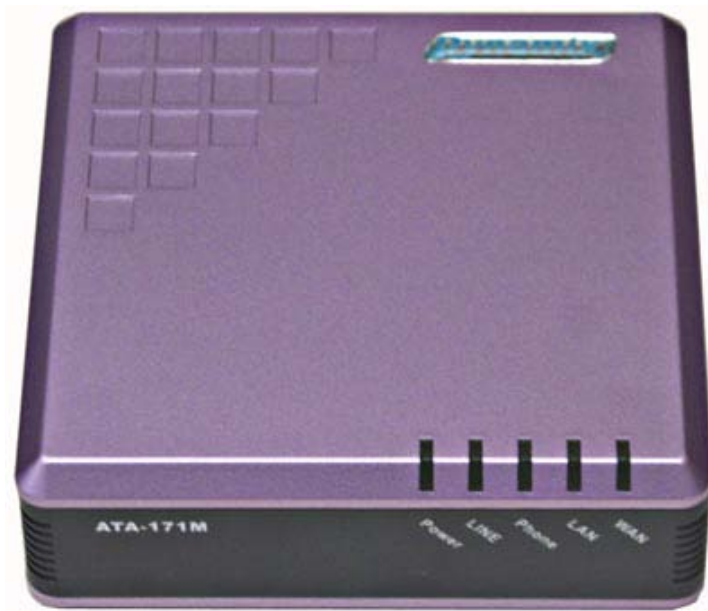


# ***Dynamix***

## ***ATA-171 | 172 | 171P | 171M (ATA-S1 | S2 | P | M)***



User's Guide  
V2.02 2008

# ATA-171/172/171P/171M (ATA-S1/S2/P/M)

## User's Guide

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## User's Guide

### 1 Introduction

This user's manual is for 1-port FXS and 1-port FXO (**FXO only supported in ATA171M**) VoIP terminal adapter (ATA). This user's manual will explain the IVR instruction, web configuration, and command line configuration for the ATA. Before using the ATA, some setup processes are required to make the ATA work properly. Please refer to the Setup Menu for further information.

#### 1.1 Hardware Overview

The ATA has the following interfaces for Networking, telephone interface, LED indication, and power connector.

- 1.1.1 Two RJ-45 Networking interface, these two interfaces support 10/100Mps Fast Ethernet. you can connect one RJ-45 Fast Ethernet port to the ADSL or Switch, and connect the other one to your computer.
- 1.1.2 One RJ-11 Type analog telephone jack and line interfaces. You can connect one analog telephone to the terminal adapter or one PSTN line.
- 1.1.3 LED Indication: There are three LED indicators in the ATA to show the Power, Register, and Off-Hook indication.

#### 1.2 Software Overview

Network Protocol	Tone
<ul style="list-style-type: none"> <li>• SIP v1 (RFC2543), v2 (RFC3261)</li> <li>• IP/TCP/UDP/RTP/RTCP</li> <li>• IP/ICMP/ARP/RARP/SNTP</li> <li>• TFTP Client/DHCP Client/ PPPoE Client</li> <li>• Telnet/HTTP Server</li> <li>• DNS Client</li> <li>• NAT/DHCP Server</li> </ul>	<ul style="list-style-type: none"> <li>• Ring Tone</li> <li>• Ring Back Tone</li> <li>• Dial Tone</li> <li>• Busy Tone</li> <li>• Programming Tone</li> </ul>
<b>Codec</b> <ul style="list-style-type: none"> <li>• G.711: 64k bit/s (PCM)</li> <li>• G.726: 16k / 24k / 32k / 40k bit/s (ADPCM)</li> <li>• G.729A: 8k bit/s (CS-ACELP)</li> <li>• G.729B: adds VAD &amp; CNG to G.729</li> </ul>	<b>Phone Function</b> <ul style="list-style-type: none"> <li>• Volume Adjustment</li> <li>• Speed dial key</li> <li>• Phone book</li> <li>• Flash</li> </ul>
	<b>IP Assignment</b> <ul style="list-style-type: none"> <li>• Static IP</li> <li>• DHCP</li> <li>• PPPoE</li> </ul>
<b>Voice Quality</b> <ul style="list-style-type: none"> <li>• VAD: Voice activity detection</li> <li>• CNG: Comfortable noise generator</li> <li>• LEC: Line echo canceller</li> <li>• Packet Loss Compensation</li> <li>• Adaptive Jitter Buffer</li> </ul>	<b>Security</b> <ul style="list-style-type: none"> <li>• HTTP 1.1 basic/digest authentication for Web setup</li> <li>• MD5 for SIP authentication (RFC2069/ RFC 2617)</li> </ul>
	<b>QoS</b> <ul style="list-style-type: none"> <li>• ToS field</li> </ul>
<b>Call Function</b> <ul style="list-style-type: none"> <li>• Call Hold</li> <li>• Call Waiting</li> <li>• Call Forward</li> <li>• Caller ID</li> <li>• 3-way conference</li> </ul>	<b>NAT Traversal</b> <ul style="list-style-type: none"> <li>• STUN</li> </ul>
	<b>Configuration</b> <ul style="list-style-type: none"> <li>• Web Browser</li> <li>• Console/Telnet</li> <li>• IVR/Keypad</li> </ul>
<b>DTMF Function</b> <ul style="list-style-type: none"> <li>• In-Band DTMF</li> <li>• Out-of Band DTMF</li> <li>• SIP Info</li> </ul>	<b>Firmware Upgrade</b>
<b>SIP Server</b> <ul style="list-style-type: none"> <li>• Registrar Server (three SIP account)</li> <li>• Outbound Proxy</li> </ul>	<ul style="list-style-type: none"> <li>• TFTP</li> <li>• Console</li> <li>• HTTP</li> </ul>

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### 2 Keypad Interface for The ATA

You can use the PSTN phone keypad to operate the ATA. Please follow the instruction to configure your terminal adapter.

Group	IVR Action	IVR Menu Choice	Parameter(s)	Notes:
Function	Dial out from PSTN Line	<b>0*</b>	None	Press 0* can pass call to PSTN Line, user can dial out from PSTN Line. <b>(For 171P and 171M)</b>
Function	Unlock keypad setting	<b>#190#</b>	None	After you unlock keypad setting, then you may configure the ATA.
Function	Reboot	<b>#195#</b>	None	After you hear "Option Successful," hang-up. The system will reboot automatically.
Function	Factory Reset	<b>#198#</b>	None	System will automatically reboot. <b>WARNING: ALL "User-Changeable" NONDEFAULT SETTINGS WILL BE LOST!</b> This will include network and service provider data.
Function	Enable PPTP client	<b>#116#</b>	None	System will automatically reboot and PPTP client will be enabled
Function	Disable PPTP client	<b>#117#</b>	None	System will automatically reboot and PPTP client will be disabled
Function	Enable VLAN	<b>#118#</b>	None	System will automatically reboot and VLAN will be enabled.
Function	Disable VLAN	<b>#119#</b>	None	System will automatically reboot and VLAN will be disabled
Function	Enable Call Waiting	<b>#138#</b>	None	System will automatically reboot and Call Waiting will be enabled.
Function	Disable Call Waiting	<b>#139#</b>	None	System will automatically reboot and Call Waiting will be disabled.
Function	Enable Anonymous	<b>#140#</b>	None	System will automatically reboot and Send Anonymous CID will be enabled.
Function	Disable Anonymous	<b>#141#</b>	None	System will automatically reboot and Send Anonymous CID will be disabled.
Function	Blind Transfer	<b>#510#</b>	None	<b>Can only be performed in a phone call conversation. For 171M, this will transfer the current IP line to another IP line.</b>
Function	Attendant Transfer	<b>#511#</b>	None	<b>Can only be performed in a phone call conversation. For 171M, this will transfer the line to IP from PSTN (must be in IP mode to execute this command)</b>
Function	3-way calling (IP Conference)	<b>#512#</b>	None	<b>Can only be performed in a phone call conversation.</b>
Function	Attendant Transfer	<b>#514#</b>	None	<b>Can only be performed in a phone call conversation. For 171M, this will transfer the line to PSTN from IP (must be in PSTN mode to execute this command)</b>
Info	Check WAN IP Address	<b>#126#</b>	None	IVR will announce the current WAN IP address of the ATA
Info	Check LAN IP Address	<b>#120#</b>	None	IVR will announce the current LAN IP address of the ATA
Info	Check IP Type	<b>#121#</b>	None	IVR will announce if DHCP is enabled or disabled.
Info	Check the Phone Number	<b>#122#</b>	None	IVR will announce current in use VoIP number
Info	Check Network Mask	<b>#123#</b>	None	IVR will announce the current network mask of the ATA.
Info	Check Gateway IP Address	<b>#124#</b>	None	IVR will announce the current gateway IP address of the ATA.
Info	Check Primary DNS Server Setting	<b>#125#</b>	None	IVR will announce the current setting in the Primary DNS field.
Info	Check Firmware Version	<b>#128#</b>	None	IVR will announce the version of the firmware running on the ATA.
Setting	Set DHCP client	<b>#111#</b>	None	The system will change to DHCP

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				Client type
Setting	Set Static IP Address	#112xxx*xxx*xxx*xxx#	Enter IP address using numbers on the telephone keypad. Use the * (star) key when entering a decimal point.	DHCP will be disabled and system will change to the Static IP type.
Setting	Set Network Mask	#113xxx*xxx*xxx*xxx#	Enter value-using numbers on the telephone keypad. Use the * (star) key when entering a decimal point.	Must set Static IP first.
Setting	Set Gateway IP Address	#114xxx*xxx*xxx*xxx#	Enter IP address using numbers on the telephone keypad. Use the * (star) key when entering a decimal point.	Must set Static IP first.
Setting	Set Primary DNS Server	#115xxx*xxx*xxx*xxx#	Enter IP address using numbers on the telephone keypad. Use the * (star) key when entering a decimal point.	Must set Static IP first.
Setting	Set Codec	#130+[1-8]#	1:G.711 u-Law, 2: G.711 a-Law, 4: G.729a, 5: G.726 16K, 6: G.726 24K, 7: G.726 32K, 8: G.726 40K,	You can set the codec you want to the first priority.
Setting	Set Handset Gain	#131+[00~15]#	Handset Gain from 0~15	You can set the Handset gain to proper value, default is 6
Setting	Set Handset Volume	#132+[00~12]#	Handset Volume from 0~12	You can set the Handset volume to proper value, default is 10
Setting	Set Auto Configuration Mode	#137X#	Select the auto configuration mode, in the X field, you can press the following; 0:OFF 1:TFTP 2:FTP	You can set the auto configuration method you want, default is off
Setting	Set Auto Configuration For TFTP Server	#135xxx*xxx*xxx*xxx#	Enter IP address using numbers on the telephone keypad. Use the * (star) key when entering a decimal point.	Must set auto configuration method to TFTP first
Setting	Set Auto Configuration For FTP Server	#136xxx*xxx*xxx*xxx#	Enter IP address using numbers on the telephone keypad. Use the * (star) key when entering a decimal point.	Must set auto configuration method to FTP first

### 3 Setup the ATA by Web Browser (LAN connection)

The ATA provides a built-in web server. You can use a Web browser to configure the ATA. For more detail instructions, please refer to the procedures below.

#### Step 1

Connect a straight through cable from the ATA's LAN port to a hub or switch, while making sure that your computer is also connected to the same hub or switch.

#### Step 2

Make sure you set your computer's network setting to DHCP mode (obtain IP address automatically). This is done in the Network Connections option that can be accessed in Control Panel.

#### Step 3

Open your web browser and in the address field, input the following IP address "**http://192.168.123.1:9999**".

