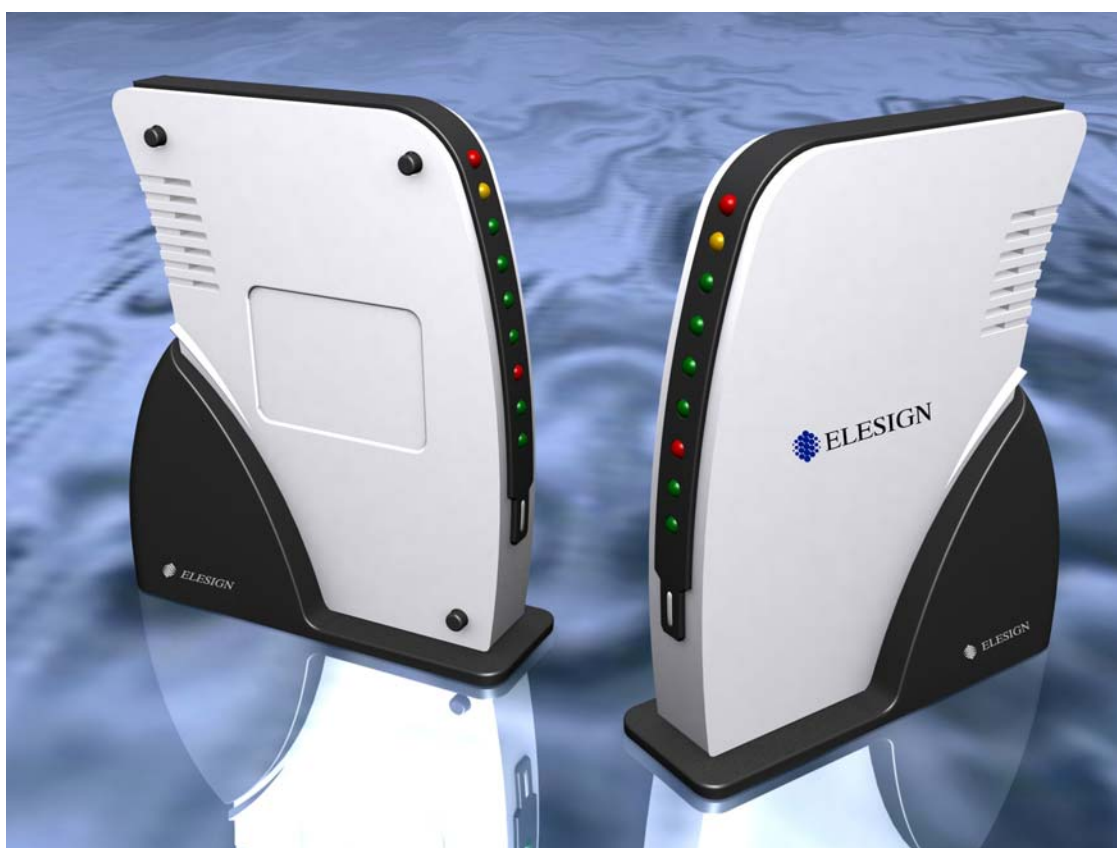


ELESIGN VoIP GATEWAY
ESC2420(H.323 Version)
User Guide



CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment

WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

INFORMATION TO USER:

This equipment has been tested and found to comply with the limit of 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:

1. Reorient / Relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help

About This Manual

This Manual provides basic information on how to install and connect Elesign Gateway to the network. It also includes features and functions of Elesign Gateway components, and how to use them.

Before Getting Started

Before you can connect ELESIGN GATEWAY to the network and use it, you must have a high-speed Internet connection installed. A high-speed connection includes such environments as DSL, cable modem, and a leased line.

Precaution

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The material of this manual could be changed for the purpose of the product enhancement.

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Chapter 1 Summary and Introduction

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I. Summary

ESC2420 is a 2-port VoIP gateway and it connects standard telephones and fax machines to IP-based networks. It provides two FXS interfaces and one FXO interface that will enable more calls to be routed through the gateway with or without using directly connected telephones to the gateway.

The gateway can be used with Internet connection such as ADSL modem, Cable Modem, and leased Line.

The gateway has NAT function, which allows connecting several PCs to use the Internet simultaneously.

The basic Internet calls with this gateway are service thru VoIP service provider. With PSTN back up allows to receive a call thru PSTN and automatically switches to PSTN when power-out or problem in networking occurs.



