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Solwise Ltd.

13/15 Springfield Way

Anlaby

Hull HU10 6RJ

UK

Tel 0845 458 4558 (local rate)

Fax 0845 458 4559

Email sales@solwise.co.uk

Http www.solwise.co.uk

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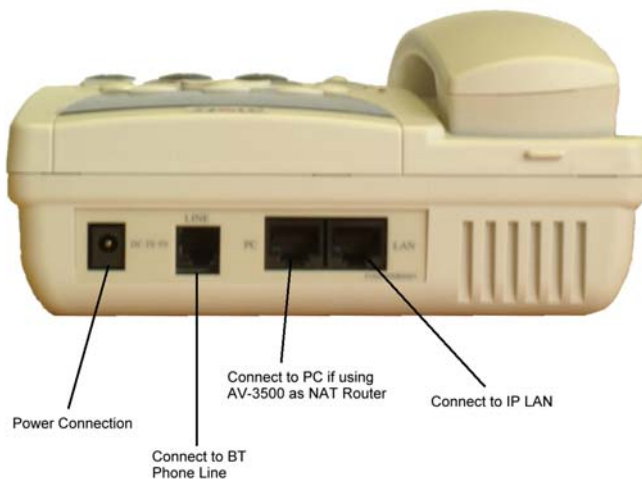
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AV-3500 IP Phone

1 Introduction

This is User's Guide for the AV-3500 IP Phone. Before using the AV-3500 IP PHONE, some basic setup processes are required to make the phone work properly. You should at least setup the IP address of IP PHONE and router when DHCP is disabled. When DHCP server is available, you can skip the process of setting up IP PHONE IP address. (Please refer to **Setup Menu** for further information.)

2 Connections



The figure shows the cable connections on the rear of the AV-3500 IP Phone. Apart from the power connection you should also use the BT phone cable supplied to connect your IP phone to the BT analogue phone line. Also connect the LAN port to your IP network – this could be either a local LAN or direct connection to a cable modem service or to an internet router.

3 Dialing

There are 4 different dialing methods in using the AV-3500 IP Phone.

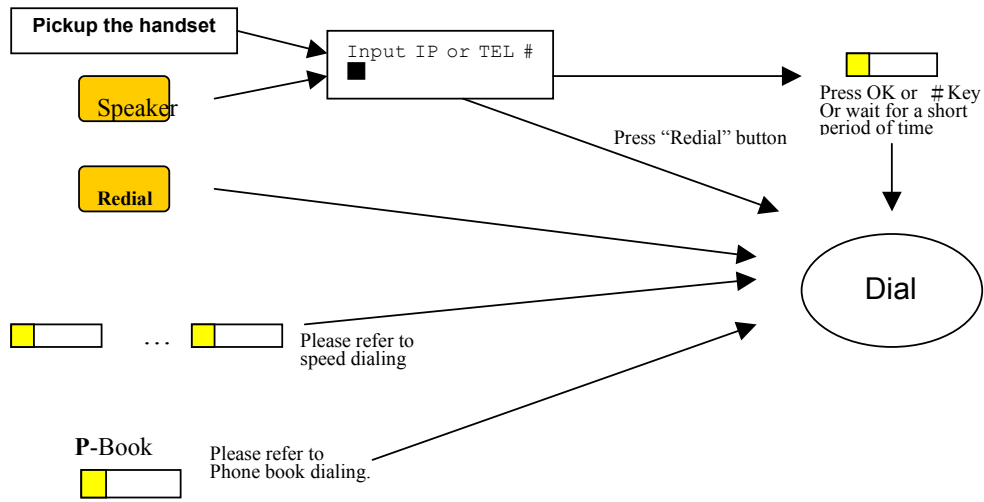
- Dial IP address directly (e.g. 210.244.26.111). To use this method dial the IP address using the syntax 210*244*26*111# - substitute the correct IP address accordingly. If you don't put a # on the end of the line then the call will be made after a two second delay (to ensure you've typed the whole number in).
- Dial extension number when Gatekeeper is available (e.g. 207)
- Dial through VOIP Gateway to PSTN (when a Gateway device is available at the destination site e.g. *165077499)

