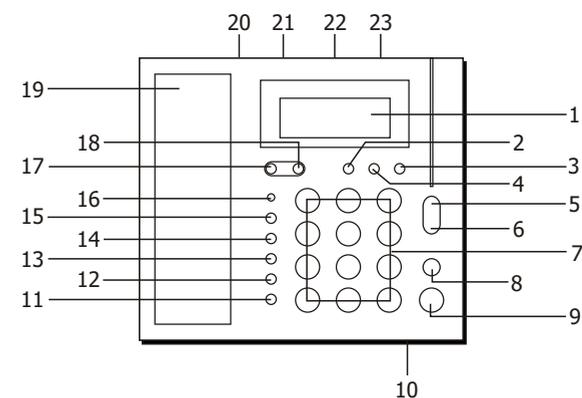


# IP Phone Manual

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# IP Phone Manual

## DESCRIPTION



- |               |             |
|---------------|-------------|
| 1. LCD        | 13. CONF    |
| 2. OK         | 14. FLASH   |
| 3. PHBOOK     | 15. HOLD    |
| 4. MENU/ESC   | 16. POWER   |
| 5. VOL +      | 17. UP/DEL  |
| 6. VOL -      | 18. DOWN    |
| 7. NUMBER KEY | 19. HANDSET |
| 8. REDIAL     | 20. PSTN    |
| 9. H.F        | 21. WAN     |
| 10. H.F MIC   | 22. LAN     |
| 11. CALL IN   | 23. DC7.5V  |
| 12. CALL OUT  |             |

## 1. Introduction

This user's manual is for VoIP Phone with FXO interface. This user's manual will explain the keypad instruction, web configuration and command line configuration for the VoIP Phone. Before using the VoIP Phone, some setup processes are required to make the VoIP Phone work properly. Please refer to the Setup Menu for further information.

### 1.1 Hardware Overview

The VoIP Phone has the following interfaces for Networking, telephone interface, and power connector.

# IP Phone Manual

Two RJ-45 Networking interface, these two interfaces support 10/100Mbps Fast Ethernet. you can connect one RJ-45 Fast Ethernet port to the ADSL or Switch, and connect the other one to your computer.

## 1.2 Software Overview

### Network Protocol

- SIP v1 (RFC2543), v2(RFC3261)
- IP/TCP/UDP/RTP/RTCP
- IP/ICMP/ARP/RARP/SNTP
- TFTP Client/DHCP Client/ PPPoE Client
- Telnet/HTTP Server
- DNS Client

### Codec

- G.711: 64k bit/s (PCM)
- G.723.1: 6.3k / 5.3k bit/s
- G.726: 16k / 24k / 32k / 40k bit/s (ADPCM)
- G.729A: 8k bit/s (CS-ACELP)
- G.729B: adds VAD & CNG to G.729

### Voice Quality

- VAD: Voice activity detection
- CNG: Comfortable noise generator
- LEC: Line echo canceller
- Packet Loss Compensation
- Adaptive Jitter Buffer

### Call Function

- Call Hold
- Call Waiting
- Call Forward
- Caller ID
- 3-way conference

### DTMF Function

- In-Band DTMF
- Out-of Band DTMF
- SIP Info

### Tone

- Ring Tone
- Ring Back Tone
- Dial Tone
- Busy Tone
- User Programming Tone

### Phone Function

- Volume Adjustment
- Speed dial, Phone book
- Flash
- Speaker Phone

### IP Assignment

- Static IP
- DHCP
- PPPoE

### Security

- HTTP 1.1 basic/digest authentication for Web setup
- MD5 for SIP authentication (RFC2069/ RFC 2617)

