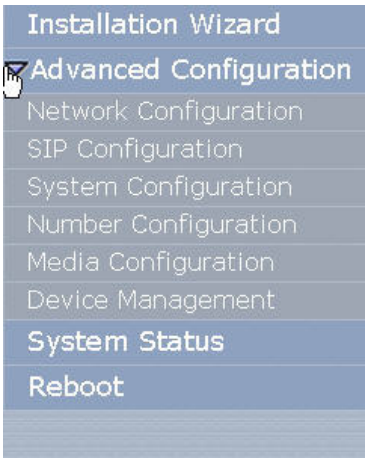


Figure 32

STEP 4. You can find the "Phone book" (Figure 33) configuration on major-screen. This is for you to define the number for your called party.

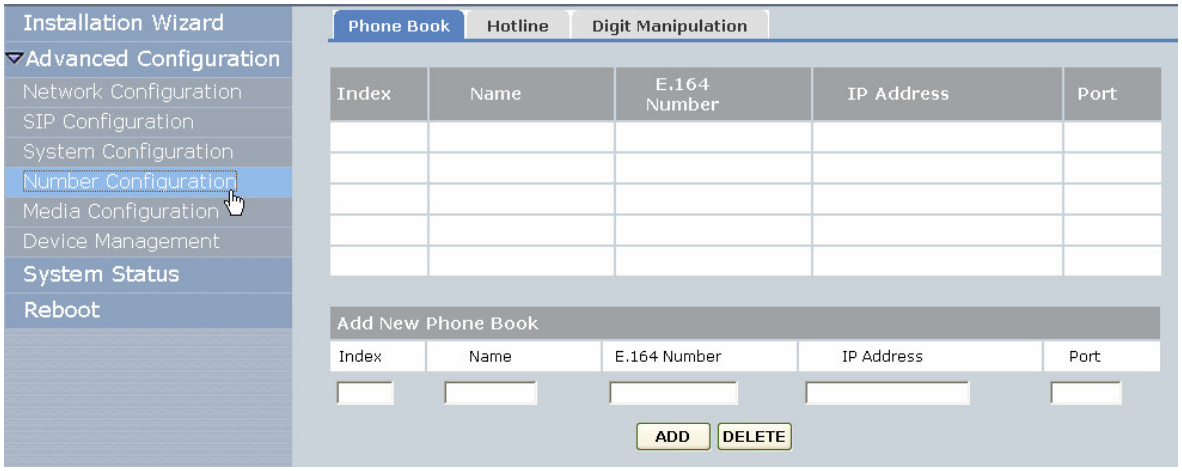


Figure 33

Example:

If You want to define a number for your friend who had a same product.

1. Input the digits as a index, it can be defined by yourself.
2. Give a name as a note for easy to recognize.
3. Define a "e.164 number" for the called party that for you can dial the number to talk.
4. Input the IP address of the called party.
5. No need to configure the port setting unless you know how to define.
6. Click "Add" for adding a record into phone book.
7. You can configure other information as the above steps if there is not only one called party.

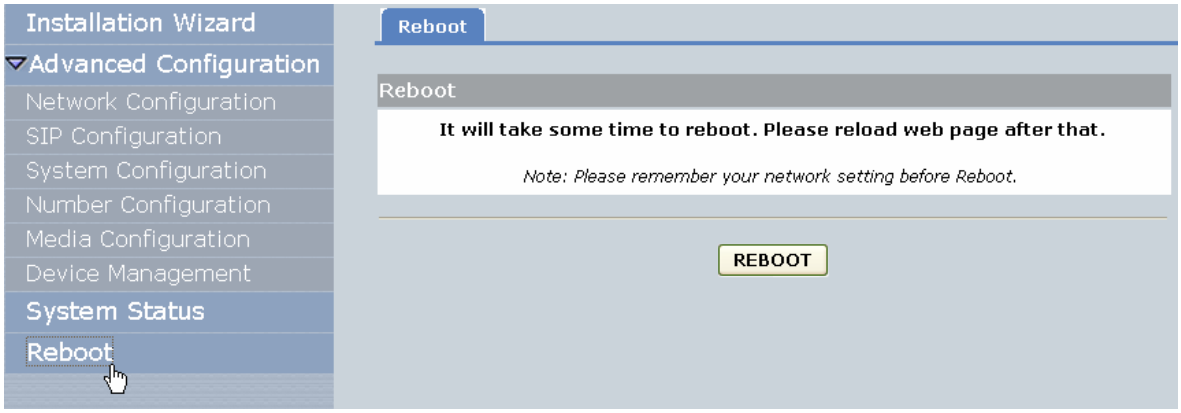


Figure 34

STEP 5. Click "Reboot" (Figure 34)

STEP 6. Click "Reboot".

So far the basic configuration is finished, please wait 30 seconds until the ATA rebooting complete.

III. Advanced configuration

This part introduces the advanced configuration for detail.

1. Setup via Advanced configuration

1.1 Setup network connection mode

- This configuration is for you to define a connection manner for connect to internet.

15.1.1.1 Static IP

STEP 1. Click 「Advanced Configuration」→「Network Configuration」, there is a pull-down list beside 「Network Connection Mode」, then select 「Static IP (Set IP address manually)」.

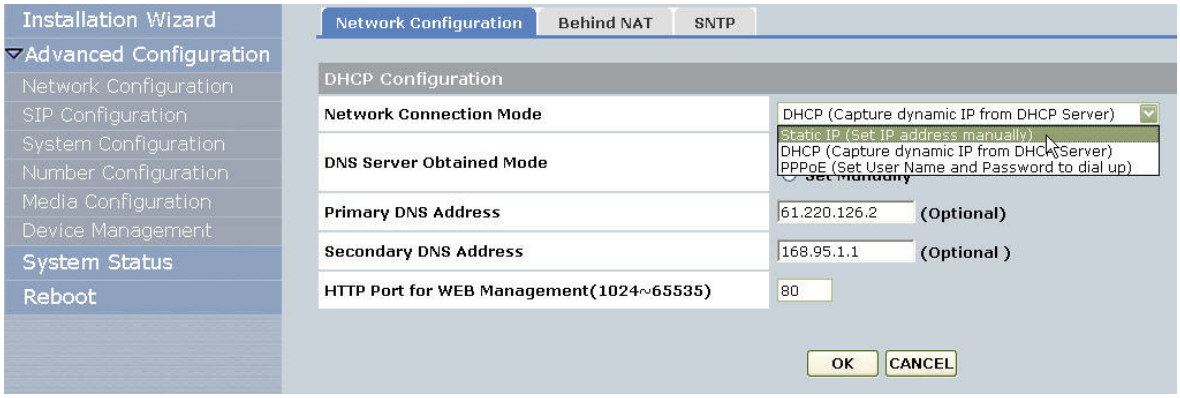


Figure 35

STEP 2. The screen will change to Figure 36, you can configure the VoIP ATA series 「IP address」, 「subnet mask」and the 「default ATA series」then click the OK button for saving the value.

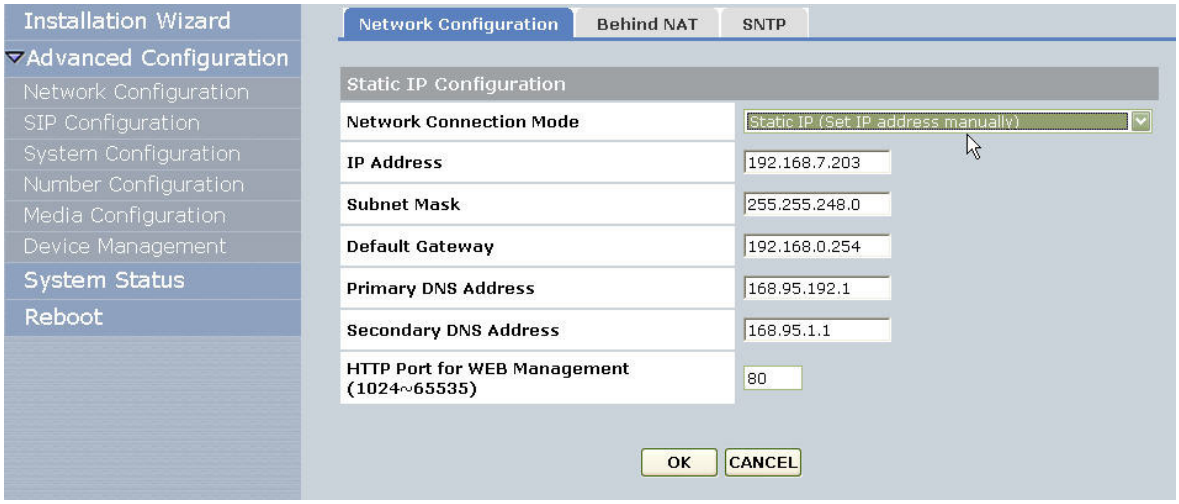


Figure 36

15.1.1.2 DHCP

STEP 1. Click 「Advanced Configuration」→「Network Configuration」, there is a pull-down list beside 「Network Connection Mode」, then select 「DHCP (Capture dynamic from DHCP server)」.

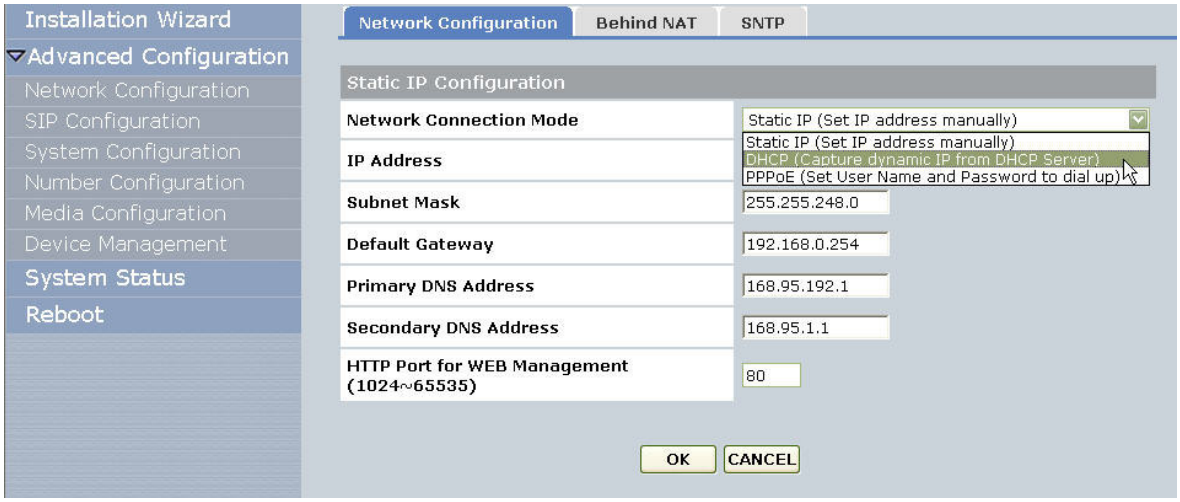


Figure 37

STEP 2. The screen will change to Figure 38

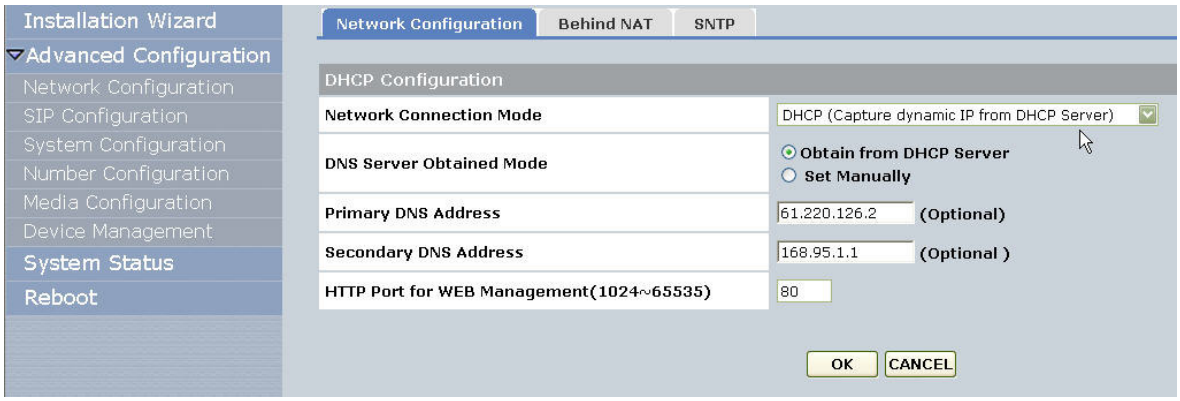


Figure 38

STEP 3. There are 2 options for you to select a manner for obtaining IP address.

STEP 4. You can set up DNS server address if the 「Set Manually」 is selected.

15.1.1.3 PPPoE

STEP 1. Click 「Advanced Configuration」→「Network Configuration」, there is a pull-down list beside 「Network Connection Mode」, then select 「PPPoE (Set User Name and Password to dial up)」.

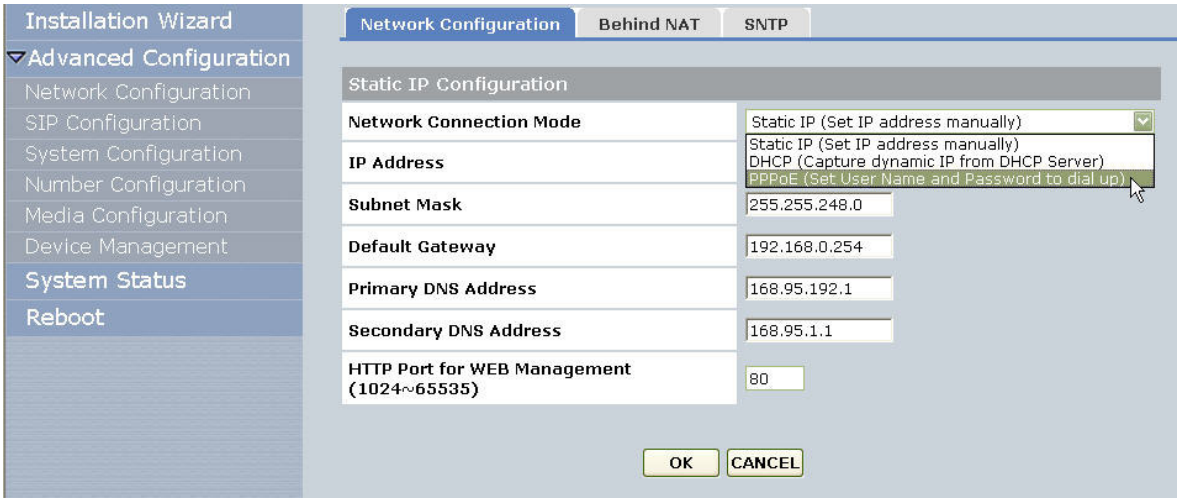


Figure 39

STEP 2. The screen will change to Figure 40.

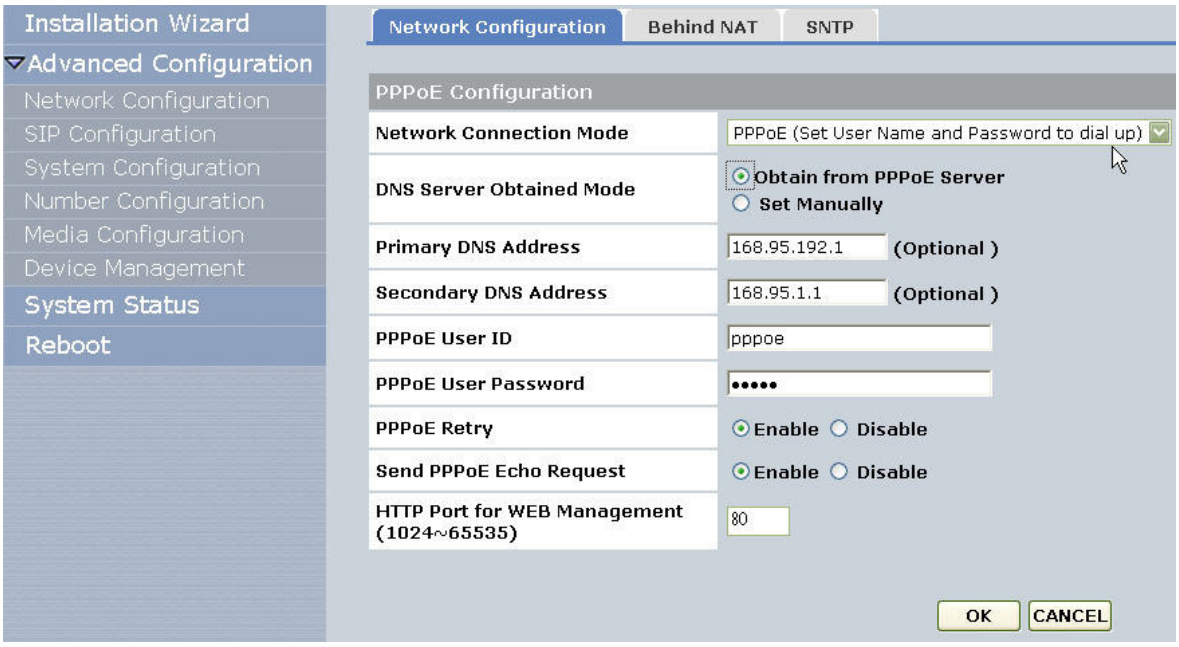


Figure 40

Function Item	Functionality
Network connection mode	Show the manner of network connection what you selected.

DNS server obtained mode	For user to select a obtaining manner of DNS server address by automatically or manually.
Primary DNS address	The first DNS server for ATA to query.
Secondary DNS address	A secondary DNS server for ATA to query if the first one is unavailable.
PPPoE User ID	User name which assigned by ISP
PPPoE User Password	Password which assigned by ISP
PPPoE Retry	Enable for re-connect again if PPPoE server has no any respond.
Send PPPoE Echo Request	Enable PPPoE echo request
HTTP Port for WEB Management(1024~65535)	Setting http port for user can make configuration by WEB

1.2 Operation mode

- After setting IP address, user must assign ATA to work under Proxy mode or Peer-to-Peer mode. If there is no SIP proxy, please set your ATA as Peer-to-Peer Mode.