The difference of “Dial extension number” and “Dial through VoIP Gateway” is that dialing number starts with ‘*1’ to ‘*5’ will go through Gateway and thus make it a call to PSTN. (Please refer to Setup Menu for detail description regarding how to setup Gateway)

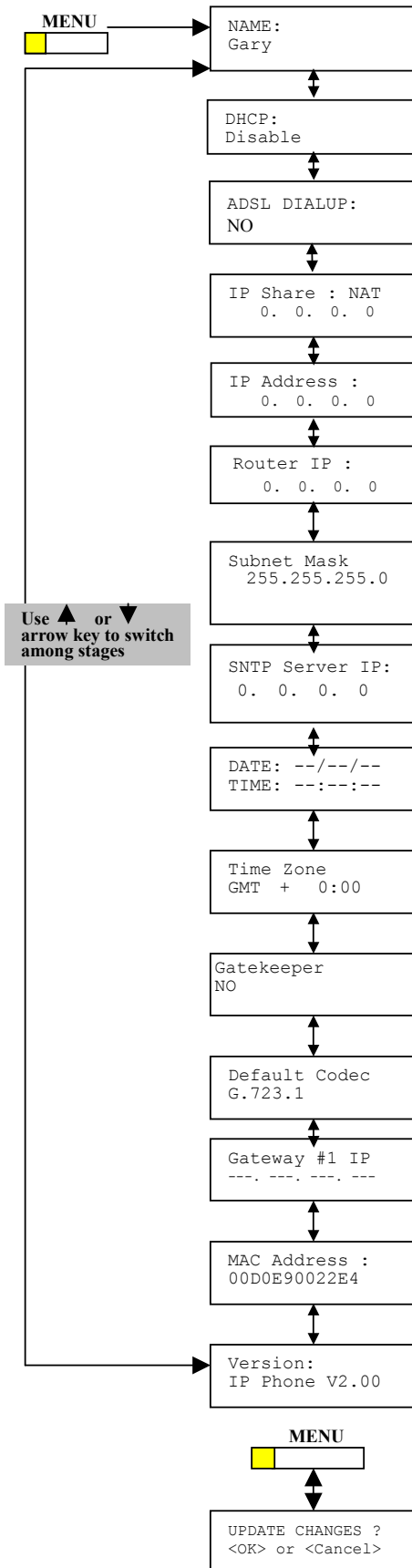
- Dialing through PSTN in order to dial a normal land line number (e.g. 08454584558). Simply lift the handset and dial the number as normal. **Please note you must setup the PSTN Prefix value to <null> to dial this way** – see Setting the PSTN Prefix below.

When you are engaged on a VoIP call and a PSTN call is made to the PSTN number that the caller hears the normal BT

ringing noise and the HOLD LED on the phone goes on. If you want to accept the PSTN call you must first hang up the VoIP call. When you have done this the IP Phone will ring for the incoming PSTN call as normal which you can then accept by lifting the handset.