### QoS

- ToS field

### NAT Traversal

- STUN

### Configuration

- Web Browser
- Console/Telnet
- Keypad

# IP Phone Manual

## SIP Server

- Registrar Server (three SIP account)
- Outbound Proxy

## Firmware Upgrade

- TFTP
- Console
- HTTP
- FTP

## 2. Keypad interface for IP Phone demo system

### 2.1 Keypad description

Key Name	Description	Note
1	1, -, ?, !, ?	
2	2, a, b, c, A, B, C	
3	3, d, e, f, D, E, F	
4	4, g, h, I, G, H, I	
5	5, j, k, l, J, K, L	
6	6, m, n, o, M, N, O	
7	7, p, q, r, s, P, Q, R, S	
8	8, t, u, v, T, U, V	
9	9, w, x, y, z, W, X, Y, Z	
0	0, space	
*	*, o, :, @	
#	Start dialing process	
Flash	This is "Transfer" to the other phone number	
REDIAL	This is "REDIAL" the same number again	
HOLD	This is "HOLD" function	
OK	This is "OK", accept setting	
UP/DOWN	This is Up ↑ and Down ↓ key	
MENU	This is the "Menu" key to set the IP Phone	
H-F	This the Speaker Phone	
Conf	This is three way conference function	
Call In	This is Incoming call list	
Call Out	This is out going call list	
Volume +/-	This is volume setting	
Phone Book	This is Phone Book list	

### 2.2 IP or PSTN

If you want to use PSIN to dial the number, please firstly press **0\***, LCD will display PSTN Dialing.

## IP Phone Manual

### 2.3 Keypad Function and setting List

#### Phone Book

---

- 1 Search: Search Phone Book.
- 2 Add entry: Add new phone number to phone book.
- 3 Speed dial: Add speed dial phone number to speed dial list.
- 4 Erase all: Erase all phone number from Phone Book.

#### Call history

---

- 1 Incoming calls: Show all incoming call.
- 2 Dialed numbers: Show all dialed call.
- 3 Erase record: Delete call history.
  - All: Delete all call history.
  - Incoming: Delete all incoming call.
  - Dialed: Delete all dialed out call.

#### Phone setting

---

- 1 Call forward
  - All Forward.  
Activation: To Enabled/Disabled this function.  
Number: Forward to a Speed Dial Number.
  - Busy Forward.  
Activation: To Enabled/Disabled this function.  
Number: Forward to a Speed Dial Number.
  - No Answer Forward.  
Activation: To Enabled/Disabled this function.  
Number: Forward to a Speed Dial Number.
  - Ring Timeout: Set the Ring times to start the no answer forward function, ex: 2 means after 2 rings then forward to the dedicated number.
- 2 Block Setting
  - All: Reject all the coming calls
  - By Time: Reject all the coming calls for a period
  - Duration: Set the start time and end time to Block Setting.
- 3 Date/Time setting: Date and Time Setting.
  - Date & Time: Set the IP Phone Date and Time.
  - SNTP setting

## IP Phone Manual

SNTP: Enabled / Disable SNTP.

Primary SNTP: Set Primary SNTP server IP address.

Secondary SNTP: Set Secondary SNTP server IP address.

Time zone: Set Time zone.

Adjustment Time: Set adjustment time period.

- 4 Volume and Gain
  - Handset volume: Set Handset volume from 0~12 (max.) for you to hear.
  - Speaker volume: Set Speaker phone volume from 0~12 (max.) for you to hear.
  - Handset Gain: Set Handset Gain from 0~12 (max.) for the other site to haer.
  - Speaker Gain: Set Speaker phone Gain from 0~12 (max.) for the other site to haer.
- 5 Ringer
  - Ringer volume: Ringer volume setting from 0~15 (max.).
  - Ringer type: Ringer tone selection from 1~4.
- 6 Auto Dial: Set Auto Dial time from 3~9 seconds.
- 7 Auto Answer: This function will active on IP Phone with FXO interface. Set Auto Answr for user can re-dial a call from IP call to PSTN call or from PSTN call to IP call.
- 8 Answer Counter: This function will active on IP Phone with FXO interface. Set Auto Answer will active after the numbers of ring.