The diagram below will show you an example of the web page menu:

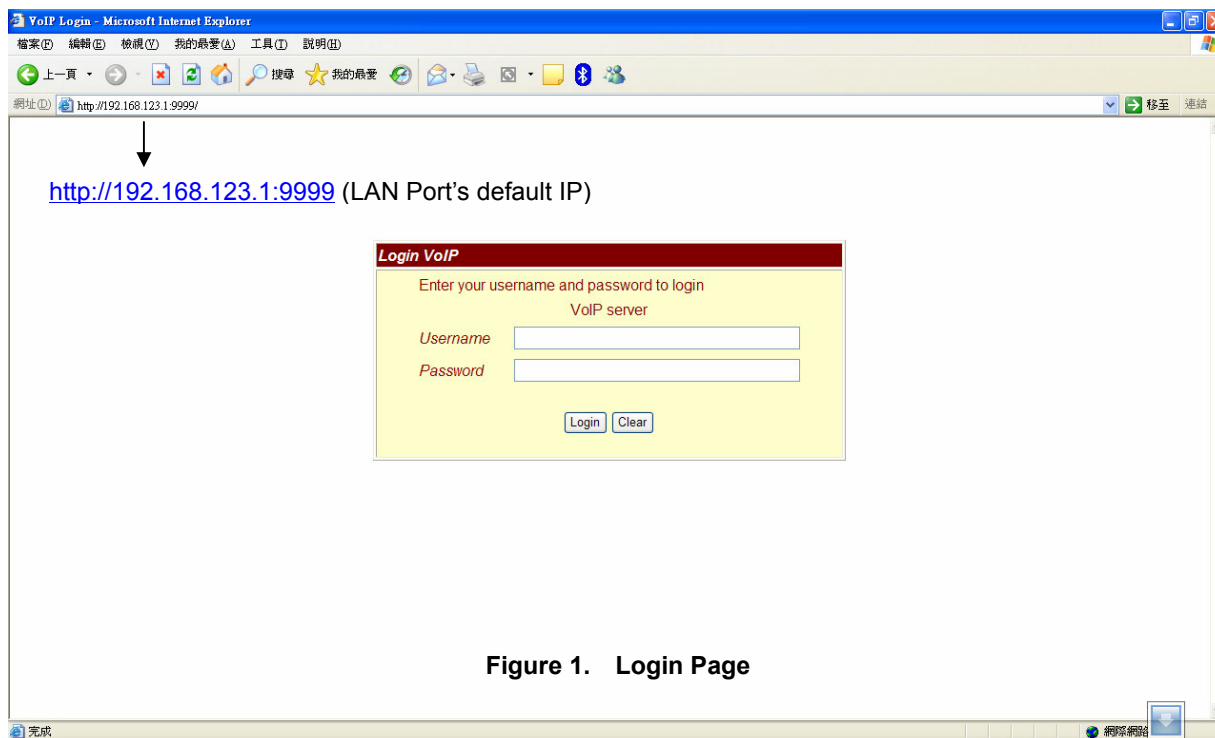


Figure 1. Login Page

#### 3.1 Login.

3.1.1 Please input the username and password into the blank field. The default setting is:

1. For Administrator, the username is: **root**; and the password is: **null**. If you use this account to login, you can configure all the setting.
2. For normal user, the username is: **user**; and the password is: **test**. If you use this account to login, you will not be able to configure any SIP settings due to authorization level.

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- 3.1.2 Click the "Login" button will move into the ATA web based management information page.
- 3.1.3 If you change the setting in the Web Management interface, please do remember to click the "Submit" button in that page. After you finished the change of the setting, click the "Save" function in the left side, and click the Save Button. When you finished the setting, please click the Reboot function in the left side, and click the Reboot button in that page. After the system restart, all the setting can work properly.

### 3.2 System Information for the ATA.

- 3.2.1 When you login the web page, you can see the ATA current system information like firmware version, company... etc in this page.
- 3.2.2 Also you can see the function lists in the left side. You can use mouse to click the function you want to set up.

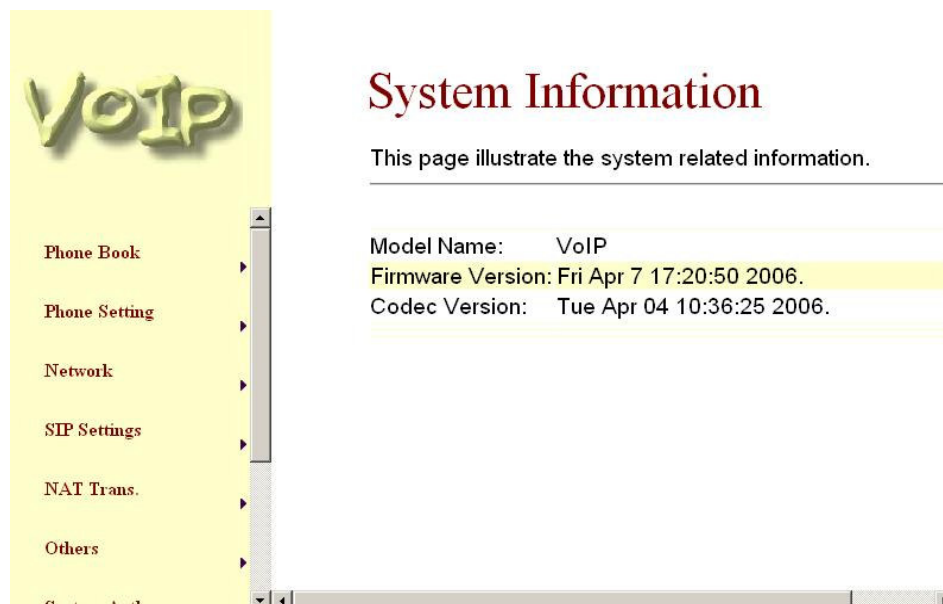


Figure 1. System Information

### 3.3 Phone Book

- 3.3.1 In Phone Book page contains (from page 1~14).
- 3.3.2 Phone : show serial number.
- 3.3.3 Name : setting other side telephone number
- 3.3.4 URL : other side IP address

Example :

Phone	Name	URL	Select
0	1	070000002@192.168.15.210	<input type="checkbox"/>

When you dial 1# the device should search phone book,if search match number 1 will send out "070000002@192.168.15.210", if not got match number will send out 1.

- 1- If you need to add a phone number into the phone book, you need to input the position, the name, and the phone number (by URL type). When you finished a new phone list, just click the "Add Phone" button.
- 2- If you want to delete a phone number, you can select the phone number you want to delete then click "Delete Selected" button.
- 3- If you want to delete all phone numbers, you can click "Delete All" button.



## Phone Book

You could add/delete items in current phone book.

Phone Book Page:

Phone	Name	URL	Select
0			<input type="checkbox"/>
1			<input type="checkbox"/>
2			<input type="checkbox"/>
3			<input type="checkbox"/>
4			<input type="checkbox"/>
5			<input type="checkbox"/>
6			<input type="checkbox"/>
7			<input type="checkbox"/>
8			<input type="checkbox"/>
9			<input type="checkbox"/>

### Add New Phone

Position:  (0~139)  
 Name:   
 URL:

Figure 2. Speed Dial

### 3.4 Phone Setting

- 3.4.1 In Phone Setting contains Call Forward, SNTP Settings, Volume Settings, DND Settings, Auto Answer, Caller ID, Dial Plan Settings, Flash Time Settings, Call Waiting, and T.38(FAX) Setting, Hot line Settings and Alarm Settings functions.
- 3.4.2 Call Forward function: you can setup the phone number you want to forward in this page. There are three type of Forward mode. You can choose All Forward, Busy Forward, and No Answer Forward by click the icon.
- 1- All Forward: All incoming call will forward to the number you choosed. You can input the name(description) and the phone number in URL field. If you select this function, then all the incoming call will direct forward to the speed dial number you choose (**Note: PSTN forwarding is only supported in ATA171M**).
  - 2- Busy Forward: If you are on the phone, the new incoming call will forward to the number you choosed. You can input the name(description) and the phone number in URL field.
  - 3- No Answer Forward: : If you can not answer the phone, the incoming call will forward to the number you choosed. You can input the name(description) and the phone number in URL field. Also you have to set the Time Out time for system to start to forward the call to the number you choosed (**Note: PSTN forwarding is only supported in 171M**).
  - 4- When you finished the setting, please click the Submit button.
  - 5- If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.



**Forward Setting**

You could set the forward number of your phone in this page.

All Forward:  Off  IP  PSTN

Busy Forward:  Off  IP

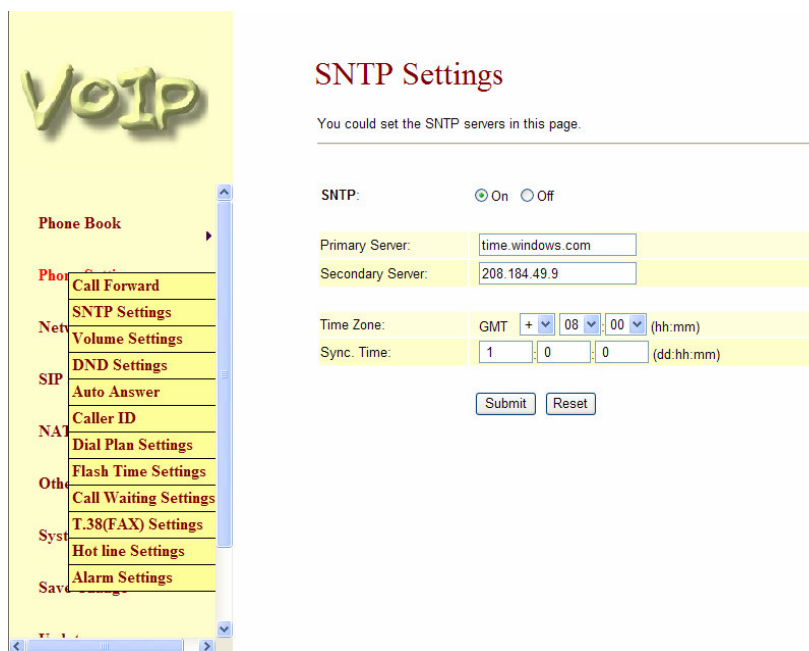
No Answer Forward:  Off  IP  PSTN

	Name	URL/Number
All Fwd No.:	<input type="text"/>	<input type="text"/>
Busy Fwd No.:	<input type="text"/>	<input type="text"/>
No Answer Fwd No.:	<input type="text"/>	<input type="text"/>

No Answer Fwd Time Out:  (2~8 Ring)

Figure 3. Forward Setting

- 3.4.3 SNTP Setting function: you can setup the primary and second SNTP Server IP Address, to get the date/time information. Also you can base on your location to set the Time Zone, and how long need to synchronize again. When you finished the setting, please click the Submit button.



**SNTP Settings**

You could set the SNTP servers in this page.

SNTP:  On  Off

Primary Server:

Secondary Server:

Time Zone: GMT + 08:00 (hh:mm)

Sync. Time:  :  :  (dd:hh:mm)

Figure 4. SNTP Setting

- 3.4.4 Volume Setting function: you can setup the Handset Volume, Ringer Volume, and the Handset Gain. When you finished the setting, please click the Submit button.
- 1- Handset Volume is to set the volume for you can hear from the handset.
  - 2- Ringer Volume is to set the ringer volume for you can hear.
  - 3- PSTN-Out Volume is to set the volume for you can hear from the PSTN side (**Note: Only supported in ATA171M**).
  - 4- Handset Gain is to set the volume send out to the other side's handset.
  - 5- PSTN-In Gain is to set the volume send out to the other side (**Note: Only supported in ATA171M**).
  - 6- When you finished the setting, please click the Submit button.
  - 7- If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.



Figure 5. Volume Setting

- 3.4.5 DND Setting function: you can setup the DND Setting to keep the phone slience. You can choose Always Block or Block a period.
- 1- Always DND: All incoming call will be blocked until disable this feature.
  - 2- DND Period: Set a time period and the phone will be blocked during the time period. If the "From" time is large than the "To" time, the Block time will from Day 1 to Day 2.
  - 3- When you finished the setting, please click the Submit button.
  - 4- If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.

**VOIP**

Phone Book

Phone Settings

Network

SIP

NAT

Other

System

Save

Call Forward

SNTP Settings

Volume Settings

**DND Settings**

Auto Answer

Caller ID

Dial Plan Settings

Flash Time Settings

Call Waiting Settings

T.38(FAX) Settings

Hot line Settings

Alarm Settings

## DND Setting

You could set the do not disturb period of your phone in this page.

DND Always:  On  Off

DND Period:  On  Off

From:  :  (hh:mm)

To:  :  (hh:mm)

Figure 6. DND Setting

### 3.4.6 Auto Answer (For 171M only)

- 1- You can choose to disable or enable Auto Answer feature.
- 2- Auto Answer Counter: Specifies how many ring tones will be heard before it is switched to IP or PSTN line (depending on the type of incoming call). Default value is 3, you can set between 0~8.
- 3- You can choose to disable or enable PIN code feature. When a PIN code is set on the ATA device, once the auto answer counter value is encountered (for example 3 rings), you will hear a continuous series of beeps, the caller then must specify the PIN set followed by the hash key “#” to dial out and transfer to the second line. If the original call is IP, then it will be dialed out to PSTN and vice versa.

**Auto Answer**

You could enable/disable the auto answer in this page.