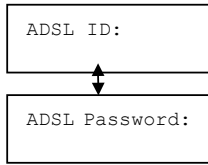


4 Setup Menu



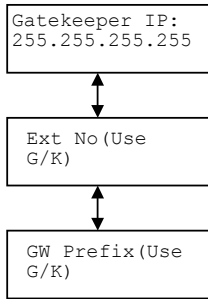
- Setup the name of the phone
- Setup DHCP mode (Enable or Disable switched by ← or → key)
- Setup ADSL Dialup mode (for Support PPPoE – **NOT in the UK**). Enable or Disable switched by ← or → key
Note*: If you select ADSL DIALUP to “YES”, please complete the settings as required
- Setup the LAN IP address of the IP share to provide the virtual IP address for Internet access. This sets the address of the phone on the PC port (see Connections above)
- Setup IP address
You don't have to setup the IP address if DHCP is enabled but you do when DHCP is disabled
- Setup router IP address. You have to setup router IP address. However, if you just want to do testing within the LAN, set the router IP to 0.0.0.0 is recommended. You don't have to setup the router IP address if DHCP is enabled.
- Setup subnet mask. The default subnet mask is 255.255.255.0 (class C network). You have to modify it depends on the configuration of your network. You don't have to setup the subnet if DHCP is enabled.
- Setup SNTP (Simple Network Time Protocol)
This function allow IP Phone to get Time from Internet
- Setup the date (year/month/day) e.g. 99/11/30
- Setup the time (hour: minute:second) e.g. 14:53:20
Only need when SNTP is not available
- Setup the Time Zone
- Enable or Disable Gatekeeper by ← or → key
Note*:If you select Gatekeeper to “YES”, please complete the setting as note2
- Setup the highest priority of the voice codec for this phone. (G.711ALaw/ G.711ULaw/ G.723.1)
You could use ←, → key to choose.
- Setup gateway IP address
If you want to dial to PSTN network, the VOIP gateway IP address has to be set.
There are total 5 gateways from #1 to #5
- Show the MAC of the machine.
- Show the version of the firmware
- You can exit the Setup Menu anytime by press “MENU” key again.
- Press the “OK ” key to save and “ Cancel ” key to ignore the changes

Note 1 : When setup “ADSL Dialup” function set to “YES”



- ID for ADSL Dialup
- Password for ADSL Dialup

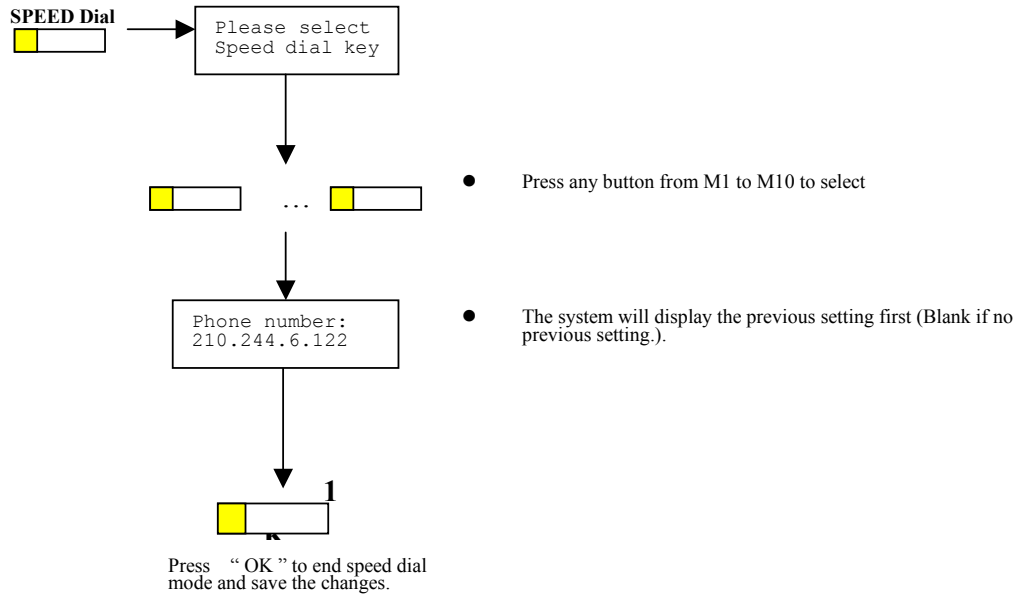
Note 2 : When setup “Gatekeeper” function set to “YES”



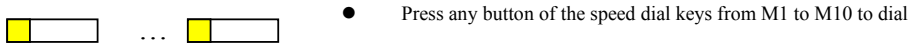
- Setup Gatekeeper (GK) IP Address
- If you want to auto search GK, enter “0.0.0.0”
- Setups the Extension num if you have already setup the GK IP.
- Setups the Gateway prefix number if you have already setup the GK IP.
- Once GW prefix has been set, this type IP Phone will register as a gateway in the gatekeeper.