#### Network

---

- 1 WAN Setup
  - IP Type  
Fixed IP client: set network address by hand  
DHCP client: set network address using DHCP method  
PPPoE client: set network address using PPPoE
  - Fixed IP setting  
IP Address: the network address setup of this phone  
Subnet mask: subnet mask setting  
Default Gateway: gateway IP address setting  
MAC address: MAC address setting

## IP Phone Manual

- PPPoE setting  
User name: PPPoE user name setting  
Password: PPPoE Password setting
- 2 LAN Setup
  - Bridge: set Ethernet interface into bridge mode
  - NAT: set Ethernet interface into NAT mode
- 3 DNS
  - Primary DNS: First DNS address setting
  - Secondary DNS: second DNS address setting
- 4 VLAN
  - Activation: enabled/disabled VLAN setting
  - VID: setting VID 2~4094
  - Priority: setting preferred 0~7
  - CFI: 0~1
- 5 Status: Show WAN, LAN IP address and MAC address.

### SIP Settings

---

If you want to use Keypad to set the SIP setting, you have to go to item 7 (Administrator) System Authentication to input the password, or you can not change the SIP setting.

- 1 Service domain
  - First realm  
Activation: first sip server enabled/disabled  
User name: SIP user name setting  
Display name: SIP display name setting  
Register name: SIP register name setting  
Register password: SIP register password setting  
Proxy server: SIP Proxy server address setting  
Domain server: Domain server address setting  
Outbound proxy: Outbound Proxy address setting
  - Second realm  
Activation: second SIP sip server enabled/disabled  
User name: SIP user name setting  
Display name: SIP display name setting  
Register name: SIP register name setting  
Register password: SIP register password setting

## IP Phone Manual

Proxy server Proxy: SIP Proxy server address setting  
Domain server: Domain server address setting  
Outbound proxy: Outbound Proxy address setting

- Third realm  
Activation: Third SIP sip server enabled/disabled  
User name: SIP user name setting  
Display name SIP: SIP display name setting  
Register name: SIP register name setting  
Register password: SIP register password setting  
Proxy server Proxy: SIP Proxy server address setting  
Domain server: Domain server address setting  
Outbound proxy: Outbound Proxy address setting

### 2 Codec

- Codec type  
G.711 uLaw:  
G.711 aLaw:  
G.723:  
G.729:  
G.726-16:  
G.726-24:  
G.726-32:  
G.726-40:  
• VAD: Voice Active Detection Enable/Disable.

### 3 RTP setting

- Outband DTMF: Outband DTMF Enable/Disable
- Duplicate RTP  
No duplicate:  
One duplicate:  
Two duplicate:

### 4 RPort Setting: RPort Enabled/Disabled RPORT setting

### 5 Hold by RFC: disabled/enabled setting

### 6 Status: Show the SIP Proxy register status. You can use UP/Down key to check each Realm's status.

- First Realm:
- Second Realm:
- Third Realm:

## NAT Transversal

---

STUN setting

- STUN: STUN disabled/enabled
- STUN server setting

## Administrator

---

- 1 Auto Config
  - Config Mode: You can select Disable/TFTP/FTP to do the auto config function. This function must work with the Auto Config Server.
  - TFTP server: Setting the TFTP server IP address.
  - FTP server: Setting the FTP server IP address.
  - FTP Login Name: Setting the login name to the FTP server.
  - FTP Password: Setting the Password to the FTP server.
- 2 Default setting: You can restore to the default setting.
- 3 System Authentication: To do the SIP setting from Keypad, need to input the password first. Default is **test**.
- 4 Version: This will show the system's firmware version.
- 5 Watch Dog: You can use this to enable Watch Dog function to do the debugging.
- 6 Restart: You can use this function to restart your IP Phone.