II. Introduction

1. Contents Checklist

- 1) 1 Elesign Gateway (ESC2420)
- 2) 1 LAN Cable (Blue)
- 3) 1 Serial Cable (Green)
- 4) 2 Telephone Lines
- 5) 1 User Guide
- 6) 1 Adapter

2. Specifications

Item		Specification
Adapter (Input/output/frequency)		220VA / 12VDC / 60Hz
Port	WAN	RJ-45 for LAN (10/100baseT)
	LAN	RJ-45 for PC (10/100baseT)
	Serial	RJ-45 for Serial Connector
	Phone	2 RJ-11 for Telephone
	Line	1 RJ-11 for PSTN
	Reset Switch	System Reset
Optional Features		Use with PBX & Key phone, Fax Support
Power Consumption		2.8W / 3.6W
Operating Temperature		0~60℃
Relative Humidity		5~95%
Volume		160mm(W) x 200mm(L) x 33mm(H)
Weight		355g



Chapter 2 Installation

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I. Installation and Procedure at a Glance

1. Before Installation

1) Check OS of PC used for Installation

You may install the gateway using PC thru Internet browser, Console, or Telnet. Please check OS of the PC that will be used for Installation. (Win98, NT, Me, 2000, XP, Linux). There are minor differences in setting up the network according to OS.

2) Check PC's LAN Card

The PC that will be used to install the gateway must have LAN card. Please check if PC has LAN card available.

3) Check Calling Environment

Before getting started, check calling environment about how many telephones you want to connect and if you will use existing PSTN network. The telephones that can be directly connected to the gateway are four. You may connect more than four telephones to use Internet call using PBX. You may connect the gateway to PBX, and you can make Internet call from any telephone that is connected to PBX. But you may only make four simultaneous Internet calls at once since the Gateway has only four FXS ports.

With PSTN back up allows to receive a call thru PSTN and automatically switches to PSTN when power-out or problem in networking occurs



2. Procedure at a Glance

※ Please make sure to follow the procedure.

① **Components Check Up**

② **Installation**

③ **LED Check Up**

④ **PC Set Up**

⑤ **Network Set Up**

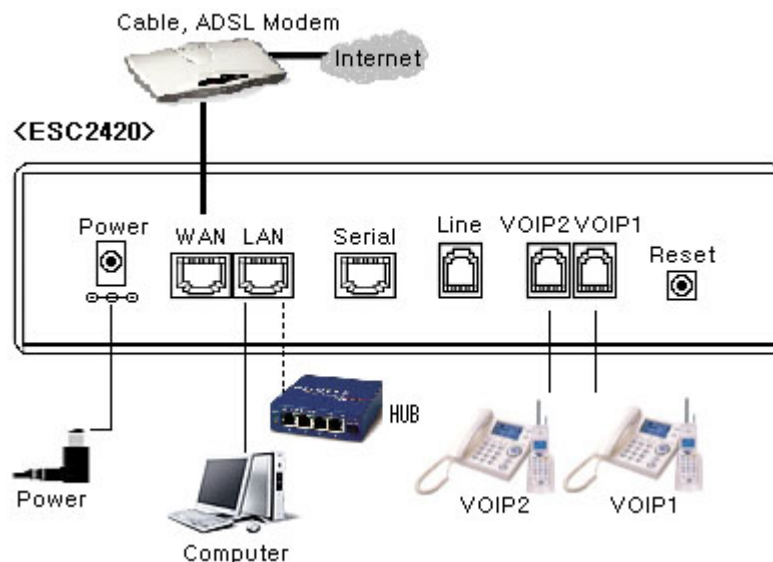
⑥ **VoIP Set Up**

⑦ **Make a call**



3. Installation (Step ② of the Procedure)

!! Caution: ADSL MODEM USERS, Please make sure to uninstall ADSL connecting program before starting the installation.



1) Remove the phone line, which is connected from the wall jack to your existing analogue phone, and connect it to 'Line' port.

※ Make sure to leave the handset ON HOOK※

2) Find a phone line in the box and connect between 'VOIP1' port or 'VOIP2' port and your existing analogue phone

3) **Remove from your PC the LAN cable for Internet connection** and connect it to 'WAN' port.

Some of Modems use Cross LAN cable, so please make sure to use the cable that is connected between your PC and modem to connect from modem to 'LAN' port of Elesign Gateway.

4) Find a LAN cable in the box and connect between 'LAN' port and your PC.