Auto Answer:  On  Off

Auto Answer Counter:  (0-8)

PIN Code Enabled:  On  Off

PIN Code:

- 3.4.7 Caller ID function: you can set the device to show Caller ID in your PSTN Phone or IP Phone.
- 1- There are four selection of Caller ID. You need to base on your environment to set the Caller ID function for FSK or DTMF. When you change the setting, please also double check the PTT setting in Others. You need to choose the correct country code then the Caller ID will be effect.
  - 2- When you finished the setting, please click the Submit button. If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.

**Caller ID Setting**

You could enable/disable the caller ID setting in this page.

Caller ID:

Single Caller ID:  Yes  No

CID Without Time:  Yes  No

**Figure 7. Caller ID Setting**

- 3.4.8 Dial Plan Settings function: This function is when you input the phone number by the keypad but you don't need to press "#". After time out the system will dial directly. When you finished the setting, please click the Submit button. If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.

## Dial Plan

You could the set the dial plan in this page.

Drop prefix :	<input type="radio"/> Yes <input checked="" type="radio"/> No
Replace rule 1:	<input type="text"/> + <input type="text"/>
Drop prefix :	<input type="radio"/> Yes <input checked="" type="radio"/> No
Replace rule 2:	<input type="text"/> + <input type="text"/>
Drop prefix :	<input type="radio"/> Yes <input checked="" type="radio"/> No
Replace rule 3:	<input type="text"/> + <input type="text"/>
Drop prefix :	<input type="radio"/> Yes <input checked="" type="radio"/> No
Replace rule 4:	<input type="text"/> + <input type="text"/>
Dial now:	<input type="text"/>
Auto Dial Time:	<input type="text" value="5"/> (3~9 sec)
Use # as send key:	<input checked="" type="radio"/> Yes <input type="radio"/> No
Use * for IP dialing:	<input checked="" type="radio"/> Yes <input type="radio"/> No

**Figure 8. Auto Dial Setting**

Drop Prefix	- No (add number): when the rule match will direct add number ◦ - Yes (reduce number): when the rule match will cut match number then add you setting number ◦
Replace rule1	Setting dial number rule ◦ +: or ◦ xxx: number limit ◦
Dial Now (*)	When there is a number that matches this field, the device will automatically dial the number specified. <b>However, first digit cannot be set to 0, because the feature Dial Now is unable to detect first digit as 0. Therefore if Dial Now is set to 0xxxx, the system will not be able to send out this piece of information</b>
Auto Dial Time	Wait setting time then auto dial number
Submit [Button]	Save setting value ◦
Reset [Button]	Clean all setting ◦

For example:

## Dial Plan

You could the set the dial plan in this page.

Drop prefix :	<input type="radio"/> Yes <input checked="" type="radio"/> No
Replace rule 1:	002 + 8613+8662
Drop prefix :	<input checked="" type="radio"/> Yes <input type="radio"/> No
Replace rule 2:	006 + 002+003+004+005+007+009
Drop prefix :	<input type="radio"/> Yes <input checked="" type="radio"/> No
Replace rule 3:	009 + 12
Drop prefix :	<input type="radio"/> Yes <input checked="" type="radio"/> No
Replace rule 4:	007 + 5xxx+35xx+21xx
Dial now:	*xx+#xx+11x+xxxxxxxx
Auto Dial Time:	5 (3~9 sec)
Use # as send key:	<input checked="" type="radio"/> Yes <input type="radio"/> No
Use * for IP dialing:	<input checked="" type="radio"/> Yes <input type="radio"/> No

1: Drop prefix: No, Replace rule 1: 002, 8613+8662

Explanation : If you dial a number that has a prefix matching 8613 or 8662, the device will automatically append the number 002 in front of the dialed number, therefore the number that will be dialed out is [002+8613+xxx] or [002+8662+xxx] depending on which of the two numbers were dialed.

2 : Drop prefix: Yes, Replace rule 2: 006, 002+003+004+005+007+009 ;

Explanation : If you dial a number that has a prefix matching 002, 003, 004, 005, 007 or 009, the device will drop all these numbers and replace it with 006, therefore the number that will be dialed out is [006+xxx].

3: Drop prefix: No, Replace rule 3: 009, 12

Explanation : If you dial a number that has a prefix matching 12, the device will automatically append the number 009 in front of the dialed number, therefore the number that will be dialed out is [009+12+xxx].

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### 4: Drop prefix: No, Replace rule 4: 007, 5xxx+35xx+21xx

Explanation : This replacement rule will check if the first digit of the number is 5 followed by any three digits, if it is, the device will automatically append 007 to the dialed number. Therefore the number that will be dialed out is [007+5xxx]. This rule will also check whether the first two digits of the number dialed by the user is 35 or 21 followed by any two digits, if it matches, the device will automatically append 007 to the dialed number. Therefore the number that will be dialed out is [007+35xx] or [007+21xx] correspondingly. However, if the user dials a number that does not match the rule, for instance 534, the device will detect that only 2 digits were inputted to the end of the digit 5, not three, as a result the device will only dial the number 534 without appending 007. Likewise, if the number dialed does not match any of the prefix rules, only the original number will be dialed.

### 5: Auto Dial Time: 5

Explanation: While dialing a number, once the user stops pressing the keypad for 5 seconds, the device will commence the dialing process. For example, if the user dials 58946869 and stops dialing for 5 seconds, this number will be dialed. You can set this option within the range of 3 – 9 seconds.

### 6: Dial now: \*xx+#xx+11x+xxxxxxxx

Explanation 1: If the number dialed matches the rule “\*xx”, it will automatically dial the dialed number, e.g. \*00, \*01, \*02... \*99. If the user happens to dial more digits in the end such as \*001111, the system will detect that the first two matches the rule, and send out the number \*00 regardless of the remaining digits. Hence the name Dial Now.

Explanation 2: If the number dialed matches the rule “#xx”, it will automatically dial the dialed number, e.g. #00, #01, #02... #99. If the user happens to dial more digits in the end such as #001111, the system will detect that the first two matches the rule, and send out the number #00 regardless of the remaining digits. Hence the name Dial Now.

Explanation 3: If the number dialed matches the rule “11x”, then it will automatically dial the dialed number, e.g. 110, 111, 112...119. If the user happens to dial more digits in the end such as 1101234 the system will detect that the first three matches the rule, and send out the number 110 regardless of the remaining digits. Hence the name Dial Now.

Explanation 4: If it detects the number dialed is 8 digits, then it will automatically send out the number dialed, e.g. 12345678.



- 3.4.9 Flash Time Setting function: When you use the PSTN Phone and you need to press the Hook to do the Flash (Switch to the other phone line or HOLD), this function is for you to set the time you press the Hook to represent the Flash function. When you finished the setting, please click the Submit button. If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically (**Note: Configuration for FXO Flash Time is only supported in ATA171M**).

**Flash Time Setting**

You could set the flash time in this page.

**FXO Flash Time**  
Flash Time:  x 10MS (9~120)

**FXS Flash Time**  
Max Flash Time:  x 10MS (4~255)

Figure 9. Flash Time Setting

- 3.4.10 Call Waiting Setting function: You can Enable/Disable the Call Waiting function, When you are talking with someone, there is a new incoming call, you will hear the call waiting tone. When you finished the setting, please click the Submit button. If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.

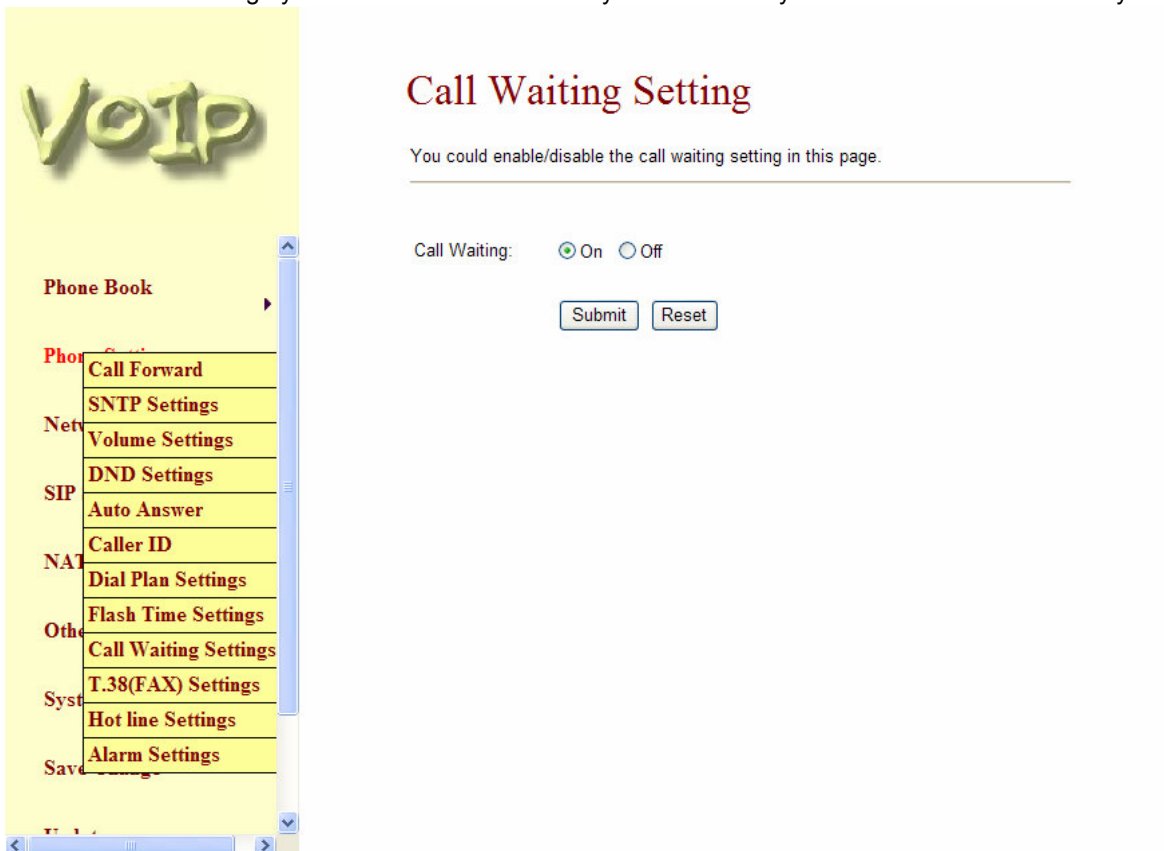


Figure 10. Call Waiting Setting

- 3.4.11 T.38 Setting function: You can Enable/Disable the T.38 function. When you finished the setting, please click the Submit button. If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically (**Note: T.38 Port of Phone 2 is only supported in ATA172**).

Figure 11. T.38 (FAX) Setting

### 3.5 Hot line

#### Hot line Setting

You could set the hot line in this page.

Use Hot Line :  Enable  Disable

Hot line number:

This function is support auto dial to you setting hot line number, when you setting this function device cannot dial any number.

## 3.6 Alarm setting

## Alarm Settings

You could set the alarm time in this page.

Alarm:  ON  OFF

Alarm Time:  :  (hh:mm)

Current time: 2006-10-05 17:47

Alarm time: setting telephone ring time,when you setting time with current time are match device should produce a ring ,this time format is 24 hours.

## 3.7 Network

- 3.7.1 In Network you can check the Network Status, WAN Settings, LAN Settings, DDNS Settings, VLAN Settings, DMZ Setting, Virtual Server and PPTP Settings.
- 3.7.2 Network Status: You can check the current Network setting in this page.

**Network Status**

This page shows current status of network interfaces of the system.