5 Speed Dial

5.1 Setup The Speed Dial Keys

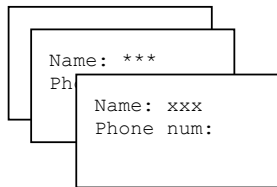


5.2 Using the Speed Dial Keys

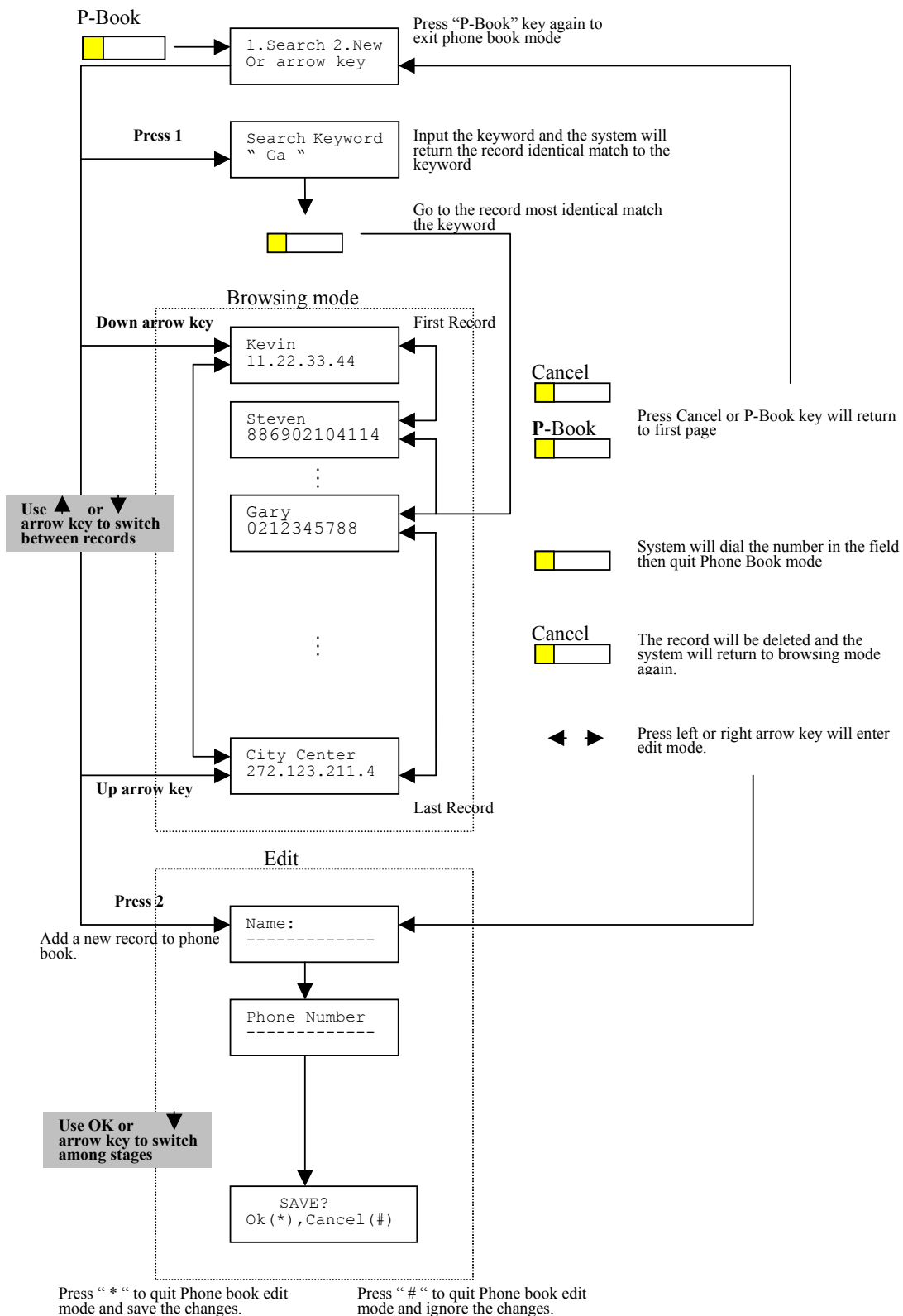


6 Phone Book

Every record inside the phone book includes 2 fields: Name, Phone number.