## 3. Setup the VoIP Phone by Web Browser

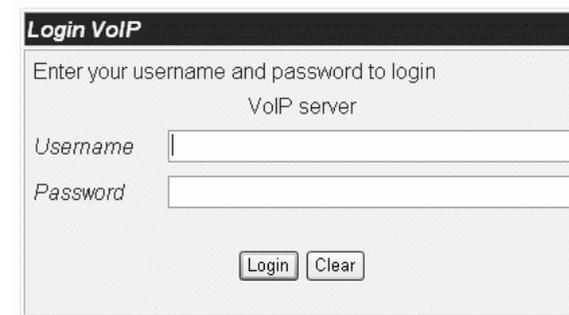
Default the IP Phone's NAT is enabled, WAN port is in DHCP Client Mode, LAN port is in DHCP Server Mode. You can connect you PC on LAN port, then you will get an IP Address from the IP Phone.

The IP Phone provides a built-in web server. You can use Web browser to configure the IP Phone. First please input the IP address `http://192.168.123.1:9999` in the Web page. Please remember to add the port number **:9999**.

### 3.1 Login.

1. Please input the username and password into the blank field. The default setting is:
  - For Administrator, the username is: root; and the password is: test. If you use the account login, you can configure all the setting.
  - For normal user, the username is: system or user; and the password is: test. If you use the account login, but you can not configure the SIP setting.

2. Click the **Login** button will move into the VOIP PHONE web based management information page.
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.



**Login VoIP**

Enter your username and password to login  
VoIP server

Username

Password

### 3.2 System Information for the VOIP PHONE

1. When you login the web page, you can see the VOIP PHONE current system information like firmware version, company... etc in this page.
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.

## System Information

This page illustrate the system related information.

Model Name:	VoIP
Firmware Version:	Mon May 8 10:07:20 2006.
Codec Version:	Wed Apr 19 18:11:29 2006.

## IP Phone Manual

### 3.3 Phone Book

1. In Phone Book contains Phone Book and Speed Dial Settings. You can setup the Phone Book and Speed Dial number. The Phone Book can store 140 phone numbers and the Speed Dial can store 10 phone numbers. If you want to use Speed Dial you just dial the speed dial number (from 0~9) then press #.
2. In the Phone Book function you can add/delete the phone number in the phone book list. You can input maximum 140 entries phone book list.
  - 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.
  - If you want to delete a phone number, you can select the phone number you want to delete then click **Delete Selected** button.
  - If you want to delete all phone numbers, you can click **Delete All** button.

The screenshot shows the 'Phone Book' web interface. At the top, it says 'Phone Book' and 'You could add/delete items in current phone book.' Below this is a 'Phone Book Page:' dropdown menu set to 'page 10'. A table with 4 columns: 'Phone', 'Name', 'URL', and 'Select' is displayed. The 'Phone' column contains numbers 90 through 99. The 'Name' and 'URL' columns are empty. The 'Select' column contains checkboxes. Below the table are three buttons: 'Delete Selected', 'Delete All', and 'Reset'. At the bottom, there is an 'Add New Phone' section with input fields for 'Position' (0~139), 'Name', and 'URL', and 'Add Phone' and 'Reset' buttons.

## IP Phone Manual

3. In Speed Dial setting function you can add/delete Speed Dial number. You can input maximum 10 entries speed dial list.
  - If you need to add a phone number into the Speed Dial list, 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.
  - If you want to delete a phone number, you can select the phone number you want to delete then click **Delete Selected** button.
  - If you want to delete all phone numbers, you can click **Delete All** button.

The screenshot shows the 'Speed Dial Phone List' web interface. At the top, it says 'Speed Dial Phone List' and 'You could set the speed dial phones in this page.' Below this is a table with 4 columns: 'Phone', 'Name', 'URL', and 'Select'. The 'Phone' column contains numbers 0 through 9. The 'Name' and 'URL' columns contain some values. The 'Select' column contains checkboxes. Below the table are three buttons: 'Delete Selected', 'Delete All', and 'Reset'. At the bottom, there is an 'Add New Phone' section with input fields for 'Position' (0~9), 'Name', and 'URL', and 'Add Phone' and 'Reset' buttons.