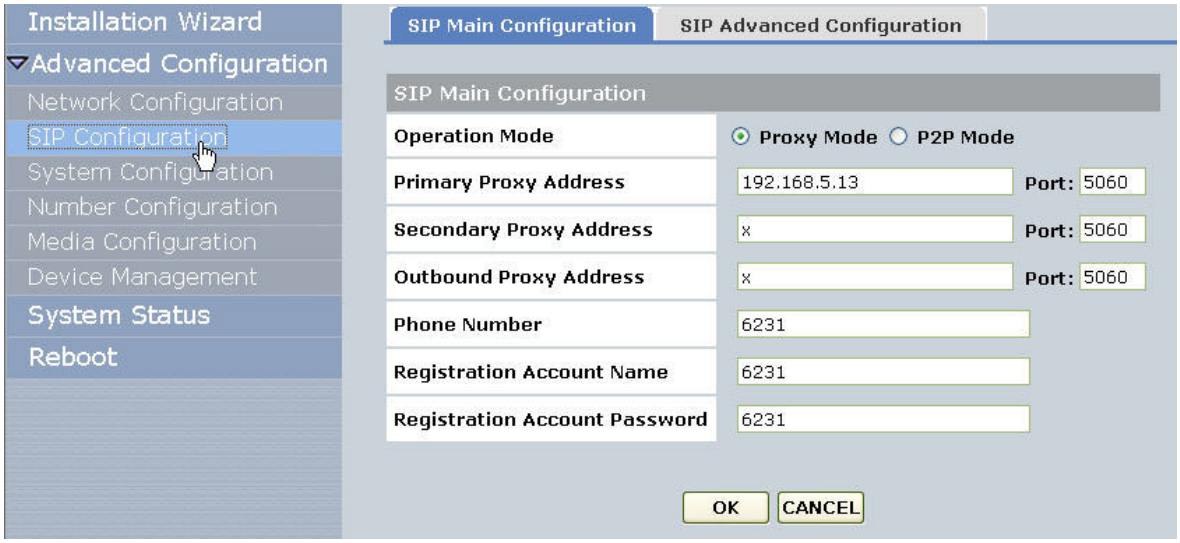


Figure 41

15.1.1.4 Proxy mode

- ATA will first register to the Proxy Server located at the ISP side. For the following operation, it sends the INVITE message to the Proxy Server once you initiate a session. Then the Proxy server will forward the INVITE message to the right place. And the Response message from the remote entity will be forwarded back to you via Proxy server.

STEP 1. Configure the ATA SIP Configuration. Click 「Advanced Configuration」→「SIP Configuration」 on the navigation panel. In the SIP Configuration screen, select 「Proxy Mode」.

STEP 2. Set the SIP information from your service provider, that includes Proxy IP Address, Phone Number, Registration Account name, Registration Account Password, and click the OK button.

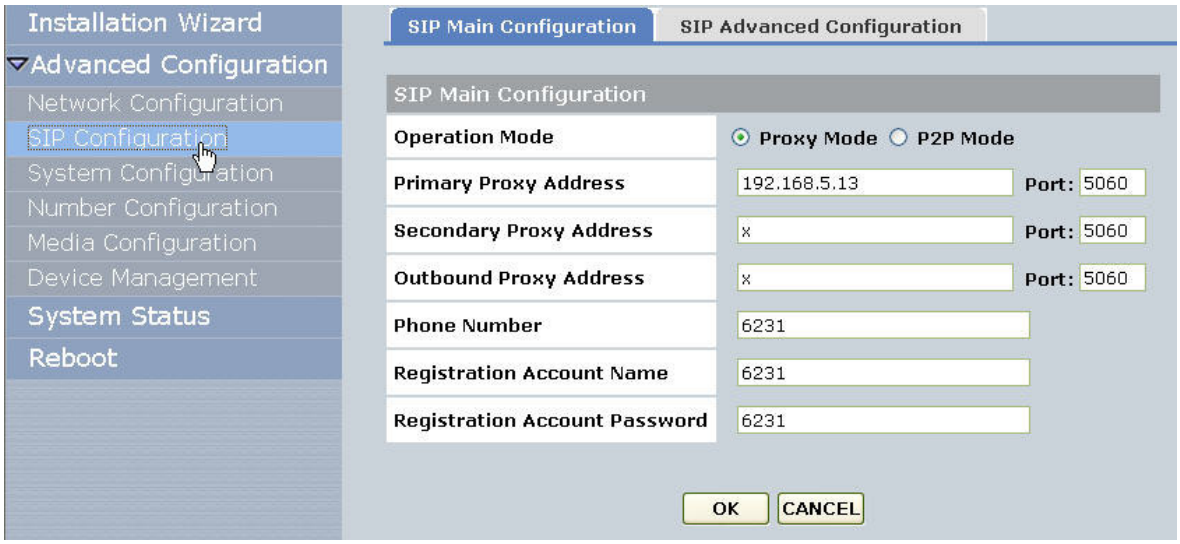


Figure 42

Note:
1. Please contact with your Proxy vendor to obtain user account information.
2. If no need to enter password, user also has to set security information, please set "name" the same with line number.
3. ATA uses "line number" to register to proxy server, the "name" is only for authentication.

15.1.1.5 Peer-to-Peer Mode

- Peer-to-Peer Mode allows users to call other VoIP devices without the proxy server. When in Peer-To-Peer mode, ATA use Phone Book, which will dial pre-defined phone number, and press "#" (optional, to accelerate the dial) as end of dial.

  Please follow the steps in below for configure with Peer-To-Peer Mode:

STEP 1. 「Advanced Configuration」→「SIP Configuration」 on the navigation panel. In the SIP Configuration screen, select 「P2P mode」. (Figure 43)

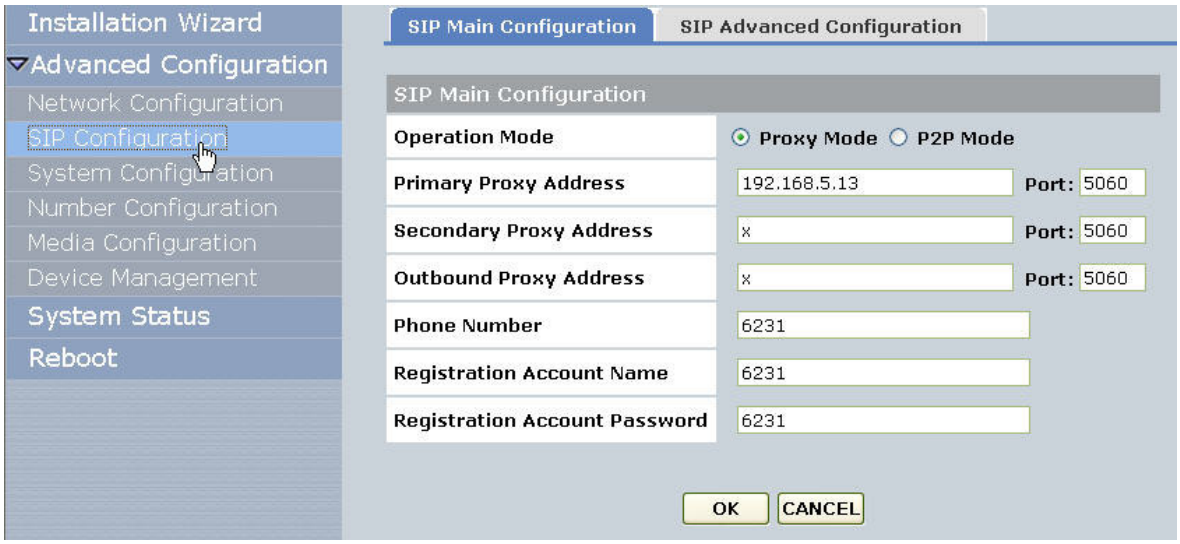


Figure 43

STEP 2. Configure the Phone number, Registration Account name and Registration password which given by your ISP.

STEP 3. 「Advanced Configuration」→「Number configuration」→「Phone book」

STEP 4. In the Phone Book screen, enter the Index, Name, IP address and e164 (phone number) of the destination and click the Add Data button.

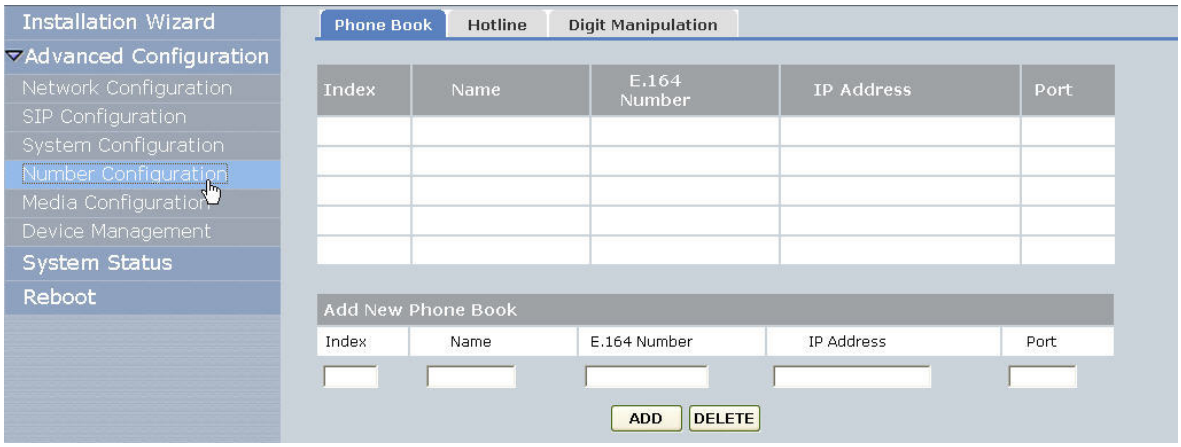


Figure 44

1.3 Setup via Telnet Command Line interface

- This section describes how to setup ATA via Telnet command line interface. Please follow procedures below to configure essential items before you use ATA.
- Save Data and Reboot:
  - After any configuration has been made, user has to save all data and reboot system to make configurations take effect.

STEP 1. Confirm the changed configurations, input [commit] and press [enter] key to save it.
STEP 2. Input [reboot] then press [enter] key to restart ATA series.
STEP 3. After around 20 seconds, ATA series will take effect in new configurations.

Do not turn off your ATA series or remove the ATA series while saving your configuration.

15.1.1.6 Setup Network

Use command [ifaddr] to configure ATA series IP Address and related information.

A. Fixed IP

```
usr/config$ ifaddr –ip 192.168.1.11 –mask 255.2555.255.0 –gate
192.168.1.254
```

In this case is to configure ATA series IP Address as [192.168.1.11], subnet mask as [255.255.255.0], default router ATA series as [192.168.1.254].

B. DHCP

```
usr/config$ ifaddr –ipmode 1
```

In this case is to enable DHCP mode of ATA, once ATA reboot system, it will automatically capture IP from DHCP server.

C. PPPoE

STEP 1. Input the user id & password provided by your ISP:

```
usr/config$ pppoe –id 123@hinet.net (PPPoE login account)
usr/config$ pppoe –pwd 123 (PPPoE login Passowd)
```

STEP 2. Check the result with following command

```
usr/config$ pppoe –print
PPPoE adapter information
    Status          :
```

```
    User name        : pppoe
    Password         : *****
    Reboot           : Yes
    PPPoE echo       : Enable
```

STEP 3. Commit and reboot ATA.

```
usr/config$ commit
usr/config$ reboot
```

STEP 4. When ATA successfully establish PPPoE connection, use command [pppoe -print] to see detail information.

For example:

```
usr/config$ pppoe -print

PPPoE adapter information
    Device           : Enabled
    Status           : Ready
    User name        : 84460791@hinet.net
    Password         : ********
    Reboot           : Yes
    IP address       : 218.160.239.35
    Destination      : 61.223.128.254
    DNS primary      : 168.95.1.1
    Subnet Mask      : 255.255.255.255
    Authenticate     : PAP
    Protocol         : TCP/IP
    Device           : PPP/PPPoE

usr/config$
```

15.1.1.7 Application mode-Proxy/P2P Mode

- After setting IP address, user must assign ATA to work under Proxy mode or Peer-to-Peer mode. If there is no Proxy, please set your ATA as Peer-to-Peer Mode.

D. Proxy mode

- Proxy mode means that there will be an intermediate Proxy Server between ATA and the remote entity. ATA will first register to the Proxy Server located at the ISP side if Proxy

mode is selected. For the following operation, ATA will send the INVITE message to the Proxy Server once you start to make a call, and then the Proxy server will forward the INVITE message to the destination which you dialed. And the Response message from the remote entity will be forwarded back to you via Proxy server.

STEP 1. Using following command to set to SIP mode

```
usr/config$ sip –mode 1
```

STEP 2. You must specify Proxy address obtained from your service provider. And the Proxy address can be IPv4 address as well as DNS name. Several important SIP parameters are listed below when setting proxy mode:"–px", "–line".

For example:

```
usr/config$ sip –px 210.68.222.33 -line 12345
```

In this case is to set proxy IP address as "210.68.222.23", line number as "12345".

STEP 3. You must configure the accounts using "security" command.

An example is demonstrated below:

```
usr/config$ security –name 12345 –password 12345
```

This is to set username (user id) as "12345", password as "12345" into line, which means line can accept incoming calls after successfully registered to Proxy server.

Note:
1. Please contact with your Proxy vendor to obtain user account information.
2. If no need to enter password, user also has to set security information, please set "name" the same with line number.

E. P2P Mode

Peer-to-Peer Mode allows users to call other VoIP devices without the proxy server. When in Peer-To-Peer mode, ATA use Phone Book, which will dial predefined phone number, and press "#" (optional, to accelerate the dial) as end of dial.

To configure Peer-To-Peer Mode in ATA, follow the steps below:

STEP 1. Set Peer-To-Peer Mode, using "sip" command

```
usr/config$ sip –ipmode 0
```

Mode 0 is for Peer-To-Peer mode, while mode 1 is for Proxy mode.

STEP 2. Configure Phone Book, using "pbook" command.

```
usr/config$ pbook –add name TEST1 ip 10.1.1.1 e164 10
```

In this case user add one callee record named as TEST1, IP address as 10.1.1.1, and mapping e.164 number as 10. After phone book data has been set, user can dial 10 to make a call for IP 10.1.1.1.

After the command completed, you can type "pbook –print" to see if the input record is correct.

When adding a record to Phone Book, user does not have to reboot the machine, and the record will be effective immediately.

:

IV. Special Applications and Features

This part explains how to configure ATA under special application mode, such as behind NAT, and how to upgrade firmware.

1. NAT mode (PPPoE)

STEP 1. Set PPPoE mode, input the user id & password provided by your ISP, using [pppoe –name –pwd], reboot the device after disconnection, using [pppoe –reboot 1]

```
usr/config$ pppoe –id 123@hinet.net (PPPoE login account)
usr/config$ pppoe –pwd 123 (PPPoE login Passowd)
usr/config$ pppoe –reboot 1 (Enable)
```

STEP 2. Set NAT function (Default NAT function is enable)

```
usr/config$ ifaddr -nat 1
```

For example:

```
usr/config$ ifaddr -print

Internet address information
    Get IP Mode        : DHCP
    LAN IP address     : 192.168.123.123
    IP address         : 192.168.7.227
    Subnet mask        : 255.255.248.0
    Default ATA series  : 192.168.0.254
    NAT                : Enabled
    DNS Obtained       : Auto
    DNS primary        : 61.220.126.2
    DNS secondary      : 168.95.1.1
    SNTP               : mode=1
                         server 168.95.195.12
                         time zone : GMT+8
                         cycle=1024 mins
                         format=1 (1:12 or 0:24)
    IPSharing          : no IPSharing device.
    EMS IP Address     : 192.168.1.1
    EMS User ID        : vwusr
    EMS Password       : vwusr
    EMS cycle time     : 0
```

STEP 3. When ATA series connection succeed. Setup PC use LAN IP connection Network

STEP 4. Select [Specify an IP Address] and enter [192.168.123.xxx] in the [IP Address] location (where xxx is a number between 2 and 254 used by the VoIP ATA series to identify each computer), and the default [Subnet Mask 255.255.255.0]. Please notice that two computers on the same LAN cannot have the same IP address. Set Default ATA series value as 192.168.123.123 in the [new ATA series] field. Then save your change. PC can also use DHCP mode when DHCP server of ATA is enabled.

2. Call Hold, Transfer and Forward

ATA series provides various, convenient call function that includes call hold, transfer and forward. Please be noted that both calling and called site have to support this feature. For call forward function, it only works under Proxy mode. Of course, Proxy must support these call features, too.
It is better for user to prepare a telephone set supported [FLASH] function on keypad. If telephone set does not support [FLASH] function on keypad, user can click the Hook quickly by sending FLASH message.

Note:
The default FLASH length for ATA series is between 400ms to 800 ms.. This value must be compliant with your phone set, if user press flash but not work, please check the flash time value of your phone set and adjust it on ATA.

2.1 Call Hold – press [FLASH]

By pressing the FLASH after making a call, both sites shall hear the 2nd dial tone generated by ATA series. To retrieve the call back, just press the FLASH again. Call Transfer – press [FLASH], then [transferring number]

- Consultant transfer
  - A talk with B → B press FLASH → B hear dial tone → B dial to C → C ring then pick up handset → B talk with C → B Hangs up → A talk with C.
- Blind transfer
  - A talk with B → B press FLASH → B hear dial tone → B dial to C → B Hangs up → A talk with C.

2.2 Call Forward:

- User has to activate/deactivate call forward function via pressing keypad of phone set. This function is only available under Proxy mode, and the Proxy must support Call Forward function. There are three conditions for user to set forward function:

2.3 No response/ Answer:

- While no one answers the call, incoming call will be forwarded to the assigned number.

2.4 Activate: *75 [Forward No.] #

- Deactivate: #75#

15.1.1.8 Busy Forward:

While line is engaged or phone set is been off-hook, incoming call

will be forwarded to the assigned number.
Activate: *76 [Forward No.] #
Deactivate: #76#

15.1.1.9 Unconditional:
Incoming call will be forwarded to the assigned number unconditionally.
Activate: *77 [Forward No.] #
Deactivate: #77#

3. Upgrade Your ATA

3.1 Upgrade via Web management interface

15.1.1.10 Before start

STEP 1. Please confirm Host PC, which is installed as TFTP / FTP server and is in available network.

STEP 2. Note down your current configurations, such as [SIP configuration], [Phone Book].

15.1.1.11 Upgrade Version

STEP 1. To update the ATA ROM Version, please click 「Advanced configuration」 (Figure 45)→ 「Device management」on the navigation panel. Click the tab named 「Software upgrade」 (Figure 46)then you can find a screen for you to make software upgrade.