5) Connect an adapter in the box to 'POWER'.

※ Make sure to use the adapter provided with the gateway in the box.

II. Status Checkup using LED (Step ③ of the Procedure)



LED	Action	LIGHT
POWER	Adapter is connected and system is initialized	ON
	Adapter is not connected	OFF
STATUS	The device is registered with a proxy server	ON
	The device is not registered with the proxy server	OFF
WAN	When only 'WAN' is connected	ON
	When 'WAN' is not connected or internet service is error	OFF
LAN	When only 'LAN' is connected	ON
	When 'LAN' is not connected	OFF
PSTN	PSTN call is coming or PSTN backup	ON
	VoIP call mode	OFF
VOIP1	When the phone connected VOIP1 is off hook	ON
	When the phone connected VOIP1 is on hook	OFF
VOIP2	When the phone connected VOIP2 is off hook	ON
	When the phone connected VOIP2 is on hook	OFF



Chapter 3 PC Network Setup

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To use the gateway, you need to setup the network of PC and the gateway. To connect PC and the gateway, you need to confirm the PC's network setup. After the confirmation, you need to setup the network of PC and the gateway according to the Internet connection.

I. Before Getting Started

Before getting started, please confirm the matters below.

1. LED Check

Look into the page11 to check the installation. If the color doesn't match with current installation, there might be problems regarding the connection, PC, or PC's LAN card. Please check the connection of the modem, PC's LAN card, or the gateway.

2. Check Internet Connection

You need to setup the network of PC and the gateway according to the current Internet connection. Please confirm the current connection (ADSL, Cable, Lease line), and check the necessary information for setup.

1) Leased Line – Static IP Users

When setup the network of PC, write down the network information. (IP address, subnet mask, gateway, DNS) They are necessary information for the network setup of the gateway.

2) ADSL users

- ① Please check the ID and password that is used in connecting to Internet. They are necessary information for the network setup of the gateway.
- ② Before starting the network setup of PC, you need uninstall the ADSL connection program from PC.



II. PC Network Setup (Step ④ of the Procedure)

1.ADSL Modem Users

After the installation, restart PC. If the PC is turned off, simply start the PC.

2.VDSL Modem Users

After the installation, restart PC. If the PC is turned off, simply start the PC.

3.Cable Modem Users

After the installation, restart PC. If the PC is turned off, simply start the PC.

※ If you are using cable modem with static IP, go to 'Leased line – static IP' to setup network of PC.

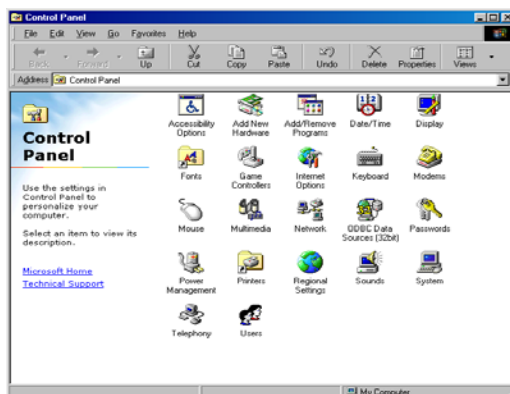
4. Leased Line – Dynamic IP Users

After the installation, restart PC. If the PC is turned off, simply start the PC.

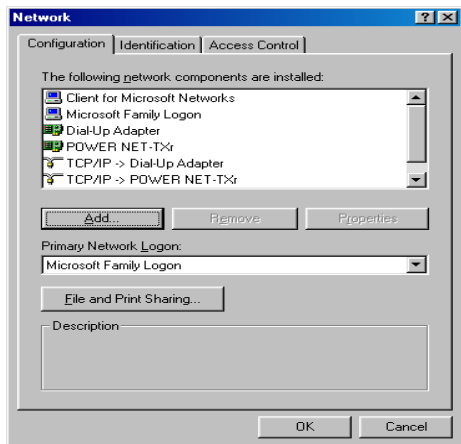
5. Lease Line – Static IP Users

1) WIN98/WinME Users

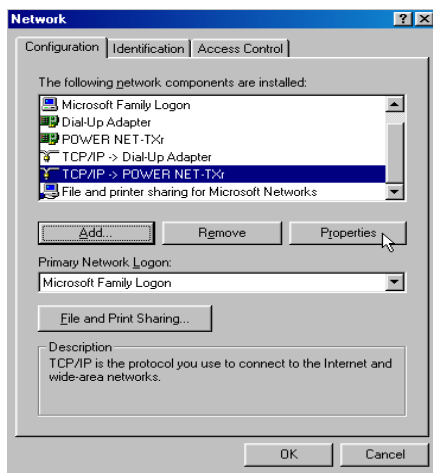
- ① Click on 'Start' button
- ② 'Select 'Control Panel' from 'setting' of start menu.