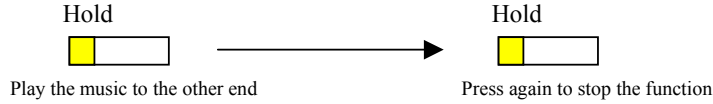


The Name field is the primary key of the record and Phone number is the field you can use to store extension number, PSTN number or IP address. Phone book records are sorted by Name automatically. The functions like search, add, delete records can be helpful to update your personal phone book.

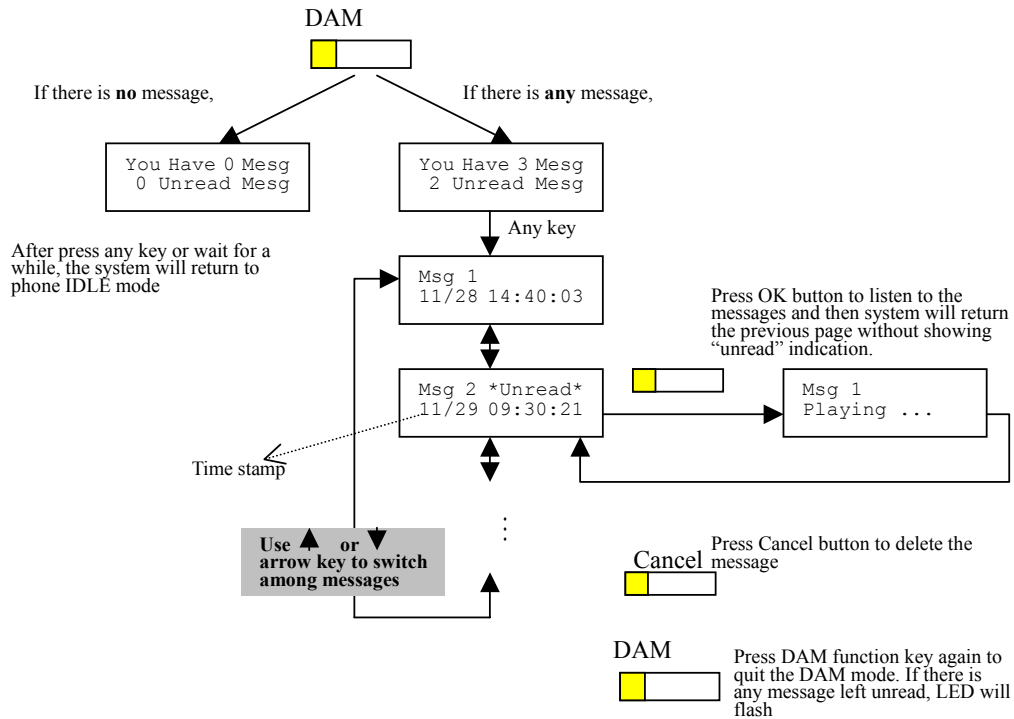


7 Hold (Mute – for VoIP calls only)

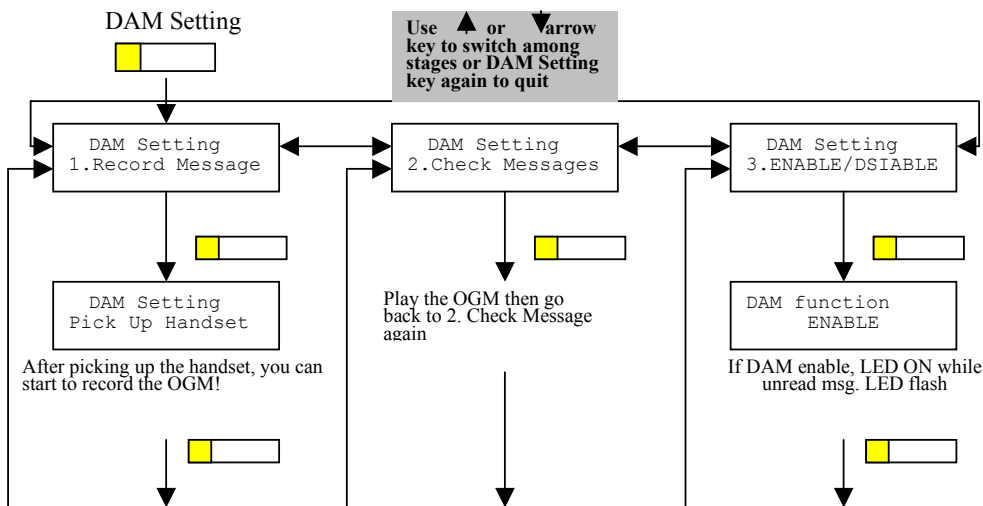
The Hold function can only work during talking mode. After pressing the “HOLD” key the remote side of the communication line will hear music playing. (Codec must set to: Default G.723.1)



8 DAM (Digital Answering Machine Only Works On IP Calls)

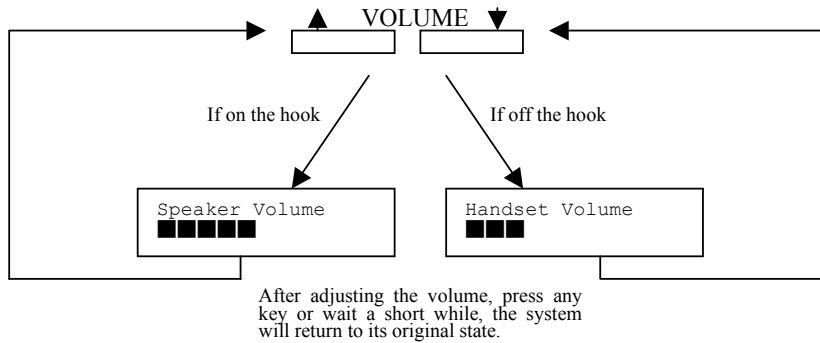


9 DAM Setting



Note **: Only “OK” key will save the OGM msg.

10 Volume Adjustment



11 IP Call Transfer