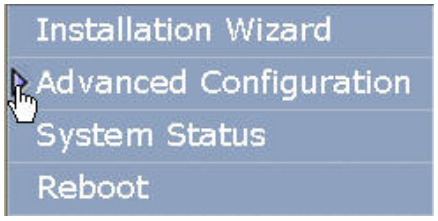


Figure 45

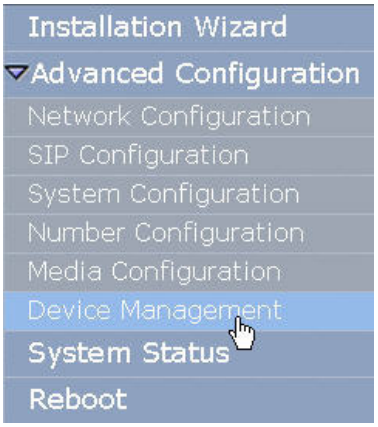


Figure 46

STEP 2. Please input TFTP or FTP Server IP address, target File Name (The version name of firmware), Method, Target File Type (e.g.

Server IP Address: 192.168.0.100, Target File Name (e.g. ata151sip.100), Method: TFTP, Target File Type: Application image) and click the [OK] button.

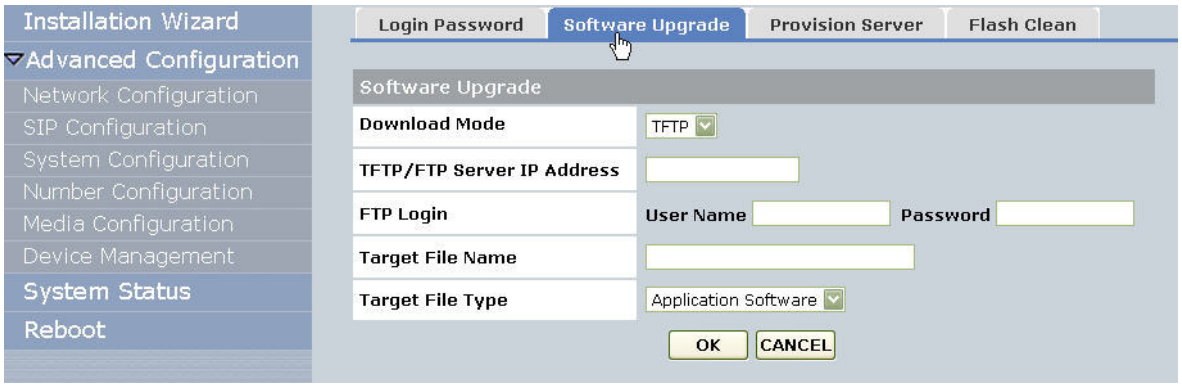


Figure 47

STEP 3. After upgrade finished, on screen will display [Please issue FLASH CLEAN to consist software version.] information.

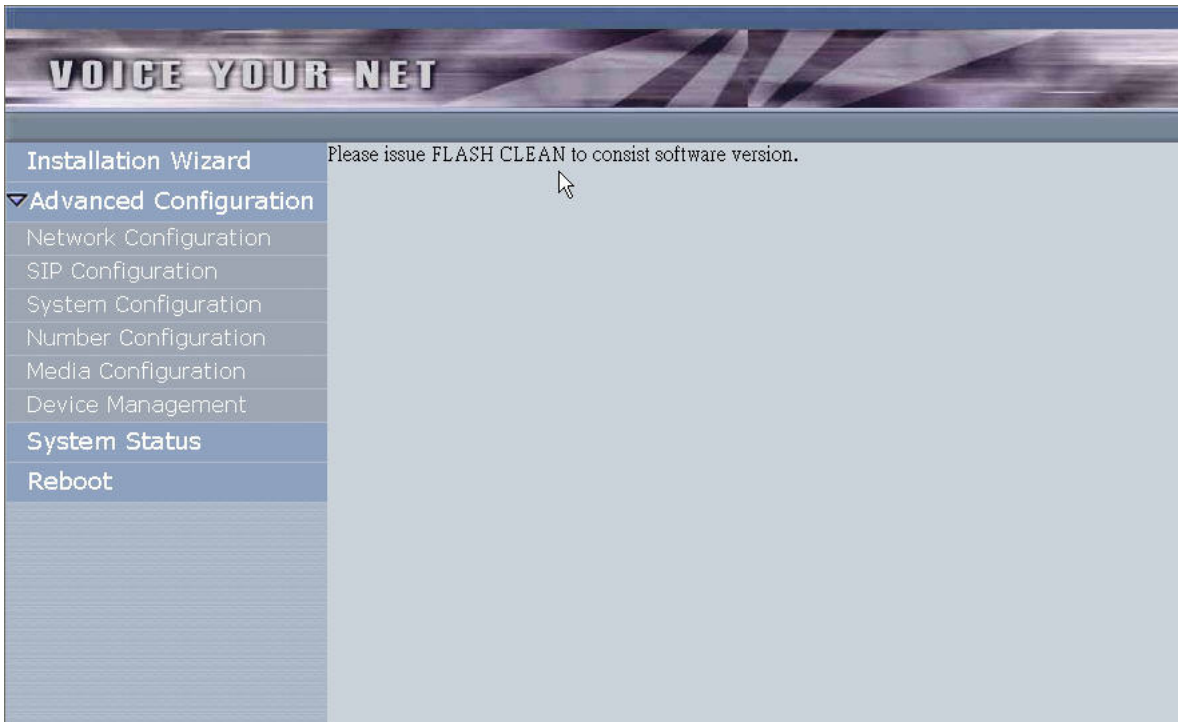


Figure 48

STEP 4. Click 「Advanced configuration」→「Device management」on the navigation panel. In the「Flash clean」screen, click the

[CLEAN] button. (Figure 49)

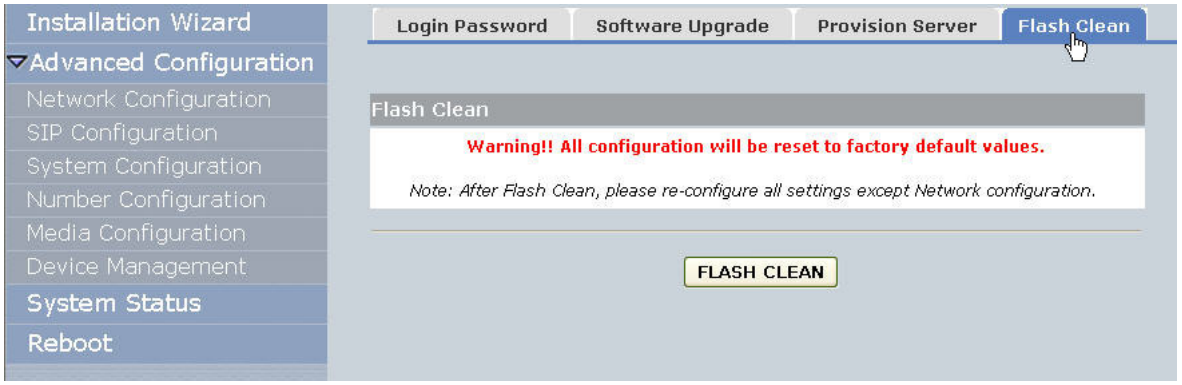


Figure 49

STEP 5. In the Flash Clean screen to Display [Flash cleaned!! Please reboot your system!!], when Flash Clean Ok.

STEP 6. Click [Reboot System] on the navigation panel. In the Reboot ATA screen, click the [Reboot] button. It will take 20 seconds to reboot.

STEP 7. Close the current browser windows and launch your web browser again. Enter the IP address in the Location or Address field.

3.2 Upgrade via Telnet Command interface

15.1.1.12 Use [rom] command to upgrade software of ATA.

```
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
```

15.1.1.13 Parameter Usages:

A. -print: Show versions of all ROM files

B. -app, boot, boot2m, dsptest, dspcore, dspapp, ht:

15.1.1.13.1.1 To update main Application program code, Boot code, DSP testing code, DSP kernel code, or DSP application code, and Hold Tone file.

```
Note:
Most of all, the Rom file needed to get upgrade is App or Boot2m. Please check the exact Rom file before doing download procedure.
```

15.1.1.13.1.2 -s: To specify TFTP server's IP address when upgrading ROM files.

15.1.1.13.1.3 -f: To specify the target file name, which will replace the old one.

15.1.1.13.1.4 -method: To decide using TFTP or FTP as file transfer server. [0] stands for TFTP, while [1] stands for FTP.

15.1.1.13.1.5 -ftp: If users choose FTP in above item, it is necessary to specify pre-defined username and password when upgrading files.

For example:

```
usr/config$ rom -print
Download Method   :   TFTP
Application Rom   :   inca152_0616v5.bin
```

15.1.1.14 After software like application has been upgraded, please execute [flash -clean] to clear old configurations and make upgrade complete. This will keep all configurations under [ifaddr].

```
usr/config$ flash –clean
```

15.1.1.15 Hotline mode

STEP 1. The Hotline Mode is applied in limited two peers. User just picks up the phone set and then hears ring back tone or dial tone depended on configurations of destination device.

STEP 2. Specify ATA series service type as Hotline service.

STEP 3. Create a Hotline table with [line] command.

```
usr/config$ sysconf –service 1
usr/config$ bureau –hotline 1 10.2.2.2 201
```

This example means that if user picks up phone set of FXS Line1, ATA series will automatically dial out IP address of [201].

Note:
If this ATA series is under P2P mode, please set the phone book firstly.
The IP address of "bureau" command indicates the IP address of called party in P2P mode, or the proxy server IP address in proxy mode.
Step 4. After the configuration, [commit] and [reboot] the device.

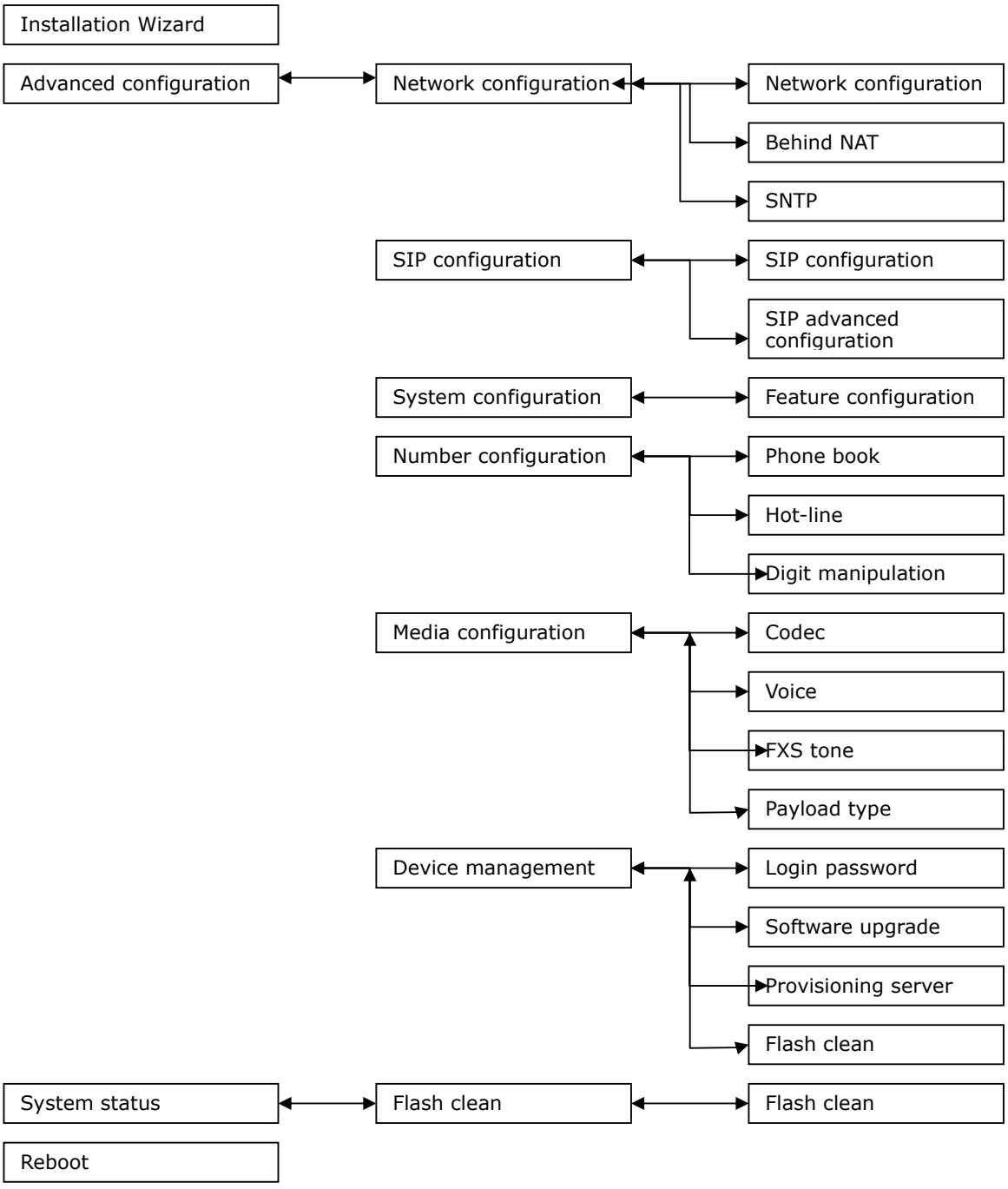
```
usr/config$ commit
usr/config$ reboot
```

:

V. Web Management Interface

This part explains how to configure the ATA via WEB management interface.

1. WEB tree introduction



2. Login and welcome screen

STEP 1. Start your web browser.

STEP 2. Launch your web browser and enter [192.168.123.123] (the default IP address of the PC Port) in the Location or Address field. Press Enter.

Password request screen will appear as below. Please input "root" in the user name field and no password in the password field.

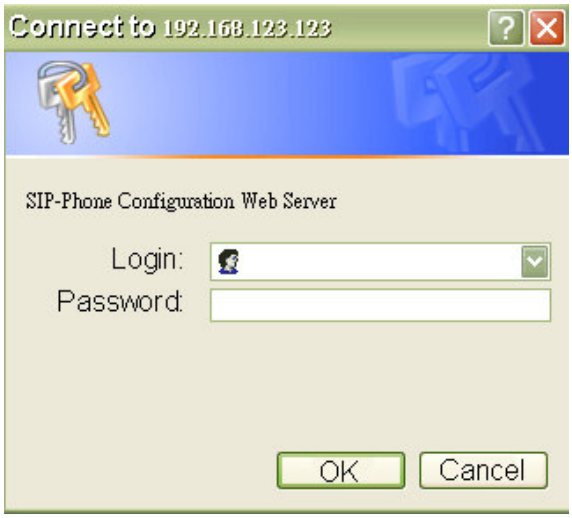
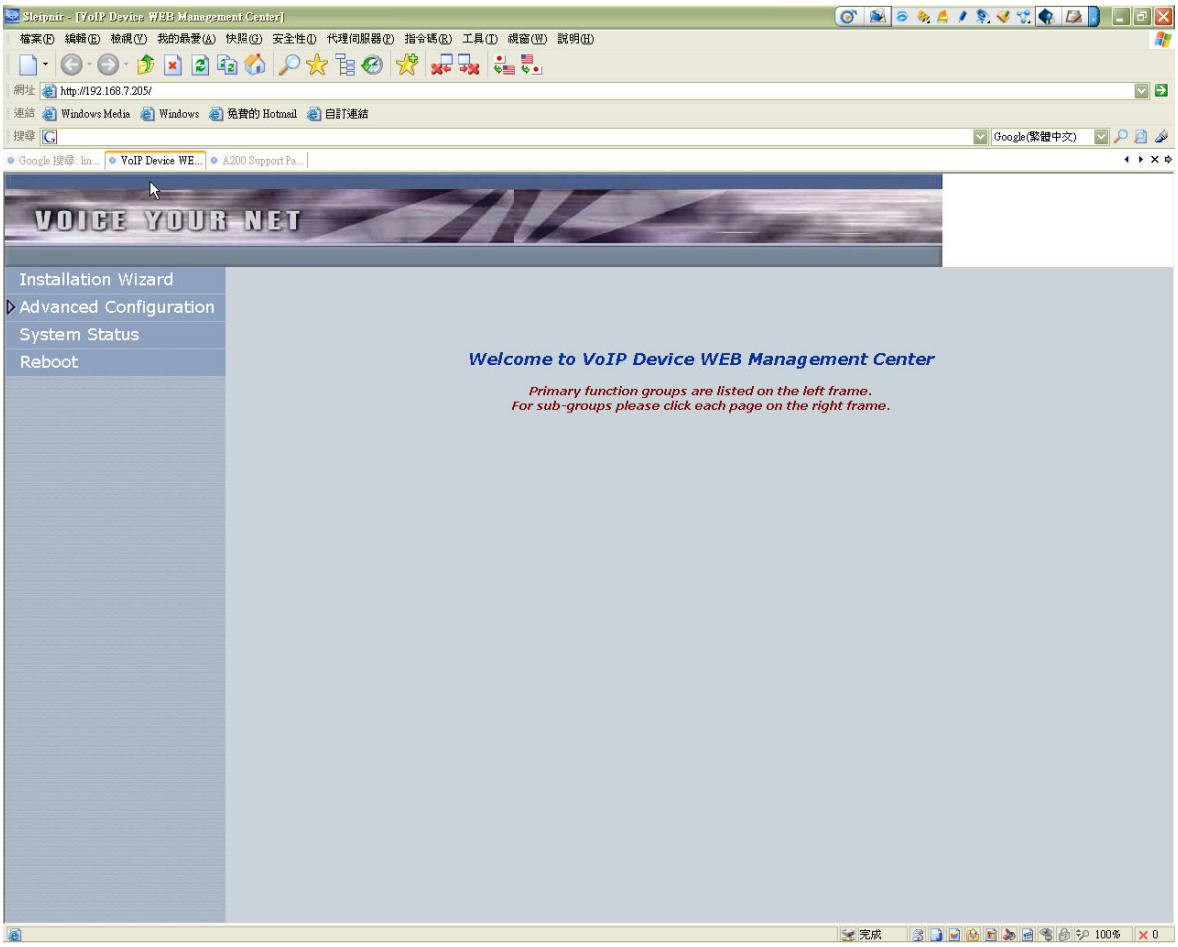


Figure 50

STEP 3. Click OK.

STEP 4. After a successful login, you will see the welcome screen described next. User can click links on the navigation panel at left to go to corresponding configuration screen.



3. Save and Reboot

Click OK at the end of every configuration page to confirm your changes. All configurations will not take effect before reboot system. Please remember to click [Reboot] to reboot ATA.

4. Others Web Management Configuration

4.1 Network Configuration

Click 「Advanced configuration」→「Network configuration」 in the navigation panel and open the Network Interface Screen. There are 3 tabs for you to configure the ATA.