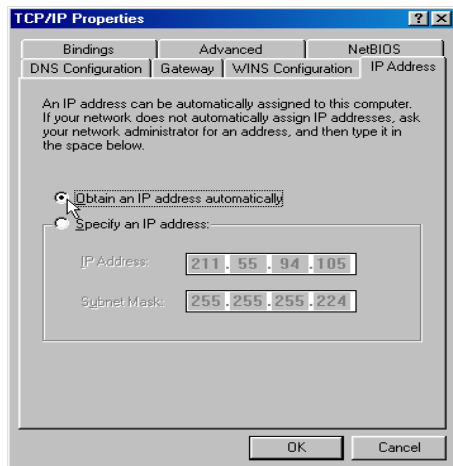
- ③ Select 'Network' from control panel



- ④ Select TCP/IP and click on 'Property' button



- ⑤ Select 'Obtain an IP address automatically' and click on 'OK' button



- ⑥ Popup window will appear to restart the computer, then restart the computer right away by clicking on 'OK' button



2) Win2000/WinXP Users

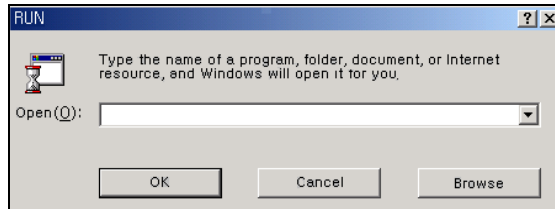
- ① Click on 'Start' button
- ② Select 'Control Panel' from 'Setting' of start menu.
- ③ Select 'Network'.
- ④ Select 'Local Connection'
- ⑤ Click on 'Properties' button
- ⑥ Select 'TCP/IP' and click on 'Property' button.
- ⑦ Select 'Obtain an IP address automatically' and click on 'OK' button.
- ⑧ Click on 'OK' to close window.



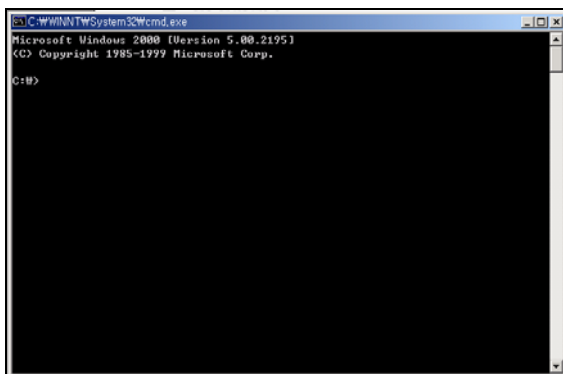
6. Check PC's IP address

This step is to make sure that PC for the installation and the gateway is connected. Before you connect to the setup page using Web browser, check PC's IP address for correct installation and PC network setup.

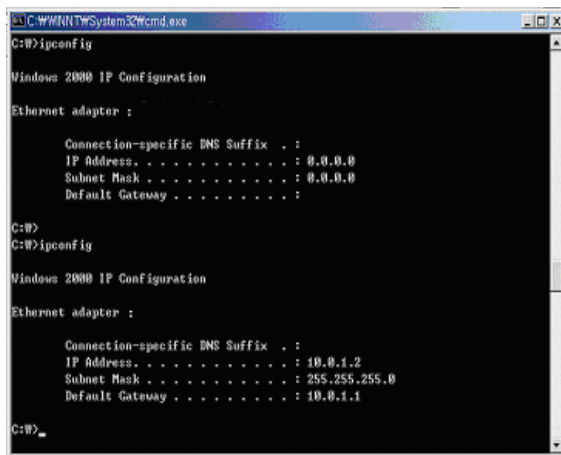
- 1) Click on 'Start' button and select 'RUN'.



- 2) Enter 'CMD' (Win2000/WinXP Users) or 'COMMAND' (Win98/WinMe Users) and click on 'OK' button to see a window as below.