This function is available only when both IP phones support H.450 call transfer. Upon placing a phone call, you can use “call transfer” function to transfer the call to other person. For example: when **A** is talking to **B**, **A** could press “FLASH” key and the display will show “Transfer to”. **A** can enter the IP address of **C** and **A** is talking to **C**. After **A** hanging up the phone, **C** can talk with **B**.

12 IP Share / NAT

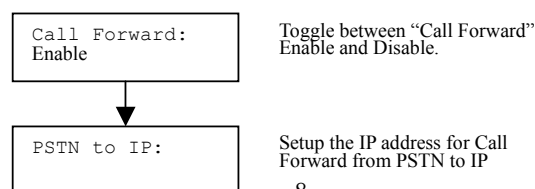
This function allows IP phone and PC to share the same IP address. For example: You may only have one real IP address assigned by ISP. After putting this real IP address in “IP Address” and setup the “IP Share / NAT” to 10.1.1.1, you can then configure the network environment of PC as follows,

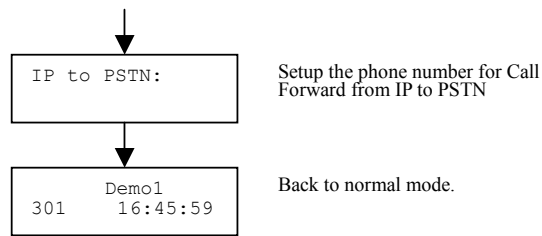
- Fixed IP address: 10.1.1.2
- Subnet mask: 255.255.255.0
- Gateway IP address: 10.1.1.1 (Same value of “IP Share / NAT”)
- Set DNS to a well-known Domain Name Server, e.g. 168.95.192.1

13 Call Forward (between IP/PSTN)

The AV-3500 IP phone can be setup to forward IP calls to a PSTN number or PSTN to and IP number.