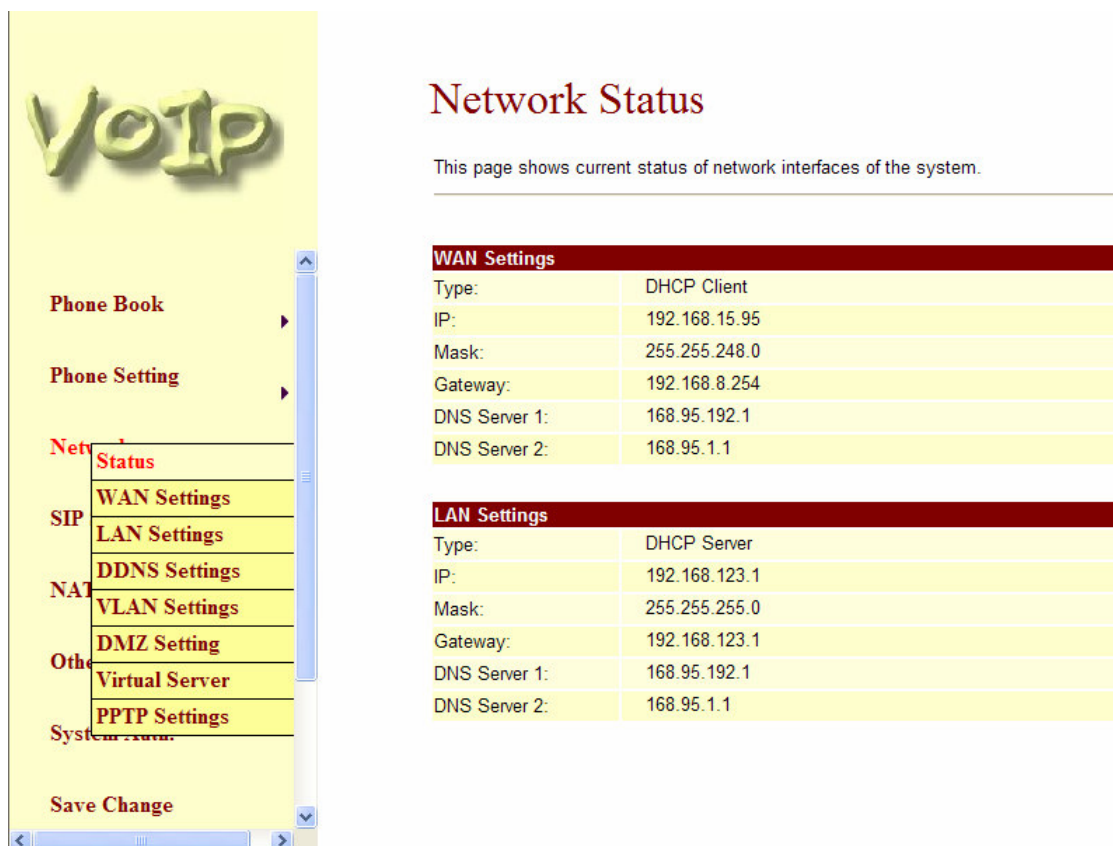
WAN Settings	
Type:	DHCP Client
IP:	192.168.15.95
Mask:	255.255.248.0
Gateway:	192.168.8.254
DNS Server 1:	168.95.192.1
DNS Server 2:	168.95.1.1

LAN Settings	
Type:	DHCP Server
IP:	192.168.123.1
Mask:	255.255.255.0
Gateway:	192.168.123.1
DNS Server 1:	168.95.192.1
DNS Server 2:	168.95.1.1

Figure 12. Network Status

## 3.7.3 WAN and LAN Settings:

- 1- If you change the WAN port's setting to Fix IP Mode, then you have to make sure the IP address, Net Mask, Gateway, and DNS setting is suitable in your current network environment
- 2- The WAN port is DHCP Client mode, You can change the setting to Fixed IP or PPPoE Mode. **NOTE: WAN port IP address is in DHCP mode by default, please use #126# to hear WAN port get IP address.**
- 3- If you change the WAN port's setting to PPPoE Mode, you have to input a correct username/password to get the IP address from your Internet Service Provider..
- 4- The LAN port's default IP address is 192.168.123.1, Net Mask is 255.255.255.0., and DHCP Server enabled. The start IP address is 150, end IP address is 200. It is not necessary to change the LAN settings.
- 5- You can connect your PC to the LAN port, set your PC as DHCP Client mode, then you can get IP addresses from the ATA.
- 6- When you finished the setting, please click the Submit button.
- 7- If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.



The screenshot displays the ATA web interface. On the left is a navigation menu with a 'VOIP' logo at the top. The menu items include 'Phone Book', 'Phone Setting', 'Network Status' (highlighted), 'SIP', 'NAT', 'Other', and 'System'. Under 'Network Status', there are sub-items: 'Status', 'WAN Settings', 'LAN Settings', 'DDNS Settings', 'VLAN Settings', 'DMZ Setting', 'Virtual Server', and 'PPTP Settings'. At the bottom of the menu is a 'Save Change' button. The main content area is titled 'Network Status' and contains a descriptive sentence: 'This page shows current status of network interfaces of the system.' Below this are two tables: 'WAN Settings' and 'LAN Settings'.

## Network Status

This page shows current status of network interfaces of the system.

WAN Settings	
Type:	DHCP Client
IP:	192.168.15.95
Mask:	255.255.248.0
Gateway:	192.168.8.254
DNS Server 1:	168.95.192.1
DNS Server 2:	168.95.1.1

LAN Settings	
Type:	DHCP Server
IP:	192.168.123.1
Mask:	255.255.255.0
Gateway:	192.168.123.1
DNS Server 1:	168.95.192.1
DNS Server 2:	168.95.1.1

Figure 13. Network Settings

Bridge Setting: If you don't want to use the NAT Mode, then you can set the network setting in this page.

- 8- The TCP/IP Configuration item is to setup the LAN port's network environment. You may refer to your current network environment to configure the VoIP Phone properly.
- 9- If you change the LAN port's setting to Fix IP Mode, then you have to make sure the IP address, Net Mask, Gateway, and DNS setting is suitable in your current network environment.
- 10- If you change the LAN port's setting to DHCP Client Mode, then you have to make sure in your current network environment has a DHCP server, then the TA will get the IP address from the DHCP Server.
- 11- If you change the LAN port's setting to PPPoE Mode, you have to input a correct username/password to get the IP address from your Internet Service Provider.
- 12- If you set the Bridge On, then the two Fast Ethernet ports will be transparent. Usually, we suggest you set the Bridge Mode is Enable, it will easy for you to connect any one of the port to the IP Network.
- 13- When you finished the setting, please click the Submit button.
- 14- If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.

**WAN Settings**

You could configure the WAN settings in this page.

LAN Mode:  Bridge  NAT

**WAN Setting**

IP Type:  Fixed IP  DHCP Client  PPPoE

IP:

Mask:

Gateway:

DNS Server1:

DNS Server2:

MAC:

Host Name:

**PPPoE Setting**

User Name:

Password:

Figure 145. WAN Settings

- 3.7.4 DDNS Setting: You can configure the DDNS setting in this page. You need to have the DDNS account and input the informations properly. You can have a DDNS account with a public IP address then others can call you via the DDNS account. But now most of the VoIP applications are work with a SIP Proxy Server. When you finished the setting, please click the Submit button. If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.

**VOIP**

Phone Book

Phone Setting

Network Status

WAN Settings

LAN Settings

**DDNS Settings**

VLAN Settings

DMZ Setting

Virtual Server

PPTP Settings

System Status

Save Change

## DDNS Settings

You could set the configuration of DDNS in this page.

DDNS:  On  Off

Host Name:

User Name:

Password:

E-mail Address:

DDNS Server:

DDNS Server List:

Type:

Wild Card:

BACKMX:  On  Off

Off Line:  On  Off

Figure 15. DDNS Setting

- 3.7.5 VLAN Setting: You can set the VLAN setting in this page. There are two parts in this page. First one is to set the packets related to the TA, and the second parts is if you use the VLAN setting in the NAT Mode.
- 1- There are two kind of destination packets will come from the TA's WAN port, one kind of packets will go to the TA, the other will go through the LAN port to the PC.
  - 2- VLAN Packets: if you enable the first VLAN Packets and set the VID, User Priority, and CFI, then all the incoming packets will be check with the IP Address and the VID.
  - 3- VID: You can follow your service provider to set your VID.
  - 4- User Priority: Defines user priority, giving eight ( $2^3$ ) priority levels. IEEE 802.1P defines the operation for these 3 user priority bits. Usually this will be defined by your service provider.
  - 5- CFI: Canonical Format Indicator is always set to zero for Ethernet switches. CFI is used for compatibility reason between Ethernet type network and Token Ring type network. If a frame received at an Ethernet port has a CFI set to 1, then that frame should not be forwarded as it is to an untagged port.
  - 6- When you enable the first VLAN Packets and set the VID, User Priority, and CFI, then all the incoming packets with the TA's IP address and the same VID will be accept by the TA. If the incoming packets with the TA's IP address but the different VID then the packets will be discard by the TA. The Other incoming packets with different IP address will go through the LAN port to the PC.
  - 7- If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.

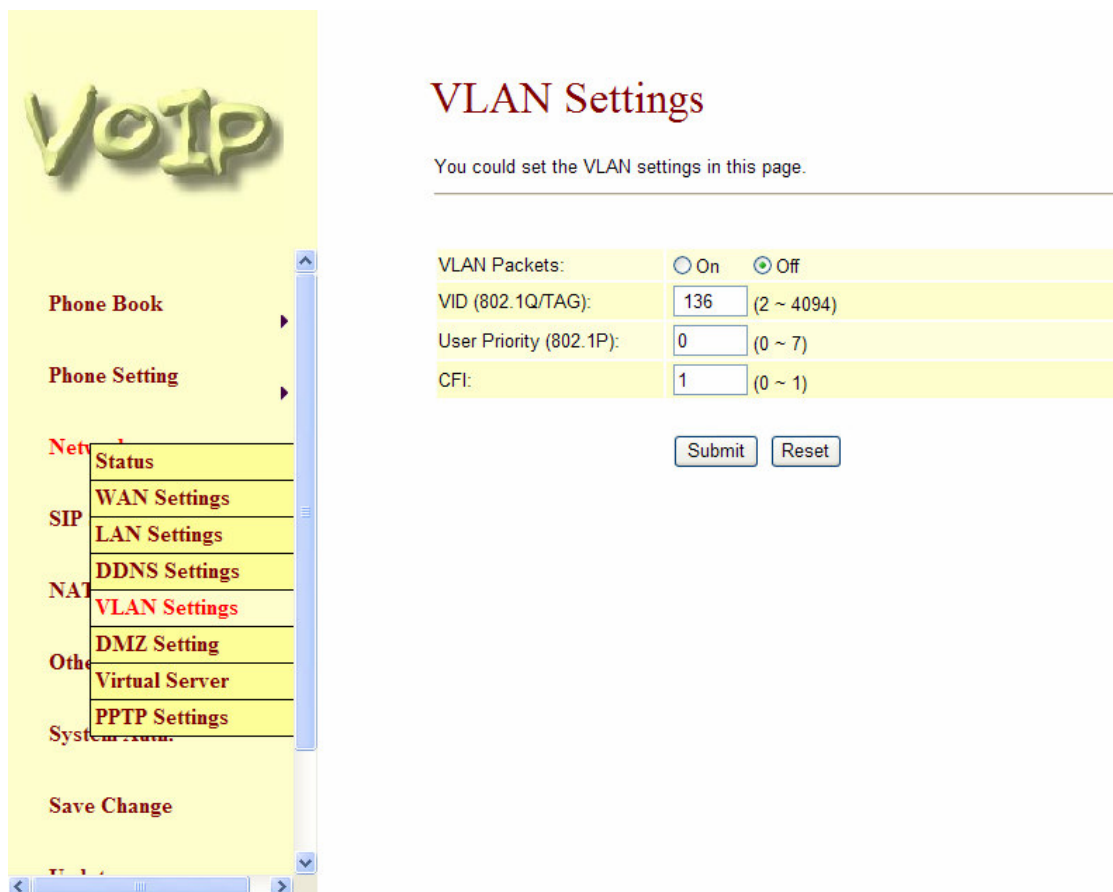


Figure 16. VLAN Setting



### 3.8 Virtual Server Setting

## Virtual Server Settings

You could set your virtual servers in this page. The usual port numbers are WEB [TCP 80], FTP (Control) [TCP 21], FTP(Data) [TCP 20], E-mail(POP3) [TCP 110], E-mail(SMTP) [TCP 25], DNS [UDP 53] and Telnet [TCP 23].

Virtual Server Page:

Num	Enable	Protocol	In Port	Ex Port	Server IP	Select
0	<input type="checkbox"/>					<input type="checkbox"/>
1	<input type="checkbox"/>					<input type="checkbox"/>
2	<input type="checkbox"/>					<input type="checkbox"/>
3	<input type="checkbox"/>					<input type="checkbox"/>
4	<input type="checkbox"/>					<input type="checkbox"/>
5	<input type="checkbox"/>					<input type="checkbox"/>
6	<input type="checkbox"/>					<input type="checkbox"/>
7	<input type="checkbox"/>					<input type="checkbox"/>

#### Add Virtual Server

Num:  (0~23)  
 Server IP:   
 Protocol:    
 Internal Port:  External Port:

Virtual Server Page	To browse through different pages, click on the drop down box and select the page number you wish to view.
Num	This column displays the serial numbers, ranging from 0-23. There are 24 records in total.
Enable	Click on the check box to enable this option, the default option is unchecked (disabled).
Protocol	Displays the TCP and UDP port information.
In Port	Displays the internal port number
Ex Port	Displays the external port number
Server IP	Shows the IP address of the Server
Select	To select a specific Virtual Server and perform configurations, click on the check box according to the server that you wish to configure.
Enable Selected [Button]	Enable the selected server
Delete Selected [Button]	Delete the selected server
Delete All [Button]	Delete all data ◦
Reset [Button]	Clean all data ◦
Num [Button]	Specify which record to insert the server on the table. The allowable range is 0-23.

