

WiFi SIP VoIP Phone

AVP-2000B

Users Manual

Copyright® 2005-2006 Acrowave Systems Co,Ltd. All rights reserved

-- INDEX --

1. OVERVIEWS	5
1.1 LCD DISPLAY	5
1.1.1 Pictograms on LCD	5
1.1.2 Key Buttons	5
2. AVP-2000B MENU TREES	6
2.1 BASIC MENU TREE	6
2.2 PHONEBOOK MENU TREE	8
2.3 MESSAGE MENU TREE	8
2.4 INCALL SOFT MENU TREE	8
3. OPERATIONS	9
3.1 POWER ON / OFF	9
3.1.1 Power On	9
3.1.2 Power Off	9
3.2 SIP REGISTRATION / UNREGISTRATION	9
3.2.1 Registration	9
3.2.1 Unregistration	11
3.3 CALL MAKING / ANSWERING / HANGUP / DND	12
3.3.1 Making Call	12
3.3.2 Answering Call	12
3.3.3 Hangup Call	12
3.3.4 DND Call	12
4. PHONE FUNCTIONS	13
4.1 MENU DESCRIPTIONS	13
4.1.1 RING / BELL	13
4.1.1.1 Ringing Type	13
4.1.1.2 Ring Color	13
4.1.1.3 Ring Volume	13
4.1.2 PHONE DIARY	14
4.1.2.1 Alarm	14
4.1.2.2 Calculator	14
4.1.3 USER SETUP	14
4.1.3.1 Standby Display Mode	14
4.1.3.2 LCD Contrast	15

4.1.3.3 LCD Backlight	15
4.1.3.4 Auto Answering	15
4.1.3.5 Localization	15
4.1.3.6 Call Prefix	16
4.1.3.7 Call Forward	16
4.1.3.8 Call Waiting	16
4.1.3.9 Password Change	17
4.1.3.10 Ring-Back ToneMode	17
4.1.3.11 DTMF Mode	17
4.1.4 ADMIN SETUP	17
4.1.4.1 Networks	18
4.1.4.2 SIP	18
4.1.4.3 Wireless LAN	18
4.1.4.4 NAT	20
4.1.4.5 CODEC	21
4.1.4.6 Initializaionz	22
4.1.4.7 Ping Test	22
4.2 INPUT CHARACTERS	23
4.3 PHONEBOOK	24
4.3.1 OUTBOUND CALL	24
4.3.2 INBOUND CALL	24
4.3.3 SEARCH PHONEBOOK	25
4.3.4 ADD NEW ENTRY	25
4.4 MESSAGE	26
4.4.1 RECEIVED MESSAGE	26
4.4.2 SEND MESSAGE	26
4.5 SOFT MENUS	28
4.5.1 PHONEBOOK	28
4.5.2 CALL MUTE	28
4.5.3 CALL TRANSFER	28
4.5.4 CALL HOLD	29
4.5.5 CALL WAIT	29

This page is blank area.

1. OVERVIEWS

1.1 LCD DISPLAYS

1.1.1 Pictograms on LCD

아이콘	설 명
	WiFi Signal Strength.  Weak  : Strong
	Out of Service area.
	Indicates in call state
	Indicates alarm is on.
	Indicates that there is/are new message(s) that has/have not been read.
	Indicates vibration mode or manner mode is on
	Indicate key-lock state is on
	Battery life gauge  : Full  : Sufficient  : Shortage  : Empty

1.1.2 Key buttons

버튼 이름	기 능
[]	Send or Receive
[M]	Menu
[↑]	Upper direction
[↓]	Down direction
[→]	Right direction / Message Menu
[←]	Left direction / Phonebook Menu
[S]	OK / Selection
[CLR]	Cancel Key
[0]~[9]	Number / Character input Keys
[*]	Symbol Key / Manner Mode
[#]	Symbol Key / Keylock Mode
[]	Power On / Off / Cancel

2. AVP-2000B MENU TREES

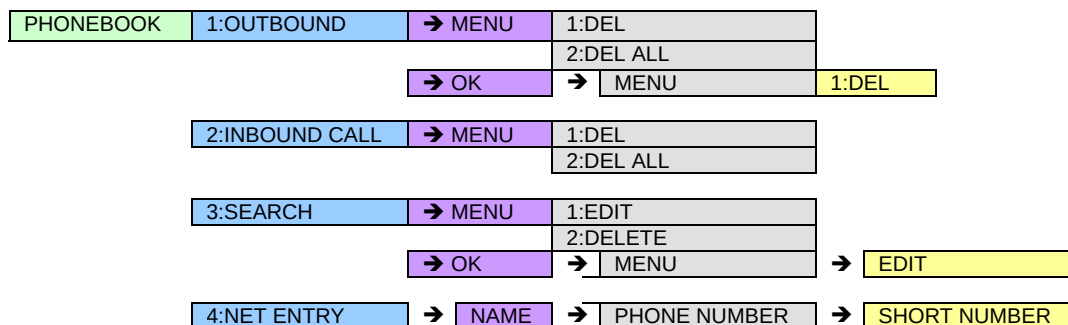
This chapter shows the menu trees of AVP-2000B

2.1 BASIC MENU TREES

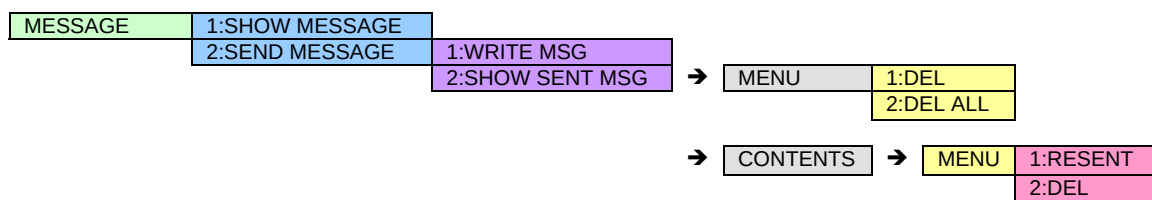
MENU	1.SOUND	1.RING TYPE	1.RING	
			2.VIBRATOR	
			3.RING AFTER VIBRATOR	
			4.RING WITH VOBRATOR	
		2.RING COLOR	1.RING COLOR 1	
			2.RING COLOR 2	
			3.RING COLOR 3	
			4.RING COLOR 4	
			5.RING COLOR 5	
		3.RING VOLUME		
	2.DIARY	1.ALARM SETTING	1.SET ON/OFF	1.ALARM ON
				2.ALARM OFF
			2.SET TIME	
			3.SET BELL TYPE	1.RING COLOR 1
				2.RING COLOR 2
				3.RING COLOR 3
				4.RING COLOR 4
				5.RING COLOR 5
		2.CALCULATOR		
	3.USER SETUP	1.DISPLAY TYPE	1.NUMBER MODE	
			2.LOGO MODE	
		2.LCD CONTRAST		
		3.LCD BACKLIGHT	1.ALWAYS OFF	
			2.10 SEC ON	
			3.20 SEC ON	
			4.ALWAYS ON	
		4.AUTO ANSWER	1.DISABLE	
			2.AFTER 1 BELL	
			3.AFTER 3 BELL	
		5.LOCALIZATION	1.LANGUAGE	1.ENGLISH
				2.KOREAN
			2.TIME SERVER	
			3.TIME ZONE	
		4.DST SETUP		1.DST ENABLE
				2.DST DISABLE
		6.CALL PREFIX		
		7.CALL FORWARD	1.CALL FWD OFF	
			2.CALL FWD ON	1.FORWARD NUMBER
				2.CONDITION
		8.CALL WAITING	1.DISABLE	
			2.ENABLE	
		9.PASSWORD CHG		
		0.DTMF	1.SIP INFO	
			2.INBAND	
		*.RINGBACK TONE	1.ENABLE	
			2.DISABLE	

4.ADMIN SETUP	1.NETWORK	1.DHCP	PHONE ADDRESS	NET MASK	GATEWAY IP
		2.STATIC IP			
	2.SIP SETUP				
	2.WLAN	1.AP SELECT	1.SCAN AP		
			2.INPUT DIRECT		
		2.SECURITY	1.DISABLE		
			2.ENABLE	1.64 BITS	1.ASCII
					2.HEXA
				2.128 BITS	1.ASCII
					2.HEXA
		3.802.1X	1.DISABLE		
			2.ENABLE	USER ID	PASSWORD
		4.ROAMING	1.ENABLE		
			2.DISABLE		
		5.CONNECTION	1.INFRA STRUCT		
			2.AD-HOC		
	4.NAT	1.NAT DISABLE			
		2.NAT ENABLE	1.STUN SETUP	STUN SERVER	STUN PORT
			2.STATIC NAT		
	5.CODEC	1.G.711			
		2.G.711+G.723			
		3.G.711+G.729			
		4.G.711+G.726			
	6.INITIALIZE	1.SOFT RESET			
		2.RESET PARAM	1.YES		
			2.NO		
		3.FACTORY RESET	1.YES		
			2.NO		
	7.TEST MODE	1.PING TEST			
		2.RF TEST	1.RF Tx TEST		
			2.RF Rx TEST		
5.INFORMATION	1.VERSIONS				
	2.NETWORK				
	3.SIP				
	4.CODEC				
	5.WLAN				
	6.MAC ADDRESS				

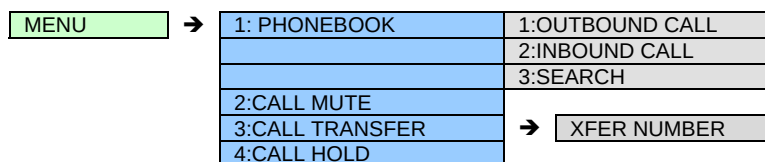
2.2 PHONEBOOK MENU TREE



2.3 MESSAGE MENU TREE



2.4 INCALL SOFT MENU TREE



3. OPERATIONS

This chapter describes how to operate and configure the AVP-2000B WiFi Phone.

3.1 POWER ON / OFF

3.1.1 Power On

Press [] button during 2 or 3 seconds to power on the AVP-2000B, then AVP-2000B turn on the power with short beep sound.

3.1.2 Power Off

Press [] button during 2 or 3 seconds to power off the AVP-2000B, then AVP-2000B turn off with “Good-Bye” message on LCD windows.

3.2 SIP REGISTRATION / UNREGISTRATION

3.2.1 REGISTRATION

AVP-2000B can use after SIP registration operation on SIP REGISTRAR SERVER.

The operations of SIP registration are as below ;

1) Press [M] button in standby state.

2) Select “4.Admin Setup” menu.

3) Default password is “0000”.

4) First, select “1. Setup Network” menu and configure the network informations.

AVP-2000B supports two kind of IP address mode which are DHCP mode and Static IP address mode. When used as Static IP address mode, SubNet Mask value and Default Gateway Address are also needed.

(Refer to clause 4.2 how to input IP address)

5) Select “2. Setup SIP” menu and configure the SIP informations.

AVP-2000B need some SIP informations to make / receive call.

- SIP Phone Number - Administrator will be supported
- SIP Registrar Server IP Address - Administrator will be supported
- SIP Domain Name – Administrator will be supported.

(SIP Registrar Server IP Address will be used as default value if not supported.)

- SIP Authenticate Name – Administrator will be supported

(Press **[S]** button to skip this value)

- SIP Authenticate Password – Administrator will be supported

(Press **[S]** button to skip this value)

- SIP Registration Expire Time – Administrator will be supported

(Default value is 3600 seconds)

6) Select “3.Setup WLAN” menu and configure the WLAN informations

Input the SSID of AP(Access Point), Encryption mode of WiFi, Security configure, Roaming mode and Connection mode of WLAN in this mode.

- SSID of AP : Scanning Mode and Direct input mode
- Encryption Mode : Configure Static WEP key value of AP when using Encryption mode.
- 802.1x Security : Configure security informations when using Security mode.
- Roaming mode : Select Roaming state of AVP-2000B (Default is disable)
- Connection mode : Select WiFi Connection mode (Default is Infra-structure mode)

7) Select “4.Setup NAT” menu and configure the NAT informations when needed.

(AVP-2000B supports two kind of NAT mode, one is STUN protocol and the other is Static NAT. Administrator will be support for about this operation.)

- STUN Mode

Administrator can supports STUN server IP address and port value.

Default value of STUN server IP address is same as SIP Registrar Server IP address and value of STUN port is 3478.

- Static NAT

Some kind of Route Server can not support dynamic allocation of port number. In this case, select “Static NAT” mode to operate normally.

8) Select “5.Setup CODEC” menu if need to change.

AVP-2000B supports G.711 a/mu – law and G.729ab mode CODEC as default.

9) Press [] button to save and reboot AVP-2000B

AVP-2000B will reboot and register on SIP Registrar Server.

3.2.2 UNREGISTRATION

The unregistration of AVP-2000B Phone means that administrator or user is to remove registration for AVP-2000B on purpose using already registered on SIP registration server.

Following both the means provide removing information in phone registered on SIP registration server.

3.2.2.1 Phone Power Off

AVP-2000B Power Off is to remove registered information in AVP-2000B registered on SIP registration server.

3.2.2.2 Phone Factory Initialization

Initializing phone setup figures is to remove registered information from SIP registration server and initialize all figures of AVP-2000B.

[Using Method]

[Menu] → [4.Administrator setup] → [6.Initialization setup] → [3.Factory Initialization]

3.3 Call Making / Answering / Hangup / DND

3.3.1 Making Call

There is 3 ways to make a call with AVP-2000B Phone.

- 1) At registered state of AVP-2000B on SIP server,
(If registered, LCD window shows registered phone number) press the phone number you want to make a call and press button [] and then the phone is called.
- 2) In case that there is the shortened number registered in the phone book, press the number a long while and then automatically you can make a call to the stored number in shortened number.
- 3) In standby state, press button [] and then there appears previous calling list.
After you choose number in the list you want with the use of direction key [] [], press Button [] and then you can make a call to the relevant number.

3.3.2 Answering Call

AVP-2000B phone is ringing and its LCD window shows sender's phone number.

At this time, press some button except button **[CLR]** **[Power/Off]** and then the phone is connected with the sender's.

3.3.3 Hangup Call

To finish calling in AVP-2000B, press button **[Power/Off]** once and then call is finished.

For 3 seconds, call time is indicated.

3.3.4 DND Call

If you do not want to answer the phone after checking sender's phone number when AVP-2000B rings, press button **[Power/Off]** and then the phone is disconnected.

At the same time, "Denied Call" message is transmitted to the sender.

4. Phone Functions

4.1 Menu Descriptions

AVP-2000B provides each menu for setup of each function.

The composition of whole menu is <1.Menu Tree>

Each function is described as follows :

4.1.1 Ring/ Bell

Ring/ Bell menu of AVP-2000B provides 3 kinds of function listed below :

1. Ringing Type 2. Ring Color 3. Ring Volume

4.1.1.1 Ringing Type

This mode is for setup about how AVP-2000B operates when phone is called.

- Phone Bell, Vibration, Bell after Vibration, Vibration + Bell

By using direction key or figure key [] [], they can be selected.

[Using Method]

[Menu] → [1:Ring/Bell] → [1:Ringing Type] → [1:Phone Bell]

4.1.1.2 Ring Color

This menu is for setup about Ring Color when phone is called, AVP-2000B have 5 kinds of Ring Color to be selected.

By using direction key or figure key [] [], they can be selected.

[Using Method]

[Menu] → [1:Ring/Bell] → [2:Ring Color] → [1:Ring Color 1]

4.1.1.3 Ring Volume

This is for setup about Ring Volume when phone is called

By using direction key or figure key [] [], they can be selected.

[Using Method]

[Menu] → [1:Ring/Bell] → [1:Ring Volume Type] → [3:Ring Volume]

4.1.2 Phone Diary

AVP-2000B provides functions of alarm and calculator for user's convenience.

4.1.2.1 Alarm

This is to provide user with sound of bell by AVP-2000B at setting time with alarm setup.

By using direction key or figure key [] [], they can be selected.

[Using Method]

[Menu] → [2:Phone Diary] → [1:Alarm] → [1:Alarm] → [2:Time setting] → [3:Bell setting]

4.1.2.2 Calculator

AVP-2000B provides function of calculator for user's convenience.

[Using Method]

[Menu] → [2:Phone Diary] → [2:Calculator]

The using method is that first of all, after input of initial figure by using direction key, do select calculation symbol corresponding to the direction indicated in LCD window and then select the calculation method required. After selection of calculation symbol, do input second figure by using figure key and press button [OK], and then the calculation results are indicated in below line of LCD window.

At this state, if direction key button [] is pressed, previous calculation results are moved to figure window to calculate first and are waiting for selection input of next calculation symbol. The next methods are just like the description mentioned above.

4.1.3 User Setup

This user setup menu provides setup made by user of AVP-2000B.

4.1.3.1 Standby Display Mode

AVP-2000B, at standby state, provides dual ways to indicate LCD window.

There is mode showing your telephone number and present time with date. And also there is other mode showing logo of Acrowave Systems with phone number time and date.

Basic mode of AVP-2000B is to show logo of Acrowave Systems. By using direction key or figure key [] [], they can be selected.

[Using Method]

[Menu] → [3:User Setup] → [1:Standgby Display Mode]

4.1.3.2 LCD Contrast

This menu is adjusting contrast of LCD window.

There are total 11 steps for adjusting contrast. After selecting menu, by using direction key [] [], contrast can be adjusted.

[Using Method]

[Menu] → [3:User Setup] → [2:LCD Contrast]

4.1.3.3 LCD Backlight

In case that key button of AVP-2000B is pressed or when phone is called, this menu is adjusting time to light up.

There are total 4 steps to be selected.

By using direction key or figure key [] [], they can be selected.

- Always not lighting, 10 seconds lighting, 20 seconds lighting, always lighting.

[Using Method]

[Menu] → [3:User Setup] → [3:LCD Backlight] → [2:10 seconds lighting]

4.1.3.4 Auto Answering

This menu is for user to answer the phone automatically without pressing button [] with setting conditions when AVP-2000B is called.

There is mode for user to answer the phone by using button [] when phone is called and also there is other mode for user to answer the phone automatically after bell rings once or three times.

- 1. No Use 2. Bell Once 3. Bell three times

By using direction key or figure key [] [], they can be selected.

[Using Method]

[Menu] → [3:User Setup] → [4:Auto Answering] → [3:Bell three times]

4.1.3.5 Localization

This menu is setup using language, standard time server, time zone and sunlight saving time when AVP-2000B is used.

For getting standard time with Internet, standard time server must be designated.

IP address of basic server is 203.254.163.74.

- 1 : using language 2 : time server setup 3 : time zone setup 4: sunlight saving setup

By using direction key or figure key [] [], they can be selected.

[Using Method]

[Menu] → [3:User Setup] → [5:Localization] → [1:Using Language] → [2:Korean]

4.1.3.6 Call Prefix

AVP-2000B can be used through PSTN network using connection equipment (example: AVG-5400G) with PSTN network in Wireless Lan circumstances.

In this case, for using PSTN network, it is needed to press country line selected number in advance to differentiate from VoIP phone generally.

This menu provides automatic function for those procedures.

By using this menu, if PSTN country line selection number is input in advance, user can call by pressing phone number regardless of VoIP telephone number or PSTN telephone number.

AVP-2000B provides country line selection number with one digit.

If this menu is not needed, press button [CONFIRM] without inputting any figures after selecting this menu and then this function is removed.

[Using Method]

[Menu] → [3:User Setup] → [6:Call Prefix]

→ [Country Line Selected number input]

4.1.3.7 Call Forward

AVP-2000B have function for Call Forward when phone is called.

This menu is setup for "Call Forward" function.

[Using Method]

[Menu] → [3:User Setup] → [7:Call Forward] → [2:Call Forward] →

[Call Forward Phone number input]

4.1.3.8 Call Waiting

AVP-2000B have function for Call Waiting when phone is called.

This menu is setting for "Call Waiting" function.

[Using Method]

[Menu] → [3:User Setup] → [8:Call Waiting] → [2:Call Waiting]

4.1.3.9 Password Change

AVP-2000B is using password to remove phone lock function for phone setup change.

At this time, user can change password to use.

Initial password of AVP-2000B is "0000".

[Using Method]

[Menu] → [3:User Setup] → [9:Password Change] → [New Password] →
[Password Confirmation]

4.1.3.10 RingBack Tone Mode

When you are phoning with AVP-2000B, you can select sending sound to people answering the phone.

[Using Method]

[Menu] → [3:User Setup] → [10:RingBack Tong Change] → [1.RingBack Tone On] → [Yes]

4.1.3.11 DTMF Mode

While phoning with AVP-2000B, you can transmit DTMF.

This mode is menu for DTMF transmitting methods.

AVP-2000B supports following 3 modes.

1. SIP INFO (RFC2976)
2. RFC2833 OOB
3. Inband Mode

Basic mode is setup for SIP INFO to be supported.

[Using Method]

[Menu] → [3:User Setup] → [0:Call DTMF] → [1.SIP INFO] → [Example]

4.1.4 Administrator Setup

This menu provides setup for registration of AVP-2000B phone.

This menu can be used after user does input password decided in advance.

4.1.4.1 Network Setup

This menu can do setup and change of AVP-2000B network environment.

- 1:DHCP 2:Fix IP

By direction key or figure key [] [], they can be selected.

1) DHCP

This menu is to be used with IP allotted automatically.

[Using Method]

[Menu] → [4:Administrator Setup] → [Password input] → [1:Network Setup] → [1:DHCP] Selection

2) Fix IP

This menu is for Fix IP.

[Using Method]

[Menu] → [4:Administrator Setup] → [Password input] → [1:Network setup] → [1:Fix IP] selection → [Phone IP address] → [Net Mask Figures] → [Gateway Address] Input

4.1.4.2 SIP Setup

This menu is for setup and change of AVP-2000B registration.

[Using Method]

[Menu] → [4:Administrator Setup] → [Password input] → [1:SIP Setup] selection
→ [SIP Phone number] → [SIP Server Address] → [Domain Name] → [SIP License Name]
→ [SIP License Password] Input

4.1.4.3 Wireless Lan

AVP-2000B is phone used with connection of network by WiFi Wireless Land, IEEE802.11b.

This menu is for setup and change relevant to IEEE802.11b Wireless Lan.

- 1:SSID setup, 2:passwordization setup, 3:802.1X License,
- 4:Roaming setup, 5:contact mode setup

By direction key of figure key [] [], they can be selected.

1) SSID Setup

This menu is for selection of AP to be contacted or to change AP already contacted with AVP-2000B.

- 1:AP Scan, 2:direct Input

[Using Method]

[Menu] → [4:Administrator Setup] → [4:Wireless Lan Setup] → [1:SSID Change]
→ [1:AP Scan] or [2:Direct Input] selection

3) Passwordization Setup

This is setup menu relevant to safety to be setup with use of wireless lan.

Fixed Web key, supplied from IEEE802.11b standard, and be used by this menu.

Fixed Web key, provided by AVP-2000B, supports 64 beat, 128 beat, ASK1 Word mode and 16 digit mode.

[Using Method]

[Menu] → [4:Administrator Setup] → [4:Wireless Lan Setup] → [2:Passwordization Setup] → [2:Setup] → [1:64 beat mode] → [1:Character line Mode] → [Fix Web key] → [WEF key Number] Input

4) 802.1X License

This menu is relevant to license required by Wireless Lan Internet operators for use of wireless lan.

This menu makes it possible to input user's ID and password provided by the relevant operator when applied wireless Lan.

For use of 802.1X license with AVP-2000B, first with this menu, do input user's ID and password provided by the operator and then make contact with Wireless Lan AP so that it can be used by Wireless Lan License.

Basic setup of AVP-2000B is mode not using 802.1X license function.

[Using Method]

[Menu] → [4:Administrator Setup] → [4:Wireless Lan Setup] → [3:802.1X License] → [1:Mode Setup] → [User ID input] → [User password input]

4) Roaming Setup

This menu provides AVP-2000B with roaming or hand-over function under the circumstances of lots of AP setup. Basic setup of AVP-2000B is made to permit roaming movement.

[Using Method]

[Menu] → [4:Administrator Setup] → [4:Wireless Lan Setup] → [4:Roaming Setup] → [1:Roaming Setup]

5) Contact Mode

This menu is to setup contact mode of wireless lan mode.

This menu can do setup following 2 modes.

*Infra-Structure mode, that is general AP mode stipulated in IEEE802.11b standard.

*AdHoc mode that is only card contact mode without AP.

With use of this menu, after selecting Wireless Lan Contact mode, AP connection have to be tried .

For registration of phone, first check state of wireless lan to contact and select contact mode and complete phone registration procedures so that the relevant contact mode works. After contact completed, with the use of function <1.SSID change>, contact the relevant AP or card.

[Using Method]

[Menu] → [4:Administrator setup] → [4:Wireless Land setup] → [5:contact mode] → [1:general mode]

4.1.4.4 NAT

This menu is for using to do setup or change the relevant circumstances to NAT with AVP-2000B.

AVP-2000B provides functions passing NAT by two ways. One way is using STUN server for private network use. The other is to do port forwarding function in NAT server.

- 1:NAT removal, 2:NAT setup

1) NAT removal

This menu is to remove STUN and NAT port forwarding functions in AVP-2000B.

[Using Method]

[Menu] → [4:Administrator setup] → [3:NAT setup] → [1:NAT Removal] selection

1) NAT setup

This menu is to do setup STUN server and NAT port forwarding functions for private network use.

Following are for NAT setup.

- 1:STUN setup, 2:Fix NAT setup

[Using Method]

[Menu] → [4:Administrator setup] → [3:NAT setup] → [1:NAT setup] selection

1. STUN setup

This menu is for setup of STUN server and STUN port.

[Using Method]

[Menu] → [4:Administrator setup] → [3:NAT setup] → [1:NAT setup] → [1:STUN setup] → [STUN server address] → [STUN port] Input

2. Fix NAT setup

This is menu for setup of NAT Port Forwarding Function. NAT server address, NAT SIP Port, and NAT RTP Port can be setup.

[Using Method]

[Menu] → [4:Administrator setup] → [3:NAT setup] → [1:NAT setup] → [1:Fix NAT setup] → [NAT server address] → [NAT SIP Port] → [NAT RTP Port] Input

4.1.4.5 CODEC

Following are voice CODEC which can be used with AVP-2000B.

- G.711 a/u law, G.723.1, G.726, G.729a

Among the above, AVP-2000B can support another CODEC except G.711 a/u law.

At the same time, two kinds of CODEC can be supported.

So, user can do setup the kinds of CODEC to use. This menu has following selections.

- G.711 a/u law
- G.711 a/u law + G.723.1
- G.711 a/u law + G.729
- G.711 a/u law + G.726

[Using Method]

[Menu] → [4:Administrator setup] → [2:CODEC setup] → [3:G.711 + G.729]

4.1.4.6 Initialization

This menu is to initialize the variables which are setup in AVP-2000B or to remove the registration of SIP registration server normally.

1) Rebooting

This menu is enabling user to start AVP-2000B again.

[Using Method]

[Menu] → [4:Administrator setup] → [6:Initialization setup] → [1:Rebooting]

2) Variables Initialization

This menu is enabling user to change all setup figures in AVP-2000B to initial setup figures.

If initialization is carried out by this menu, all figures, such as bell sound, contrast, backlight setup, password and etc, which were setup in AVP-2000B, are initialized.

[Using Method]

[Menu] → [4:Administrator setup] → [6:Initialization setup] → [2:Variables Initialization]
→ [1:Yes]

3) Factory Initialization

This menu is to return all of AVP-2000B phone state to initial factory setup.

[Using Method]

[Menu] → [4:Administrator setup] → [6:Initialization setup] → [3:Factory Initialization]
→ [Yes]

4.1.3.7 Ping Test

This menu is to carry out Ping Test to confirm simply network state and etc.
with AVP-2000B.

[Using Method]

[Menu] → [4:Administrator setup] → [7:Test Mode] → [1.Ping Test] →
[Address input] → [Test rounds input]

4.2 Input Characters

In case of transmitting short text message or making phonebook, AVP-2000B phone is converted to Input Characters Mode and waiting for characters input.

Input characters methods are as follows:

If AVP-2000B is converted to characters input mode, pictogram, showing characters input mode, is indicated at upper right side of LCD window.

At this state, the wanted characters can be input by figure key and “*” “#” key of AVP-2000B.

On input of characters, stipulated characters are supposed to show the corresponding characters to characters indicated on figure key.

Input characters setup is as follows:

Digit Button	Input character		Digit Button	Input charecter	
	Korean	Alphabet		Korean	Alphabet
1	ㄱ ㅋ ㆁ	@ _ + - =	7	ㅍ	P Q R S
2	ㄴ ㄷ	A B C	8		T U V
3	ㄷ ㅌ ㄹ	D E F	9	ㅇ	W X Y Z
4	ㅂ ㅅ ㅈ	G H I	0	. (vowel)	Space ^ ! ~ %
5	ㅊ ㅎ ㅍ	J K L	*	ㅣ (vowel)	. * \$ & ?
6	ㅊ ㅅ ㅈ	M N O	#	ㅡ (vowel)	# < > ()

The kinds of indicating characters input are Korean, alphabet, capital/small character and digit.

The pictogram at upper right side of LCD window shows pictures corresponding to each character input mode. That is, pictures show like [ㄱ] in korean [A] in English capital, [a] in English small character and [1] in digit.

If it is needed to change kind of character during character input, it can be made by using sound adjustment button [] in left side of AVP-2000B.

If present character input mode of Korean is to be changed English capital, press once sound adjustment button []. Pictogram at upper right side of LCD window changes [ㄱ] to [A].

After that, if characters are input by figure key, English capital is input in LCD window.

Change of kinds of character is made according to following sequence.

Korean → English Capital → English small character → Digit → Korean

4.3 Phone book

AVP-2000B provides function of phone book so that user can easily control phone numbers.

AVP-2000B can keep memory of 100 phone numbers in shortened numbers.

If direction key button [] of AVP-2000B is pressed, it enters menu of phonebook.

Phone book menu is consisted of following 4 items.

- | | |
|------------------------|-----------------------------|
| 1: Recent sent number, | 2:Recent received number, |
| 3:Phone number scan , | 4:Phone number registration |

4.3.1 OUTBOUND CALL

AVP-2000B can store up to 32 phone numbers sent.

With stored phone numbers, user can make a call.

In case that the sent number is registered in phone book, it is shown as registered name in phone book. Otherwise, it is shown as the number sent.

After selection of the relevant number in recent sent number menu, if button [call] is pressed, User can make a call again with the selected number,

After selection of the relevant number, if button [confirm] is pressed, details on sent time and etc. are indicated.

At this time, if menu button is pressed, <1.store> <2.removal>menu is indicated.

If <1.store> is selected, it is moved to screen for registration of phone book. If <2.removal> is selected, the relevant number is removed in recent sent number list.

4.3.2 INBOUND CALL

AVP-2000B can store up to 32 phone numbers received and using stored numbers, it can make a call.

In case that the received number is registered in phone book, it is shown as registered name in phone book. Otherwise, it is shown as the number received.

If user presses button [call] after selecting the relevant number among recent received number, the user can make a call again with the selected number.

After selecting the relevant number, if button [confirm] is pressed, details on received time and etc. are indicated.

At this time, if button [menu] is pressed, <1.store> <2.removal>menu is indicated.

If <1.store> is selected, it is moved to screen for registration of phone book.

If <2.removal>is selected, the relevant number is removed in recent received number list.

4.3.3. SEARCH PHONEBOOK

Using function of “phone number registration” of AVP-2000B, it shows all the stored phone numbers and the registered numbers can be found.

If “Search phonebook” menu is selected, LCD window shows 3 phone numbers registered in one screen. At this time, user can make it move to next screen for finding required phone numbers by direction key [] [].

After having the cursor positioned to the required phone list, press button [menu].

Then, it shows menu <1.compilation> <2.removal>for the relevant phone number.

If menu <1.compilation>is selected by number key, it is converted to the screen to revise information of the relevant phone number.

If menu <2.removal>is selected, the relevant phone number is removed in phone book.

4.3.4 ADD NEW ENTRY

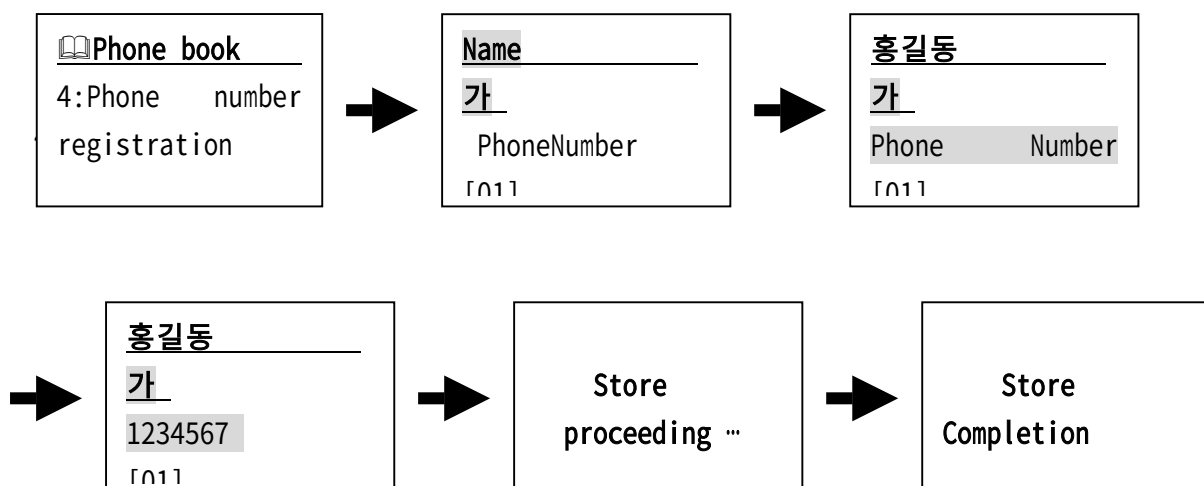
For user’s convenience, AVP-2000B can register up to 100 phone numbers that user wants.

In order to register new phone number, first select phone number new registration menu.

If it is selected, LCD window is waiting for name input to be given to new phone number.

If user presses direction key [] after name input, input cursor moves to window for phone number input.

After registration of phone number, press button [confirm]. Then, you can make a call by the shortened number indicated on right side of phone number input window.



4.4 MESSAGE (SIP Instance Message)

AVP-2000B provides short text message transmitting and receiving function between equipments using SIP protocol.

This message transmitting technique is subject to IEEE RFC-3428 standard.

This function of AVP-2000B can be worked by using direction key []. This function provides<1:Text Confirm> and <2:Text letter Writing>.

Details are as follows:

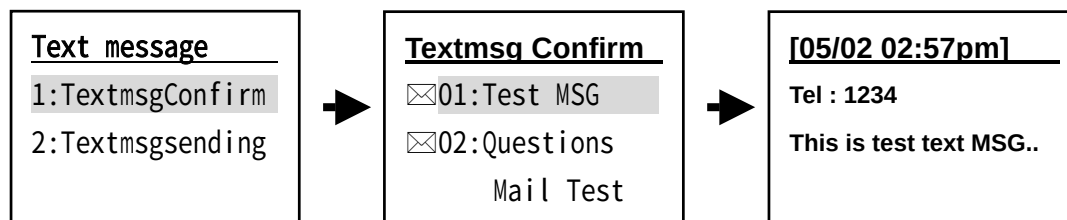
4.4.1 Received Message

This is menu for confirming text message transmitted between AVP-2000B phone or through equipments using SIP protocol.

If AVP-2000B receives text message in standby state, it shows “new message arrived” in LCD window and message icon is lighted up.

At this state, if you press direction key [] and select [1:message receiving], some of front parts of the arrived text message are showing.

In case that there are lots of message arrived, by using direction key [] or [], you have to have cursor positioned at the message you want to confirm and then if you press button [confirm], its arrival time and contents are showing.



AVP-2000B can store up to 32 text messages arrived.

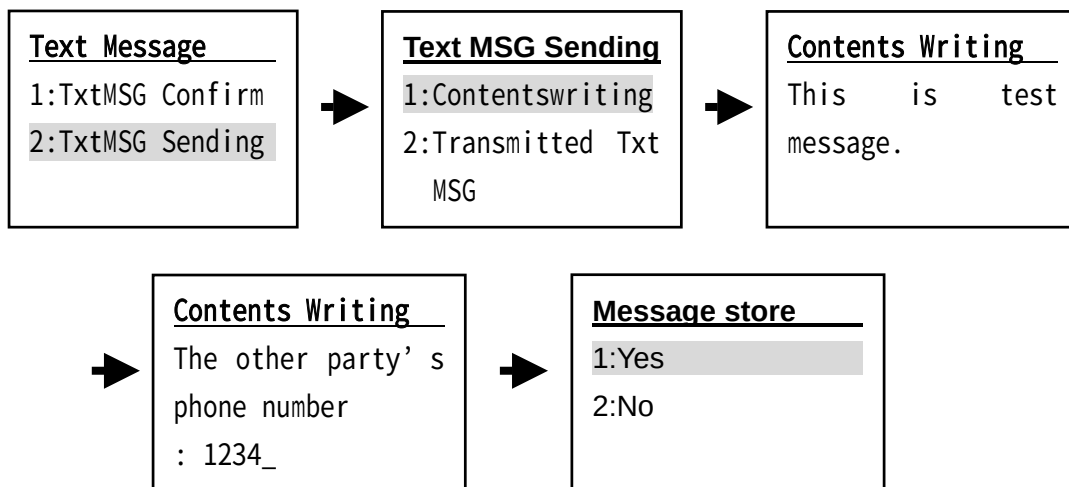
4.4.2 SEND MESSAGE

This is menu for transmitting text message with terminal observing IEEE-RFC3284 standard byAVP-2000B phone or between equipments using SIP protocol.

AVP-2000B can transmit up to 80 text message to the required terminal.

4.4.2.1 New Message transmitting

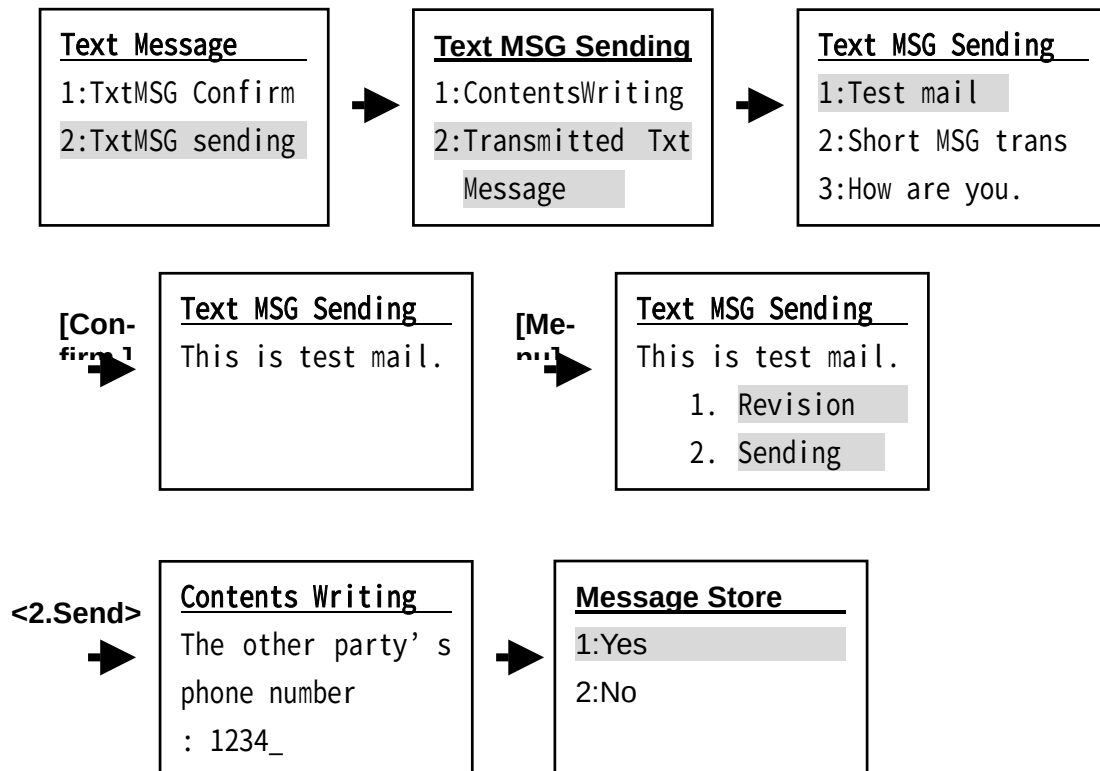
This is menu for transmitting newly made message.



AVP-2000B is able to store up to 32 transmitted message.

4.4.2.2 Send Stored Message

This is menu for transmitting again the stored message sent before.



4.5 Soft Menus

For user's convenience, AVP-2000B provides following functions at call state.

1.Phone Book, 2:Call Mute, 3:Call Transfer, 4:Call Hold

At call state, if you press button [Menu], LCD screen appears to be transferred.

At this state, if you press button [cancel], it returns to call state.

4.5.1 Phonebook

Please refer to <4.3 phonebook>.

4.5.2 Call Mute

At call state in AVP-2000B, call mute function is to prevent user's own voice from being transmitted to the other party's phone.

If this function is setup by using button [Menu], any sound does not be transmitted to the other party's phone.

">>Call mute<<" Message blinks in LCD window of user's AVP-2000B phone.

[Using Method]

[Call] → [Menu] → [2:Call mute]

At call mute state, if you want to remove this function, press button [menu] again and select <2:Call sound connection>, or you can press volume adjusting button [] or button [] for automatic call sound connection.

[Using Method]

[Call] → [Menu] → [2:Call sound connection]

4.5.3 Blind Call Transfer

At call state, AVP-2000B provides function transferring to other phone number you want.

If you do input the number you want to transfer, your present call is connected with the newly inputted number and your present call stops.

[Using Method]

[Call] → [Menu] → [3:Blind Call Transfer] → [Phone number input] → [Confirm]

4.5.4 Call Hold

At call state, AVP-2000B provides function for temporary call hold.

[Using Method]

[Call] → [Menu] → [4:Call Hold] → [Phone Number input] → [Confirm]

If call hold function is worked, message ">>call hold<<" blinks at down part of LCD window.

In order to remove call hold state of AVP-2000B, do the call hold procedures described above again.

Then, call hold is removed and phone is connected again.

4.5.5 Call Waiting

At call state, if other phone is called, AVP-2000B provides information of such phone number during call.

AVP-2000B informs it by short warning sound. Warning sound rings once every 3 seconds.

With warning sound, message ">>call standby<<" blinks.

At this state, if you want to transfer to the phone arrived later, do press button [call].

Then, you are connected with that phone.

And your present call changes to call hold state and vice versa. It can be confirmed by the number connected in LCD window.

At state connected with phone called later, when you finish call, you are connected again with previous phone.

-Acrowave Systems -CradleAP

RF Exposure Statement

The device should be used beyond 20cm from the body.

FCC Warning

FCC15.19

This device is verified to comply with part 15 of the FCC Rules for use with cable television service.

FCC 15.105

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

FCC 15.21

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form.