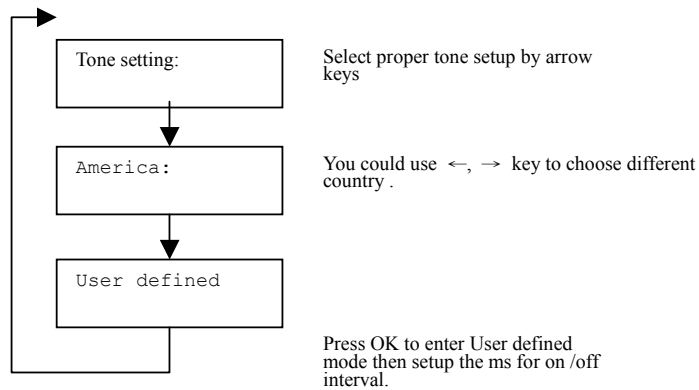
The setting for the Gateway function





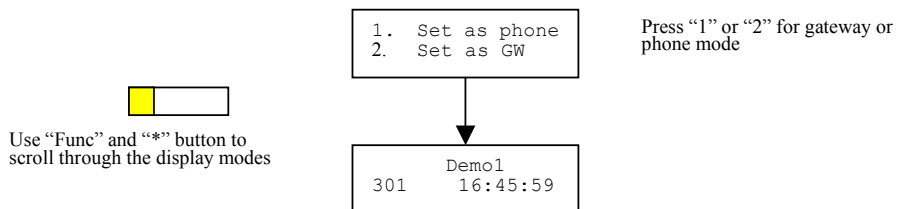
14 Busy Tone setting

Since the busy tone might be different from country to country, make sure to setup your IP Phone's busy tone for different PSTN environments.



15 Gateway/Phone Mode

This IP phone supports Gateway mode or Phone mode. Set this IP Phone to Gateway mode if you want to forward the incoming PSTN call to another IP phone. Otherwise, setup your IP Phone to Phone mode.



16 Setup from Web Browser

Your IP phone can also be setup by using a web browser, such as 'Microsoft IE', 'Netscape'. Please note you must first of all check/set the phones IP address using the Menu function on the phone. Then, within the web browser, type in the IP Phone's IP address using <http://ip:9999/> to get into web page of IP Phone. A new page will appear, which will allow you to enter all of the IP Phone's setup parameters. Once complete, press "submit" to save the settings.

IP Phone Configuration

Basic

Basic

Advance

Define Key

User Name	Alex
DHCP	<input type="radio"/> Yes <input checked="" type="radio"/> No
PPPoE	<input checked="" type="radio"/> Yes <input type="radio"/> No
PPPoE ID	alexhsu
PPPoE Password	••••••
NAT/TP Sharing	10.1.1.1
IP Address	202.173.60.157
Router IP	202.173.60.190
Subnet Mask	255.255.255.192
DNS Server	0.0.0.0
NTP(Time) Server	0.0.0.0
Time Zone	(GMT+08:00) Beijing, Singapore, Taipei ▾
Gatekeeper	<input checked="" type="radio"/> Auto <input type="radio"/> Yes <input type="radio"/> No
Gatekeeper IP	202.173.40.204
Gatekeeper Password	
Extension No.	2001
Default Codec	G.723.1 ▾
Gateway *1	202.173.40.85
Gateway *2	202.173.33.1
Gateway *3	0.0.0.0
Gateway *4	0.0.0.0
Gateway *5	0.0.0.0
MAC Address	00.D0.E9.00.00.1D
Version	IP Phone V2.10
Password	