## 3.9 DMZ Setting

**DMZ Setting**

You could configure your demilitarized zone setting in this page.

DMZ:  On  Off

DMZ Host IP:

DMZ	Default setting is Off (not executed). When activated, all packets (excluding SIP related packets) will be sent to the designated IP address
DMZ Host IP	Input the special IP address of the DMZ host.
Submit [Button]	Saves the configuration
Reset [Button]	Erases the configuration

3.10 PPTP Settings

### PPTP Settings

You could set the PPTP server in this page.

PPTP:  On  Off

PPTP Server:

PPTP Username:

PPTP Password:

PPTP	Default setting is Off (not executed). When set to On (executed), PPTP function will be activated.
PPTP Server	Input the IP address of the PPTP server's location.
PPTP Username	Input the username (login details).
PPTP Password	Input the password (login details).
Submit [Button]	Saves the configuration
Reset [Button]	Erases the configuration

### 3.11 SIP Settings

3.11.1 In SIP Settings you can setup the Service Domain, Port Settings, Codec Settings, RTP Setting, RPort Setting and Other Settings. If the VoIP service is provided by ISP, you need to setup the related informations correctly then you can register to the SIP Proxy Server correctly.

3.11.2 Subscribe for MWI : this function is offer voice mail notify.

3.11.3 I In Service Domain Function you need to input the account and the related informations in this page, please refer to your ISP provider. You can register three SIP account in the TA. You can dial the VoIP phone to your friends via first enable SIP account and receive the phone from these three SIP accounts. For the second phone you can use the same way to register.

-1- First you need click Active to enable the Service Domain, then you can input the following items:

(1-1) Display Name: you can input the name you want to display.

(1-2) User Name: you need to input the User Name get from your ISP.

(1-3) Register Name: you need to input the Register Name get from your ISP.

(1-4) Register Password: you need to input the Register Password get from your ISP.

(1-5) Domain Server: you need to input the Domain Server get from your ISP.

(1-6) Proxy Server: you need to input the Proxy Server get from your ISP.

(1-7) Outbound Proxy: you need to input the Outbound Proxy get from your ISP. If your ISP does not provide the information, then you can skip this item.

(1-8) Register Period: you need to input the Register Period get from your ISP. This is count in minute.

(1-9) You can see the Register Status in the Status item. If the item shows "Registered", then your TA is registered to the ISP, you can make a phone call directly.

(1-10) If you have more than one SIP account, you can following the steps to register to the other ISP.

(1-11) When you finished the setting, please click the Submit button.

(1-12) If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.

**Service Domain Settings**

You could set information of service domains in this page

**Phone No.:**

Realm 1 (Default)	
Active:	<input checked="" type="radio"/> On <input type="radio"/> Off
Display Name:	<input type="text" value="0702060551"/>
User Name:	<input type="text" value="0702060551"/>
Register Name:	<input type="text" value="0702060551"/>
Register Password:	<input type="password" value="*****"/>
Domain Server:	<input type="text" value="218.32.223.185:8088"/>
Proxy Server:	<input type="text" value="218.32.223.185:8088"/>

Figure 17. Service Domain Setting

- 3.11.4 Port Settings: you can setup the SIP and RTP port number in this page. Each ISP provider will have different SIP/RTP port setting, please refer to the ISP to setup the port number correctly. When you finished the setting, please click the Submit button. If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically (**Note: SIP and RTP Port settings for phone 2 is only supported in ATA172**).

**Port Settings**

You could set the port number in this page.

SIP Port of Phone1:	<input type="text" value="5060"/>	(10~65533)
RTP Port of Phone1:	<input type="text" value="60000"/>	(10~65533)
SIP Port of Phone2:	<input type="text" value="5062"/>	(10~65533)
RTP Port of Phone2:	<input type="text" value="60100"/>	(10~65533)

Figure 18. Port Setting

- 3.11.5 **Codec Settings:** you can setup the Codec priority, RTP packet length, and VAD function in this page. You need to follow the ISP suggestion to setup these items. When you finished the setting, please click the Submit button. If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.

**Codec Settings**

You could set the codec settings in this page.

Codec Priority	
Codec Priority 1:	<input type="text" value="G.729"/>
Codec Priority 2:	<input type="text" value="G.711 u-law"/>
Codec Priority 3:	<input type="text" value="G.711 a-law"/>
Codec Priority 4:	<input type="text" value="G.726 - 16"/>
Codec Priority 5:	<input type="text" value="G.726 - 24"/>
Codec Priority 6:	<input type="text" value="G.726 - 32"/>
Codec Priority 7:	<input type="text" value="G.726 - 40"/>
Codec Priority 8:	<input type="text" value="GSM"/>
Codec Priority 9:	<input type="text" value="GSM"/>

RTP Packet Length	
G.711 & G.729:	<input type="text" value="20 ms"/>
iLBC:	<input type="text" value="20 ms"/>

**Voice VAD**

Voice VAD:  On  Off

Figure 20. Codec Setting

- 3.11.6 Codec ID Setting: Sometimes 2 VoIP device with different Codec ID will cause the interoperability issue. If you are talking with others got some problems, you may ask the other one what kind of Codec ID he use, then you can change your Codec ID. When you finished the setting, please click the Submit button. If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.

**Codec ID Setting**

You could set the value of Codec ID in this page.

Codec Type	ID		Default Value
G726-16 ID:	<input type="text" value="23"/>	(95~255)	<input checked="" type="checkbox"/> 23
G726-24 ID:	<input type="text" value="22"/>	(95~255)	<input checked="" type="checkbox"/> 22
G726-32 ID:	<input type="text" value="2"/>	(95~255)	<input checked="" type="checkbox"/> 2
G726-40 ID:	<input type="text" value="21"/>	(95~255)	<input checked="" type="checkbox"/> 21
RFC 2833 ID:	<input type="text" value="101"/>	(95~255)	<input checked="" type="checkbox"/> 101

Figure 21. Codec ID Setting

- 3.11.7 DTMF Setting: you can setup the RFC2833 Out-Band DTMF, Inband DTMF and Send DTMF SIP Info in this page. To change this setting, please following your ISP information. When you finished the setting, please click the Submit button. If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.



Figure 22. DTMF Setting

- 3.11.8 RPort Function: you can setup the RPort Enable/Disable in this page. To change this setting, please following your ISP information. When you finished the setting, please click the Submit button. If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically (Note: RPort configuration for phone 2 is only supported in ATA172).



Figure 23. RPort Setting



- 3.11.9 Other Settings: you can setup the Hold by RFC, Voice/SIP QoS and SIP expire time in this page. To change these settings please following your ISP information. When you finished the setting, please click the Submit button. The QoS setting is to set the voice packets' priority. If you set the value higher than 0, then the voice packets will get the higher priority to the Internet. But the QoS function still need to cooperate with the others Internet devices. When you finished the setting, please click the Submit button. If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.

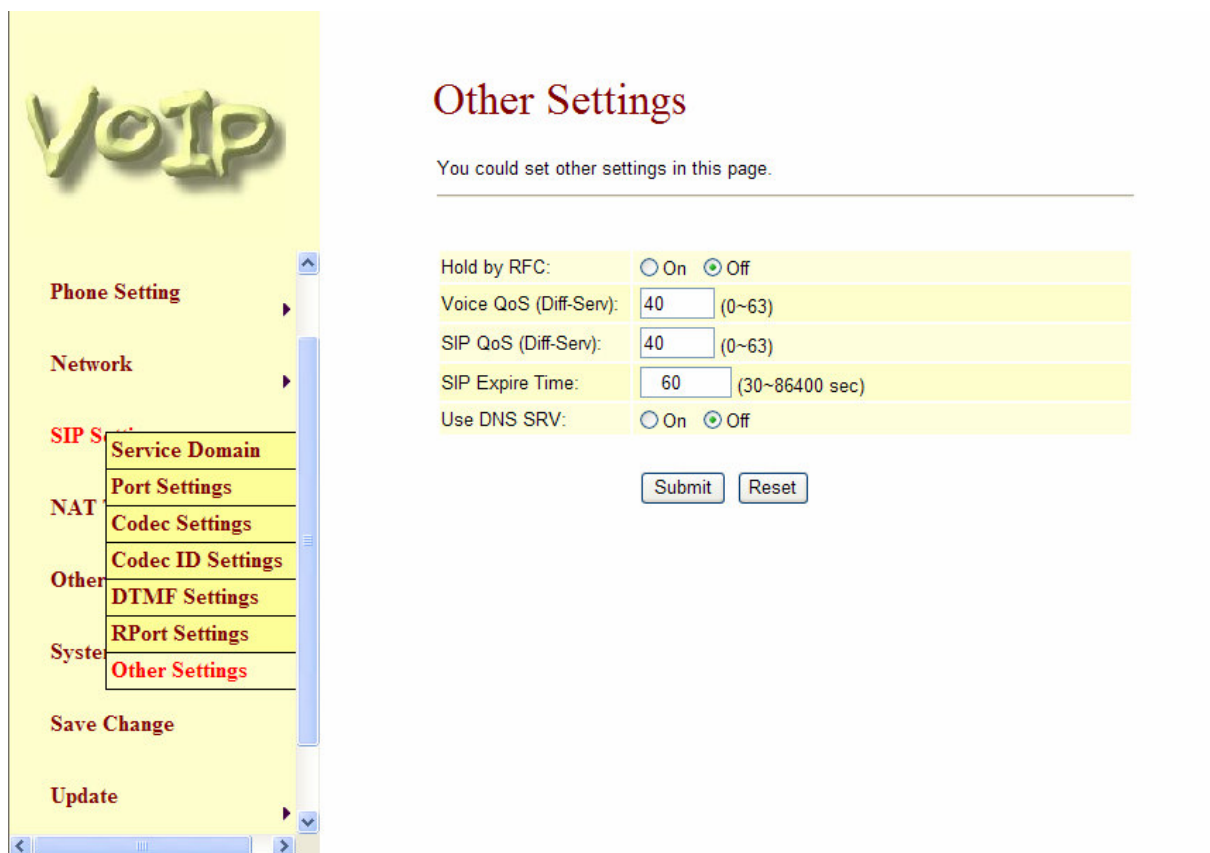


Figure 24. Other Setting

### 3.12 NAT Trans.

- 3.12.1 In NAT Trans. you can setup STUN function. These functions can help your ATA working properly behind NAT.
- 3.12.2 STUN Setting: you can setup the STUN Enable/Disable and STUN Server IP address in this page. This function can help your TA working properly behind NAT. To change these settings please following your ISP information. When you finished the setting, please click the Submit button. If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.

**STUN Setting**

You could set the IP of STUN server in this page.

**STUN:**       On    Off

STUN Server:

STUN Port:  (1024~65535)

Figure 195. STUN Setting

### 3.13 Others

- 3.13.1 In Others you can setup Auto Config, PTT Setting and ICMP Setting function. The function can configure your VoIP Phone automatically.
- 3.13.2 Auto Config: you can setup the Auto Configuration Enable/Disable and auto configuration by FTP or TFTP. You need to select the way to do the Auto Configuration and set the Server IP address in this page. This function can automatically download the configure file to setup your TA.
- 3.13.3 When you finished the setting, please click the Submit button.
- 3.13.4 If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.

### Auto Configuration Setting

You could enable/disable the auto configuration setting in this page.

Auto Configuration:  Off  TFTP  FTP  HTTP

TFTP Server:	<input type="text"/>
HTTP Server:	<input type="text"/>
HTTP Path:	<input type="text"/>
FTP Server:	<input type="text"/>
FTP Username:	<input type="text"/>
FTP Password:	<input type="text"/>
File Path:	<input type="text"/>

**Figure 206. Auto Configuration Setting**

Auto Configuration	Default setting is Off (not executed). Specify the methods on how auto configuration will be performed, the options are TFTP, FTP or HTTP.
TFTP Server	Set the TFTP Server's location, you can input IP address or Domain Name information in this text box.
HTTP Server	Set the HTTP Server's location, you can input IP address or Domain Name information in this text box.
HTTP Path	Specify the path to store data, for e.g. /123/
FTP Server	Set the FTP Server's location, you can input IP address or Domain Name information in this text box.
FTP Username	Enter the relevant Username to log on to the FTP Server.
FTP Password	Enter the relevant password associated with the inputted username to log on to the FTP Server
File Path	Specify the path to store data, for e.g. /123/
Submit [Button]	Saves the configuration
Reset [Button]	Erases the configuration

## 3.13.5 Auto configuration example

**Auto Configuration Setting**

You could enable/disable the auto configuration setting in this page.