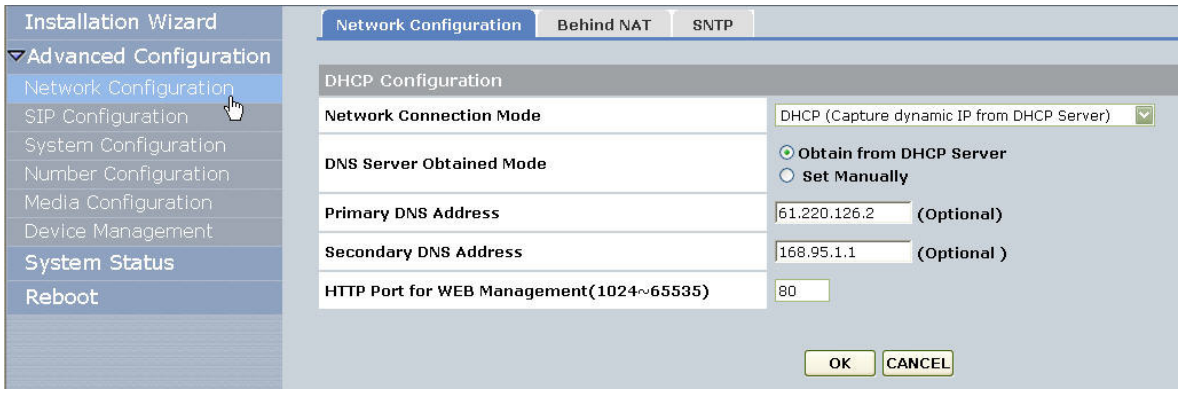


Figure 51

15.1.1.16 Network configuration

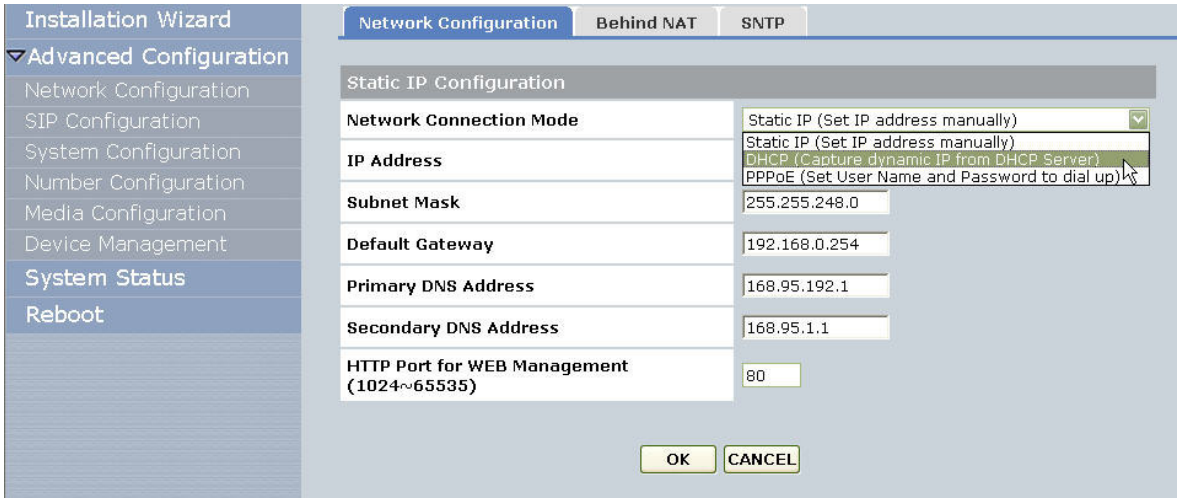


Figure 52

A. WAN IP Address:
   Set WAN IP Address of ATA
B. Subnet Mask:
   Set the Subnet Mask of ATA
C. Default routing ATA series:
   Set Default routing ATA series of ATA

15.1.1.17 Behind NAT

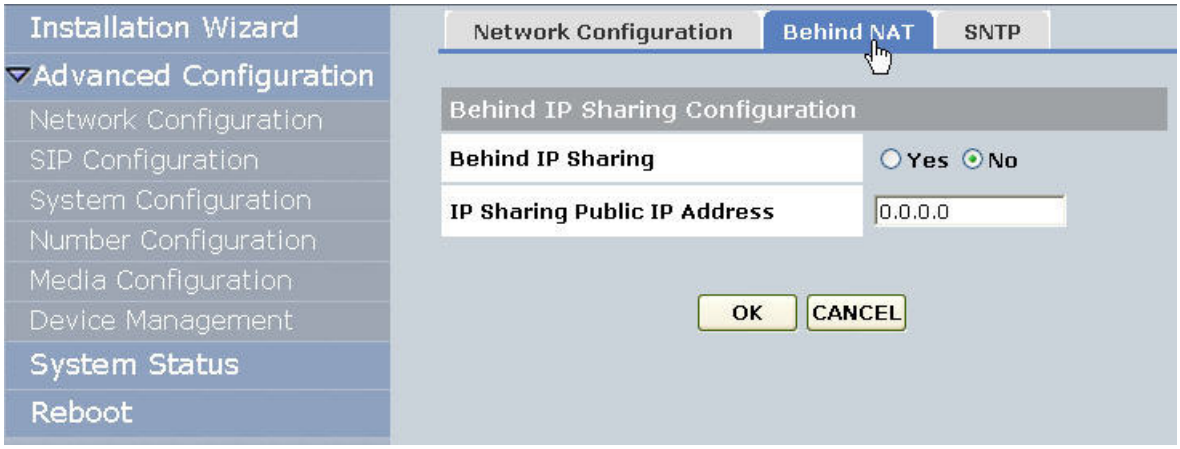


Figure 53

15.1.1.18 SNTP

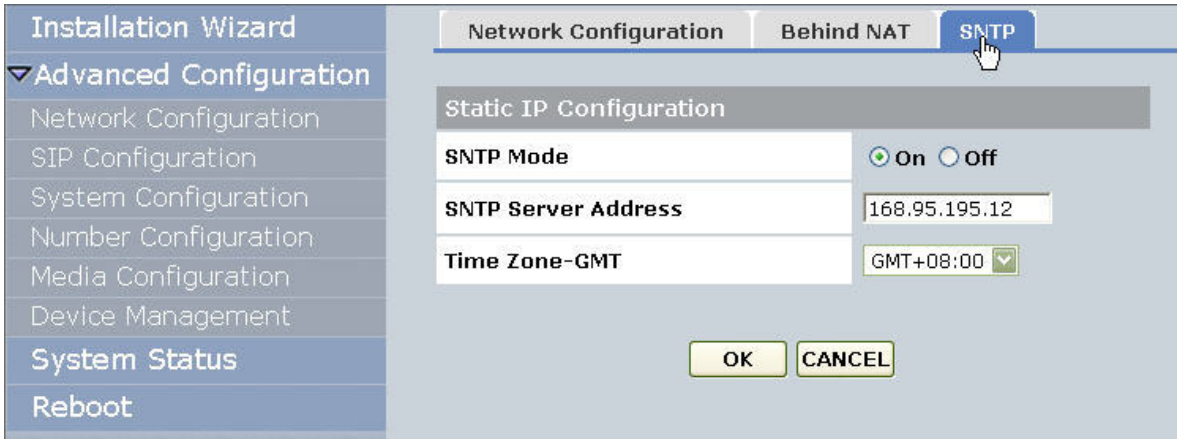


Figure 54

D. LAN IP Address:
   Set LAN IP Address of ATA (range: 192.168.1.1-192.168.254.254)
E. WAN IP Address:
   Set WAN IP Address of ATA
F. Subnet Mask:
   Set the Subnet Mask of ATA
G. Default routing ATA series:
   Set Default routing ATA series of ATA
H. Get IP Mode:
   User has to set ATA to use which network mode.
I. DHCP:
   When DHCP function enables, ATA will automatically search DHCP server after reboot.

J. NAT:
Enable / Disable the Network Address Translation function

K. SNTP:
Enable / Disable the Simple Network Time Protocol function

L. SNTP Server Address:
Set SNTP Server Address

Note:
When SNTP server is available, enable ATA SNTP function to point to SNTP server IP address so that ATA can get correct current time.

M. GMT:
Set time zone for SNTP Server time
User can set different time zone according to the location of ATA. For example, in Taiwan the time zone should be set as 8,which means GMT+8.

N. IP Sharing:
Enable it if ATA is behind IP Sharing router.

O. UPnP:
Enable it if IP sharing or NAT device supports UPnP function so that no need to configure IP sharing or ATA when ATA is behind NAT device.

P. IP Sharing Server Address:
Set Public IP Address of IP Sharing router for ATA to work behind IP sharing.

Q. Primary DNS Server:
Set Primary Domain Name Server IP address. User can set Domain Name Server IP address. Once ATA can connect with DNS server, user can specify URL address instead of IP address for Proxy and phone book IP address.

R. Secondary DNS Server:
Set Secondary Domain Name Server IP address.

Note:
When ATA is behind IP sharing device, if Proxy support behind NAT function, both ATA and IP sharing don’t need to do any configuration. Please contact with your proxy vendor more correct information before configuring ATA.

4.2 SIP Configuration

4.2.1 SIP Main Configuration

- Click [SIP Configuration] in the navigation panel and open the SIP Information Screen.

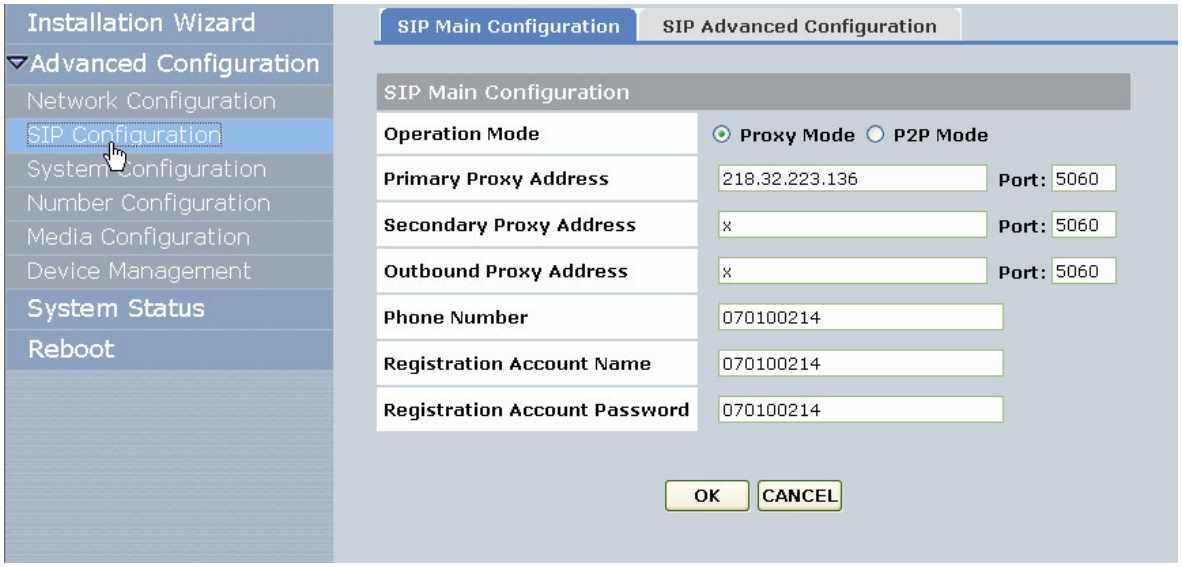


Figure 55

A. Operation Mode

Select ATA to work under Peer-to-Peer mode or Proxy mode.

B. Primary Proxy IP Address:

Set primary Proxy IP Address or URL address (Domain Name Server must be configured. Please refer to Network Interface).

i. port:

Set Primary proxy port for ATA to send message, default value is 5060, if there is no special request of Proxy server, please don't change this value.

C. Secondary Proxy IP Address

Set secondary Proxy IP Address or URL address (Domain Name Server must be configured. Please refer to Network Interface). When ATA fail to register to primary Proxy, it will try to register to secondary Proxy, when it fails again, it will retry to register to Primary Proxy.

i. port:

Set Secondary proxy port for ATA to send message, default value is 5060, if there is no special request of Proxy server, please don't change this value.

D. Outbound Proxy:

Set IP Address or URL address (Domain Name Server must be configured. Please refer to Network Configure) of outbound Proxy server.

i. Outbound proxy port:

Set outbound Proxy port for ATA to send message, default value is 5060, if there is no special request of Proxy server, please don't change this value.

E. Phone Number:

Identify one number for the ATA to register to the Proxy.

F. Registration Account Name:

Set user name of ATA 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 ATA won't register successfully.

G. Registration Account Password:

Set password for registering.

4.2.2 SIP Advanced Configuration

Click [SIP Advanced Configuration] in the main screen.

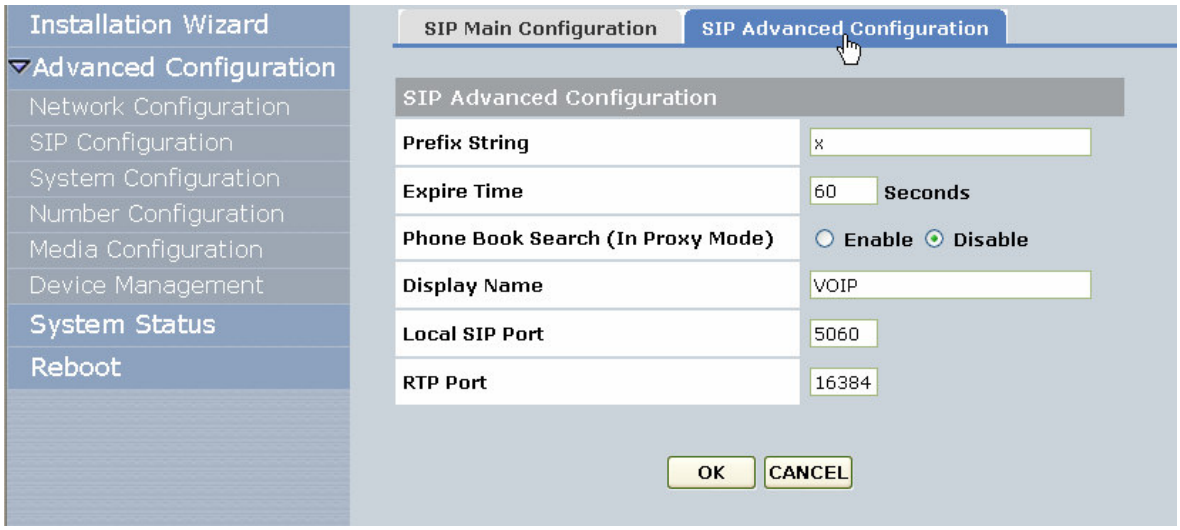


Figure 56

A. 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, ATA will sent out messages as Account Name @"IP address of

Proxy", if user set prefix as abc, ATA will set out as abc123@"IP address of Proxy". This function is for special proxy server.

B. Expire Time:
   Set expire time of registration. ATA will keep re-registering to proxy server before expire timed out

C. Local SIP Port:
   Set SIP UDP port.

D. RTP Port:
   Set RTP port for sending voice data.

4.3 System Configuration

4.3.1 Feature configuration

Click [System Configuration] in the navigation panel and open the [Feature Configuration] Screen.

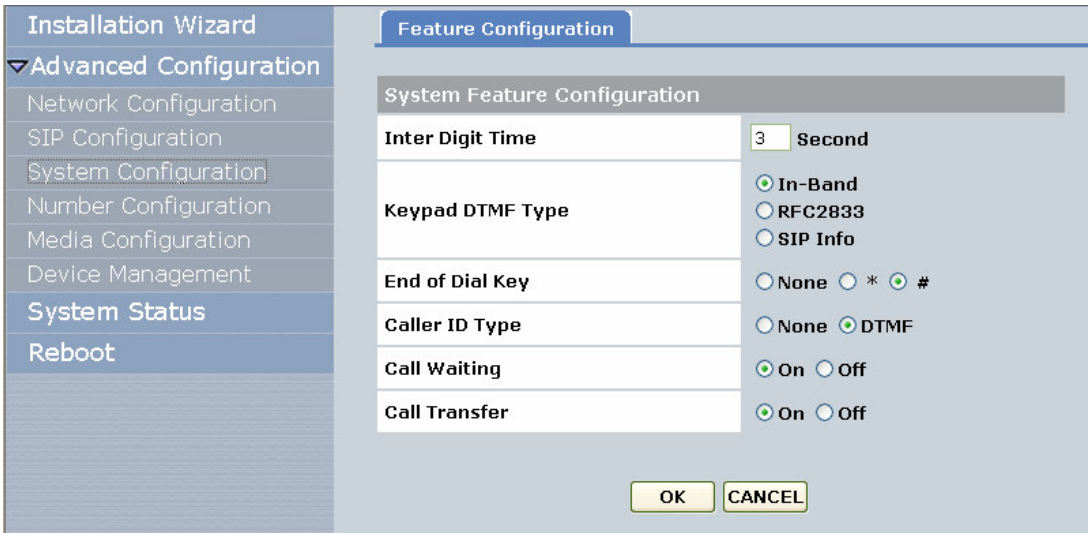


Figure 57

A. 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, ATA will dial out all number pressed (The inter digit time range is 1~10 secends).

B. Keypad DTMF Type:
Set DTMF type. User can select DTMF type ATA transmits.

C. 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.

D. Caller ID type:
For user to configure the type of caller ID. Please contact the related information from your provider.

E. Call waiting:
For user to activate or de-activate call waiting function.

F. Call transfer:
For user to activate or de-activate call transfer function.

4.4 PPPoE Configuration Screen

Click [Network Configuration] in the navigation panel.