## IP Phone Manual

### 3.4 Phone Setting

1. In Phone Setting contains Call Forward, SNTP Settings, Volume Settings, Block Setting, Caller ID, Auto Dial Setting, Dial Plan, Flash Time Setting, Call Waiting Setting and Soft-Key Setting functions.
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.
  - All Forward: All incoming call will forward to the number you choosed. You can input the name 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.
  - Busy Forward: If you are on the phone, the new incoming call will forward to the number you choosed. You can input the name and the phone number in URL field.
  - 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 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.
  - 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.

### Forward Setting

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

All Fwd No.:  Off  IP  PSTN  
Busy Fwd No.:  Off  IP  
No Answer Fwd No.:  Off  IP  PSTN

	Name	URL/Number
All Fwd No.:	<input type="text" value="Hank"/>	<input type="text" value="204"/>
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)

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- 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. 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.

### SNTP Settings

You could set the SNTP servers in this page.

SNTP:  On  Off

Primary Server:

Secondary Server:

Time Zone: GMT    (hh:mm)

Sync. Time:    (dd:hh:mm)

3. Volume Setting function: you can setup the Handset Volume, Ringer Volume, and the Handset Gain.
  - Handset Volume is to set the volume you hear from the handset.
  - Speaker Volume is to set the volume you hear from the speaker phone.
  - Ringer Volume is to set the ringer volume.
  - Handset Gain is to set the volume send out from the handset.
  - Speaker Gain is to set the volume send out from the micro phone.
  - 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.

## Volume Setting

You could set the volume of your phone in this page.

Handset Volume:	<input type="text" value="11"/>	(0~15)
Speaker Volume:	<input type="text" value="10"/>	(0~15)
Ringer Volume:	<input type="text" value="6"/>	(0~10)
PSTN-Out Volume:	<input type="text" value="10"/>	(0~15)
Handset Gain:	<input type="text" value="10"/>	(0~15)
Speaker Gain:	<input type="text" value="9"/>	(0~15)
PSTN-In Gain:	<input type="text" value="10"/>	(0~15)

4. Melody Setting function: you can select the melody for the incoming call. 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.

## Ringer Settings

You could set your favorite ringer in this page.

Ringer:  On  Off

Ringer Type:

5. Block Setting function: you can setup the Block Setting to keep the phone silence. You can choose Always Block or Block a period.
- Always Block: All incoming call will be blocked until disable this feature.
  - Block 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.
  - 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.

## Block Setting

You could set the block period of your phone in this page.

Always Block:  On  Off

Block Period:  On  Off

From:  :  (hh:mm)

To:  :  (hh:mm)

6. Auto Answer function: You can set the Auto Answer function to answer the incoming call by the phone. If the call is come from the IP, then the phone can let user to redial the call to PSTN phone number. If the call is coming from PSTN, then the phone can let user to redial to IP Phone number. Auto Answer Counter is to set after the ring count meet the number you set then the auto answer will enable. For security issue, You'd better to set the PIN Code. If you have set the PIN code, you will hear a tone to inform you input the PIN Code then you can dial out.

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### Auto Answer

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

Auto Answer:  On  Off

Auto Answer Counter:  (2~15)

PIN Code Enabled:  On  Off

PIN Code:

7. Dial Plan Setting 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.

### Dial Plan

You could set the dial plan in this page.

Replace prefix code:  On  Off

Replace rule:  ->

Dial Plan:

Auto Prefix:  (0000~9999)

Prefix Unset Plan:

Auto Dial Time:  (3~9 sec)

## IP Phone Manual

- Symbol explain:

x or X	0,1,2,3,4,5,6,7,8,9
+	or

- Replace rule: If replace prefix code is ON and prefix number is matched with rule then 005 will replace prefix.
- Auto Dial Time: Stop dialing after seconds then send dial number out.
- Dial Plan: When match with pattern then send dial number out but if first digit is **0** then dial plan will be ignored.