Auto Configuration:  Off  TFTP  FTP  HTTP

TFTP Server:

HTTP Server:

HTTP Path:

FTP Server:

FTP Username:

FTP Password:

File Path:

Example 1: Auto Configuration: HTTP · HTTP Server: 192.168.1.50 · HTTP Path: /file/ ◦

Explanation : device will connect to the HTTP Server's /file/ folder path and search the matching file ◦

**Auto Configuration Setting**

You could enable/disable the auto configuration setting in this page.

Auto Configuration:  Off  TFTP  FTP  HTTP

TFTP Server:

HTTP Server:

HTTP Path:

FTP Server:

FTP Username:

FTP Password:

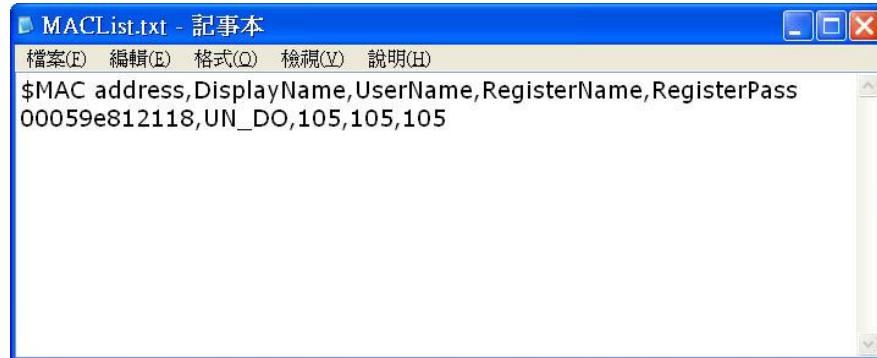
File Path:

2 : Auto Configuration: FTP · FTP Server: 192.168.1.150 · FTP Username: test · FTP Password: test · File Path: /file/ ◦

Comment 1 : device will connect to the FTP Server's /file/ folder path and search the matching file ◦

## 3.13.6 How to produce auto Configuration file.

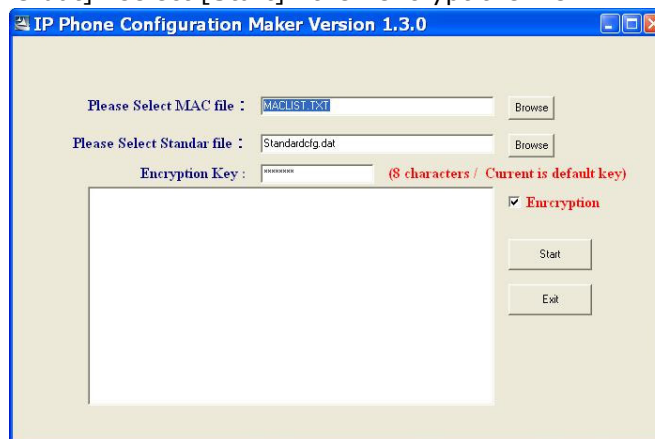
1 : Firstly, you need to find the MAC address of the device that you want to configured , for e.g. MAC Address: 00059e812118 .



Explanation 1 : open the [MACList.txt] file then enter the these information in order[MAC Address, Display Name, User Name, Register Name, Register Pass](example : 00059e812118, UN\_DO, 105, 105, 105) , when completed, please save your file.

Explanation 2 : open the [StandardCFG.dat] file (use Windows notepad program to open the file) , then change the configurations parameters accordingly, once finished, please save the file .

Explanation 3 : open the [MakeMACF.exe] file , download [MAC File: MACList.txt, Standard File: StandardCFG.dat] , select [Start] , then encrypt the file .

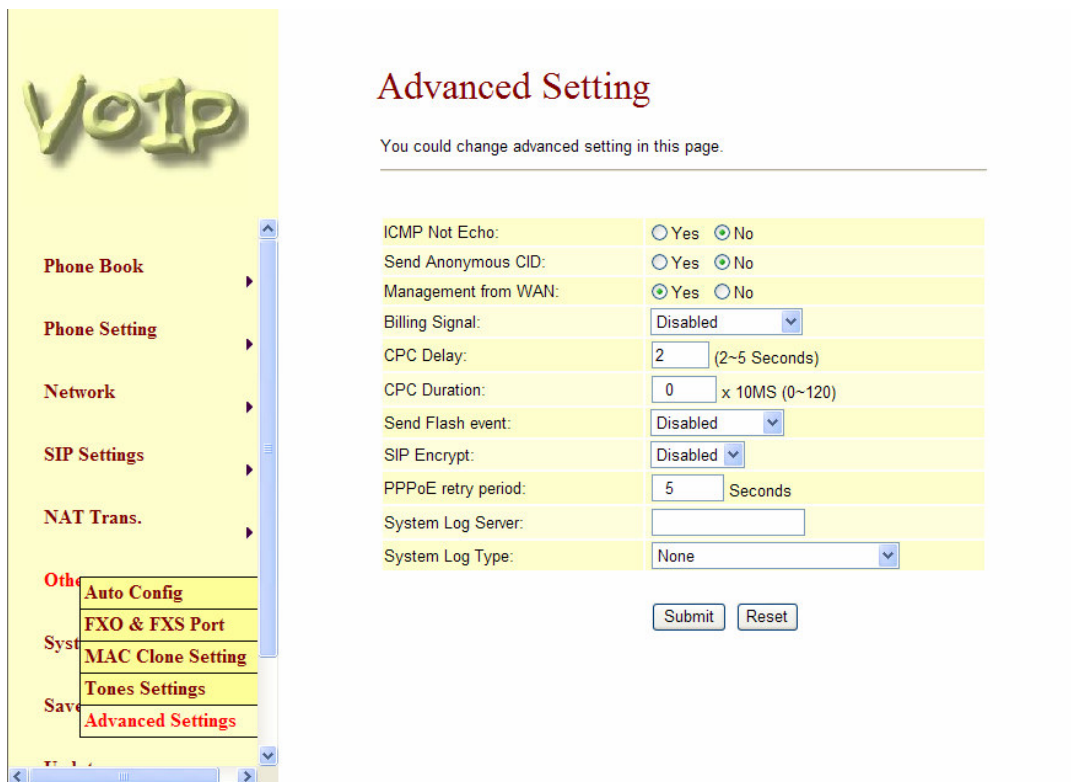


Explanation 4 : the program will produce a encrypted string [00059e812118.dat] as the filename .

Explanation 5 : please insert the name of the newly encrypted filename [00059e812118.dat] to your [HTTP or FTP or TFTP Server] file path .

## 3.13.7 Advanced Setting

ICMP Setting: you can setup the ICMP echo Enable/Disable in this page. This function can disable echo when someone ping this device, it can avoid haker try to attack the device. When you finished the setting, please click the Submit button. If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.



**Advanced Setting**

You could change advanced setting in this page.

ICMP Not Echo:	<input type="radio"/> Yes <input checked="" type="radio"/> No
Send Anonymous CID:	<input type="radio"/> Yes <input checked="" type="radio"/> No
Management from WAN:	<input checked="" type="radio"/> Yes <input type="radio"/> No
Billing Signal:	Disabled ▾
CPC Delay:	2 (2~5 Seconds)
CPC Duration:	0 x 10MS (0~120)
Send Flash event:	Disabled ▾
SIP Encrypt:	Disabled ▾
PPPoE retry period:	5 Seconds
System Log Server:	
System Log Type:	None ▾

Submit Reset

Figure 218. Advanced Setting

# ATA-171/172/171P/171M (ATA-S1/S2/P/M)

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ICMP Not Echo	Default setting is No (do not activate). Once activated all ping messages will not be responded.
Send Anonymous CID	Default setting is No (do not activate). Once activated the device will not send its own number.
Management from WAN	Default setting is Yes (do not activate). Once activated the device will restrict users to connect to it's WAN port ( <b>Note: Only supported in ATA171m</b> ).
Billing Signal (*)	Default setting is Disabled (do not activate). Once activated the device will send a signal to notify about the billing status (Polarity Reversal, Tone_12K, Tone_16k) <a href="#">Support FXS Port</a>
CPC Delay	Default is 2 seconds, allows the system the ability to adjust the time taken to lower the voltage to 0V upon disconnection. <a href="#">Support FXS Port</a>
CPC Duration	Default value is 0ms (do not lower any voltage). Specifies how long the voltage will remain in ms when it is lowered to 0V.
Send Flash event	Default setting is Disabled (do not activate). Provides two methods for sending flash event messages; DTMF Event and SIP Info.
SIP Encrypt	Default setting is Disabled (do not activate). SIP's encryption method, four options to choose from; INFINET, AVS, WALKERSUN1, WALKERSUN2. <b>Only works under environments that provide these services.</b>
PPPoE retry period (*)	Default value is 5 seconds, range is from 5~255. Specifies the time taken to redial when PPPoE dialing fails.
System Log Server (*)	Specifies the location of the System log server where log information will be stored.
System Log Type (*)	Default setting is None (do not activate). Specifies the format of system log messages, four to choose from; None, Call Statistics, Debug Information and Both.
Submit [Button]	Save setting value.
Reset [Button]	Clean all setting.

- 3.13.8 FXS and FXO impedance Setting: you can setup the FXS and FXO in this page. When you are using different country's PSTN Phone, you have to set the country's setting to meet the requirement. When you finished the setting, please click the Submit button. (**Note: Configuration for FXO is only supported in ATA171M**).

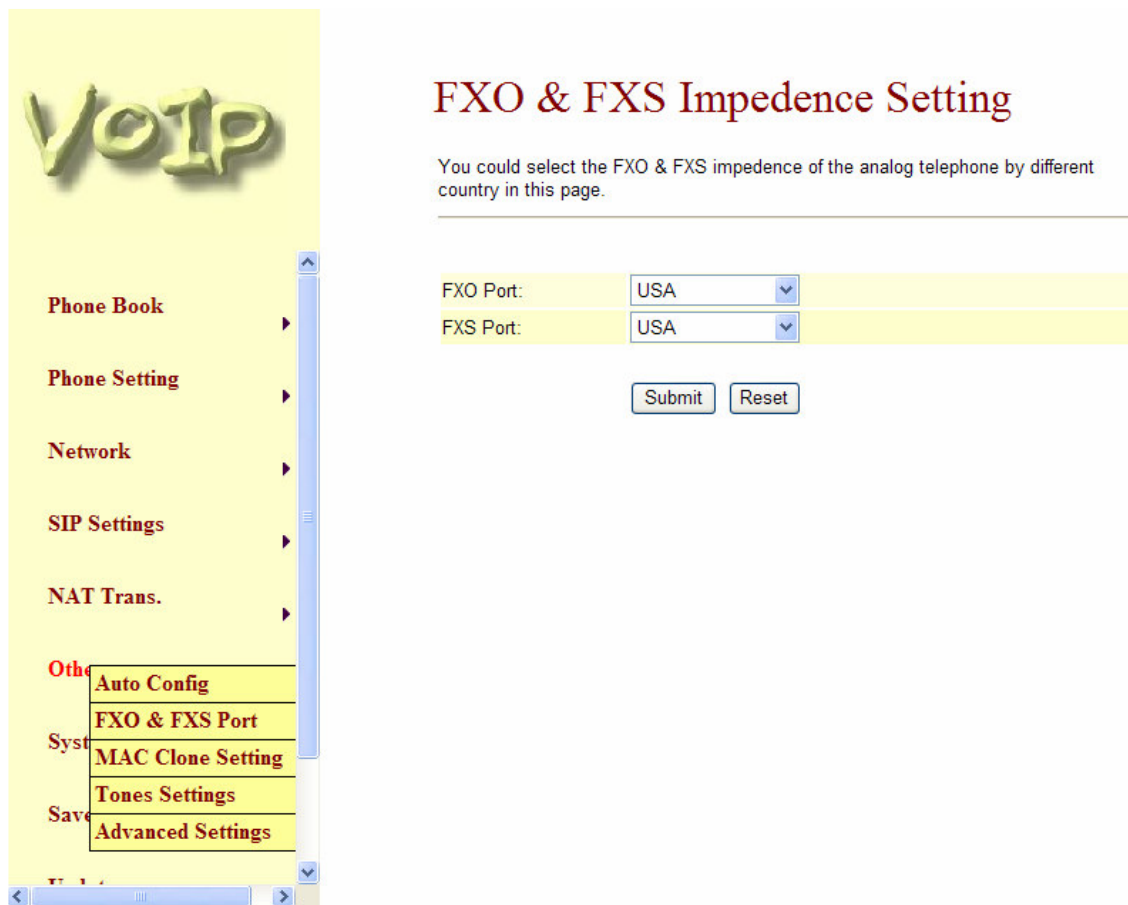


Figure 229. FXS and FXO impedance Setting



### 3.13.9 (Call Transfer Operation)

#### Blind Transfer (Unconditional Transfer)

B calls A, A and B establishes a connection and during the conversation, A performs a call transfer to a third party. Firstly, A holds B's conversation channel, presses #510# then keys in the number of the third party. After that, A presses the hash symbol “#” to initiate the call transfer to the third party. **Note: For 171M, this will only work when transferring a call from IP to IP.**

#### Attendant Transfer

B calls A, A and B establishes a connection and during the conversation, A performs a call transfer to a third party. Firstly, A holds B's conversation channel, presses #511# then keys in the number of the third party. After that, A presses the hash symbol “#” to initiate the call transfer to the third party C. C accepts the incoming call and establishes a conversation channel by answering the incoming ring tone, when A hangs up during the conversation with C, the call is transferred where B and C will be in the same conversation channel, allowing them to talk to each other. **Note: For 171M, if the transfer is performed from IP to PSTN, then the command used is #514#. If the call is performed from PSTN to IP, no access code is needed, when flash is pressed on the phone set connected to the ATA, the original caller will hear a dial tone provided by IP and continue the dialing process.**

### 3.13.10 3-way (Conference)

B calls A, A and B establishes a connection and during the conversation, A would like to add another third party to the conversation. A holds the conversation channel with B, presses #512# then keys in the number of the third party. After that, A presses the hash symbol “#” to initiate the call to the third party C. Once C accepts the incoming call, A will then press the function button “flash” to enable the 3-way calling mode, where all three parties can now talk to one another.