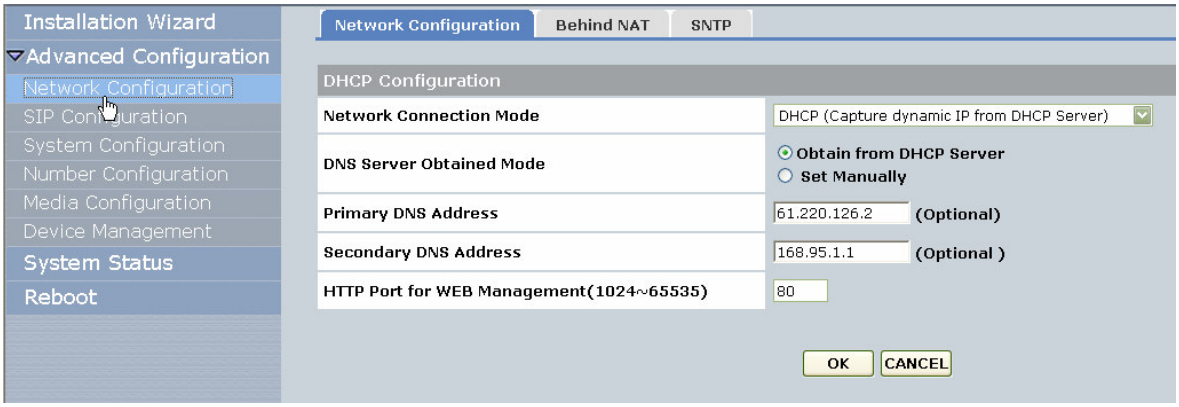


Figure 58

Click the pull-down list then select PPPoE

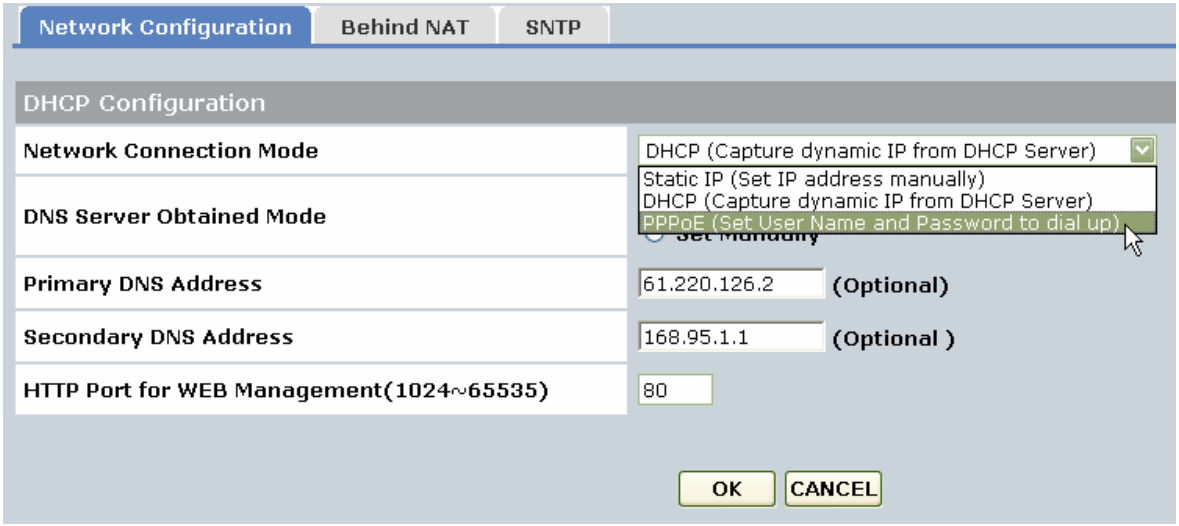
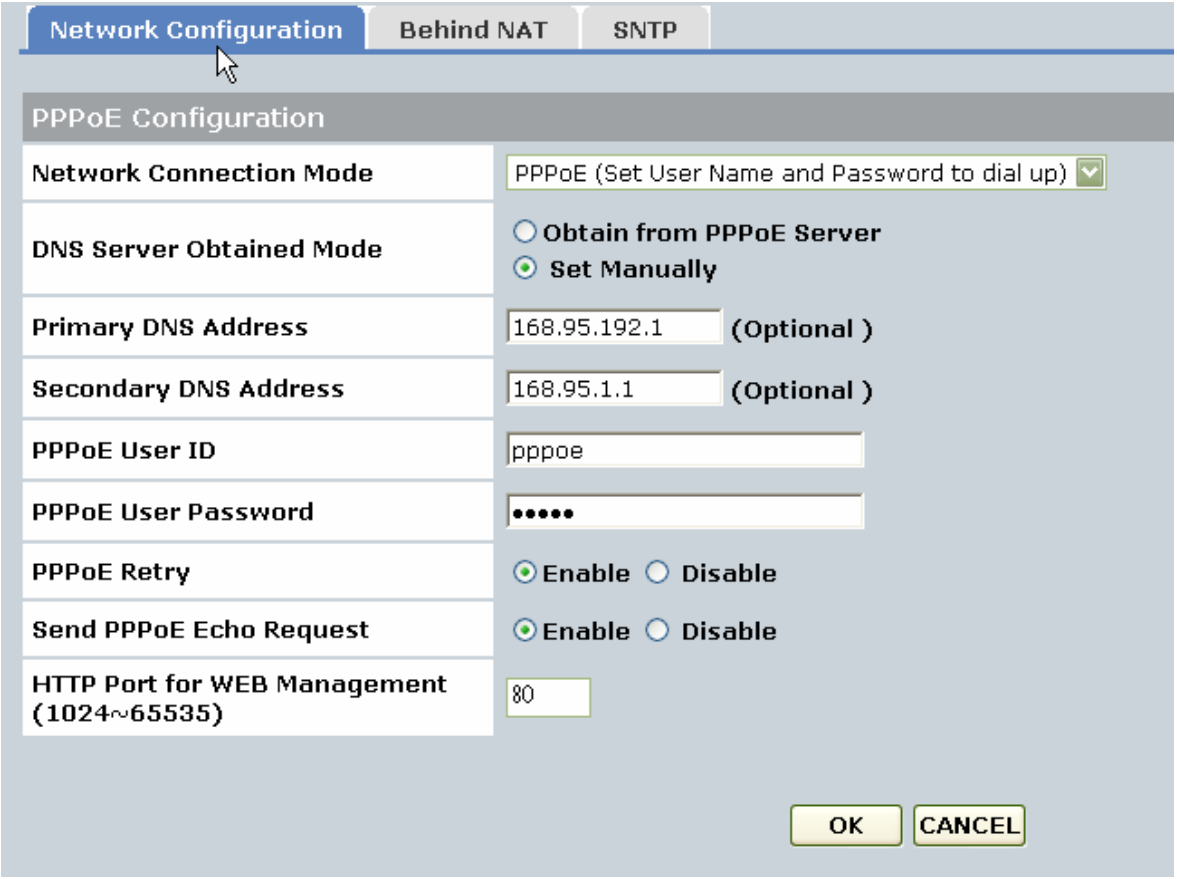


Figure 59



4.4.1 Network Connection Mode:

The connection which you selected will show here.

4.4.2 DNS Server obtained Mode:

The default option is「Obtain from PPPoE Server」, that means the ATA will fill the DNS server IP in the field of 「primary DNS address」which offered by PPPoE server.

Also you can select 「Set manually」to set the 「Primary or Secondary DNS server IP」by manual if the DNS is specified by some reasons or proprietary policy.

4.4.3 PPPoE User ID:

Set PPPoE authentication User Name.

4.4.4 PPPoE User Password:

Set PPPoE authentication password.

4.4.5 PPPoE Retry:

Enable/Disable auto reboot after PPPoE disconnection. If user enables this function, after PPPoE disconnected, ATA will reboot to re-connect automatically, and after reboot, if ATA still can't get contact with server, ATA will keep trying to

connect. After re-connected, ATA will also restart system. On the other hand, if user disables this function, ATA won't reboot and keep trying to connect.

4.4.6 PPPoE Echo Request:

Enable or Disable PPPoE echo request function. The ATA series will send "Echo Request", and PPPoE server send "Echo Reply" message. The RFC 2516 recommend both sides use this method to maintain the session. The default value of ATA is sending the "echo request" packets.

4.4.7 Http port for WEB management:

You can specify a port for WEB management. Sometime the user will worry about the attack comes from hacker or unknown source cause the device be damaged, so user can define a proprietary port to make remote management via WEB interface.

4.5 Media Configuration

Click [Media Configuration] in the navigation panel and open the [Voice Configuration] Screen.

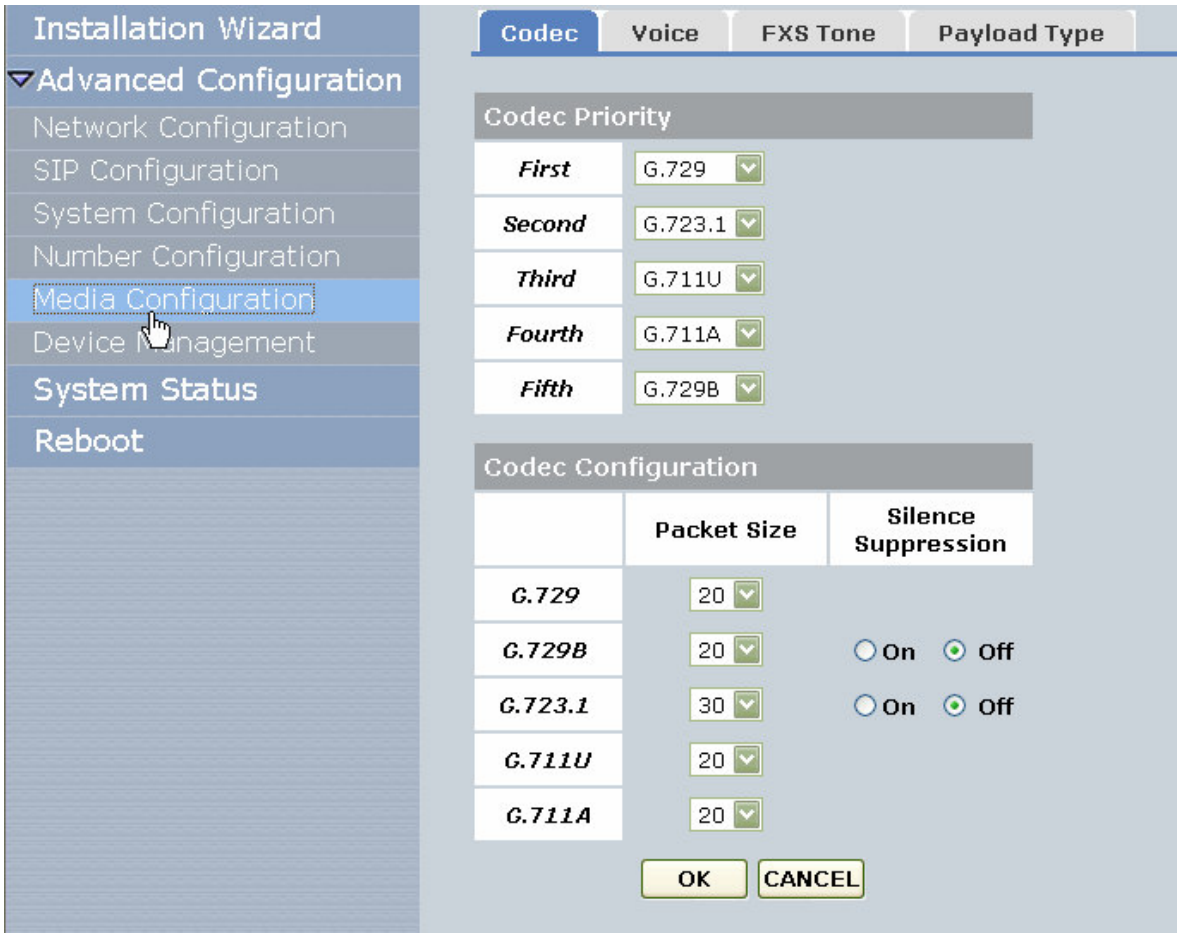


Figure 60

4.5.1 Codec

A. Codec Priority:
   i. Please notice that user can set from 1st to 5th with different codec.
B. Codec configuration:
   i. Packet size:
      - User can set different packet size for each codec.
   ii. Slince Suppression:
      - Only G.729B and G.723.1 can be configured.

4.5.2 Voice:

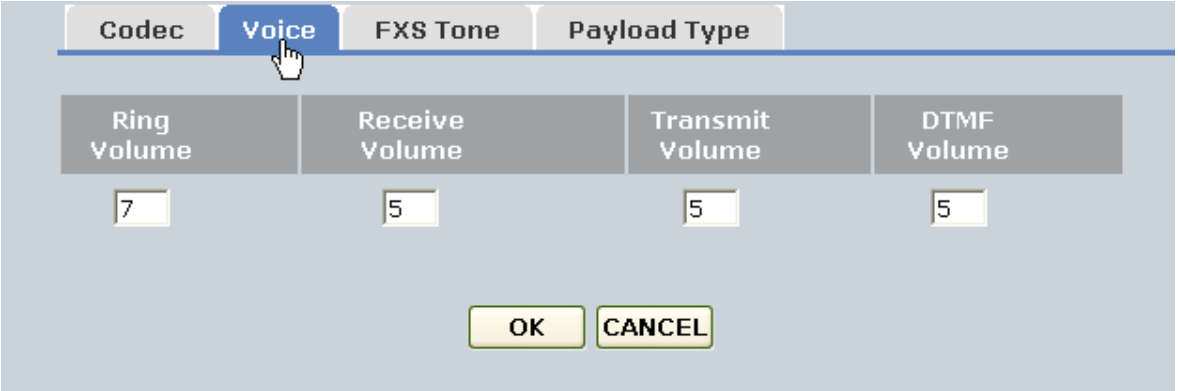


Figure 61

You can configure the volume with a suitable value.

4.5.3 FXS Tone

ATA adopts dual frequencies as traditional telephone does. If users want to have their own call progress tone, they can change the value of tones.

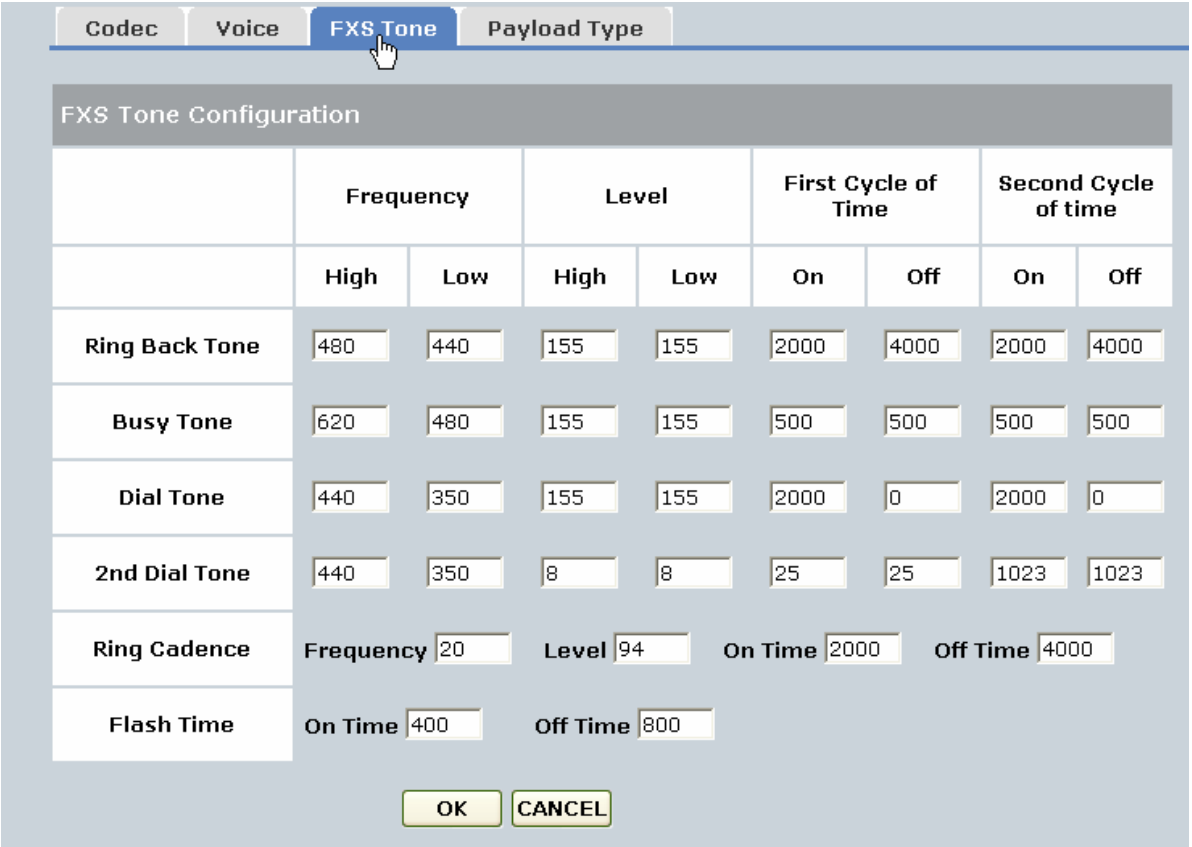


Figure 62

A. FXS Tone configuration

Set Ring frequency, on time, off time, voltage level. ATA will give ring to phone set to trigger ring. If user found that phone set cannot ring when having incoming call, please try to increase ring frequency here.

i. Ringing frequency:
   - 15 ~ 100 (Unit: Hz)

ii. Ringing ring ON/OFF:
   - 0 ~ 8000 (Unit: ms)

iii. Ringing level:
   - 0 ~ 94 (Unit: V)

iv. Tone frequency:
   - 0 ~ 65535 (Unit: Hz)

v. Tone freqLevel:
   - 0 ~ 65535 (Unit: mVrms)

vi. Tone ON/OFF:
   - 0 ~ 8000 (Unit: ms)

vii. Ring Back Tone:
   - Set ring back tone parameters.

viii. Busy Tone:
   - Set busy tone parameters.

ix. Dial tone:
   - Set Dial tone parameters.

x. Low(frq) :
   - Frequency value of Low frequency

xi. High(frq) :
   - Frequency value of High frequency

xii. Low(lev) :
   - Level (volume) of Low frequency

xiii. High(lev) :
   - Level (volume) of High frequency

xiv. On1 :
   - On cadence of first cycle

xv. Off1 :
   - Off cadence of first cycle

xvi. On2 :
   - On cadence of second cycle

xvii. Off2 :
   - Off cadence of second cycle

Note:
1. If disconnect tone is single-frequency, user has to configure the same frequency value of "Low frequency" and "High frequency"; the same level of "Low frequency" and "High frequency"
2. For On/Off cadence, user must set "1023" instead of "0", if there is only one set of cycle, please as in second set columns

4.6 Number Configuration

4.6.1 Phone Book

Click [Number Configuration] in the navigation panel and open the [Phone Book] Screen.