#### Example:

*xx	If matched with one of *00,*01...*99 then will send number out
#xx	If matched with one of #00,#01...#99 then will send number out
10x	If matched with one of 100,101...109 then will send number out
11x	If matched with one of 110,111...119 then will send number out
Xxxxxxx	If dial with 8 digits then send number out

- Auto Prefix: Number for add before dial number.
- Prefix Unset Plan: When first digit or dial number match with pattern then ignore auto prefix.

0	Ignore auto prefix if first digit is '0'
1	Ignore auto prefix if first digit is '1'
xxxxx	dial numbers are 4 digits ignore auto prefix
xxxxxx	dial numbers are 5 digits ignore auto prefix

- 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.

8. 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.

## Flash Time Setting

You could set the flash time in this page.

<b>FXO Flash Time</b>	
Flash Time:	<input type="text" value="5"/> (3~200, 1->10ms)
<b>SLIC Flash Time</b>	
Max Flash Time:	<input type="text" value="60"/> (4~255, 1->10ms)
<input type="button" value="Submit"/> <input type="button" value="Reset"/>	

- Call Waiting Setting function: If user doesn't want to be inform there is a new incoming call, user can set the function off. 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.

## Call Waiting Setting

You could enable/disable the call waiting setting in this page.

Call Waiting:  On  Off

- Soft-key Setting function: User can define the Pick Up and Voice mail function as a soft-key. This function need to work with Proxy Server and the device also need to have the Pick Up key and voice mail key. For example, if the Server define the pick up key is \*7, then user have to input the \*7 in Pick up key field. When user press the IP Phone's Pick up key, the IP Phone will send out \*7 to process the Pick up 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.

## Soft-key Setting

You could configure the soft-key setting in this page.

Pick up key:

Voice mail key:

### 3.5 Network

- In Network you can check the Network status, configure the WAN Settings, LAN Settings, DDNS settings and VLAN Settings.
- 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.

Interface 0	
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

Interface 1	
Type:	DHCP Client
IP:	192.168.101.205
Mask:	255.255.255.0
Gateway:	192.168.101.1
DNS Server 1:	192.168.101.1
DNS Server 2:	168.95.192.1

- WAN Settings: In this page you can configure the IP Phone WAN port's setting. The WAN port is for you to connect to the ADSL Router, Broadband Router. Also you can use PPPoE to get the WAN IP address from your ISP.

## IP Phone Manual

- The IP Phone's default setting is NAT mode. If you don't need to use the NAT Mode, you can change to Bridge Mode. If you change the setting to Bridge Mode, then the LAN setting will not effect and will be the same as WAN port.
- The WAN port default is DHCP Client mode, You can change the setting to Fixed IP Mode, or PPPoE Mode.
- 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.
- 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.
- 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.

### 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:

#### PPPoE Setting

User Name:

Password:

## IP Phone Manual

4. LAN Settings: In this page you can configure the IP Phone LAN port's setting.
  - 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 if 150, end IP address is 200. It is not necessary to change the LAN settings.
  - You can connect your PC to the LAN port, set your PC as DHCP Client mode, then you can get IP address from the phone.
  - 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.

### LAN Settings

You could configure the LAN settings in this page.

#### LAN Setting

IP:

Mask:

MAC:

#### DHCP Server

DHCP Server:  On  Off

Start IP:

End IP:

Lease Time:  :  (dd:hh)

## IP Phone Manual

5. **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.

### 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

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6. **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 phone, and the second parts is if you use the VLAN setting in the NAT Mode.
- There are two kind of destination packets will come from the phone WAN port, one kind of packets will go to the phone, the other will go through the LAN port to the PC.
  - **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.
  - **VID:** You can follow your service provider to set your VID.
  - **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.
  - **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.
  - When you enable the first VLAN Packets and set the VID, User Priority, and CFI, then all the incoming packets with the phone IP address and the same VID will be accept by the phone. If the incoming packets with the phone IP address but the different VID then the packets will be discard by the phone. The Other incoming packets with different IP address will go through the LAN port to the PC.
  - **NAT VLAN Setting:** When you set your device in NAT mode, the phone can help you to filter the wrong incoming packets. You can separate the other device connectd behind the phone into 4 VLAN group. You can set different VID for these 4 groups. When the incoming packets go through the phone WAN port then the phone will check the VID, if the packets is not going to the phone (with the phone IP address and the correct VID), and the VID is not these four VID you set, then the packets will be discard by the phone.
  - If there is nothing need to change, please click the Save Change Item in the eft side, then click the Save button. The change you made will save into the system and the system will Reboot automatically.