### 3.13.11 (Call Waiting/Answering a Call on Waiting)

During the conversation between A and B, another third party C calls A, which A will notice from the call waiting tone that can be heard from A's side of the conversation channel. A will then hold B on standby, while switching to a different line in order to communicate with C. If B is still on hold, and A would like to talk to B again, A can release the hold off B and continue the original conversation.

## 3.14 MAC Clone setting

## MAC Clone Setting

You could enable/disable the MAC clone setting in this page.

MAC Clone:       On    Off



MAC Clone setting: This function changes the MAC Addresses of workstations in a LAN to which that are identical to the WAN port; this is done due to the fact that some ISP companies restrict the use of multiple MAC Addresses through PPPoE.

connect LAN port PC MAC Address to device WAN Port, let your PC MAC address with your device are same MAC ; Because some ISP company should lock (PPPoE) MAC Address .

## 3.15 System Auth.

- 3.15.1 In System Authority you can change your login name and password. When you finished the setting, please click the Submit button. If there is nothing need to change, please click the Save Change Item in the left side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.

Figure 30. System Authority

### 3.16 Save Change

- 3.16.1 In Save Change you can save the changes you have done. If you want to use new setting in the ATA, You have to click the Save button. After you click the Save button, the ATA will automatically restart and the new setting will effect.

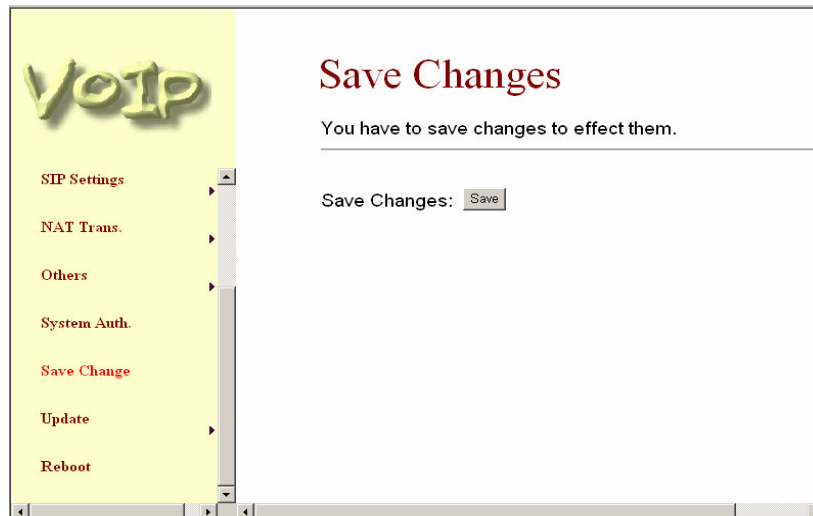


Figure 31. Save Change

### 3.17 Update Rom firmware:

3.17.1 In Update you can update the ATA's firmware to the new one or do the factory reset to let the ATA back to default setting.

3.17.2 In New Firmware function you can update new firmware via HTTP in this page. You can upgrade the firmware by the following steps:

- 1- Select the firmware code type, ROM code.
- 2- Click the "Browse" button in the right side of the File Location or you can type the correct path and the filename in File Location blank.
- 3- Select the correct file you want to download to the ATA then click the Update button.
- 4- After finished the update firmware process, the system will Reboot automatically.

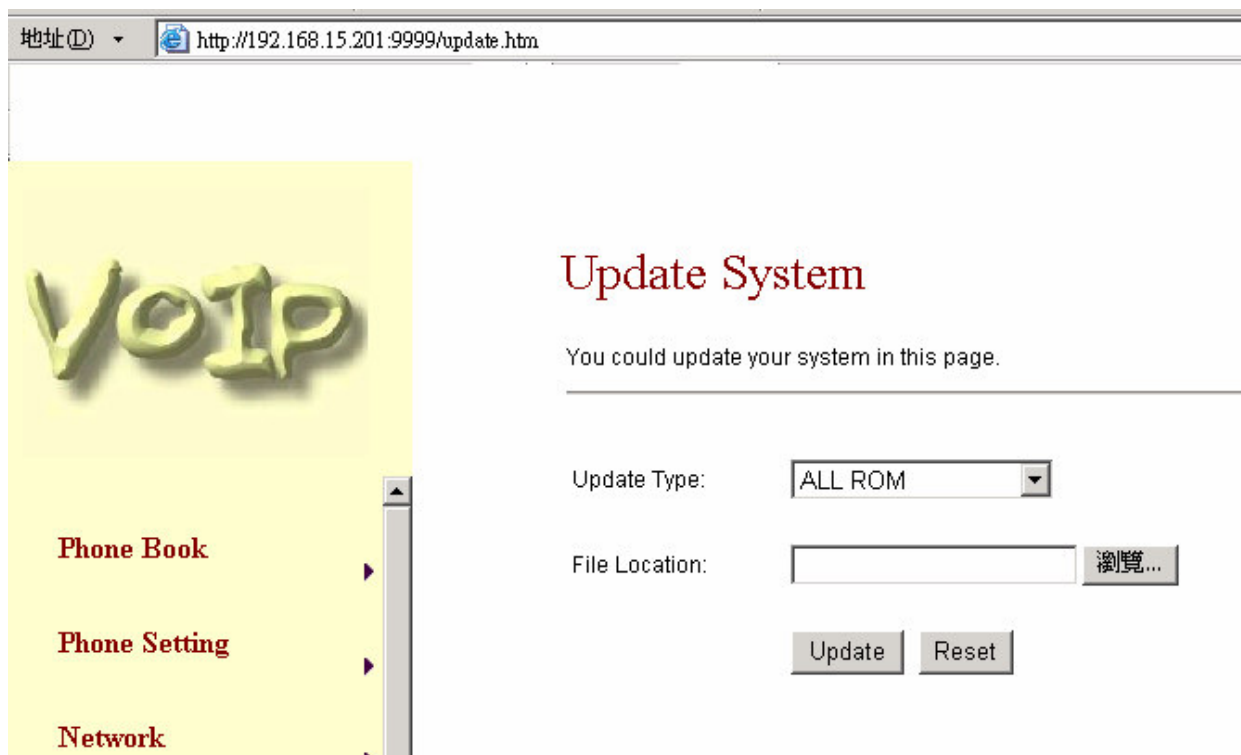


Figure 32. Update Firmware

3.17.3 In Default Setting you can restore the TA to factory default in this page. You can just click the Restore button, then the TA will restore to default and automatically restart again. The Default Setting will be NAT Mode, WAN port is DHCP Client Mode, LAN port is Fixed IP Mode and the IP Address is 192.168.123.1.



Figure 33. Restore Default Setting

### 3.18 Reboot

3.18.1 Reboot function you can restart the ATA. If you want to restart the ATA, you can just click the Reboot button, then the ATA will automatically.

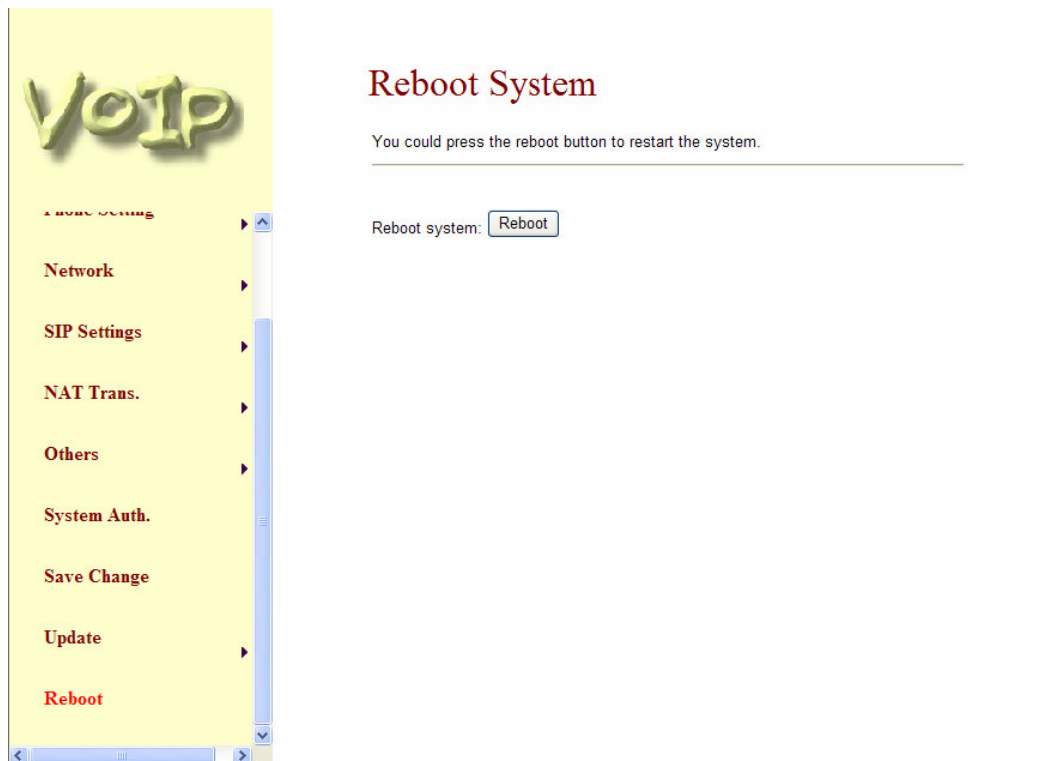


Figure 34. Reboot System

#### 4 Setup the ATA by using Console (Hyper Terminal)

##### 4.1 Configure the COM port

First Open the hyper terminal window, select the connection by the COM port, and then click the "Setting" button.

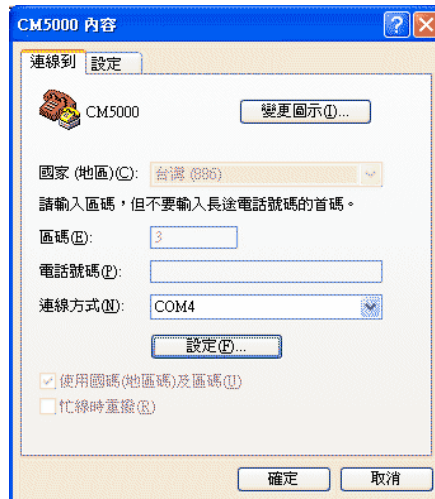


Figure 23. Console Setting-1

Set the COM port's setting as following setting. Then click OK.