- 3) When there is a prompt 'C:W>', enter 'ipconfig' and hit 'enter' to see IP information.



- 4) If IP address is '10.0.1.X' and Default Gateway is '10.0.1.1' then the installation is correct and network of PC is setup accordingly.

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4. When Failed to Setup	22



After PC Network Setup, you need to setup the network of the gateway. You may setup according to your Internet Connection.

I. Before Getting Started

Before getting started, please confirm the matters below.

1. Check Internet Connection

You need to setup the network of PC and the gateway according to the current Internet connection. Please confirm the current connection (ADSL, Cable, Lease line), and check the necessary information for setup.

1) Leased Line –Static IP Users

When setup the network of PC, write down the network information. (IP address, subnet mask, gateway, DNS) They are necessary information for the network setup of the gateway.

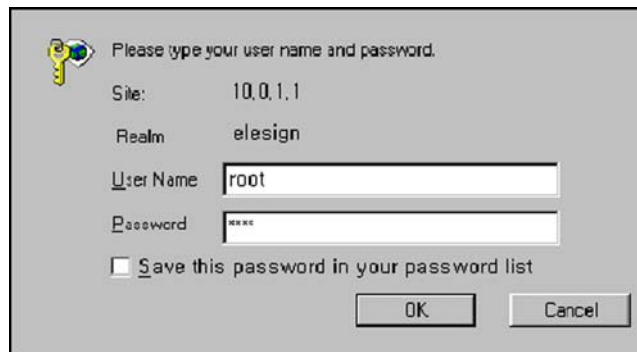
2) ADSL Users

Please check the ID and password that is used in connecting to Internet.



II. Connect to Setup Page

- 1 Start Internet browser in PC. (i.e. Click on explorer icon.)
- 2 Input 'http://10.0.1.1' in address box and hit 'enter'.



Please type your user name and password.

Site: 10.0.1.1

Realm: elesign

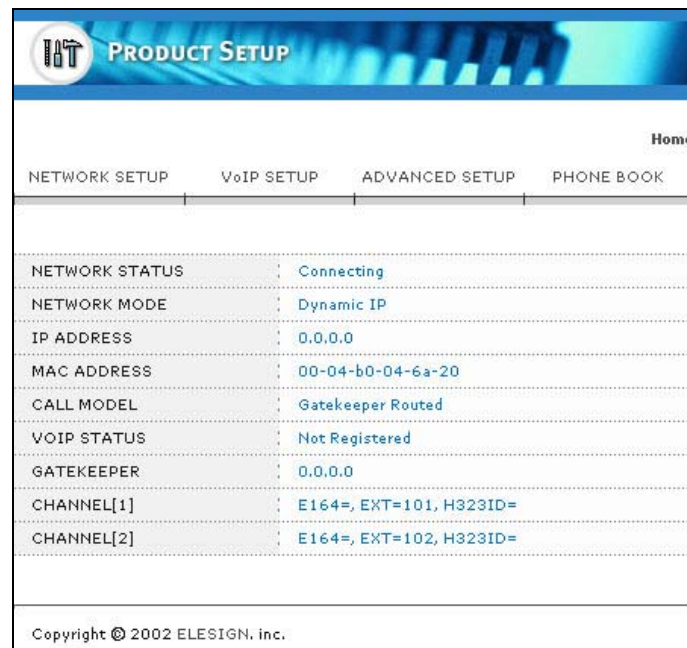
User Name: root

Password: ****

☐ Save this password in your password list

OK Cancel

- 3 When window appears to input ID and password for network, input 'root' for ID and 'root' for Password. Click on 'OK' to connect to the main page. You may change ID and password. (Refer to page 31, 'Console Setup' for more information.)



PRODUCT SETUP

Home

NETWORK SETUP VoIP SETUP ADVANCED SETUP PHONE BOOK

NETWORK STATUS	Connecting
NETWORK MODE	Dynamic IP
IP ADDRESS	0.0.0.0
MAC ADDRESS	00-04-b0-04-6a-20
CALL MODEL	Gatekeeper Routed
VOIP STATUS	Not Registered
GATEKEEPER	0.0.0.0
CHANNEL[1]	E164=, EXT=101, H323ID=
CHANNEL[2]	E164=, EXT=102, H323ID=

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- 4 When you see a window above, click on necessary setup item to go on setting up.



III. Gateway Network Setup (Step ⑤ of the Procedure)

1. Connect to Network Setup Page

- 1) From main page, select 'Network setup'.