## VLAN Settings

You could set the VLAN settings in this page.

VLAN Packets:	<input checked="" type="radio"/> Off <input type="radio"/> On
VID:	<input type="text" value="136"/> (2 ~ 4094)
User Priority:	<input type="text" value="0"/> (0 ~ 7)
CFI:	<input type="text" value="0"/> (0 ~ 1)

### NAT VLAN Setting

VLAN Packets:	<input checked="" type="radio"/> Off <input type="radio"/> On
VID1:	<input type="text" value="4"/> (2 ~ 4094), 0->Off
VID2:	<input type="text" value="5"/> (2 ~ 4094), 0->Off
VID3:	<input type="text" value="6"/> (2 ~ 4094), 0->Off
VID4:	<input type="text" value="7"/> (2 ~ 4094), 0->Off

### 3.6 SIP Settings

- In SIP Settings you can setup the Service Domain, Port Settings, Codec Settings, Codec ID 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.
- 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 VoIP Phone. You can dial the VoIP phone to your friends via first enable SIP account and receive the phone from these three SIP accounts.
  - First you need click Active to enable the Service Domain, then you can input the following items:
    - Display Name: you can input the name you want to display.
    - User Name: you need to input the User Name get from your ISP.
    - Register Name: you need to input the Register Name get from your ISP.
    - Register Password: you need to input the Register Password get from your ISP.
    - Domain Server: you need to input the Domain Server get from your ISP.
    - Proxy Server: you need to input the Proxy Server get from your ISP.
    - 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.

You can see the Register Status in the Status item. If the item shows **Registered**, then your VoIP Phone is registered to the ISP, you can make a phone call directly. If you have more than one SIP account, you can following the steps to register to the other ISP.

When you finished the setting, please click the Submit button.

## Service Domain Settings

You could set information of service domains in this page.

<b>Realm 1 (Default)</b>	
Active:	<input checked="" type="radio"/> On <input type="radio"/> Off
Display Name:	<input type="text"/>
User Name:	<input type="text"/>
Register Name:	<input type="text"/>
Register Password:	<input type="text"/>
Domain Server:	<input type="text"/>
Proxy Server:	<input type="text"/>
Outbound Proxy:	<input type="text"/>
Status:	Not Registered

<b>Realm 2</b>	
Active:	<input type="radio"/> On <input checked="" type="radio"/> Off
Display Name:	<input type="text"/>
User Name:	<input type="text"/>
Register Name:	<input type="text"/>
Register Password:	<input type="text"/>
Domain Server:	<input type="text"/>
Proxy Server:	<input type="text"/>
Outbound Proxy:	<input type="text"/>
Status:	Not Registered

<b>Realm 3</b>	
Active:	<input type="radio"/> On <input checked="" type="radio"/> Off
Display Name:	<input type="text"/>
User Name:	<input type="text"/>
Register Name:	<input type="text"/>
Register Password:	<input type="text"/>
Domain Server:	<input type="text"/>
Proxy Server:	<input type="text"/>
Outbound Proxy:	<input type="text"/>
Status:	Not Registered

3. 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.

### Port Settings

You could set the port number in this page.

SIP Port:	<input type="text" value="5060"/>	(10~65533)
RTP Port:	<input type="text" value="60000"/>	(10~65533)
<input type="button" value="Submit"/> <input type="button" value="Reset"/>		

4. 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.

### Codec Settings

You could set the codec settings in this page.