Gateway Features:

Phone Mode	<input checked="" type="radio"/> Phone <input type="radio"/> Gateway
Tone Setting	Default ▾
On Time (ms):	
Off Time (ms):	
Call Forward	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
IP to PSTN:	1112222
PSTN to IP:	202.173.60.88
IP to IP:	
Gateway Prefix No. (for GK)	8862

IP Phone Configuration

Advance

Basic

Advance

Define Key

H323ID	<input type="text"/>
Early Connect	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Fast Start	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Fast Start Codec Info	<input checked="" type="radio"/> List All <input type="radio"/> List One
H.245 Tunneling	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
VAD/CNG	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
RTP Early Open	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
Frames per Packet	1
DTMF Type	<input checked="" type="radio"/> Alphanumeric <input type="radio"/> Signal
Telnet port	<input type="radio"/> Open <input checked="" type="radio"/> Close
Prefix: PSTN, VoIP, GW#1~#5	<null>, *, *1~*5
Time to Live (0~600 second)	180
Flash/Hook Switch Interval (0~1000 ms)	62

Submit

Reset

17 Setting the external line flash time

To adjust the duration of the external flash signal then you need to go into the Advance IP Phone Configuration and set the Flash/Hook Switch Interval (see above). For UK use on a BT analogue phone line this should be set to any value from 62 to 65.

18 Setting the PSTN Prefix

By default the AV-3500 requires you to enter ‘*0’ as a prefix for all PSTN calls. This is messy! You can alter this setting in the phone setup to <null>. This then means that the phone will allow you to dial PSTN numbers normally without any special prefix. To do this go into the Advanced setup and go to the Option called “Prefix PSTN, VoIP, GW#1~#5”. Change this entry to ‘<null>,#,*1~*5’. The click on Submit to store the settings.

IP Phone Configuration

Advance

Basic

Advance

Define Key

H323ID	<input type="text"/>
Early Connect	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Fast Start	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Fast Start Codec Info	<input checked="" type="radio"/> List All <input type="radio"/> List One
H.245 Tunneling	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
VAD/CNG	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
RTP Early Open	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
Frames per Packet	1
DTMF Type	<input checked="" type="radio"/> Alphanumeric <input type="radio"/> Signal
Telnet port	<input type="radio"/> Open <input checked="" type="radio"/> Close
Prefix: PSTN, VoIP, GW#1~#5	<null>, #,*1~*5
Time to Live (0~600 second)	180
Flash/Hook Switch Interval (0~1000 ms)	62

Submit

Reset

19 Re-Setting to the Default settings

To completely reset the IP Phone to the factory default settings (e.g. you may need to do this if you set a configuration access password but forget the setting). Pick up the handset and dial 255*000[ok][ok][ok]. Obviously you will have to reenter all of your settings after doing this reset.

20 Doing a firmware upgrade

From time to time new firmware may be released for your AV-3500 IP phone which adds new features. To do a firmware upgrade you need to use a tftp programme (these are readily available as shareware or supplied with Windows).

e.g. using the standard Windows tftp.exe programme use following commands :

```
tftp -i [ip phone_address] put [firmware_file]
```

For example

```
C:\temp>tftp -i 192.168.0.16 put p21v252.rom
```

```
Transfer successful: 261357 bytes in 1 second, 261357 bytes/s
```

```
C:\temp>
```

You should then do a configuration reset (see above) – please note you will then have to reenter your configuration settings.

Abbreviations

ADSL : Asymmetric Digital Subscribe Line
CNG : Comfortable Noise Generation
DAM : Digital Answering Machine
DHCP : Dynamic Host Configuration Protocol
DTMF : Dual Tone Multi-Frequency
IP : Internet Protocol
NAT : Network Address Translation
PPPoE : PPP Over Ethernet
PSTN : Public Switch Telephony Network
SNTP : Simple Network Time Protocol
VAD : Voice Activate Detection
VoIP : Voice over Internet Protocol