The screenshot shows the 'PRODUCT SETUP' web interface. At the top, there's a header with the 'ESC' logo and 'PRODUCT SETUP'. Below it, there are three tabs: 'NETWORK SETUP', 'VoIP SETUP', and 'ADVANCED SETUP'. The 'NETWORK SETUP' tab is selected. Under this tab, there are three radio button options: 'STATIC IP', 'DYNAMIC IP & CABLE MODEM', and 'ADSL'. The 'STATIC IP' section has input fields for IP ADDRESS, SUBNET MASK, GATEWAY, PRIMARY DNS, and SECONDARY DNS, all pre-filled with '0.0.0.0'. The 'DYNAMIC IP & CABLE MODEM' section has a 'Host Name' input field. The 'ADSL' section has 'ID' and 'PASSWORD' input fields. An 'OK' button is at the bottom right.

- 2) Select the network type according to the Internet connection and input necessary information.

2. Network Setup according to Internet connection

1) ADSL Users

Check 'ADSL' and input ID and password that is used in connecting to Internet and click on 'OK' button.

2) VDSL Modem

Check 'Dynamic IP & Cable Modem' and click on 'OK' button.

3) Cable modem Users

Check 'Dynamic IP & Cable Modem' and click on 'OK' button.

※ Some of Cable service provider check on MAC address of PC's LAN card. You might not be able to connect to Internet if this is the case. Please contact you local cable service representative.

4) Leased Line – Dynamic IP Users

Check 'Dynamic IP & Cable Modem' and click on 'OK' button.

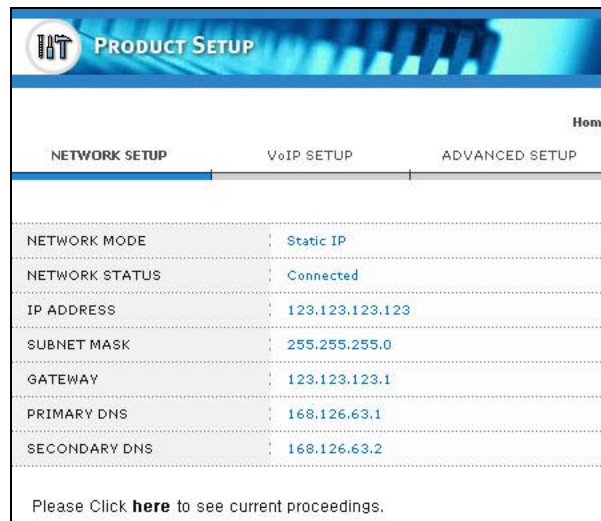
5) Lease Line – Static IP Users

Check 'Static IP' and input IP address, gateway, subnet mask and DNS. Click on 'OK' button.



3. Confirmation of Setup

- 1) When you see a message, 'connecting' for 'NETWORK STATUS', please click on 'HERE' where it says 'Please click [HERE](#) to see current proceedings.'



PRODUCT SETUP	
Home	
NETWORK SETUP VoIP SETUP ADVANCED SETUP	
NETWORK MODE	Static IP
NETWORK STATUS	Connected
IP ADDRESS	123.123.123.123
SUBNET MASK	255.255.255.0
GATEWAY	123.123.123.1
PRIMARY DNS	168.126.63.1
SECONDARY DNS	168.126.63.2
Please Click here to see current proceedings.	

- 2) If you see a message, 'Connected' for 'Network Status', the network setup is successfully done.

4. When Failed to Setup

If you don't see a message, 'Connected' for about a minute, check the items below according to Internet connection.

1) ADSL Users:

You might have failed to login. Check the ID and Password and try to restart ADSL modem by rebooting.

2) VDSL Users:

Try to restart VDSL modem by rebooting, or check the physical connections and try again.

3) Cable Modem Users

Try to restart cable modem by rebooting, or check the physical connections and try again.

4) Leased Line – Dynamic IP Users

Check the physical connection and try again.

5) Leased Line – Static IP Users

Check if the IP address and other information are correct and try again. Also if DNS address is not correct, Internet thru PC might not be possible, so check to make sure the address is right.



Chapter 5 VoIP Setup

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In order to make an Internet call, VoIP setup is necessary to register to VoIP service. First, if you subscribe for the service, you will receive the necessary information to register from Service Company.

I. Before Getting Started

1. Checkpoint

The necessary information when registering are E.164 (internet phone number), H.323ID, Password, etc. It may be different from a company to a company. Check to make sure you have all the necessary information before getting started.