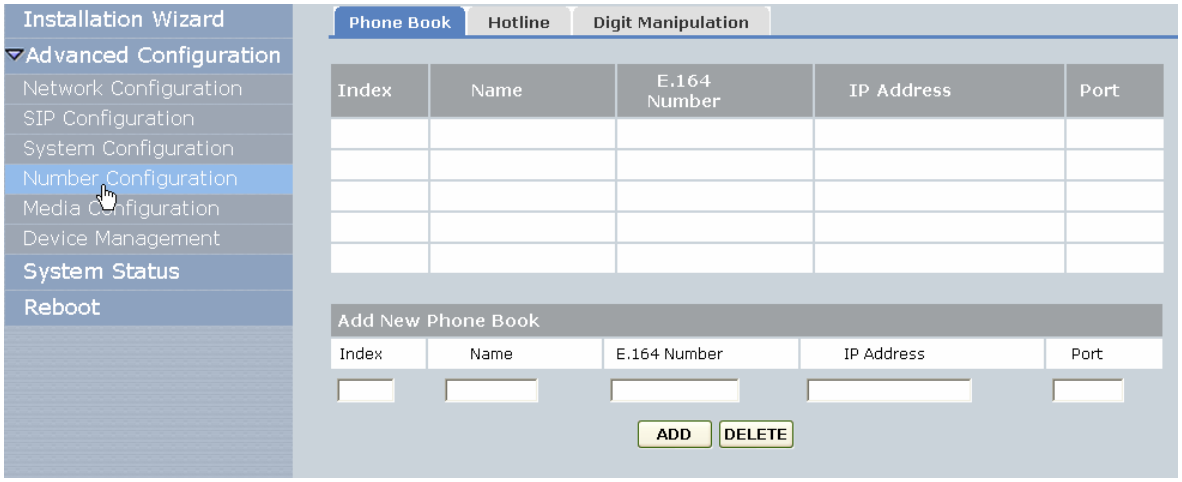


Figure 63

A. Add:

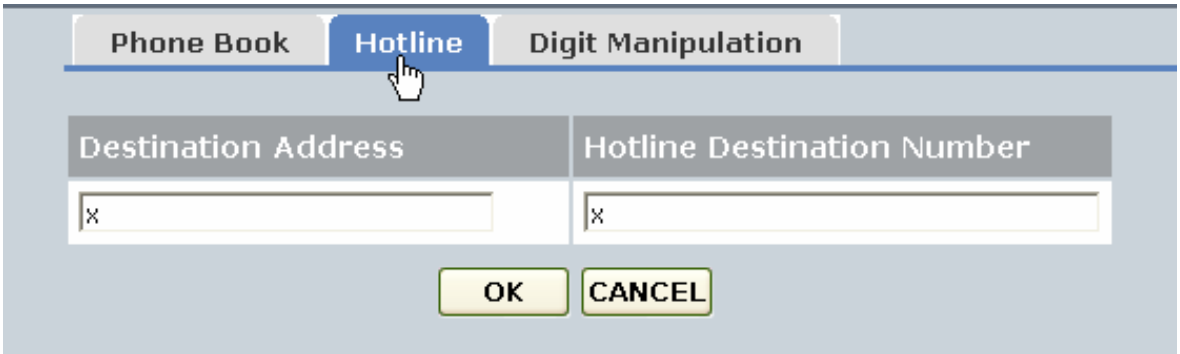
- User can specify 10 sets of phone book via Web Management Interface. Please input index, Name, IP Address and E.164 number of the destination device.

B. Delete:

- User can delete any configured phone book data by index.

Note:
The e164 number defined in phone book will be fully sent to destination. It is not just a representative number for destination's IP Address. In other words, user dial this e164 number to reach destination, destination will receive the number and find out if it is matched to its line number.

4.6.2 Hot line



A. Destination address:
   i. Please field the destination IP address here which you want hotline to.
B. Hotline destination number :
   i. Please field a number for mapping the Hotline address. So you just need to pick up the phone then the called side will ring directly.
C. Digit Manipulation

Click [Digit Manipulation]

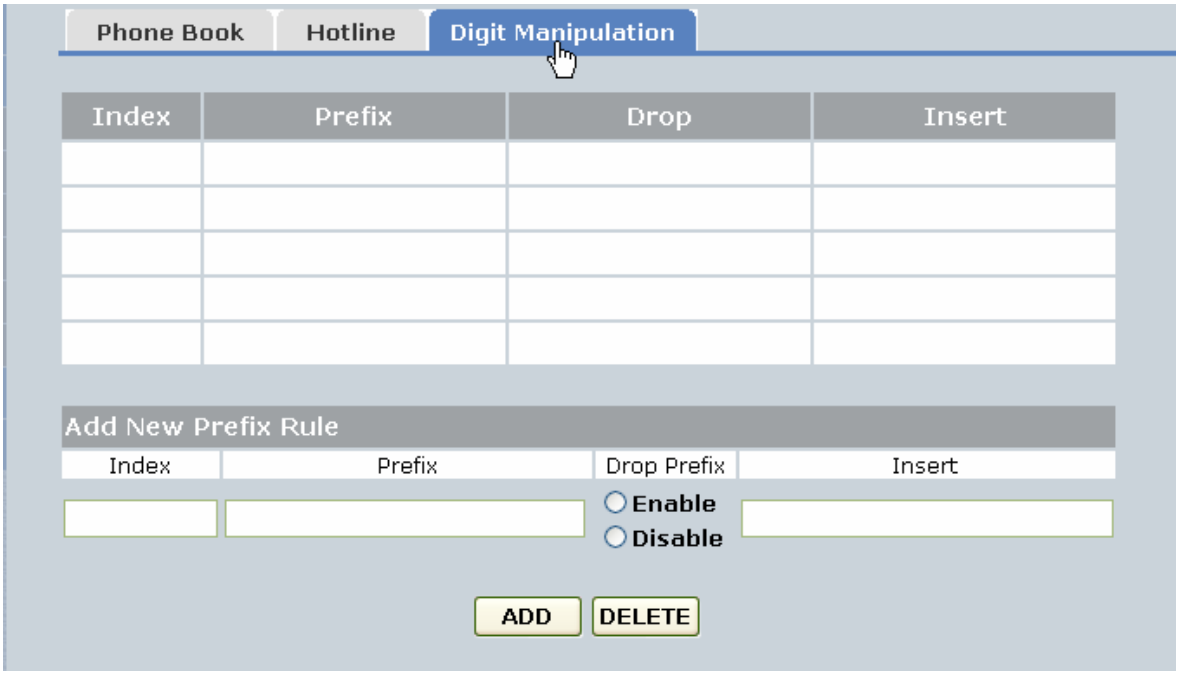


Figure 64

- Index:
  - Setting the index number for prefix record (max 30 record).
- Prefix:
  - Setting the prefix number of the whole numbers that could be into

this VoIP ATA series (1~20 digits).

- Drop:
  - Select enable or disable drop prefix function. The function is enabled means to drop prefix number when dialing out. The function is disabled means to keep prefix number.
- Insert:
  - Setting the digits that you want to insert in this number (1~30 digits).

i. Device management

1. Login Password

Click [Device management]

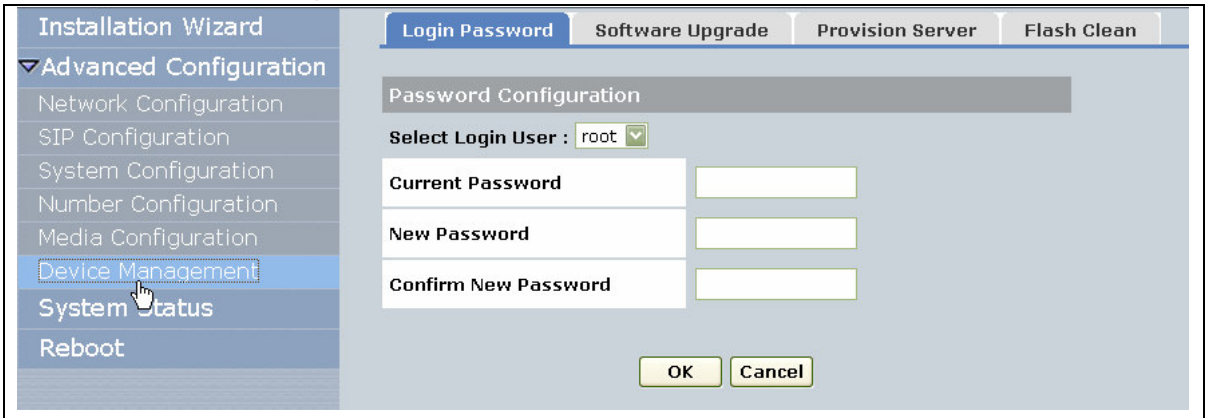


Figure 65

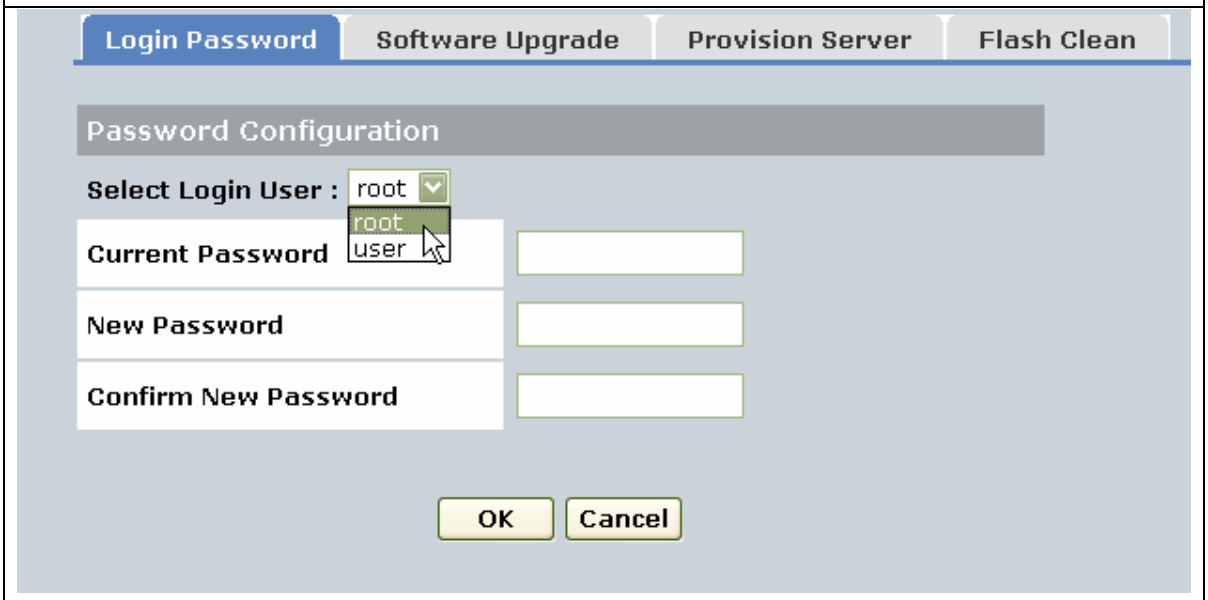


Figure 66

You can select the root or user to change the password.

2. Soft upgrade

Click [Soft upgrade]

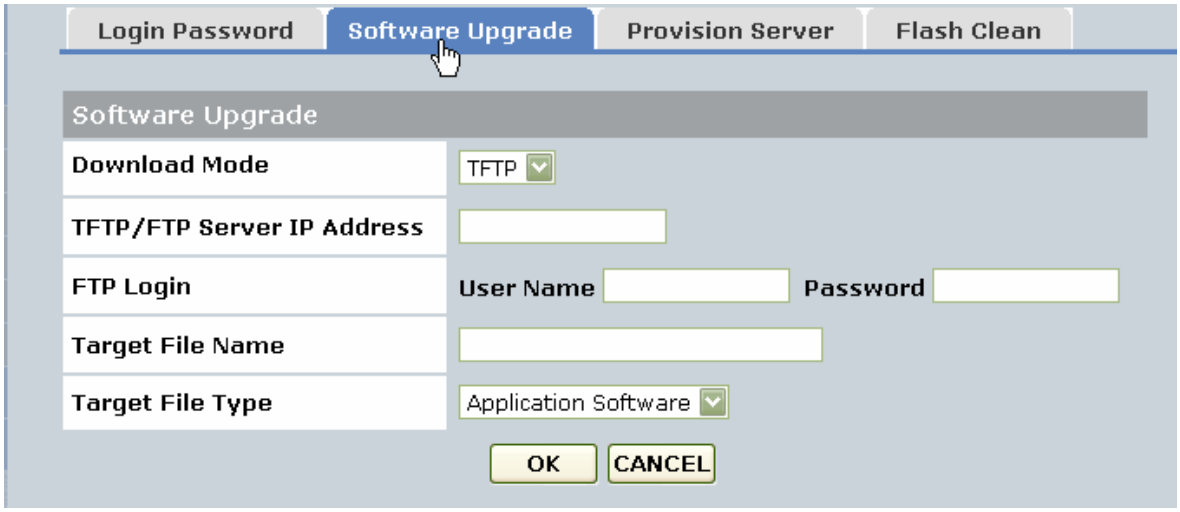
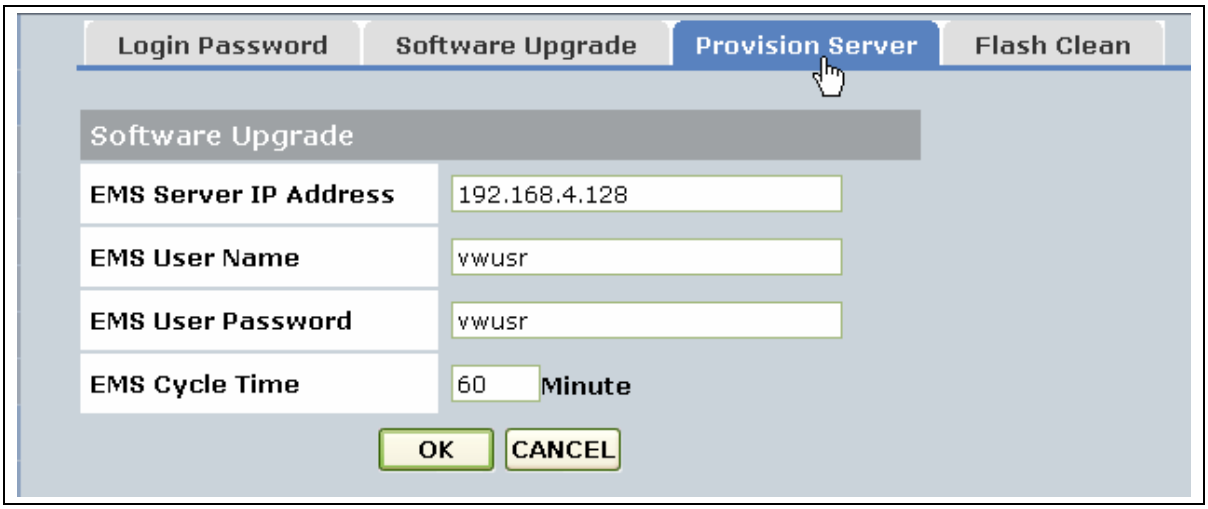


Figure 67

- Download Mode: Select download method as TFTP or FTP
- FTP/TFTP Server IP Address: Set TFTP server IP address
- FTP Login: Set FTP login name and password
- Target File name: Set file name prepared to upgrade
- Target File Type: Select which sector of ATA to upgrade

3. Provision Server



- EMS Server IP Address:
  - Set the IP address of provisioning server
- EMS User Name:
  - Set a authorized account name
- EMS User Password:

- Input a password for authorizing to update firmware or configuration by automatically.

- EMS Cycle Time:
  - Set a timer for ATA connect to provisioning server to download firmware or configuration.

4. Flash Clean

Click [Flash Clean] in the navigation panel and open the [Flash Clean] Screen.

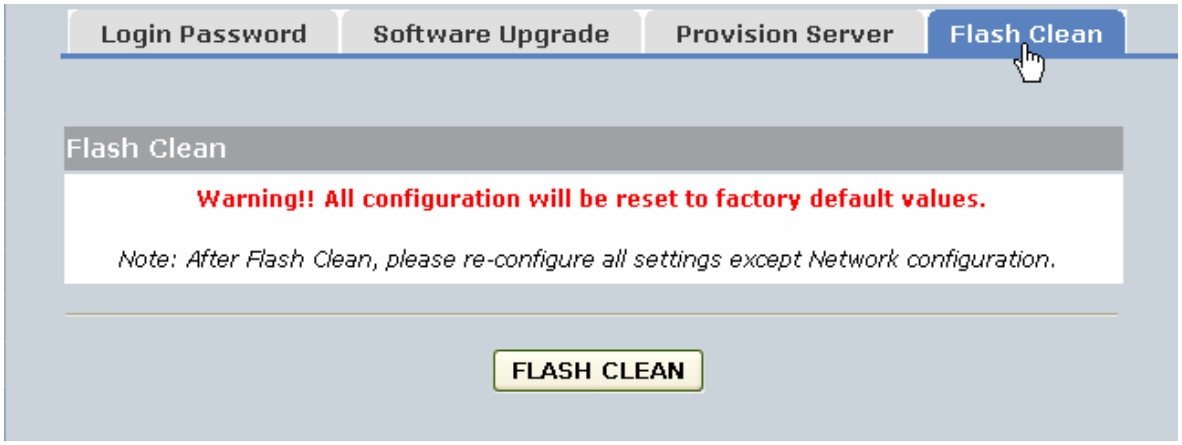


Figure 68

Press CLEAN will clean all configurations of ATA and reset to factory default value.

Note: User must re-configure all commands all over again (except Network Configure) once execute this function,

ii. Reboot ATA System screen

Click [Reboot System] in the navigation panel and open the [Reboot ATA] Screen.

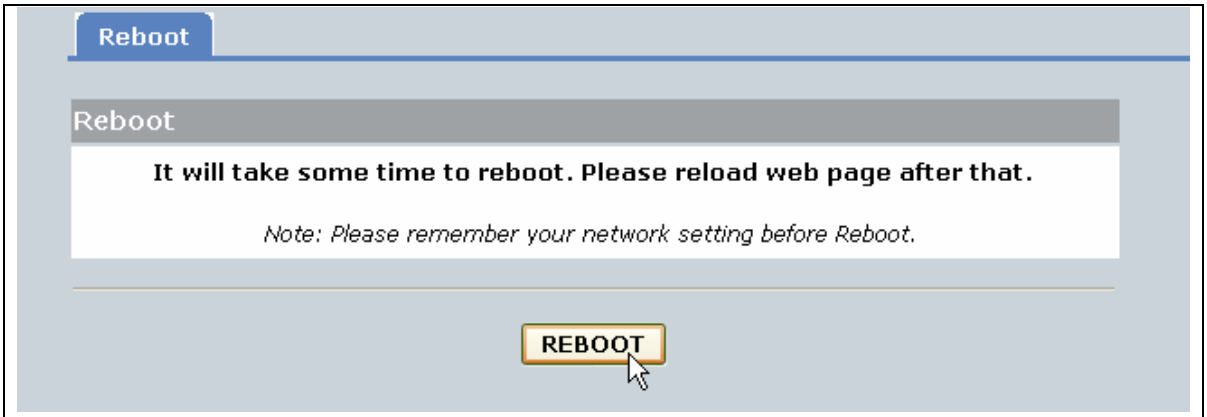


Figure 69

Click reboot will reset ATA.