Codec Priority	
Codec Priority 1:	<input type="text" value="G.711 u-law"/>
Codec Priority 2:	<input type="text" value="G.711 a-law"/>
Codec Priority 3:	<input type="text" value="G.729"/>
Codec Priority 4:	<input type="text" value="G.723"/>
Codec Priority 5:	<input type="text" value="G.726 - 16"/>
Codec Priority 6:	<input type="text" value="G.726 - 24"/>
Codec Priority 7:	<input type="text" value="G.726 - 32"/>
Codec Priority 8:	<input type="text" value="G.726 - 40"/>

RTP Packet Length	
G.711 & G.729:	<input type="text" value="20 ms"/>
G.723:	<input type="text" value="30 ms"/>

G.723 5.3K	
G.723 5.3K:	<input type="radio"/> On <input checked="" type="radio"/> Off

Voice VAD	
Voice VAD:	<input type="radio"/> On <input checked="" type="radio"/> Off

5. Codec ID Settings: you can set the Codec ID to meet the other device's requirement. When you finished the setting, please click the Submit button.

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### 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

6. 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.

### DTMF Setting

You could set the DTMF setting in this page.

- 2833  
 Inband DTMF  
 Send DTMF SIP Info

7. 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.

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### RPort Setting

You could enable/disable the RPort setting in this page.

RPort:  On  Off

8. 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.

### Other Settings

You could set other settings in this page.

Hold by RFC:  On  Off  
Voice QoS:  (0~63)  
SIP QoS:  (0~63)  
SIP Expire Time:  (60~86400 sec)

### 3.7 NAT Trans

1. In NAT Trans, you can setup STUN function. These functions can help your VoIP Phone working properly behind NAT.
2. STUN Setting: you can setup the STUN Enable/Disable and STUN Server IP address in this page. This function can help your VoIP Phone working properly behind NAT. To change these settings please following your ISP information. When you finished the setting, please click the Submit button.

## STUN Setting

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

**STUN:**       On    Off

STUN Server:

STUN Port:  (1024~65535)

### 3.8 Others

1. In Others you can setup Auto Config, PTT Setting and ICMP Setting function. The function can configure your VoIP Phone automatically.
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 phone. When you finished the setting, please click the Submit button.

## Auto Configuration Setting

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

Auto Configuration:     Off    By TFTP    By FTP

TFTP Server:

FTP Server:

FTP Username:

FTP Password:

File Path:

3. PTT Setting: you can setup the PTT in this page. When you are using different country's PSTN Phone or connect to different country's PSTN Line, you have to set the country's setting to meet the requirement. When you finished the setting, please click the Submit button.

## PTT Setting

You could select the PTT setting for different country in this page.

PSTN-PTT:

4. 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 hacker try to attack the device. When you finished the setting, please click the Submit button.

## ICMP Setting

You could enable/disable the ICMP setting in this page.

ICMP Not Echo:  On  Off

### 3.9 System Auth

In System Authority you can change your login name and password.

## System Authority

You could change the login username/password in this page.

New username:

New password:

Confirmed password:

### 3.10 Save Change

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

## Save Changes

You have to save changes to effect them.

Save Changes:

### 3.11 Update

1. In Update you can update the VoIP Phone's firmware to the new one or do the factory reset to let the VoIP Phone back to default setting.
2. In New Firmware function you can update new firmware via HTTP in this page.

You can upgrade the firmware by the following steps:

- Select the firmware code type, Risc or DSP code.
- 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.
- Select the correct file you want to download to the VoIP Phone then click the Update button.

## Update Firmware

You could update the newest firmware.

**Method:**  HTTP  TFTP

**HTTP**

Code Type:

File Location:

**TFTP**

TFTP Server:

3. In Default Setting you can restore the VoIP Phone to factory default in this page. You can just click the Restore button, then the VoIP Phone will restore to default and automatically restart again.

## Restore Default Settings

You could click the restore button to restore the factory settings.

Restore default settings:

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### 3.12 Reboot

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

### Reboot System

You could press the reboot button to restart the system.

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Reboot system: