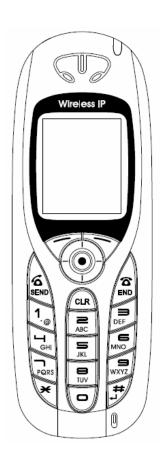


# WirelessIP5000E-A Administrator Manual

Thank you for purchasing the WirelessIP5000E-A.

- Before use, kindly read this "Administrator Manual" thoroughly to have an understanding of the contents.
- After reading, place it within reach at all times such as at the side of this product.



Product is certified to comply with technical standards.

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# Chapter 1 Administrator Settings

# **Administrator Menu**

Makes required settings for using the phone. Only administrators are able to set items on the Administrator Menu. Tail. 1 key to select Menu. 3 04/25 Mon Presence 17:40 Menu Select "5. Setup" using the ▲ ▼ keys of the 1.Phone book and confirm using the key. 2.Message 3.Call log 4.Presence 5.Setup 6.Network From the Setup menu, Setup 17:40 1.Bell/Vib. Select "2. Phone lock" using the ▲▼ keys of the 2.Phone lock and confirm using the key. 3.Alarm 4.Volume 5.Error notify 6.Information From the Phone lock menu, Phone lock 17:40 1. User Pwd Select "1. User Pwd" using the ▲▼ keys of the 2. Lock mode and confirm using the key. When you select "1. User Pwd", the system asks you for the current password. Enter the Admin password. The default value is 000000 (6 zeroes). 17:40 Set this using the key. Phone lock User Pwd Old password

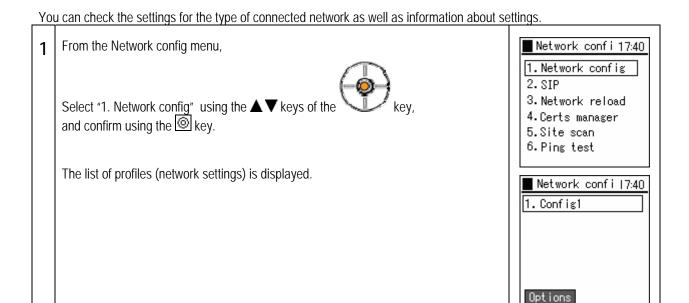
This configures network-related settings.

1 From the Admin menu,

Select "1. Network config" using the ▲▼ keys of the and confirm using the ◎ key.

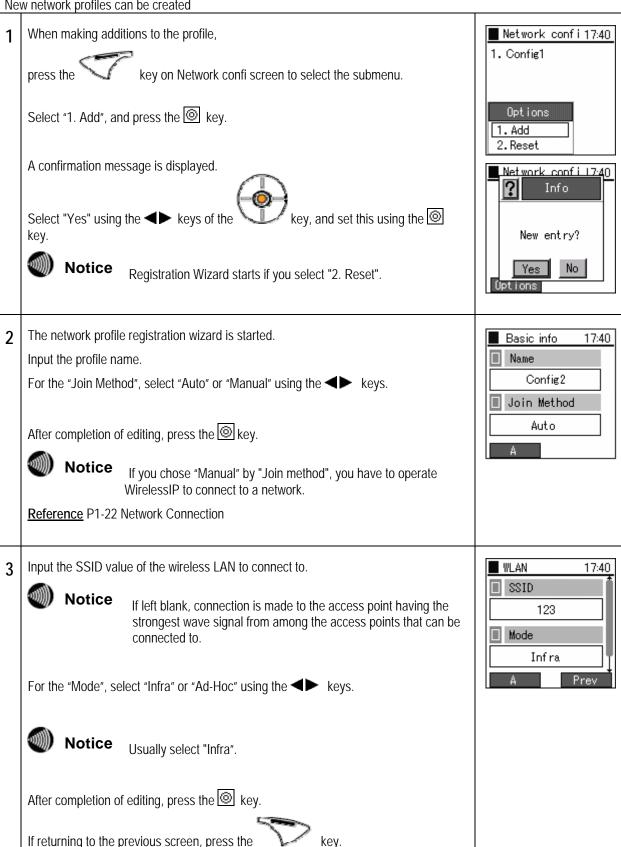
| Admin 17:40 |
| 1. Network config 2. Password 3. Upgrede 4. Error log 5. WEB server 6. Phone reset ↓

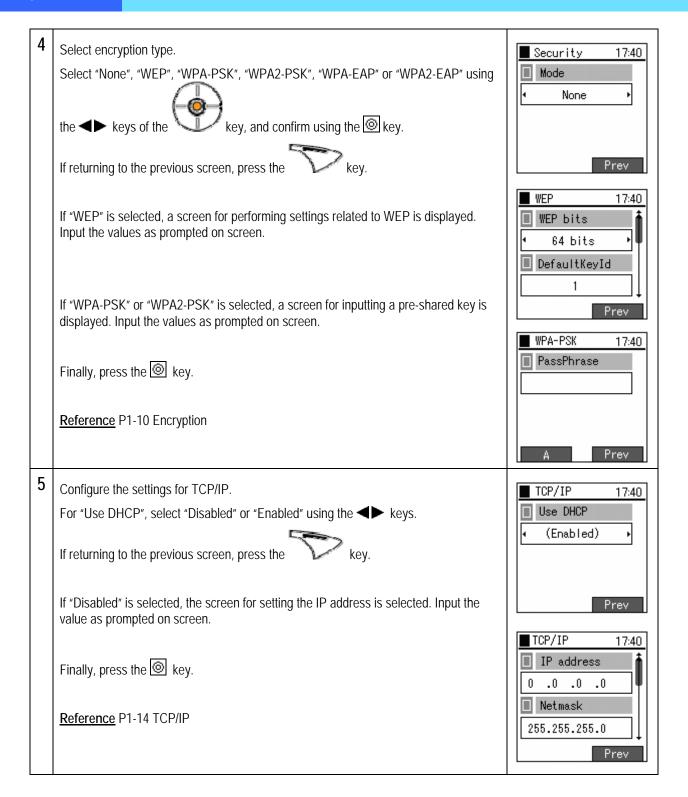
## **Network config**

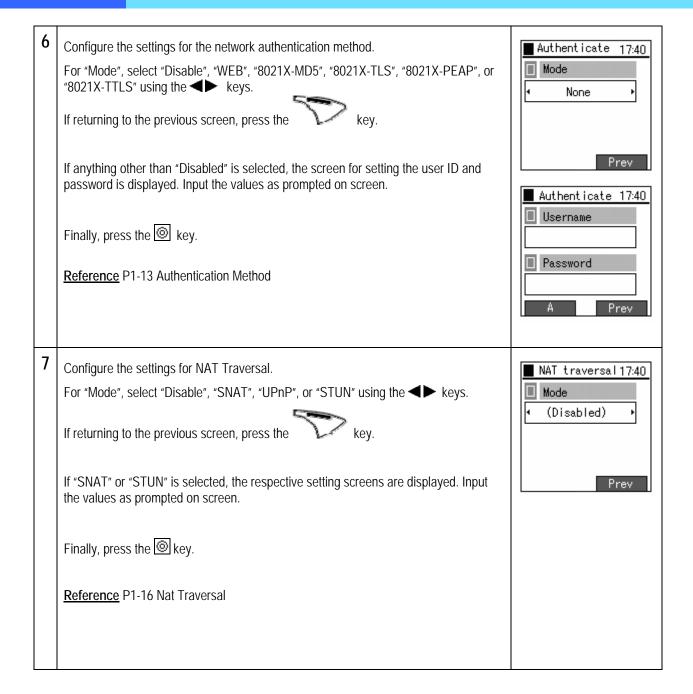


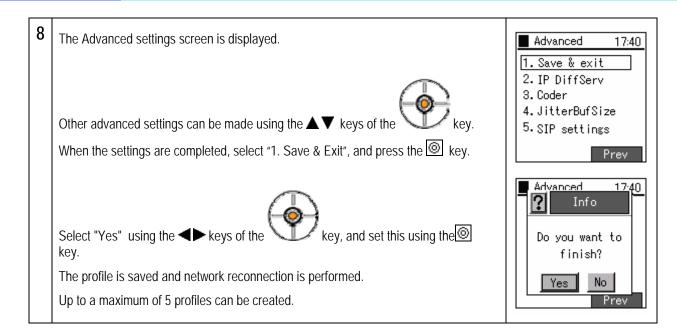
### Addition

New network profiles can be created







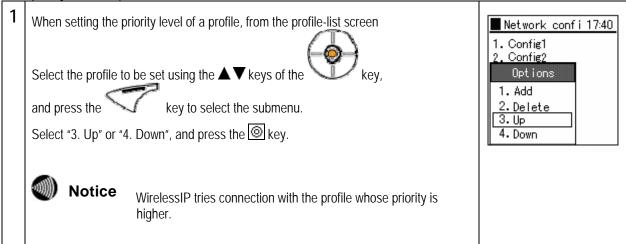


### Deletion

Network profiles can be deleted. When deleting a profile, from the Network confi screen Network confi 17:40 1. Config1 Config2 Options 1. Add select the profile to be deleted using the  $\blacktriangle \blacktriangledown$  keys of the 2.Delete 3.Up and press the key to select the submenu. 4. Down Select "2. Delete", and press the key. Network confi 17:40 Info A confirmation message is displayed. Delete entry? key, and confirm using the ® Select "Yes" using the **◄** keys of the Yes key. Upt rons Deletion of all profiles is not possible.

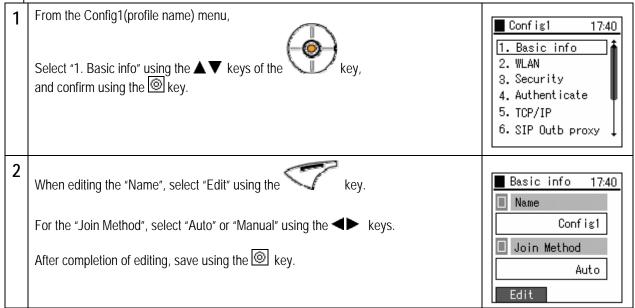
### ■ Priority-Level Settings

The priority level of a profile can be set.



### Basic Information

A profile's name and its connection method can be set.

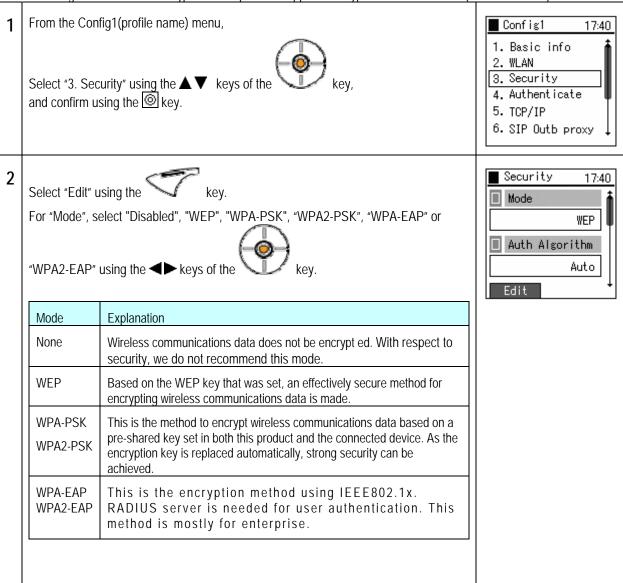


### ■ Wireless LAN

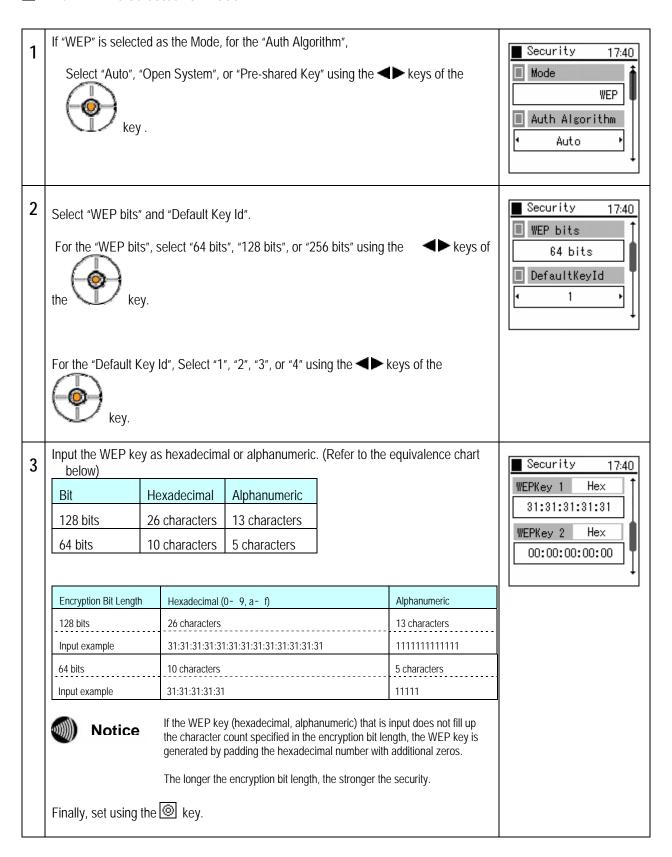
The SSID that identifies the access point can be set. From the Config1(profile name) menu, Config1 17:40 1. Basic info 2. WLAN 3. Security Select "2. WLAN" using the ▲▼ keys of the 4. Authenticate and set using the key. 5. TCP/IP 6. SIP Outb proxy 2 WLAN 17:40 Select "Edit" using the ■ SSID Input the SSID value of the wireless LAN to be connected to. 123 ■ Mode Infra **Notice** If left blank, connection is made to the access point having the Edit strongest wave signal from among the access points that can be connected to. For the "Mode", select "Infra" or "Ad-Hoc" using the ◀► keys. Notice Usually select "Infra". Finally, save using the key.

### Encryption

These settings are related to encryption. This product supports encryption based on WEP (64/128/256 bits).



### ■ When WEP is selected for Mode



### Hex (Hexadecimal Code) and Alpha (ASCII Code) equivalence chart

Hex	Alpha
21	!
23	#
24	\$
25	%
26	&
27	,
28	(
29	)
2a	*
2ь	+
2c	,
2d	-
2e	
2f	/
30	0
31	1

Hex	Alpha
32	2
33	3
34	4
35	5
36	6
37	7
38	8
39	9
3a	:
3с	<b>\</b>
3d	=
3e	>
3f	?
40	@
41	Α
42	В

Hex	Alpha
43	С
44	D
45	Е
46	F
47	G
48	Н
49	I
4a	J
4Ь	K
4c	L
4d	М
4e	N
4f	0
50	Р
51	Q
52	R

Hex	Alpha
53	S
54	Т
55	U
56	V
57	W
58	Х
59	Υ
5a	Z
5Ь	[
5c	¥
5d	]
5e	ţ
5f	-
60	,
61	a
62	Ь

Hex	Alpha
63	С
64	d
65	е
66	f
67	g
68	h
69	i
6a	j
6Ь	k
6c	1
6d	m
6e	n
6f	0
70	Р
71	q
72	r

-	
Hex	Alpha
73	Ø
74	t
75	a
76	>
77	8
78	Х
79	у
7a	Z
7Ь	-{
7c	_
7d	}
7e	2

### ■ When WPA-PSK or WPA2-PSK is selected for Mode

1 Select "Pre-shared key" (PassPhrase). Input the same value as the value set in the connection device.

Input the "PassPhrase" as single-byte alphanumeric characters with at least 8 characters but not more than 63 characters.

Finally, save using the key.



**Notice** 

Starting from the input pre-shared key, the key is automatically changed to a new value every fixed period. This makes it more secure than WEP.

With WEB interface, Pre-shared key can be set in HEX.



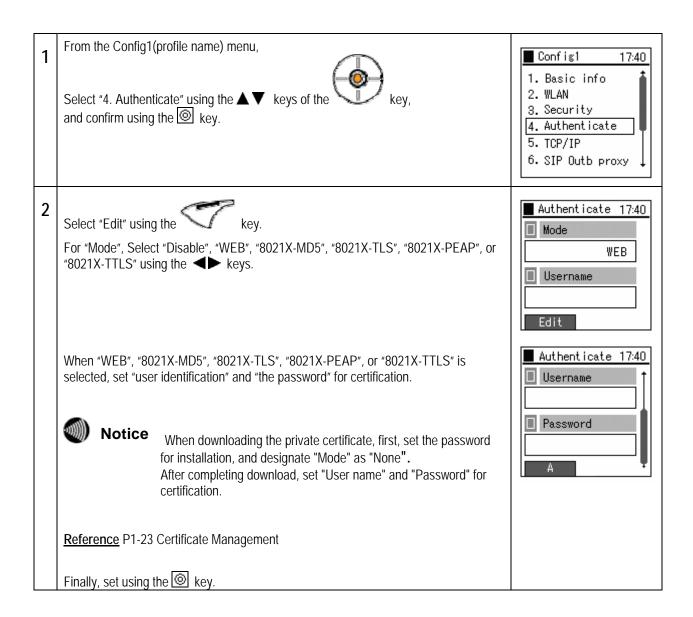
### Authentication Method

Authentication method is the settings related to network authentication.

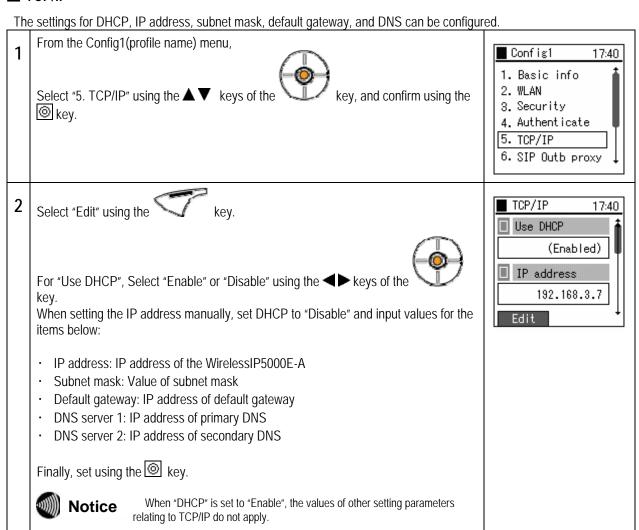


**Notice** 

When "WPA-EAP" or "WPA2-EAP" is selected for Mode. This setting must be configured.

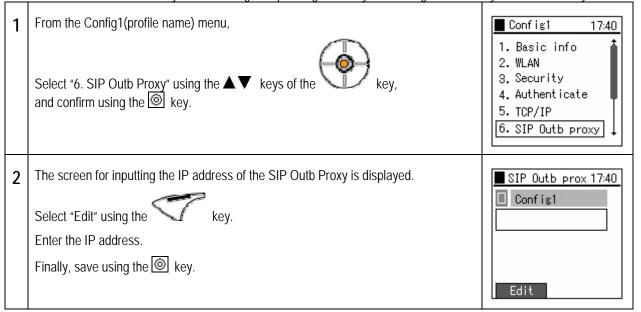


### ■ TCP/IP



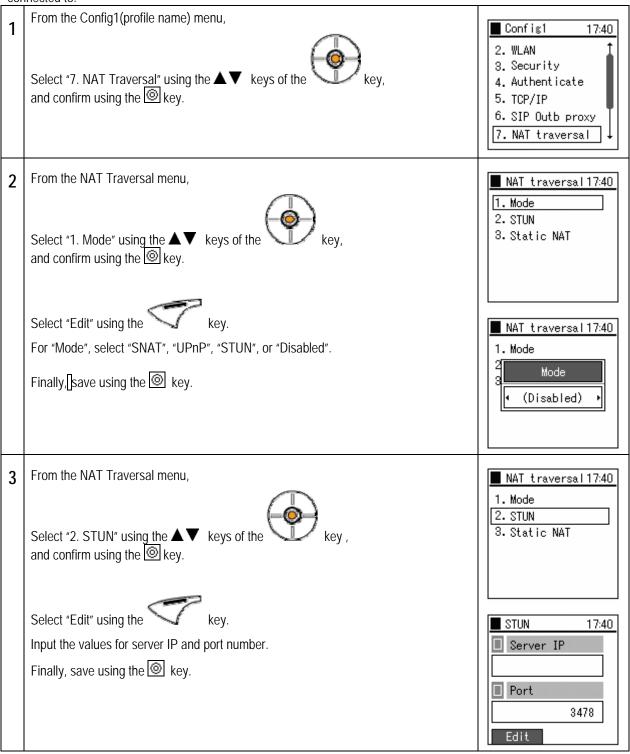
# ■ SIP Outb Proxy

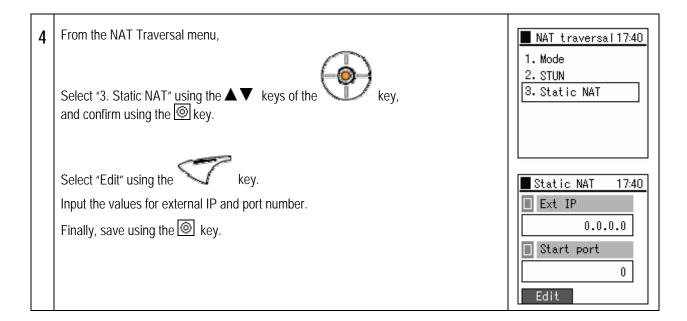
You can set the Outbound Proxy server settings. Depending on the system configuration it may not be necessary to set them.



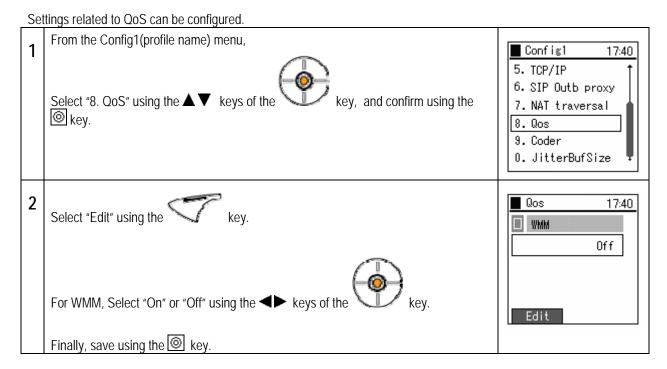
### NAT Traversal

This product supports UPnP and Static NAT, and it is possible to make calls from within the LAN to outside the LAN via a NAT Box. At these times, the settings for UPnP and Static NAT can be made to match the settings of the NAT Box to be connected to.



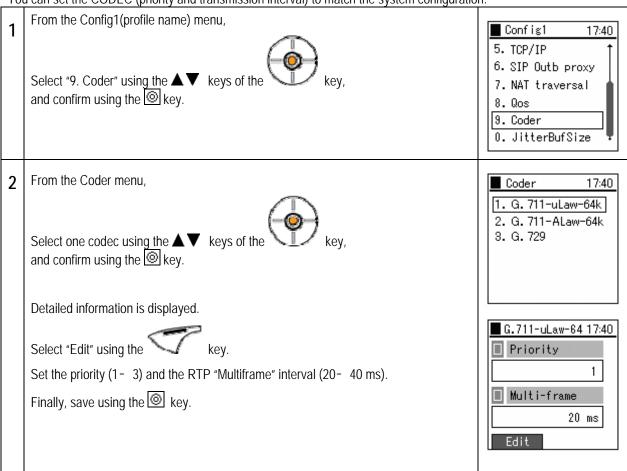


### QoS



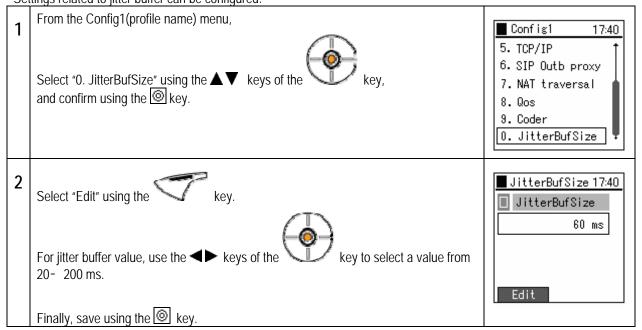
### Coding

You can set the CODEC (priority and transmission interval) to match the system configuration.



### ■ Jitter Buffer

Settings related to jitter buffer can be configured.



### SIP

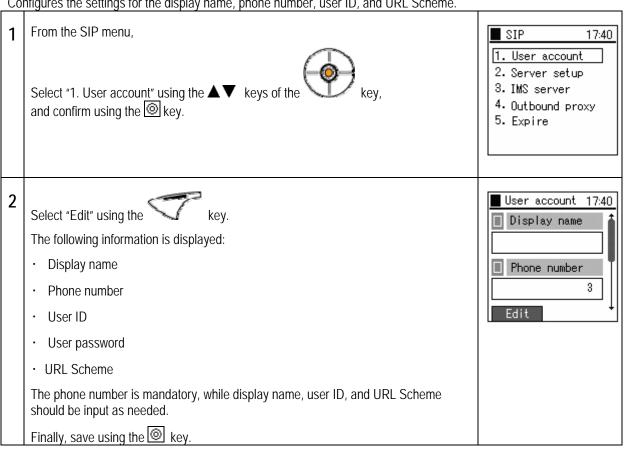


Select "2. SIP" using the ▲ ▼ keys of the and confirm using the key.

### Network confil17:40 1. Network config 2.SIP 3. Network reload 4.Certs manager 5.Site scan 6. Ping test

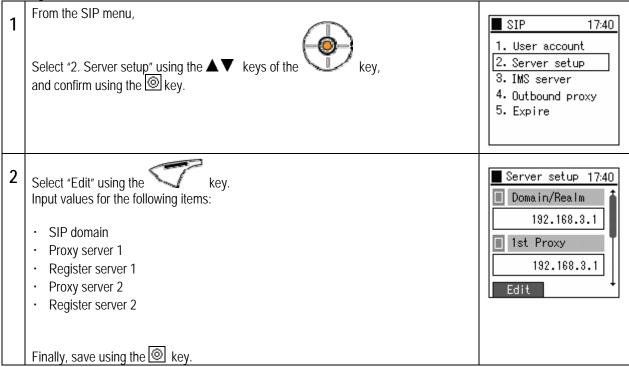
### User account

Configures the settings for the display name, phone number, user ID, and URL Scheme.



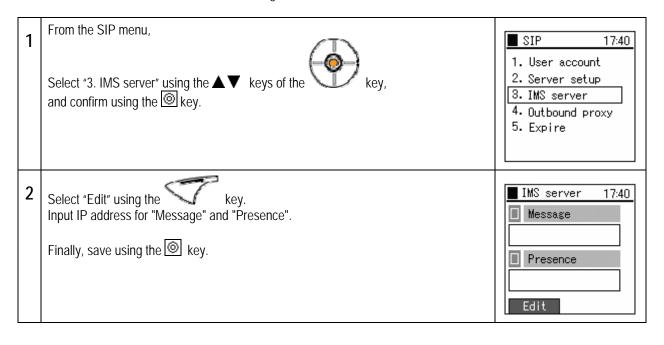
### Server

Settings the SIP server



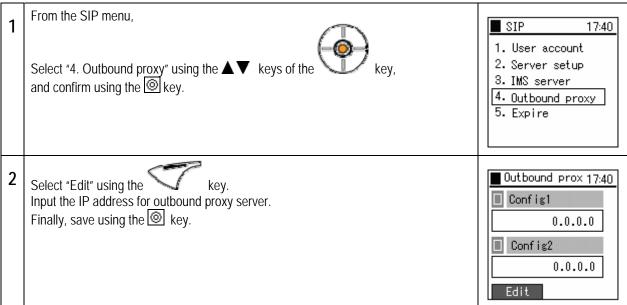
### IMS Server

Settings the IMS server and Presence server IM server is the server in order to exchange instant message. Presence server is the server in order to exchange status information.



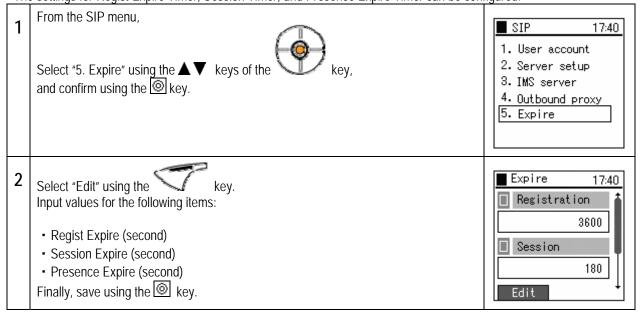
### Outbound Proxy

The settings for the outbound proxy server can be configured. Depending on the system configuration it may not be necessary to set them.



### Expire

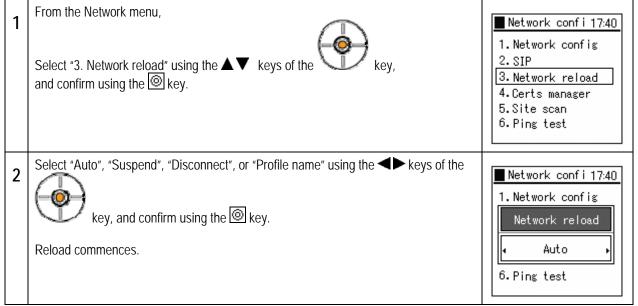
The settings for Regist Expire Timer, Session Timer, and Presence Expire Timer can be configured.



# **Network Connection**

### Network Connection

When adding, deleting, and changing settings of profiles, reconnection can be done manually.



# **Certificate Management**

Certificate settings can be configured.

1 From the Network menu,

Select "4. Certs manager" using the ▲▼ keys of the and confirm using the low key.

kev.

2. SIP

3. Network reload

■ Network confil7:40

1. Network config

4.Certs manager 5.Site scan

6. Ping test

Reference and download of the route certificate and the private certificate is possible in order to use 802.1x (EAP-TLS, PEAP, TTLS) .

From v2.4.0, you can select which of TFTP or HTTP as a download system with 【UPGRADE】 Request\_Mode. Because each setting method differs, refer the chart under.



Do not use "%" and space for file name.

download system	setting method	Example of input
TFTP	Setting IP address of TFTP server	192.168.0.1
HTTP	Setting URL and filename of HTTP server	http://192.168.0.1/1234.cer
	http://IP address of HTTP server / filename	



When installing the private certificate, record the password for installation, user identification for certification and its password.

Beforehand insert the certificate in the directory of the server.

route certificate : Supporting .der, .cer and .pem Encode system private certificate : Supporting .pfx and .p12 Encode system

### ■ View RootCA , View PrivateCA

View the route certificate and the private certificate From the Certs manager menu, 1 Certs manager 17:40 1. View RootCA 2. View PrivateCA Select "1. View RootCA" using the ▲▼ keys of the 3. Down RootCA and confirm using the key. 4. Down PrivateCA 5. Delete CA ■ View RootCA 17:40 ■ CN HCL-CA Issuer C=JP/ST=Tokyo/L From the Certs manager menu, 2 Certs manager 17:40 1. View RootCA 2. View PrivateCA Select "2. View PrivateCA" using the ▲ ▼ keys of the 3. Down RootCA and confirm using the key. 4. Down PrivateCA 5. Delete CA **Notice** Beforehand it is necessary to set "password" for certification with View PrivateC 17:40 "Authenticate" menu. ■ CN HCL Reference P1-13 Authentication Method Issuer C=JP/ST=Tokyo/L

### ■ Download RootCA

Download the route certificate





Select "3. Download RootCA" using the ▲▼ keys of the and confirm using the key.

A warning message is displayed.

Select "Yes" or "No" using the ◀▶ keys of the

<In case of TFTP server>

If "Yes" is selected, there is a prompt for input of the IP address of the download destination TFTP server. After inputting the IP address, press the wkey.

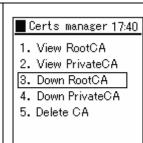
<In case of HTTP server>

If "Yes" is selected, there is a prompt for input of the URL of the download destination HTTP server and filename. After inputting them, press the key.

Reference P1-13 Authentication Method

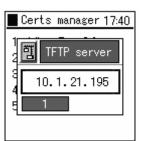
Input of "certificate file name" is required.

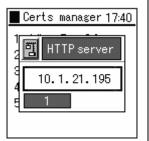
After the verifying or the editing, press the key and download starts.













### ■ Download PrivateCA

Download the route certificate



### Notice

Beforehand it is necessary to input "password" for Installation with "Authenticate" menu, and to designate "Mode" as "None".

### Reference P1-13 Authentication Method

From the Certs manager menu,

Select "4. Download PrivateCA" using the ▲ ▼ keys of the ke and confirm using the logic key.

A warning message is displayed.

Select "Yes" or "No" using the ◀▶ keys of the

### <In case of TFTP server>

If "Yes" is selected, there is a prompt for input of the IP address of the download destination TFTP server. After input of the IP address, press the key and the download is started.

### <In case of HTTP server>

If "Yes" is selected, there is a prompt for input of the URL of the download destination HTTP server and filename. After inputting them, press the key.

Reference P1-13 Authentication Method

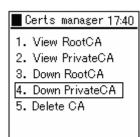
Input of "certificate filename" is required.

Verify or edit the filename, and press the key then download starts.



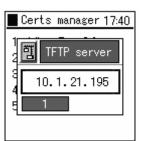
### **Notice**

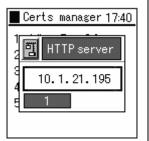
After completing download, set "User name" and "Password" for certification.







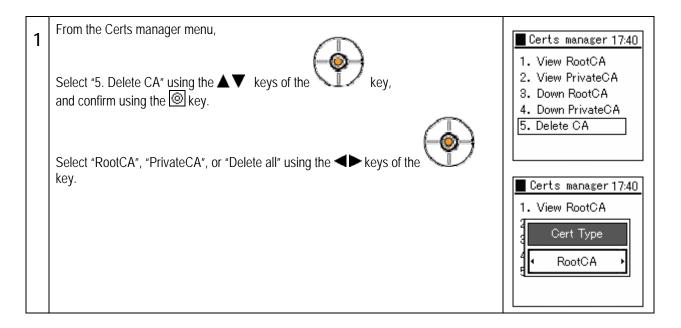




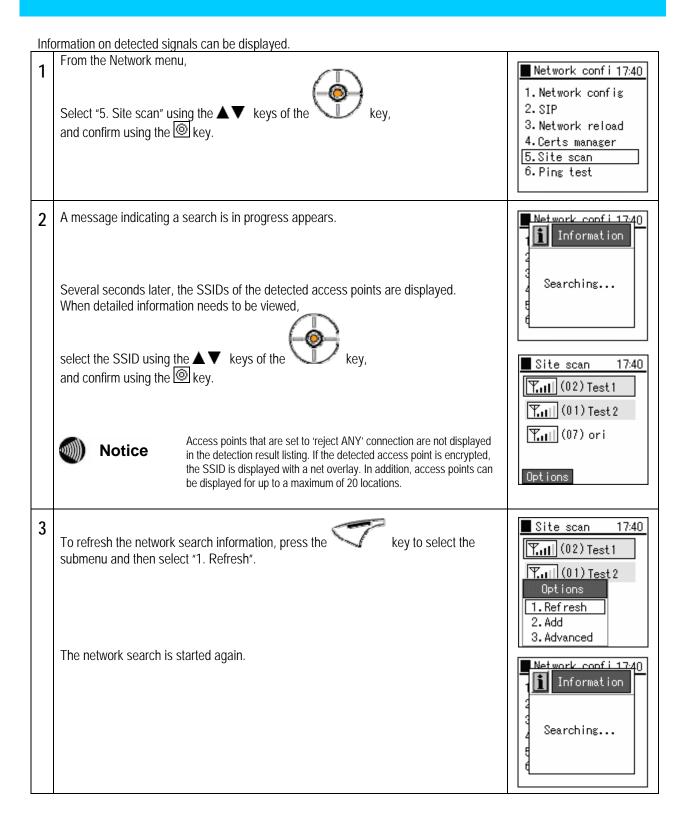


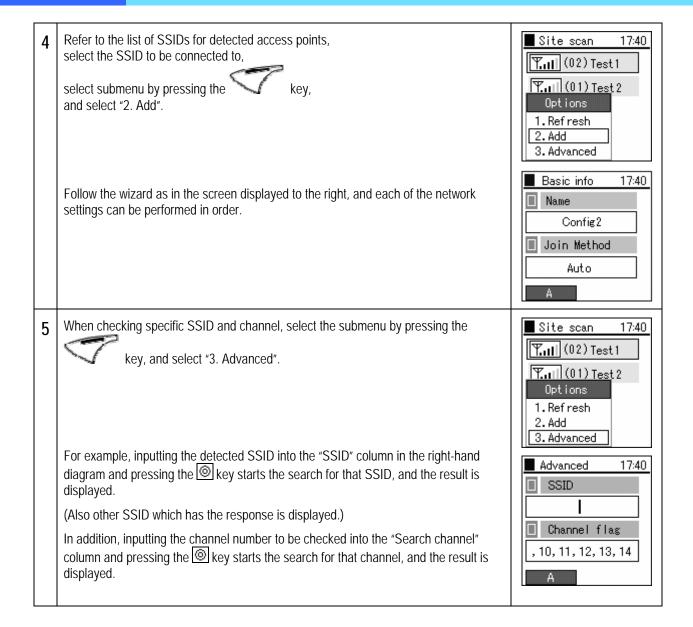
### ■ Delete CA

Delete the certificate

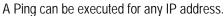


### **Network Search**





# Ping test



From the Network menu,

Select "6. Ping test" using the ▲▼ keys of the

and confirm using the ◎ key.

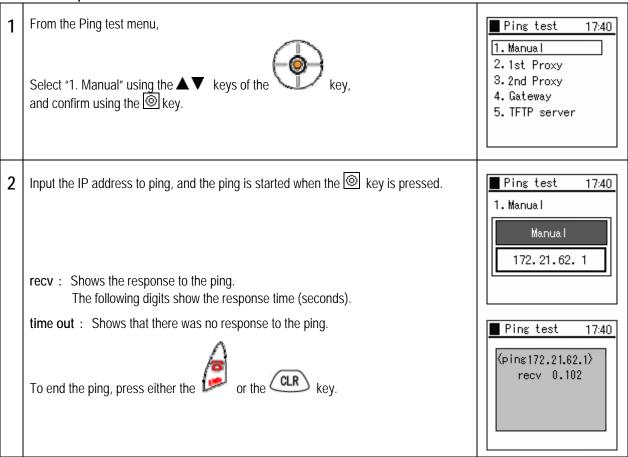
Select "6. Ping test" using the ◎ key.

Select "6. Ping test" using the ◎ key.

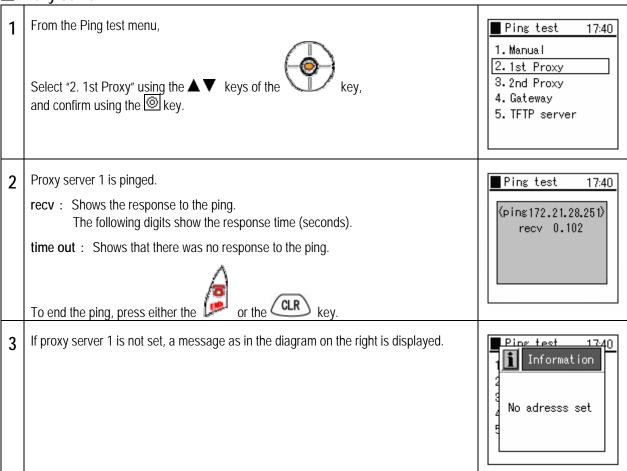
Network conf i 17:40

1. Network conf i 2. SIP
3. Network reload
4. Certs manager
5. Site scan
6. Ping test

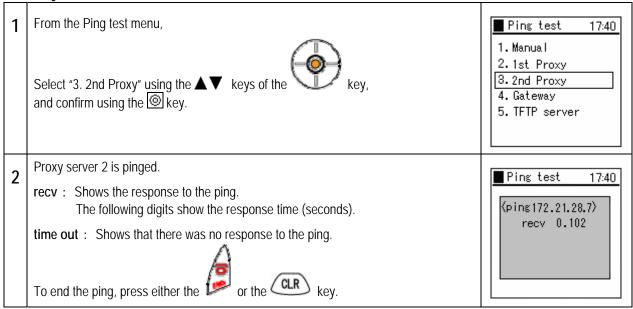
### Manual Operations

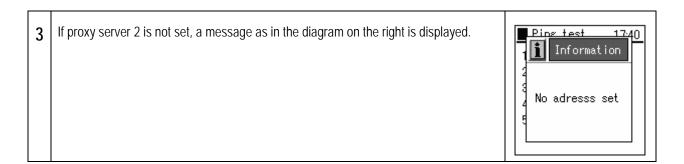


### Proxy Server 1

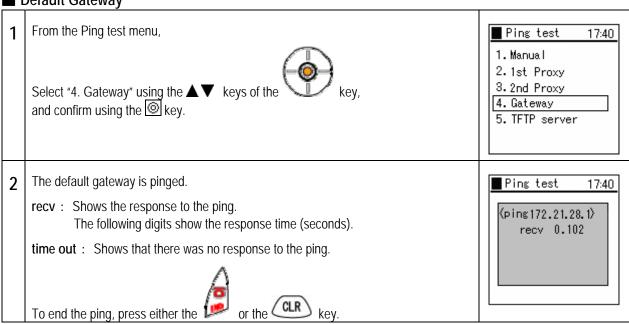


### Proxy Server 2

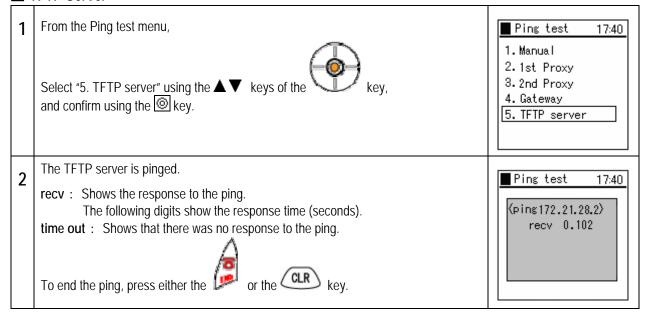




Default Gateway

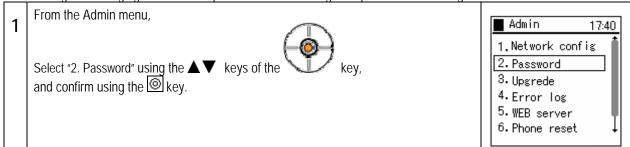


### TFTP Server



# **Password**

The settings for changing administrator password and resetting user password are configured.



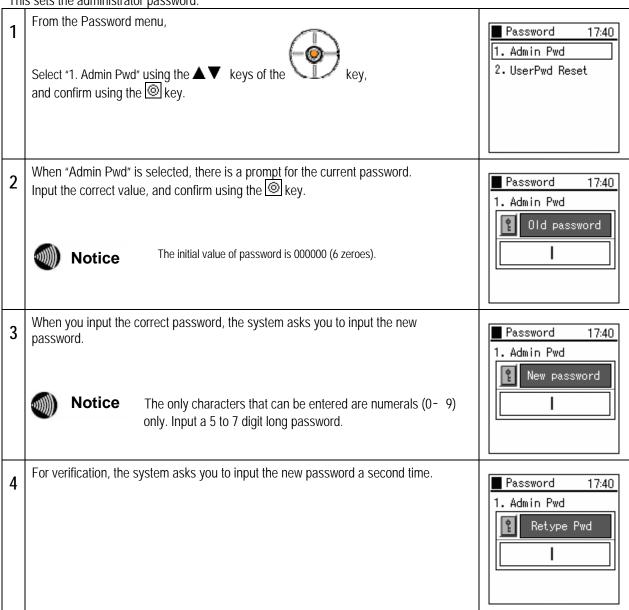
### **Administrator Password**



Caution

if the administrator password is forgotten, contact the sales agent where the purchase was made.

This sets the administrator password.



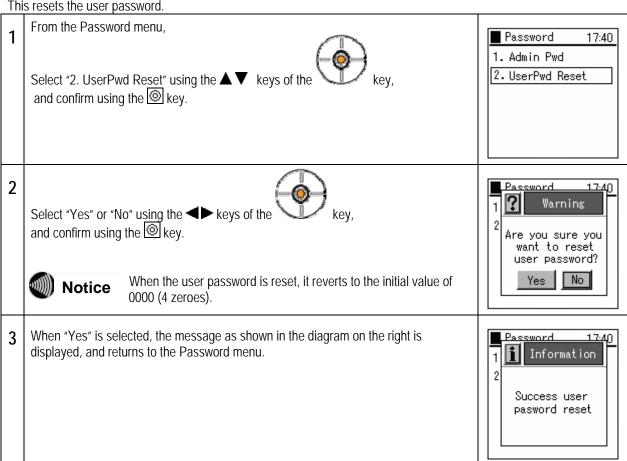
#### **Password**

When you input the password, a screen like that on the right is displayed for a few seconds.

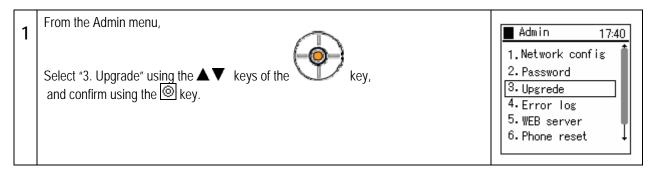


#### **User Password Reset**

This resets the user password.



Execute version upgrade of firmware / configuration or setting for version upgrade.



From v2.4.0, you can select which of TFTP or HTTP as a download system with **【UPGRADE】** Request\_Mode. Because each setting method differs, refer the chart under.



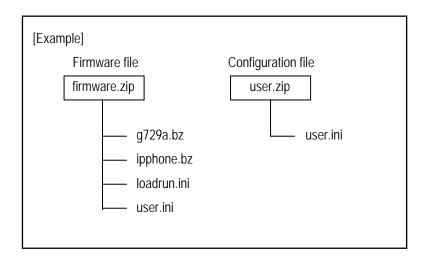
Do not use "%" and space for file name.

download system	setting method	Example of input
TFTP	Setting IP address of TFTP server	192.168.0.1
HTTP	Setting URL and filename of HTTP server	http://192.168.0.1/1234.zip
	http://IP address of HTTP server / filename	



Beforehand insert the firmware file / configuration file in the directory of the server.

When using HTTP server, each of firmware files (g729a.bz/ipphone.bz/loadrun.ini/user.ini) and configuration file (user.ini) has the necessity to be archive with non compression and the zip type.



#### **Program**

Upgrade the firmware files (q729a.bz/ipphone.bz/loadrun.ini/user.ini) with network connection.

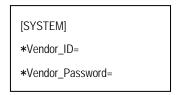


When upgrading firmware files, present configuration file is overwrited by the configuration file "user.ini" inside the folder. (All items where "\*" is added)

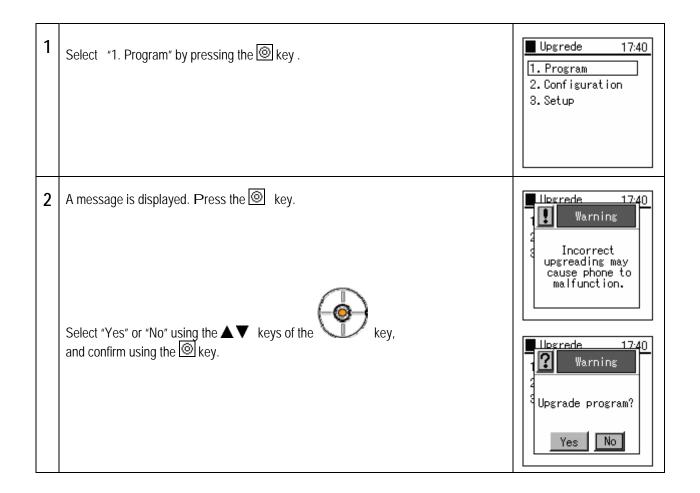
Do backup of the present configuration file (user.ini) to the folder with "Download Configuration File" function of Web settings.

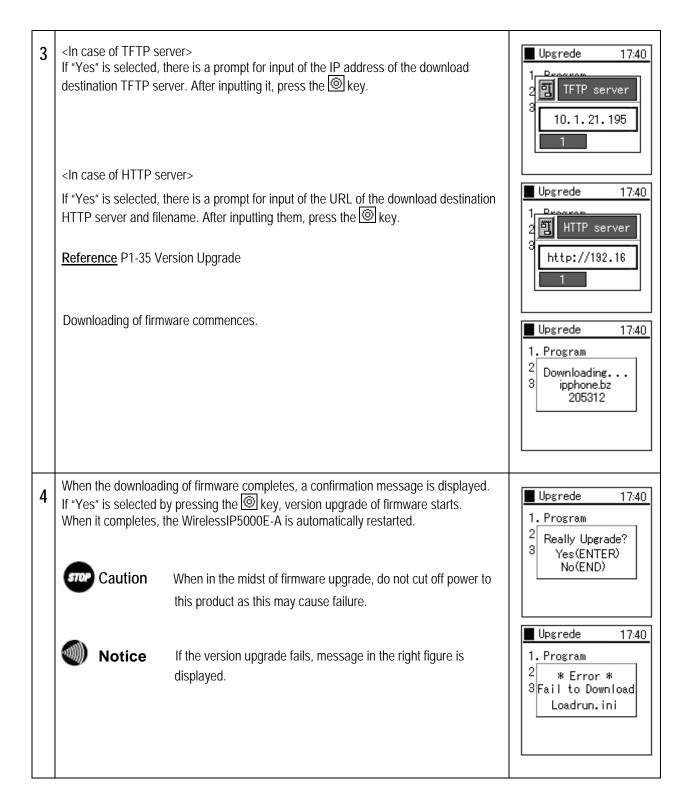
When doing backup, password becomes blank. Set present password to "Vednor\_Password". In addition, "Vednor\_ID" and "Vednor\_Password" in "system" classification must have "\*" like below.

Concerning the editing method of user.ini, refer to the "WirelessIP5000-A User.ini Manual".



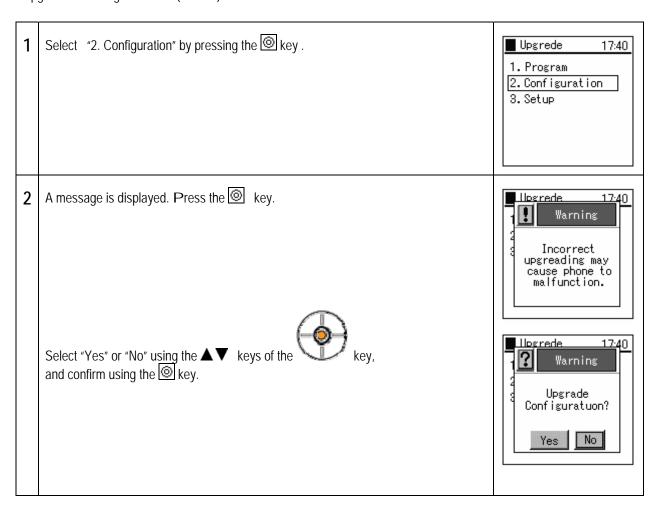
**Reference** P2-10 Download Configuration File





### Configuration

Upgrade the configuration file (user.ini) with network connection.

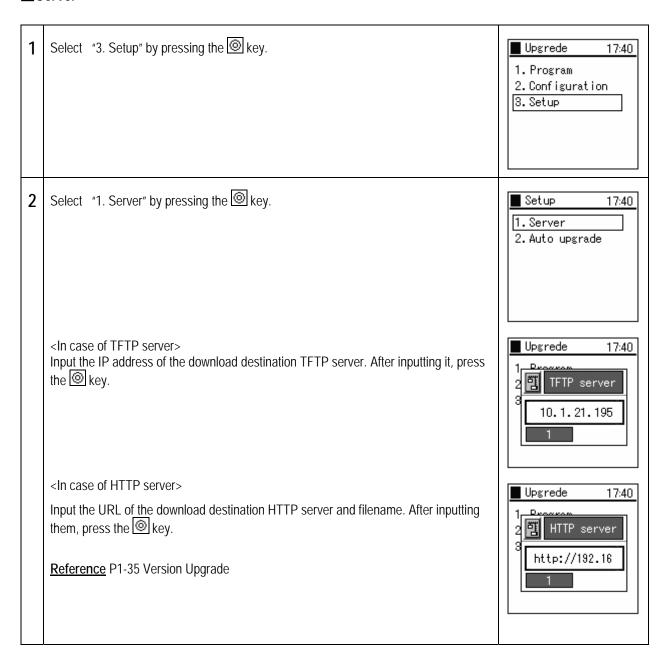


<In case of TFTP server> Upgrede 17:40 If "Yes" is selected, there is a prompt for input of the IP address of the download destination TFTP server. After inputting it, press the key. TFTP server 10.1.21.195 <In case of HTTP server> Upgrede 17:40 If "Yes" is selected, there is a prompt for input of the URL of the download destination HTTP server HTTP server and filename. After inputting them, press the key. http://192.16 Reference P1-35 Version Upgrade Upgrede 17:40 Downloading of configuration commences. 1. Program Downloading... ipphone.bz 205312 When it completes, the WirelessIP5000E-A is automatically restarted. Upgrede 17:40 1. Program STOP Caution When in the midst of configuration upgrade, do not cut off power APP Upgrade is 3 complete. to this product as this may cause failure.

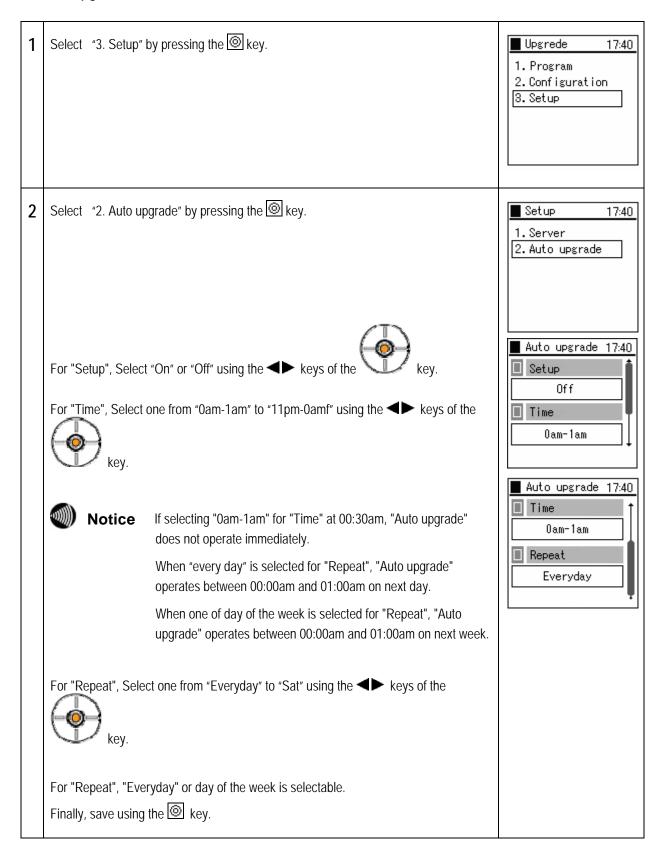
### Setup

Input setting for version upgrade.

#### Server



#### ■Auto upgrade



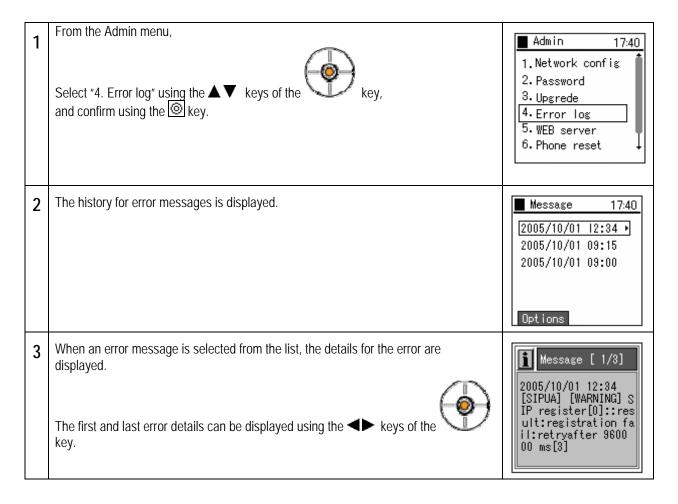
### **Error Log**

The contents of the error log can be checked.

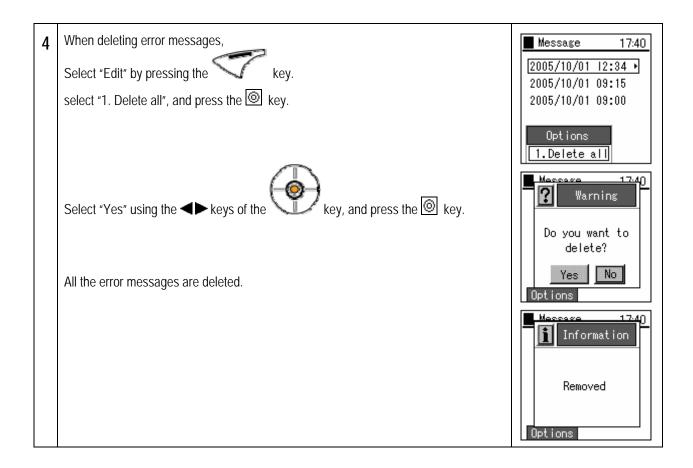


**Notice** Error log is displayed, when "Syslog" is available only.

#### **Reference** P3-2 Error Log Information

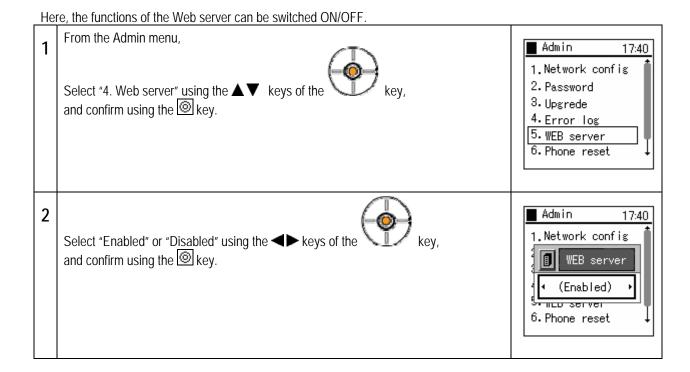


# **Error Log**



Notice Error message is retained up to 500.

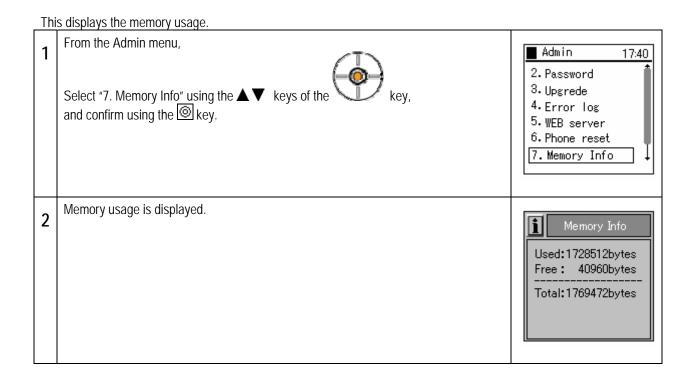
### Web Server



### Initializing

Reverts settings to the configuration last uploaded. From the Admin menu, 1 ■ Admin 17:40 1. Network config 2. Password Select "6. Phone reset" using the ▲ ▼ keys of the 3.Upgrede and confirm using the key. 4. Error log 5.WEB server 6.Phone reset 2 Admin <u>17:</u>40 Warning Select "Yes" or "No" using the ◀▶ keys of the and confirm using the key. This will return the factory default. Are you sure? No Yes ■ Admin When "Yes" is selected, initialization is started and reverts to the configuration Warning conditions uploaded previously. When initialization completes, the WirelessIP5000E-A is automatically restarted. Initializing... and Rebooting... **Notice** When "Phone reset" is executed, the contents which are modified after last uploading are entirely eliminated.

## Memory Info (Memory Usage)



# Chapter 2 Web Settings

### WirelessIP5000E-A Web Settings

#### **Overview**

The WirelessIP5000E-A is able to be configured with Web browser via the Internet. The WirelessIP5000E-A Web settings can configure detailed settings more than key operation



#### **Notice**

When using web settings, the web server of this product must be set to "Enable".

The recommended browser is IE5.0 and above

#### When setting via Browser:

Firstly, prepare a PC to be used to configure the WirelessIP5000E-A.

Next, connect the PC to an ethernet port of the access point which WirelessIP5000E-A is connecting to.

Start the browser from the PC to start the WirelessIP5000E-A Web settings, <a href="http://chost">http://chost</a>: <port> Enter the IP address or host name for the device into <host> and enter the port number into <port>. (the port number is 8080 and cannot be omitted).

#### **Access restrictions**

The authentication screen for logging in to the WirelessIP5000E-A web settings is displayed. Input the username and password that are set in the WirelessIP5000E-A phone and log in.



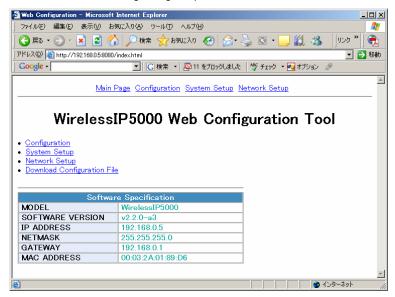
	Management User
Username	admin (default)
Password	000000 (default)
Authority	setting changes     firmware upgrade and configuration upgrade
	<ul><li>admin password changes</li><li>stopping the web server</li></ul>

(Note) Simultaneous login of the same user, general user, and management user is possible with multiple browsers (clients). But it is not recommended.

You can change settings for the phone, upgrade firmware/configuration, change admin passwords, and stop the web server.

#### Main

The basic information regarding the phone such as its software version and TCP/IP settings is displayed.



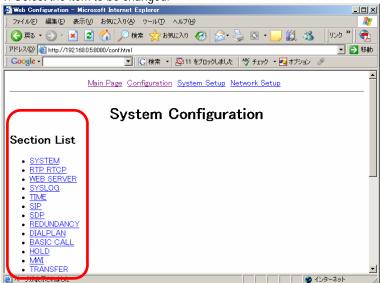
#### [Display Items]

- · Model: displays model name
- Software version: displays software version of the WirelessIP5000E-A
- IP address: displays IP address of the phone
- Net mask: displays net mask of the phone
- Default gateway: displays default gateway of the phone
- MAC address: displays MAC address of the phone

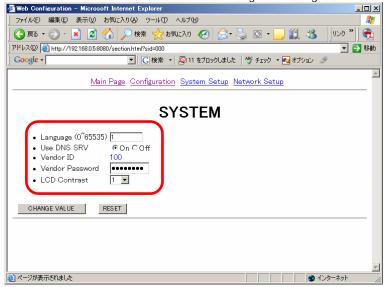
#### Configuration

This is the menu for configuring the product.

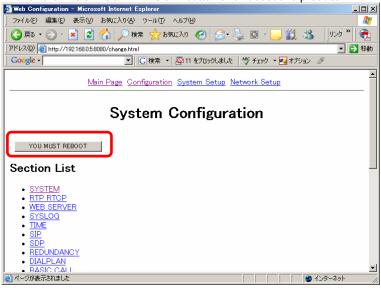
1. Select the item to be changed.



- 2. Edit the value. (Example on screen is "SYSTEM")
- 3. Click the "CHANGE VALUE" button and change the settings.



4. Click the "YOU MUST REBOOT" button and reboot this product.



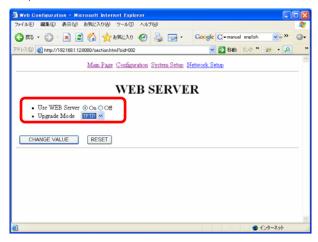
<sup>\*</sup> If this product is not rebooted, the settings are not applied.

<sup>\*</sup> Depending on the item, "YOU MUST REBOOT" button may not be displayed. For those cases, the settings are applied after the "CHANGE VALUE" button is clicked.

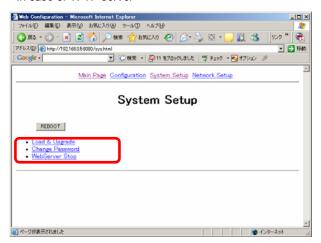
#### System Setup

The phone's firmware/configuration can be upgraded, admin user password changed, and the web server can be stopped.

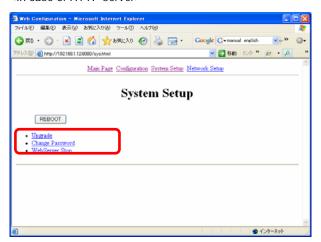
From v2.4.0, you can select which of TFTP or HTTP as a upgrade system of firmware/configuration with 【UPGRADE】 Request\_Mode.



<In case of TFTP server>



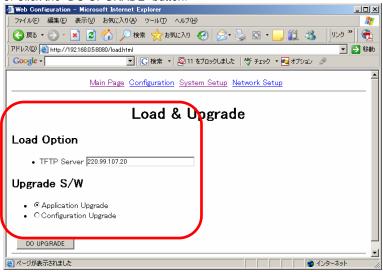
<In case of HTTP server>



#### Load & Upgrade

Upgrade the firmware and configuration of this product.

- 1. Enter the IP address of the TFTP server where the firmware is located.
- 2. Indicate the type of upgrade (software/config).
- 3. Click the "DO UPGRADE" button.



#### Upgrade

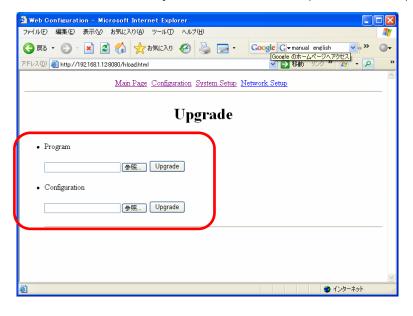
Upgrade the firmware and configuration of this product.

Select a firmware file or a configuration file for upgrading, and click the "Upgrade" button.



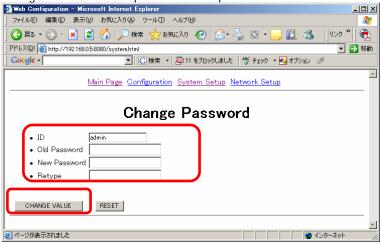
**Notice** 

Each of firmware files (g729a.bz/ipphone.bz/loadrun.ini/user.ini) and configuration file (user.ini) has the necessity to be archive with non compression and the zip type.



#### Change Password

Change the administrator password of the phone.



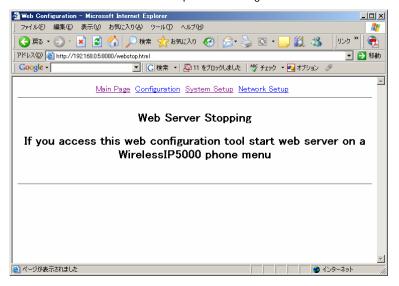
- · Username (admin) is displayed in the ID column. Username cannot be changed.
- · Input old password.
- Input new password.
- Input new password (to confirm).

Click the "CHANGE VALUE" button.

- \* If the inputted information is to be reset, click the "RESET" button.
- \* Set passwords as 5 -7 digit numerals.

#### Web Server Stop

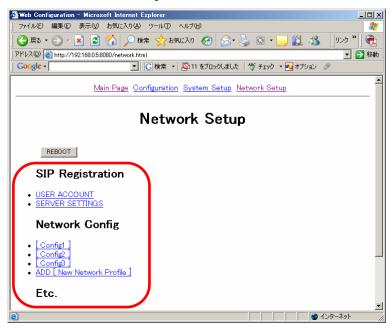
This stops the web server used for accessing the WirelessIP5000E-A web settings. Note that access via WWW is not possible during the time the "Web Server Stop" button is clicked.



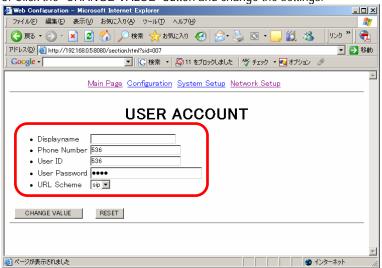
#### **Network Setup**

Setting Configuration of SIP/Network.

1. Select the item to be changed.



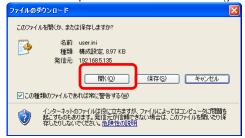
- 2. Edit the value. (Example on screen is "USER ACCOUNT")
- 3. Click the "CHANGE VALUE" button and change the settings.



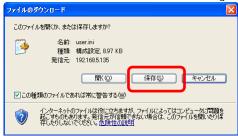
#### **Download Configuration File**

Refer or save a configuration file.

1. Click the "Open" button to refer the configuration file.



2. Click the "Save" button to save the configuration file.



Notice

Password becomes blank, when a configuration file is downloaded.