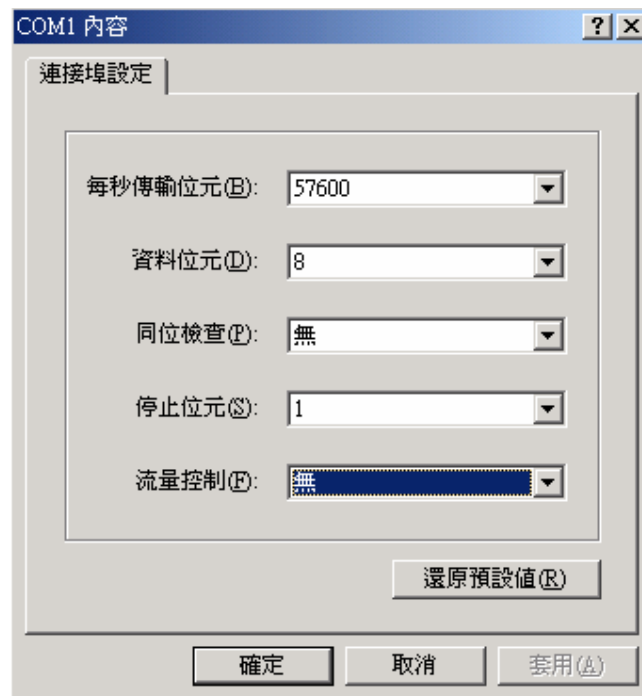


Figure 24. Console Setting-2

### 4.2 Login into the ATA

After finished the setting, click the “Connect” button (looks like a telephone icon). Then the hyper terminal is ready to connect to the ATA. Press “Enter” and the hyper terminal will show the “Login: “. Input “root” and press the “Enter” button. Then hyper terminal will show the “Password: “. Input “test” and press the “Enter” button. Now you already login the ATA. Please follow the CLI command list to configure the ATA with proper instruction and value.

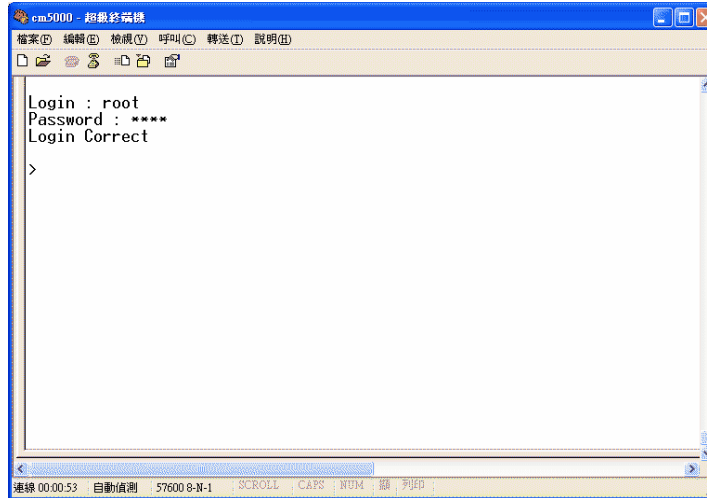


Figure 25. Console Screen



## 4.3 Using CLI command to configure the ATA

### 4.3.1 CLI command list as below:

Index	Command	Description
1	?	Show CLI Command
2	arp	ARP Configuration
3	ipconfig	Interface Configuration
4	save	Save to flash
5	reboot	Reboot
6	exit	Exit
7	debugmode	Enter Debug Mode
8	update	Update Flash Code/RAM
9	auth	Change User Name and Password
10	nat	NAT Configuration
11	dns	DNS Configuration
12	ping	ping [-IN] [IP-addr host-name]
13	sip	SIP Configuration
14	ddns	DDNS Configuration
15	sntp	SNTP Configuration
16	vlan	VLAN Configuration
17	time	Get System Time
18	mactab	Show MAC Learning Table
19	dump	Read/Write Memory
20	book	Edit phone book
21	reload	Reload Factory Setting
22	watchdog	WatchDog Function
23	phone	Phone Setting
24	weblogo	Change Web's logo
25	dsp	Show dsp type
26	addport	Add Nat Port Mapping
27	cid	Select slic Cid
28	slic	read or write slic registers
29	ver	Firmware Version

-1- "?" function is to show CLI command list in the screen.

-2- arp function

Index	Command	Description
1	?	Show 'arp' Option
2	-a	Show ARP Table
3	-d	Delete ARP Table
4	-s	Set Static ARP Table
5	(null)	Show ARP Table

-3- ipconfig function

Index	Command	Description
1	?	Show 'ipconfig' Option
2	-if0	Interface 0
3	-if1	Interface 1
4	-if2	Interface 2
5	-h	Set Host Name
6	-a	Set ARP Cache Expire
7	-r	Restore Current Setting
8	(null)	Show IP Setting

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(3-1) ipconfig -ifN function → N is 0, 1, 2

Index	Command	Description
1	?	Show 'ipconfig -ifN' Option
2	-t	Set Host Type
3	-m	Set MAC Address
4	-i	Set IP Address
5	-nm	Set Net Mask
6	-g	Set Gateway
7	-dns0	Set Primary DNS server
8	-dns1	Set Secondary DNS server
9	-dr	Set Default Route
10	-nat	Set NAT
11	on	Enable Interface
12	off	Disable Interface
13	-dhcps	DHCP Server Setting
14	-ddns	Set DDNS
15	-bridge	Set Bridge
16	-dev0	Set Device 0 Setting
17	-dev1	Set Device 1 Setting
18	-dev2	Set Device 2 Setting
19	(null)	Show Interface Setting

-4- save function

Index	Command	Description
1	?	Show 'save' Option
2	-book	Save phone book
3	-sys	Save system setting

-5- reboot function is to restart the system.

-6- exit function is to exit the CLI.

-7- debugmode function is to enter the debugmode.

-8- update function

Index	Command	Description
1	?	Show 'update' Option
2	-os	Update OSImage(IP filename)
3	-dsp	Update DSP Image(IP filename)
4	-all	Update All Image(IP filename)
5	-server	Update Server (IP filename length)
6	-pcm	PCM(IP filename)
	-alaw	alaw (IP filename)
	-ulaw	ulaw (IP filename)
	-g729	g729 (IP filename)
	-g726.16	g726.16 (IP filename)
	-g726.24	g726.24 (IP filename)
	-g726.32	g726.32 (IP filename)
	-g726.40	g726.40 (IP filename)

IP is the TFTP server's IP address, and the filename is the image you want to download into the system.

-9- auth function

Index	Command	Description
1	?	Show 'auth' Option
2	-admin	Change Administrator user name/password
3	-sys0	Change System user0 user name/password
4	-sys1	Change System user1 user name/password
5	-sys2	Change System user2 user name/password
6	-sys3	Change System user3 user name/password
7	-sys4	Change System user4 user name/password
8	-norm0	Change Normal user0 user name/password
9	-norm1	Change Normal user1 user name/password
10	-norm2	Change Normal user2 user name/password
11	-norm3	Change Normal user3 user name/password
12	-norm4	Change Normal user4 user name/password
13	-ppp	Change PPP user name/password
14	(null)	Show auth Setting

In each item includes

Index	Command	Description
1	?	Show 'auth' Option
2	-user	Change User Name.'auth -sys3 -user xxx '
3	-pass	Change Password. 'auth -sys3 -pass xxx xxx'
4	(null)	Show auth's System/PPP Setting

If you want to change the password, you need to type the password twice in the CLI.

-10- nat function

Index	Command	Description
1	?	Show 'nat' Option
2	-vs	Set 'nat -vs' Option
3	-dmz	Set 'nat -dmz' Option
4	(null)	Show NAT Setting

In DMZ item includes

Index	Command	Description
1	?	Show 'nat -dmz' Option
2	on	EnableDMZ
3	off	EnableDMZ
4	-ip	Set DMZ IP address
5	(null)	Show DMZ Setting

-11- dns function

Index	Command	Description
1	?	Show 'dns' Option
2	-q	DNS query. dns -q domain-name
3	(null)	Show DNS Table

-12- ping function

Index	Command	Description
1	?	Show 'ping' Option
2	-l	ping [-l N] [IP-addr host-name]
3	(null)	ping [IP-addr host-name]

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### -13- sip function

Index	Command	Description
1	?	Show 'sip' Option
2	-proxy0	sip -proxy0
3	-proxy1	sip -proxy1
4	-proxy2	sip -proxy2
5	-upnp	sip -upnp on/off/show
6	-exts	sip -exts sip upnp external-port
7	-extr	sip -extr rtp upnp external-port
8	-sipp	sip udp port
9	-rtpp	sip rtp port
10	-stun	sip -stun on/off
11	-rport	sip -rport on/off
12	-sserver	sip -sserver stun-server
13	-out	sip -out outbound-proxy
14	-dump	sip -dump
15	-log	sip -log on/off
16	-drtp	sip -drtp 0/1/2
17	-rtpsc	sip -rtpsc on/off
18	-wanip	sip -wanip
19	-nattype	sip -nattype
20	-hbyrfc	sip -hbyrfc
21	-dereg	sip -dereg
22	-restart	sip -restart
23	-jbt	sip -jitter buffer Threshold
24	(null)	Show SIP Setting

### -14- ddns function

Index	Command	Description
1	?	Show 'ddns' Option
2	-type	Set DDNS Type
3	-host	Set Host Name
4	-wild	Set Wild Card Mode
5	-mx	Set Mail Exchanger
6	-backmx	Set Mail Exchanger Mode
7	-offline	Set Offline Mode
8	-user	Set Login User Name
9	-pass	Set Login Password
10	(null)	Show DDNS Setting

### -15- sntp function

Index	Command	Description
1	?	Show 'sntp' Option
2	-on	Enable SNTP Client
3	-off	Disable SNTP Client
4	-ip1	Set SNTP Server1 IP
5	-ip2	Set SNTP Server2 IP
6	-mode	Set SNTP Client Mode
7	-zone	Set GMT Time Zone: [+][-][hour]:[min]
8	-adjust	Set Adjustment Time: [second]
9	(null)	Show SNTP Setting

-16- vlan function

Index	Command	Description
1	?	Show 'vlan' Option
2	-tx	Tx Vlan setting
3	-rx	Rx Vlan setting
4	(null)	Show Vlan Setting

-17- time function

Index	Command	Description
1	?	Show 'Time' Option
2	-t	Modify Time: hour:min:sec
3	-d	Modify date: year:mon:date
4	(null)	Show Data & Time

-18- mactab function is to show MAC learning table.

-19- dump function

Index	Command	Description
1	?	Show 'dump' Option
2	-r	dump -r XXXXxxxx
3	-w	dump -w XXXXxxxx XX

-20- book function

Index	Command	Description
1	?	Show 'book' Option
2	-a	Show answer list
3	-c	Show call list
4	-s	speed dial
5	-p	phone book

-21- reload function is to Reload Factory Setting, please make sure you want to do the factory reset.

-22- watchdog function

Index	Command	Description
1	?	Show 'WatchDog' Option
2	on	Enable WatchDog
3	off	Disable WatchDog
4	(null)	Show WatchDog Setting

-23- phone function

Index	Command	Description
1	?	Show 'phone' Option
2	-autoanswer	phone auto answer
3	-vol	Volume setting
4	-block	Block Incoming call
5	-ring	Set Melody Ringer
6	-forward	Auto-forward Incall to Phone[0-9] in Book
7	(null)	Show Phone Setting

-24- weblogo function

Index	Command	Description
1	?	Show 'weblogo' Option
2	-on	Vender Logo
3	-off	Default Logo
4	(null)	Show weblogo Setting

-25- dsp function is to show dsp code type.

-26- addport function is to add Nat Port Mapping

-27- cid function

Index	Command	Description
1	?	Show 'cid' Option
2	-off	Disable Slic Cid signal
3	-1	Tx FSK after 1st Ring
4	-2	Tx FSK before 1st Ring
5	-3	Tx DTMF before 1st Ring
6	-4	Tx FSK with Line reversal before 1st Ring
7	-5	Tx DTMF with Line reversal before 1st Ring
8	-time	FSK cid with time message
9	-single	Single type FSK CID
10	(null)	Show Cid Option

-28- slic function

Index	Command	Description
1	?	Show 'slic' Option
2	-ring	Issue Ring signal
3	-r	read slic addr
4	-w	write slic addr
5	-a	read all slic reg
6	(null)	Show slic register

-29- ver function is to show Firmware Version.

### 5 How to make a phone call

When your ATA is configured properly, you can make a phone call to your friend in the same Service provider.

If you want to make a phone call, you can dial the phone number and press “#” button to start to dial the phone number.

The ATA also provides some functions that list as below:

1. Call Waiting: When a new call is coming while you are talking, you can push the Flash button to switch to the new call. You can push the Flash button to switch between the two calls.
2. Call Hold: You can push the Hold key to hold the current call for a while, then push Hold key again to keep talking.
3. 3-way conference: If you want to make a 3-way conference call, you can make a phone call to the first phone number. After the call is established, push the Flash button then you can hear the Dial tone, then make a phone call to the second phone number. When the second call is established, press the Flash button again.