Note: To execute reboot, please remember to do Commit Data before Reboot System.

VI. Telnet Command Interface

This part gives information on how to configure ATA via Telnet command line interface.

1. Login

For you first login, enter the login: [root] and default no password.

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

usr/config$
```

Note:
Login account [root] or [administrator] is the default login account and there is no password needed.

2. Save and Reboot

After any configuration has been made, user has to save all data and reboot system to make configurations take effect.

STEP 1. Confirm the changed configurations, input [commit] and press [enter] key to save it.
STEP 2. Input [reboot] then press [enter] key to restart ATA series.
STEP 3. After around 40 seconds, ATA series will take effect in new configurations.

Do not turn off your ATA series or remove the ATA series while saving your configuration.

```
usr/config$ passwd -set root voip

Setting
Login: root
Password: voip
OK

usr/config$
```

3. System Commands Overview

iii. [help]

Press help/man/ ? will display all command list of ATA. The following table lists all of the commands that you can use with the ATA series. Refer to the following chapters for descriptions of commonly used commands.

This user's guide describes commands that are helpful for configuring the ATA series. Using commands not documented in the user's guide can damage the unit and possibly render it unusable.

Commands with ATA

Command	DESCRIPTION
help	Input help/man/? to list all command list.
quit	Input quit/exit/close to exit telnet connection.
debug	Add debug flag and display debug messages.
reboot	Reboot local machine.
commit	Save all data in ATA.
ifaddr	Internet address manipulation.
time	Show current time.
ping	Test if an IP address is reachable.
pbook	Phone book information and configuration.
pppoe	PPPoE parameters manipulation.
flash	Clean all configuration from flash rom.
sysconf	System information manipulation.
sip	Configure SIP related parameters.
security	This command is used to configure the account information included username and password obtained from the service provider.
voice	Voice information manipulation.
support	Special functions support manipulation.
tos	Set DSCP values for QOS.
phone	Setup of call progress tones and ring (SLIC control).
bureau	To set Hotline function which must be under Peer-to-Peer mode and switch to hotline service.
rom	ROM file update.
auth	Set configuration items for "administrator" user.
passwd	Password setting information and configuration.

Command	DESCRIPTION
prefix	Prefix drop/insert information manipulation

iv. [quit]

Type [quit] will quit the ATA series configuration mode. And turn back to login prompt.

```
usr/config$ quit

Disconnecting..
login: root
Welcome to Terminal Configuration Mode
Please enter your configuration item

usr/config$
```

Note:
It is recommended that type the [quit] command before you leave the console. If so, ATA series will ask password again when next user connects to console port.

v. [debug]

Open debug message will show up specific information while ATA series is in operation. After executing the debug command, it should execute command [debug –open] as well.

```
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$
```

Parameter Usages:
-status: Display the enabled debug flags.
-add: Add debug flag.
-- sip: sip related information
-- msg: voice related information
-delete: Remove specified debug flag.
-open: Start to show debug messages.
-close: Stop showing debug messages.
In this example, user open debug flags including sip, vp, msg.

```
usr/config$ debug -add sip msg
usr/config$ debug –open
```

For example:

```
usr/config$ debug -status

Current debug type enabled :
Debug Mode is open
DEBUG-> SIP   MSG
usr/config$
```

vi. [reboot]

After [commit], type [reboot] to reload ATA series in new configuration. The procedure is as below:

```
usr/config$ reboot

 Start to Unregister ...
 Unregister complete...
. Rebooting...It will take 40 seconds....Attached TCP/IP interface to
cpm unit 0
Attaching interface lo0...done

HTTPD initialized...
Flash Check
 WorkMode : PROXY_MODE
```

```
 Start registering to Proxy server

 AC4804[0] is ok
 AC4804[1] is ok
 successful 2 2
 Initialize OSS libraries...OK!
VP v1.42 stack open sucessfully.

login:
```

vii. [commit]

Save changes after configuring ATA series.

```
usr/config$ commit

This may take a few seconds, please wait..
Commit to flash memory ok!

usr/config$
```

Note:
Users shall use [commit] to save modified value, or they will not be activated after system reboot.

viii. [ifaddr]

Configure and display ATA series network information.

```
usr/config$ ifaddr

LAN information and configuration
Usage:
ifaddr [-print]|[-dhcp used]|[-sntp mode [server]]
ifaddr [-ip ipaddress] [-mask subnetmask] [-gate defaultATA series]
ifaddr [-dns index [dns server address]] [-ipsharing used[ip address]]
ifaddr [-autodns used]

    -print      Display LAN information and configuration.
    -ip         Specify WAN ip address.
```

```
    -lanip       Specify LAN ip address.
    -mask        Set Internet subnet mask.
    -gate        Specify default ATA series ip address
    -nat         Set NAT service flag (On/Off).
    -dhcp        Set DHCP client service flag (On/Off).
    -sntp        Set SNTP server mode and specify IP address.
    -autodns     Specify the way to obtain DNS Server
(0:Manual/1:Auto).
    -dns         Specify IP address of DNS Server.
    -timezone    Set local timezone.
    -ipsharing Specify usage of an IP sharing device and specify IP
address.
    -server      Specify EMS Server IP address
    -id          Specify EMS Server ID
    -pwd         Specify EMS Server password
    -emstime     Specify EMS cycle time
Note:
    Range of ip address setting (0.0.0.0 ~ 255.255.255.255).
    DHCP client setting value (On=1, Off=0). If DHCP set to 'On',
    Obtain a set of Internet configuration from DHCP server assgined.
    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 -nat 1
    ifaddr -dhcp 1
    ifaddr -sntp 1 210.59.163.254
    ifaddr -ipsharing 1 210.59.163.254
    ifaddr -autodns 1
    ifaddr -dns 1 168.95.1.1

usr/config$
```

Parameter Usages:
-print: Print current IP setting and status
-ip: Assigned IP address for ATA series
-lanip: Specify PC Port IP address (For NAT function), use this command setup LAN IP address assigned to PC or other machine.

```
usr/config$ ifaddr -lanip 192.168.XXX.YYY
(The range of LAN IP is XXX: 1-254, YYY: 1-254)
```

-mask: Assigned internet subnet mask
-gate: Assigned IP default ATA series
-nat: Provide DHCP Server and NAT function.
-dhcp: Dynamic Host Configuration (1 = ON; 0 = OFF)
-dns: Setup DNS Server IP Address.
-sntp: Simple Network Time Protocol (0=No update, 1=Specify server IP, 2=broadcast mode). When SNTP function is activated, users have to specify a SNTP server as network time source. An example is demonstrated below while 10.1.1.1 stands for SNTP server's IP address:

```
usr/config$ ifaddr -sntp 1 10.1.1.1
```

-autodns: Auto or manual configures the DNS IP address when ATA series device is under DHCP and PPPoE mode.
-timezone: set local time zone according to GMT
-ipsharing: To enable or disable IP sharing function. When this function is enabled, user must specify a public fixed IP address.

```
usr/config$ ifaddr -ipsharing 1 210.11.22.33
```

Note:
If the public IP address is not a fixed one, ATA cannot work behind NAT with peer-to-peer mode.

-server: set EMS server IP address. EMS is software to help user can easily configure products. Please contact with your reseller for more information.
-id: specify EMS ID to login EMS Server.
-pwd: specify EMS password to login EMS Server.
-emstime: specify EMS cycle time.

For example:

```
usr/config$ ifaddr -print

Internet address information
```

```
    WAN IP address          : 192.168.13.71
    Subnet mask             : 255.255.248.0
    Default ATA series       : 192.168.8.254
    NAT enabled             : OFF
    DHCP startup            : OFF
    SNTP                    : mode=1
                              server 168.95.195.12
                              time zone : GMT+8
                              cycle=1024 mins

    IPSharing               : no IPSharing device.

    Primary DNS Server    : 168.95.1.1
    Secondary DNS Server : 168.95.1.1

   EMS IP Address:   null
   EMS User ID    :   vwusr
   EMS Password   :   vwusr
   EMS cycle time:   0
usr/config$
```

ix. [time]

When SNTP function of ATA series is enabled and SNTP server can be found as well, type [time] command to show current network time.

```
usr/config$ time
Current time is WED SEP 17 12:36:49 2003

usr/config$
```

x. [ping]

Use [ping] to test whether a specific IP is reachable or not.

For example: if 192.168.1.2 is not existing while 210.63.15.32 exists. Users will have the following results:

```
usr/config$ ping 192.168.1.2
no answer from 192.168.1.2
usr/config$ ping192.168.1.254
PING 192.168.1.254: 56 data bytes
```

```
64 bytes from 192.168.1.254: icmp_seq=0. time=5. ms
64 bytes from 192.168.1.254: icmp_seq=1. time=0. ms
64 bytes from 192.168.1.254: icmp_seq=2. time=0. ms
64 bytes from 192.168.1.254: icmp_seq=3. time=0. ms
----192.168.1.254 PING Statistics----
4 packets transmitted, 4 packets received, 0% packet loss
round-trIP (ms)   min/avg/max = 0/1/5
210.63.15.32 is alive
usr/config$
```

xi. [pbook]

Phone Book function allows users to define their own numbers, which mapping to real IP address. It is effective only in peer-to-peer mode. When adding a record to Phone Book, users do not have to reboot the machine, and the record will be effective immediately.

```
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] [port numb
er]]
pbook [-delete index]
pbook [-modify [index] [ip ipaddress] [name Alias] [e164
phonenumber] [port numb
er]]

    -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 omited, only record 'start_record' will
be disp
```

```
lay.
    If  both parameters 'end_record' and 'start_record' are omited, 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$
```

Parameter Usages:
-print: Print out current contents of Phone Book. Users can also add index number, from 1 to 100, to the parameter to show specific phone number.

> Note:
> Index number: means the sequence number in phone book. If users do request a specific index number in phone book, ATA series will give each record a automatic sequence number as index.

-add: add a new record to phone book. When adding a record, users have to specify name, IP, and e164 number to complete the command.
--name: Name to represent caller.
--e164: e.164 number for mapping with IP address of caller
--ip: IP address of caller
--port: Call signal port number of caller
--drop : Drop e.164 number when dial out. 0 means to keep e.164 number, 1 means to drop e.164 number when dialing out.
--inert: Insert digits.(1~10 digits)

```
usr/config$ pbook –add name test e164 100 ip 192.168.13.78
```

-modify: modify an existing record. When using this command, users have to

specify the record's index number, and then make the change.

```
usr/config$ pbook –modify 1 name test e164 5678 ip 192.168.1.10
port 1730 drop 0
```

-delete: delete a specific record. [pbook –delete 3] means delete index 3 record.

```
usr/config$ pbook –delete 3
```

PhoneBook Rules:

The e164 number defined in phone book will fully carry to destination. It is not just a representative number for destination's IP Address. In other words, user dial this e164 number to reach destination, destination will receive the number and find out if it is matched to its e164, including Line number in some particular device.

For example:

```
usr/config$ pbook -print

index    Name           IP                  E164            Port
=========================================================
=============
1        74             192.168.13.74       74
---------------------------------------------------------
usr/config$
```

xii. [pppoe]

Display PPPoE related information.

```
usr/config$ pppoe

PPPoE device information and configuration
Usage:
pppoe [-print]|[-open]|[-close]
pppoe [-dev on/off][-id username][-pwd password]

    -print      Display PPPoE device information.
    -dev        Enable(=1) or Disable(=0) device.
    -open       Open PPPoE connection.
    -close      Disconnect PPPoE connection.
    -id         Connection user name.
    -pwd        Connection password.
```

```
    -reboot     Reboot after remote host disconnection.
-echo       PPPoE Echo Request (0=disable, 1=enable).
usr/config$
```

Parameter Usages:
-print: print PPPoE status.
-dev: Enable PPPoE Dial-up function
-open: Open the connection
-close: Close the connection
-id: Input the User name ID provided by ISP
-pwd: Input the User name password provided by ISP
-reboot: Reboot the PPPoE connection.
-echo: Enable or Disable PPPoE echo request function.

For example:

```
usr/config$ pppoe -print

PPPoE adapter information
    Device          : Enabled
    Status          : Not initialized
    User name       : pppoe
    Password        : *****
    Reboot          : No
    Echo            : Enable
usr/config$
```

xiii. [flash]

Clean the configuration stored in flash.

```
usr/config$ flash

Flash memory information and configuration
Usage:
flash [-clean]
flash -clean   Clean the configuration stored.

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

```
usr/config$
```

Parameter Usages:
-clean: clean all the user defined value, and reboot ATA series in factory default mode.

> Note:
> It is recommended to execute [flash –clean] after application firmware been upgraded.
> Only User who login with root can execute it. After flash clean, all configurations in command [ifaddr] and [pppoe] will still be kept.

For example:

```
usr/config$ flash -clean

Flash clean start
Flash clean success!!



!! rebooting ...
Attached TCP/IP interface to cpm unit 0
Attaching interface lo0...done

HTTPD initialized...
Flash Check
 WorkMode : PROXY_MODE
 Start registering to Proxy server

 AC4804[0] is ok
 AC4804[1] is ok
 successful 2 2
 Initialize OSS libraries...OK!
VP v1.42 stack open successfully.

login:
```

xiv. [sysconf]

This command displays system information and configurations.

```
usr/config$ sysconf

System information and configuration
Usage:
 sysconf [-print] [-idtime digit] [-bf digit] [-keypad dtmf]
          [-faxtype type][-2833type type][-lcdrop ON/OFF]
          [-droptime digit][-eod digit] [-callerid type]
          [-service used][-dtmfstart digits] [-dtmfend digits]
 sysconf -print

 -print          Display system overall information and configuration.
 -idtime         Inter-Digits time.(1~10 sec)
 -service        Specify ATA series service type. (0: Dial in service,
                  1: HotLine service.)
 -keypad         Select DTMF type: 0=In-band,
                                   1=RFC2833.
                                   2=INFO.
 -faxtype        FAX Payload Type      (range:96~128
inter-used:100,102~105)
 -2833type       RFC2833 Payload Type (range:96~128
inter-used:100,102~105)
 -lcdrop         Disconnect Supervision(Loop Current Drop) (ON:1 /
OFF:0)
 -droptime       Period of Loop Current Drop (ms)
 -eod            End of Dial Digit setting(0: none, 1: *, 2: #)
 -callerid       Caller ID Type setting, 0: Disable,
                                         1: FSK(BELLCORE),
                                         2: DTMF,
                                         3: NTT.
 -dtmfstart      DTMF CallerID Start Symbol.
 -dtmfend        DTMF CallerID End Symbol.
Example:
  sysconf -keypad 0 -eod 2 -callerid 1

usr/config$
```

Parameter Usages:
-print: Print current sysconf settings.
-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, it will dial out all number pressed (1-10 seconds).
-service: set SIP Phone to be normal mode or under hotline mode. (sysconf –service 0/1, 0 for normal service, 1 for hotline service.)
-keypad: DTMF replay type. When value is "1", ATA will transfer DTMF signal via RTP payload as defined in RFC2833. When the value is set to "0", the DTMF type is set as In-band, and 2 for SIP info DTMF.
-faxtype: FAX Payload Type. range: 96~128 inter-used:100,102~105.
-2833type: RFC2833 Payload Type. Range: 96~128 inter-used: 100, 102~105.
-lcdrop: Disconnect Supervision (Loop Current Drop) (ON:1 / OFF:0).
-droptime: Period of Loop Current Drop (ms).
-eod: It will transfer the DTMF in [#] if users disable the end of dial function. Users have to press the keypad in [#] if the end of dial function is enable.
Note:
User can also define IP address here in P2P mode, once user press "#", ATA series will call out this IP address.
-callerid: Support Bell Core, DTMF caller ID and NTT caller ID function. After the first ring at destination site, device will send line number as caller ID to called site.
-dtmfstart: DTMF Caller ID Start Symbol.
-dtmfstart: DTMF Caller ID End Symbol.

For example:

```
usr/config$ sysconf -print

System information
        ATA series Service              : 0
        Inter-Digits time           : 3
        BusyForward                   : OFF
        Keypad DTMF type             : In-band
        End of Dial Digit           : #
        Caller ID Type               : x
        DTMF Caller ID Start Symbol : D
        DTMF Caller ID End Symbol    : C
```

```
        RFC2833 Payload Type          : 96
        FAX Payload Type              : 101
        Disconnect Supervision        : OFF
        Loop Current Drop Time(ms)    : 500
usr/config$
```

xv. [sip]

This command is to configure SIP related parameters.

```
usr/config$ sip

SIP stack information and configuration
Usage:
sip [-print] [-mode   pxmode] [-outpx IPaddmress] [-transport type]
sip [-px address] [-px2 address] [-pxport number] [-outpxport number]
    [-line1 number]
    [-prefix prefixstring] [-expire t1] [-port udpPort] [-rtp rtpPort]
sip -print

    -print       Display SIP stack information and configuration.
    -mode        Configure as Peer-to-Peer mode:0/Proxy mode:1.
    -px          Primary Proxy server address. (IPv4 address or dns name)
    -px2         Secondary Proxy server address. (IPv4 address or dns
name)
    -pxport      Proxy server port.      (the port of proxy)
    -outpx       OutBound Proxy server address. (IPv4 address or dns
name)
    -outpxport OutBound Proxy server port. (the port of OutBound proxy)
    -prefix      Specify prefix string, use it when UserID contains alphabets
                 (if UserID uses numerals, specify as null)
    -line1       TEL1 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 port number (2326~65534), Default: 16384
Example:
     sip -mode 1
     sip -px 210.59.163.171 -line1 70
```

```
usr/config$
```

Parameter Usages:
-mode: Configure as Proxy mode or Peer-to-Peer mode (0: Peer-to-Peer mode, 1: Proxy mode).
-px: to specify Proxy address when ATA is in proxy mode. Proxy address can be IPv4 address or DNS name.
-px2: to setting Secondary Proxy server address. Proxy address can be IPv4 address or DNS name.
-pxport: Set Proxy port for ATA to send message, default value is 5060, if there is no special request of Proxy server, please don't change this value.
-outpx: Set IP Address or URL address (Domain Name Server must be configured. Please refer to Network Configure) of outbound Proxy server.
-outpxport: Set outbound Proxy port for SIP-Phone to send message, default value is 5060, if there is no special request of Proxy server, please don't change this value.
-prefix: when your username contains alphabets, for example sip1123, then specify the prefix string as "sip".
-line1: assign line 1 number.
–pbsearch: enable/disable phone book search function under Proxy Mode. If user enabled this function, ATA 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, ATA will make call to related IP address.
-expire: this parameter is used to inform proxy server the valid duration of the registration information.
-port: SIP local UDP port which uses to listen incoming SIP Messages.
-rtp: Specify the RTP received port number.
Note: One will need to configure port and rtp parameters only when you deploy two or more sets behind the IP sharing device (Router).