2. Confirmation of VoIP Service Mode

There are different types of service from one Service Company to another. Select the VoIP setup mode according to your service provided. Make sure to check the mode and setup accordingly, otherwise, you may have problem registering.

1) Terminal Type

If there are 2 of H323 ID necessary to register, you need to setup as 'Terminal' for 'Terminal Type'. Typically you need 2 of H323 ID and 2 of E.164 (Internet Telephone Number) for this type of service.

2) Gateway Type

If there is 1 of H323ID necessary to register, you need to setup as 'Gateway' for 'Terminal Type'. Typically you need 1 of H323 ID and 2 of E.164 (Internet Telephone Number) for this type of service.



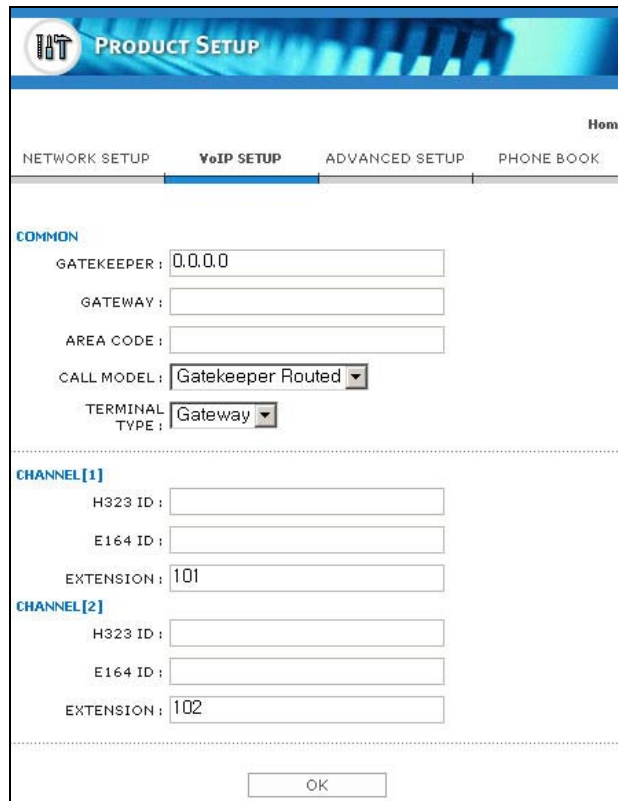
II. VoIP Setup (Step ⑥ of the Procedure)

1. Connect to Setup page

Connect to Setup page. Refer to page20 'Connect to Setup page'. If you are already in Setup page, start from number 2 'Connect to VoIP Setup page'.

2. Connect to VoIP Setup page

Select 'VoIP Setup' from Main Page



The screenshot shows the 'PRODUCT SETUP' interface with the 'VoIP SETUP' tab selected. The interface includes a navigation bar with 'Home', 'NETWORK SETUP', 'VoIP SETUP', 'ADVANCED SETUP', and 'PHONE BOOK'. The 'VoIP SETUP' section is divided into 'COMMON' and 'CHANNEL' settings. The 'COMMON' section includes fields for 'GATEKEEPER' (0.0.0.0), 'GATEWAY', 'AREA CODE', 'CALL MODEL' (Gatekeeper Routed), and 'TERMINAL TYPE' (Gateway). The 'CHANNEL' section is divided into 'CHANNEL [1]' and 'CHANNEL [2]', each with fields for 'H323 ID', 'E164 ID', and 'EXTENSION' (101 for Channel 1, 102 for Channel 2). An 'OK' button is located at the bottom.

Section	Field	Value	
COMMON	GATEKEEPER	0.0.0.0	
	GATEWAY		
	AREA CODE		
	CALL MODEL	Gatekeeper Routed	
	TERMINAL TYPE	Gateway	
CHANNEL [1]	H323 ID		
	E164 ID		
	EXTENSION	101	
	CHANNEL [2]	H323 ID	
		E164 ID	
		EXTENSION	102

3. VoIP Setup

1) Register as Terminal Type

- ① First, subscribe for Internet call service to get necessary information.
- ② Input gatekeeper IP address in 'GATEKEEPER' box. (Ex: 123.123.123.123)
- ③ Leave blank for 'GATEWAY' box. (For more information regarding setup of media gateway, refer to page44)
- ④ Input area code used with PSTN in 'AREA CODE' box. (Ex: Seoul – 02)
- ⑤ Select 'Gatekeeper Routed' for 'CALL MODEL'
- ⑥ Select 'Terminal' for Terminal Type
- ⑦ Enter H323ID and E164 received from the service company to each box of the channel.