# Chapter 3 Appendix

# Error Log Message

Log message	Level	Description
SIP connection Information : SRC IP(%s), PORT(%d)	Info	SIP registeration is completed.
DHCP bind succeeded : IP address(%s)	Info	DHCP binding is completed.
Program upgrade SUCCEEDED : version (%s)!!!	Info	Version up is succeeded.
Program upgrade FAILED : version (%s)!!!	Info	Version up is failed.
Configuration upgrade SUCCEEDED!!!	Info	Configuration update is succeeded.
Configuration upgrade FAILED!!!	Info	Configuration update is failed.
Network Binding : Program Version(%s), Bootrom Version(%s), H/W Version(%s)	Info	Network binding is succeeded after powered on.
Received invalid SIP message	Warning	Invalid SIP messasge is received.
ReINVITE : Non-Supported Payload Type, RemotelP(%s), Remote Port(%d)	Warning	Non-supported payload type is received.
2000K : Call or Transaction does not exist	Warning	200OK for unknown transaction is received.
BYE : Call/Transaction does not exist	Warning	BYE for unknown transaction is received.
Failure response : Call/Transaction does not exist	Warning	4xx, 5xx or 6xx for unknown transaction is received.
Informative response : Call/Transaction does not exist	Warning	1xx, 2xx or 3xx for unknown transaction is received.
Fail to send SUBSCRIBE for pickup	Warning	Sending SUBSCRIBE for pickup is failed.
Fail to send SUBSCRIBE for presence	Warning	Sending SUBSCRIBE for Presence is failed.
Reigstration[%d] : authentication fail	Warning	Registration with authentication is failed.
Registration[%d] : no response, retry after %d millisecond	Warning	No response from SIP server.
Extension method : Non-supported SIP method(%s)	Warning	Non-supported SIP method is received.
Fail to send SUBSCRIBE for MWI	Warning	Sending SUBSCRIBE for MWI is failed.
Initial-INVITE : invalid ip address in sdp	Error	Initial INVITE with invalid IP address in SDP is received.
Fail to send Subscribe : Send to bad destination address (%s).	Error	Sending SUBSCRIBE with invalid destination address is failed.
DNS : host information for %s not found	Error	No answer from DNS server.

# Glossary

ANY Connection	If the SSID of the wireless LAN client is set to 'ANY connection', any wireless LAN access point can be connected to.
	However, access points that reject LAN clients set to 'ANY connection' cannot be connected to.
CODEC	Algorithm for compressing and decompressing digital video and audio data.
(COder DECoder)	This product supports G.711 $\mu$ -Law, G711A-Law, and G729.
DHCP (Dynamic Host Configuration Protocol)	This is the protocol (communication procedure) for automatically configuring the network settings. The DHCP server automatically configures the network settings for the network's DHCP clients.
DHCP Server	This is the server that automatically assigns DHCP. Information that can be assigned to client such as IP address, subnet mask, IP address of gateway and DNS server, and the like are set; this information is provided to accessing clients; and when the communications are ended, the address is automatically recovered and assigned to other computers.
DNS (Domain Name System)	Used in TCP/IP networks, this is a system related to the actual IP address and the name affixed to computer.
DNS Server	This is the computer that possesses information related to IP address and name affixed to computer, and that responds to inquiries from outside.
DSCP (DiffServ Code Point)	This is the code (program) for deciding on the actions for routers, etc., in identifying and carrying out transaction processing to suits the types of services (traffic) on the internet with various features such as motion picture and voice. For this purpose, a TOS (type of service) field inside the IP packet is redefined as a DS (DiffServ) field, and in order to decide on actions that the DiffServ target node (such as router) performs on this DS field, a value is set which becomes the basis for quality of service.
IP address	This is the address (location number) affixed for the purpose of distinguishing all connected devices in networks built on TCP/IP protocol.
IP Diffserv	Technology that identifies the types of traffic (this traffic is called services) transmitted and received by internet users, and offers communications quality (QoS: Quality of Service) that satisfies that type.
LAN (Local Area Network)	This is the abbreviation for local area network. It refers to small-scale computer networks.
MAC address value	This is the ID number that is assigned to be unique for each Ethernet card. There is no duplication of this number in Ethernet cards worldwide.  This phone also has a unique MAC address.
NAT-Traversal (NAT Translation Function)	This is the mechanism for carrying out address translation for communications between hosts within the organization which have private IP addresses and hosts on the internet having a global IP address.  A global IP address is an IP address used on the global internet that is unique, while a private IP address refers to the IP address used only within architectures that are not connected to the internet.
Ping (Packet Internet Groper)	This is the program for diagnosing TCP/IP network such as internet and intranet. When an IP address to be investigated whether or not it is connected is specified, data is sent using ICMP, and the network is diagnosed based on whether the other party replies.
Private-CA	Private (user) certificate used for 802.1x authentication.
Root-CA	Root (certification authority) certificate used for 802.1x authentication.
RTP (Real-time Transport	Real-time data transport protocol. RTP is designed on the assumption of being used in applications
Protocol)	such as for remote conferencing making use of image and voice, and has the objective of transporting the image and voice data in a form appropriate for real time. In RTP, data is divided into packets based on unit time and transported with the time information of data added to the packets.
SIP (Session Initiation Protocol)	This is one of the call control protocols and used in internet calls employing VoIP, and the like. The transport function, caller number notification function and others, when compared to similar protocols, provide functions close to that of the public telephone network, and the time required for connection is also short.

# Glossary

SIP Domain	This is the domain for offering services to the SIP user.
SSID	This is the ID used in wireless LAN communications for identifying the network.
Static NAT(SNAT)	This is the static NAT table settings. Refer to the NAT-Traversal column with regard to NAT.
STUN (Simple Traversal of UDP Through NATs)	Protocol used for traversing NAT using UDP. The traversing of NAT by UDP packets is realized through examining the router's mapping algorithm and the port number mapped to the external address of the NAT router.
Syslog server	Server that collects system logs.
TCP (Transmission Control Protocol)	This is the standard protocol used in internet. It bridges the IP of network layer and the protocols (HTTP, FTP, SMTP, POP, etc) above the session layer.
TCP/IP	This is the standard protocol used in the internet and intranets.
TFTP Server (Trivial File Transfer Protocol)	This is the simple protocol for transporting files between computers connected to the network.  It is characterized by having no authentication function and allowing easy usage.  It can be used for updating the settings file and firmware of WirelessIP5000E-A.
UPnP (Universal Plug and Play)	Technical specifications for enabling mutual recognition of devices connected to a network such as PC or peripheral devices. It was advocated by Microsoft® in 1999, and is being standardized by the Universal Plug and Play Forum. UPnP gathers together technologies such as XML, DHCP, SOAP, and GENA that are standard to the internet; and has the functionality for auto recognition of devices connected to a network, mutually exchanging information between devices, and exerting control.
Web Server	This refers to a computer that offers contents to be browsed through web browser.
Web Browser	This is an application for browsing web pages.
ciphering	This is the encryption of wireless LAN communications. This WirelessIP5000E-A product supports 5 types of encryption methods, which are "WEP", "WPA-PSK (TKIP)", "WPA2-PSK (AES)", "WPA-EAP (TKIP)" and "WPA2-EAP (AES)" for wireless LAN communications.
Subnet Mask	Within the IP address, this is the numeral that defines which bits are used in network address for distinguishing networks.  The portion that is outside the network address becomes the host address for identifying the individual computers within the network.
Server	This is a computer or software that offers data or functionality in own possession to client computers in a computer network.
Signal (dBm)	Shows the wave strength of wireless LAN.
Jitter Buffer	The jitter size that can be tolerated in fulfilling the required quality of conversation differs according to the jitter buffer of the receiving device.  The role of the jitter buffer is to store the arriving VoIP packets in the buffer and adjust the latency in the arrival times of packets prior to sending to end user.  If the jitter buffer is made bigger the jitter certainly becomes less, but if the size is made too big intolerable delays in conversation are forced onto the end users.
Certificate	This is the data for authenticating the authenticity of the public key used for analyzing digital signatures. Although it is not possible, by the digital signature itself, to confirm whether the public key belongs to the person; based on the digital certificate belonging to the digital signature, it is possible via the certification authority to certify the creator of data as well as there being no tampering of data (this function can be realized by the digital signature itself).
Channel	Wireless LAN uses electromagnetic waves with frequencies in the 2.4 GHz band. The bandwidth is 2.400 to 2.497 GHz, and that range is used divided into 14 channels.
Default Gateway	This refers to device such as computer or router that represents the "entrance and exit" used when accessing computers outside the LAN.  With regard to the IP address of an access location, if a specific gateway is not specified, data is sent to the host specified in the default gateway.
Beacon Interval	A Beacon is the packet sent at fixed intervals for the synchronization of wireless LAN communications. The beacon interval is the period of that fixed interval.
Firmware	This is the software incorporated into the device for the basic management of the hardware.

# Glossary

Proxy Server	This is the computer that connects to the internet as an "agent" in place of internal computers that cannot directly connect to the internet, and is the boundary between the internet and the internal network of an enterprise.
Protocol	This is the communications procedure that must mutually be in accord when multiple computers are communicating. If the protocol differs, communications are not possible.
Router	This is the device for relaying data that flows in the network to other networks.  It has the function of analyzing the protocol, looking at the address and selecting the route. In addition, all data of unsupported protocols is discarded.
Registration Server	This is the server for registering and managing the SIP user information.
IM Server	This is the server for sending or receiving short message in real time.  It is possible todisplay the message which WirelessIP received.
Presence Server	This is the server for notifying status of both you and the person whom you want to telephone. It is possible to display the status (talking on the telephone, away from the telephone, etc.) of the person whom you want to telephone.

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#### **NOTICE**

This product is in accordance with the Japanese Foreign Exchange and Foreign Trade Law.

When you plan to export or take this product out to overseas, similar law(s) and/or regulation(s) applicable in your country may require approval or permission from a relative authority.

Our corporate homepage provides updated information and version upgrade services for each product. To use this product in the most appropriate manner it is recommended that this homepage is periodically visited.

Home page: http://www.WirelessIP5000.com/

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