For example:

```
usr/config$ sip –print

    Run Mode                 : PEER-2-PEER MODE
    Prefix string            : null
    Line1                    : 1001
    pbook search             : OFF
    SIP listen port          : 5060
    RTP receive port         : 16384
```

```
usr/config$
```

```
usr/config$ sip –print

    Run Mode                    : PROXY MODE
    Primary Proxy address      : 10.1.1.2
    Secondary Proxy address    : null
    Proxy port                 : 5060
    OutBound Proxy address     : null
    Transport Type (TCP/UDP) : UDP
    Prefix string              : null
    Line1                      : 1001
    Line2                      : 1002
    Line3                      : 1003
    Line4                      : 1004
    pbook search               : OFF
    SIP listen port            : 5060
    RTP receive port           : 16384
    Expire                     : 3600
usr/config$
```

xvi. [security]

This command is used to configure the account information included username and password obtained from the service provider

```
usr/config$ security

Secuirty information and configuration
Usage:
 security [-line number][-name username] [-pwd password]
 security [-print]

 -print          Display system account information and configuration.
 -line           Specify which line number you want to set the account.
 -name           Specify user name.
 -pwd            Specify password.
Example:
  security -line 1 -name 1001 -pwd 1001

usr/config$
```

Parameter Usages:
-print: print current setting in security command.
-line: Specify which line number you want to set into the account
Note: If you have only one account, you can set into line1 or line2 using this parameter. For example, if you set the account into line1, line1 can accept incoming calls.
-name: Specify the username of your account information.
-pwd: Specify the password of your account information.

For example:

```
usr/config$ security -print

 Line1 account information
    Username      : 1001
    Password      : ***
usr/config$
```

xvii. [voice]

The voice command is associated with the audio setting information. There are four voice codecs supported by ATA series.

```
usr/config$ voice

Voice codec setting information and configuration
Usage:
voice [-send [G723 ms] [G711U ms] [G711A ms] [G729 ms] ]
       [-volume [voice level] [input level] [dtmf   level]]
       [-nscng [G711U used1] [G711A used2] [G723 used3]]
       [-echo used] [-mindelay t1] [-maxdelay t2]
voice -print
voice -priority [G723] [G711U] [G711A] [G729]

    -print      Display voice codec information and configuration.
    -send        Specify sending packet size.
                 G.723   (30/60 ms)
                 G.711U (20/40/60 ms)
                 G.711A (20/40/60 ms)
                 G.729   (20/40/60/80 ms)
```

```
    -priority   Priority preference of installed codecs.
                G.723
                G.711U
                G.711A
                G.729
    -volume      Specify the following levels:
                voice volume (0~63, default: 25),
                input gain (0~38, default: 25),
                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 g711u 60 g711a 60 g729 60
    voice -volume voice 20 input 32 dtmf 27
    voice -echo 1 1 1 1
usr/config$
```

Parameter Usages:

-print: Print current voice information and configurations.

-send: To define packet size for each codec. 20/40/60/80 ms mean to send a voice packet per 20/40/60/80 milliseconds. The smaller the packet size, the shorter the delay time. If network is in good condition, smaller sending packet size is recommended. In this parameter, 20/40/60ms is applicable to G.711u/a law, 20/40/60/80 ms is applicable to G.729 codec, while 30/60ms is applicable to G.723.1 codec.

-priority: Codec priority while negotiating with other SIP device. The codec listed in left side has the highest priority when both parties determining final codec.

```
usr/config$ voice –priority g723   (only select this codec)
usr/config$ voice –priority g723 g729 g711u g711a (select four
codecs, and g723 is the first choice)
```

-volume: There are three adjustable value.

--voice volume stands for volume, which can be heard from ATA series side(range 0~63, default: 28).

--input gain stands for volume, which the opposite party hears (range 0~38, default: 28).

--dtmf volume stands for DTMF volume/level, which sends to its own Line (range 0~31, default: 23).

-nscng: Silence suppression and comfort noise generation setting (1 = ON; 0 = OFF). It is applicable to G.723 codec only.

```
usr/config$ voice -nscng g723 1
```

-echo: On or Off the activate each canceler.

-mindelay: The minimum jitter buffer size (Default value= 90 ms).

-maxdelay: The minimum jitter buffer size (Default value= 150 ms).

```
usr/config$ voice –mindelay 90 –maxdelay 150
```

Note:
Be sure to know well the application before you change voice parameters because this might cause incompatibility.

For example:

```
usr/config$ voice -print

Voice codec setting relate information
    Sending packet size   :
            G.729A          : 40 ms
            G.723.1         : 60 ms
            G.711U          : 40 ms
            G.711A          : 40 ms
    Priority order codec :
            g729a g7231 g711u g711a
    Volume levels           :
            voice volume : 25
            input gain    : 25
            dtmf volume   : 23
 No sound compress & CNG :
            G.729A          : There is no setting
            G.723.1         : Off
            G.711(U-Law) : Off
            G.711(A-Law) : Off
    Echo canceller          : On On On On
    Jitter buffer           :
            Min Delay       : 90
```

```
                Max Delay      : 150
usr/config$
```

xviii. [support]

This command provides some extra functions that might be needed by users.

```
usr/config$ support

Special Voice function support manipulation
Usage:
support [-t38 enable]
          [-busy number] [-noanswer number] [-uncon number]
support -print
     -t38        T.38(FAX) enabled/disabled.
     -busy       Busy Forward number.(if empty, please fill "null")
     -noanswer No Anser Forward number.(if empty, please fill "null")
     -uncon      Unconditional Forward number.(if empty, please fill
"null")
Example:
     support   -t38 1
     support   -busy 1001
     support   -uncon null

usr/config$
```

Parameter Usages:

-print: print current settings in support command.

-t38: Enable or disable T.38 fax ability. The function is will automatically defer codec (G.723 or G.729a) to T.38 when FAX signal is detected.

-busy: Provide setting busy forwrd to other number, when you setting this function. Then this channel busy, auto forward to setting phone number.

-noanswer: Provide setting noanser forwrd to other number, when you setting this function. Then this channel not answer, auto forward to setting phone number.

-uncon: Provide setting noanser forwrd to other number, when you setting this function. Then all call this channel number, will all auto forward to setting phone number.

Note:
It is not recommended to change the value in this command, only if users

do know well the application. This might cause incompatibility with other devices.

For example:

```
usr/config$ support -print

Special Voice function support manipulation
    T.38(FAX) support : Disabled
Forward Numbers
    Busy Forward number: 0123456789
    NoAnswer Forward number: 0212345678
    Uncondition Forward number:
usr/config$
```

xix. [tos]

This command is for setting Differentiated Service Code Point configuration.

```
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$
```

Parameter Usages:

-rtptype: the packages of voice (0~63).

-sigtype: the package of call signal (0~63).

Note:

The value of rtptype and sigtype is from 0 to 63. It’s working if it supported by your network.

For example:

```
usr/config$ tos –print

IP Packet ToS information:
    Signalling Packet:
            DSCP Code : 0
    Media Packet       :
            DSCP Code : 0

usr/config$
```

xx. [phone]

ATA series progress tone is configurable. Default tone value is set according to U.S. tone specification. Users may adjust the values according to their own country's tone specification or users-defined tone specification.

```
usr/config$ phone

Phone ringing , ringback tone , busy tone , dial tone setting and notes
Usage:

phone [-ring [freq    ] [ringON   ] [ringOFF ] [ringLevel]]
      [-rbt   [freqHi ] [freqLo   ] [freqHiLev] [freqLoLev]
              [Tone1ON] [Tone1OFF] [Tone2ON   ] [Tone2OFF ]]
      [-bt    [freqHi ] [freqLo   ] [freqHiLev] [freqLoLev]
              [Tone1ON] [Tone1OFF] [Tone2ON   ] [Tone2OFF ]]
      [-dt    [freqHi ] [freqLo   ] [freqHiLev] [freqLoLev]
              [Tone1ON] [Tone1OFF] [Tone2ON   ] [Tone2OFF ]]
      [-flash [freqLo ] [freqHi ]]
      [-level [loopCurrentLevel] [onhookLineVoltageLevel ]]
phone [-print [ring]|[rbt]|[bt]|[dt]|[flash]]

      -print   Display phone ringing/tone configuration.
               ring :    ringing
               rbt   :    ringback tone
               bt    :    busy tone
               dt    :    dial tone
               flash:    flash tone
      -ring    ringing configuration set .
      -rbt     ringback tone configuration set .
```

```
        -bt       busy tone configuration set .
        -dt       dial tone configuration set .
        -flash    flash configuration set .
        -level    Loop Current and On-Hook Line Voltage level set .
Note:
        ringing frequency     : 15 ~ 100     (Unit : Hz)
        ringing ring ON/OFF : 0   ~ 8000   (Unit : ms)
        ringing level          : 0   ~ 94      (Unit : V)
        tone      frequency     : 0   ~ 65535 (Unit : Hz)
        tone      freqLevel     : 0   ~ 65535 (Unit : mVrms)
        tone      Tone ON/OFF : 0   ~ 8000   (Unit : ms)
        level     loopCurrent : 0   ~ 7       (20mA ~   41mA, Step :
3mA)
        level     OnHookVol     : 0   ~ 63      (   0V ~ 94.5V, Step : 1.5V)
Example:
        phone -print rbt
        phone -ring 20 2000 4000 94
        phone -rbt 480 440 125 105 2000 4000 2000 4000
        phone -bt 620 480 125 105 500 500 500 500
        phone -dt 440 350 96 96 8000 0 8000 0
        phone -flash 400 800
        phone -level 1 32

usr/config$
```

Parameter Usages:

-print: Print current call progress tone configurations (ring: ring tone, rbt: ring back tone, bt: busy tone, dt: dial tone). This parameter should be accompanied with tone type.

-ring: To set RING tone value. The played tone type, when ATA series is receiving a call.

-rbt: To set RingBackTone value. The played tone type, when ATA series receives a Q.931 Alerting message. In condition that ATA series is the originate side.

-bt: To set BusyTone value. The played tone type, when destination is busy.

-dt: To set DialTone value. The played tone type, when hook off a phone set of workable ATA series.

-flash: Set the detective flash range in ms, for example, 300-500 ms.

Note:
For tone simulation, ATA series adopts dual frequencies as traditional telephone does. If users want to have their own call progress tone, they can change the value of tones. High and Low frequency/level/cadence can be configured respectively.

For example:

```
usr/config$ phone -print rbt
Phone ringback tone paramter
    Ringback Tone frequency high          : 480
    Ringback Tone frequency low           : 440
    Ringback Tone frequency high level    : 155
    Ringback Tone frequency low level     : 155
    Ringback Tone tone1 on                : 2000
    Ringback Tone tone1 off               : 4000
    Ringback Tone tone2 on                : 2000
    Ringback Tone tone2 off               : 4000

usr/config$
```

```
usr/config$ phone -print rbt

Phone ring back tone paramter
    Ringback Tone frequency high          : 440
    Ringback Tone frequency low           : 480
    Ringback Tone frequency high level    : 13
    Ringback Tone frequency low level     : 13
    Ringback Tone tone1 on                : 100
    Ringback Tone tone1 off               : 200
    Ringback Tone tone2 on                : 100
    Ringback Tone tone2 off               : 200

usr/config$
```

```
usr/config$ phone -print bt

Phone busy tone paramter
    Busy Tone frequency high          : 620
```

```
    Busy Tone frequency low          : 480
    Busy Tone frequency high level   : 155
    Busy Tone frequency low level    : 155
    Busy Tone tone1 on               : 500
    Busy Tone tone1 off              : 500
    Busy Tone tone2 on               : 500
    Busy Tone tone2 off              : 500

usr/config$
```

```
usr/config$ phone -print dt

Phone dial tone paramter
    Dial Tone frequency high         : 440
    Dial Tone frequency low          : 350
    Dial Tone frequency high level   : 155
    Dial Tone frequency low level    : 155
    Dial Tone tone1 on               : 8000
    Dial Tone tone1 off              : 0
    Dial Tone tone2 on               : 8000
    Dial Tone tone2 off              : 0
usr/config$
usr/config$
```

```
usr/config$ phone -print flash

Phone flash paramter
    Flash frequency high : 800
    Flash frequency low  : 400

usr/config$
```

xxi. [bureau]

To set Hotline function.

```
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. (Port range: 1~6)
Note:
    Hotline feature should be used together with:
        $sysconf -service 1 (HotLine service)
Example:
    bureau -hotline 1 192.168.4.69 628 2 192.168.4.200 999

usr/config$
```

Parameter Usages:
-print: Display current Hotline table.
-hotline: Define Line1 Hotline table respectively. The table is included [Line number], [destination IP Address] and [destination Port or Number].

For example
1. Destination is a FXS device, 628 is its Line1 number
usr/config$ bureau -hotline 1 200.168.4.69 628
User picks up the Line1, and then hears the ring back tone generated from destination. Of course, 628 are ringing simultaneously.

For example:

```
usr/config$ bureau -print

Bureau line setting relate information
    Hot line table

==========================================
==
    Port      Destination Address       Remote TEL
    ------------------------------------------
     1           192.168.13.78            629

==========================================
==
```

```
usr/config$
```

xxii. [rom]

ROM file information and firmware upgrade function.

```
usr/config$ rom

ROM files updating commands
Usage:
rom [-print] [-app] [-boot] [-dsptest] [-dspcore] [-dspapp]
    [-ht] [-method used] [-boot2m]
    -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)
    -ht         updata Hold Tone PCM file(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
    -server     specify EMS Server IP address
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
```

Parameter Usages:

-print: show versions of all rom files.

-app, boot, boot2m, dsptest, dspcore, dspapp, ht: To update main Application program code, Boot code, DSP testing code, DSP kernel code, or DSP application code, and Hold Tone file.

Note:

Most of all, the Rom file needed to get upgrade is App or Boot2m. Please check the exactly Rom file before doing download procedure.

-s: To specify TFTP server's IP address when upgrading ROM files.

-f: To specify the target file name, which will replace the old one.

-method: To decide using TFTP or FTP as file transfer server. [0] stands for TFTP, while [1] stands for FTP.

-ftp: If users choose FTP in above item, it is necessary to specify pre-defined username and password when upgrading files.

- server: specify EMS Server IP address. Provide auto upgrade rom application verion, but you must use EMS Server it work.

For example:

```
usr/config$ rom -print


Download Method   :   TFTP
        Boot Rom   :   sdboot.200
Application Rom   :   1asipATA.107
         DSP App   :   48302ce3.140
      DSP Kernel   :   48302ck.140
  DSP Test Code   :   483cbit.bin

       Hold Tone   :   holdtone.101

usr/config$
```

xxiii. [auth]

For security concern, the "root" user can customize some configurable items for "administrator" user.

```
usr/config$ auth

Root control what command administrator can use.
Usage:
auth -print Display auth switch configuration.
                Use item name to do config name (0=Disable,
```

```
1=Enabled).
Example: auth -ifaddr 1

usr/config$
```

Parameter Usages:

-"item name": Assign the configurable item for "administrator" user.

```
usr/config$ auth -ifaddr 1
usr/config$ auth -h323 1
usr/config$ auth -voice 1
```

Now the Administrator user can use the command which Root user assigned.

-print: Display the configurable items for "administrator" user.

For example:

```
usr/config$ auth -print

Root can control what command administrator can use.
     ifaddr    : Enable
     sip       : Disable
     line      : Disable
     pbook     : Enable
     support   : Disable
     sysconf   : Disable
     voice     : Disable
     phone     : Disable
     rtp       : Disable
     tos       : Disable
     prefix    : Disable
     passwd    : Enable
     rom       : Disable
     flash     : Disable
     bureau    : Enable
     pppoe     : Enable

usr/config$
```

xxiv. [passwd]

For security concern, users have to input the password before entering configuration mode. [passwd] command is for password setting purpose.

```
usr/config$ passwd

Password setting information and configuration
Usage:
passwd [-set [Login name] [Password]][-clean]

passwd -set      Loginname Password.
        -clean   Clear all password stored in flash.
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
   passwd -clean

usr/config$
```

Parameter Usages:
–set: Set login name and password, input login name then input new password.
-clean: Will clear all password setup, and change null.

> Note:
> ATA series Login name only use [root] or [administrator]. [root] and [administrator] have the same authorization, except commands that can be excuted by [Login name: root] only [passwd –set root], [rom –boot], [room-boot2m] and [flash –clean].

For example:

```
usr/config$ passwd -set root root1234

Setting
login: root
Password: root1234
OK
usr/config$
```

```
sr/config$ passwd -clean

Please wait a moment!!

Clean password OK.
usr/config$
```

xxv. [prefix]

This command is for make rules for drop or insert prefix digits.

```
usr/config$ prefix

Prefix drop/insert information and configuration
Usage:
prefix -add [prefix number][drop number][insert digits]
prefix -delete index
prefix -modify index [prefix number][drop number][insert number]
prefix -print      Prefix drop/insert information.
        prefix      The prefix of dialed number.
        drop        Drop prefix(Enable:1/Disable:0).
        insert      Insert digits.
Example:
      prefix -add prefix 100 drop 1 insert 2000
      prefix -add prefix 100 drop 1
      prefix -add prefix 100 drop 0 insert 200
      prefix -delete 1
      prefix -modify 1 prefix 100 drop 0 insert 300

usr/config$
```

Parameter Usages:

-add: Add a rule to drop or insert prefix digits of incoming call.

--prefix: Set which prefix number to implement prefix rule.

--drop: Enable or disable drop function. If this function is enabled, ATA series will drop prefix number on incoming call.

--insert: Set which digit to insert on incoming call.

```
usr/config$ prefix -add prefix 100 drop 1 insert 2000
```

-modify: Modify a rule to drop or insert prefix digits of incoming call.

```
usr/config$ prefix –modify 100 drop 0 insert 200
```

-delete: Delete a rule to drop or insert prefix digits of incoming call.

```
usr/config$ prefix –delte modify 100 drop 0 insert 200
```

For example:

```
usr/config$ prefix -print

Prefix drop/insert information and configuration
Index   Prefix                  Drop       Insert
=============================================
============
1       100                     Enable     2000

usr/config$
```

Table of Figures