PRODUCT SETUP Home

NETWORK SETUP **VoIP SETUP** ADVANCED SETUP PHONE BOOK

COMMON

GATEKEEPER : 123.123.123.123

GATEWAY :

AREA CODE : 02

CALL MODEL : Gatekeeper Routed

TERMINAL TYPE : Terminal

CHANNEL [1]

H323 ID : test1

E164 ID : 028881234

EXTENSION : 101

CHANNEL [2]

H323 ID : test2

E164 ID : 028881235

EXTENSION : 102

OK

- ⑧ Click on 'OK' button.
- ⑨ When you see a message, 'Registering' for 'VoIP Status', please click on 'HERE' where it says 'Please click [HERE](#) to see current proceedings.'

IAT PRODUCT SETUP	
Home	
NETWORK SETUP VoIP SETUP ADVANCED SETUP PHONE BOOK	
CALL MODEL	Gatekeeper Routed
TERMINAL TYPE	Terminal
VOIP STATUS	Registering
GATEKEEPER	123.123.123.123
GATEWAY	
AREA CODE	02
CHANNEL[1]	E164=028881234, EXT=101, H323ID=test1
CHANNEL[2]	E164=028881235, EXT=102, H323ID=test2
Please Click HERE to see current proceedings	

- ⑩ If you see a message, 'Registered' for 'VoIP Status', the VoIP setup is successfully done.

2) Register as Gateway Type

- ① First, subscribe for Internet call service to get necessary information.
- ② Input gatekeeper IP address in 'GATEKEEPER' box. (Ex: 123.123.123.123)
- ③ Leave blank for 'GATEWAY' box. (For more information regarding setup of media gateway, refer to page44)
- ④ Input area code used with PSTN in 'AREA CODE' box. (Ex: Seoul – 02)
- ⑤ Select 'Gatekeeper Routed' for 'CALL MODEL'
- ⑥ Select 'Gateway' for Terminal Type
- ⑦ Enter H323ID for Channel 1 and E.164 (Internet Telephone number) for each box of the channel.



PRODUCT SETUP

Home

NETWORK SETUP **VoIP SETUP** ADVANCED SETUP PHONE BOOK

COMMON

GATEKEEPER : 123.123.123.123

GATEWAY :

AREA CODE : 02

CALL MODEL : Gatekeeper Routed

TERMINAL TYPE : Gateway

CHANNEL [1]

H323 ID : test1

E164 ID : 028881234

EXTENSION : 101

CHANNEL [2]

H323 ID :

E164 ID : 028881235

EXTENSION : 102

OK

- ⑧ Click on 'OK' button.
- ⑨ When you see a message, 'Registering' for 'VoIP Status', please click on 'HERE' where it says 'Please click [HERE](#) to see current proceedings.'

PRODUCT SETUP

Home

NETWORK SETUP **VoIP SETUP** ADVANCED SETUP PHONE BOOK

CALL MODEL	: Gatekeeper Routed
TERMINAL TYPE	: Gateway
VOIP STATUS	: Registering
GATEKEEPER	: 123.123.123.123
GATEWAY	:
AREA CODE	: 02
CHANNEL[1]	: E164=028881234, EXT=101, H323ID=test1
CHANNEL[2]	: E164=028881235, EXT=102, H323ID=test1

Please Click [HERE](#) to see current proceedings

- ⑩ If you see a message, 'Registered' for 'VoIP Status', the VoIP setup is successfully done.

4. When Failed to Setup

If you don't see a message 'Registered' for about a minute, check to make sure you have inputted the information correctly. Try again after checking the necessary information regarding the registration.



III. Make a Call (Step ⑦ of the Procedure)

Dial the number → Press '#' ('Send')

- ※ The way to make an Internet call may differ from a service company. In order to receive further information, contact the service company.



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This chapter is to setup the advanced option other than basic setup to make an Internet call. You may setup to use advanced option according to network environment.

I. Console Setup

1. Connect to Setup page

Connect to Setup page. Refer to page20 'Connect to Setup page'. If you are already in Setup page, start from number 2 'Connect to Advanced Setup page'.

2. Connect to Advanced Setup page

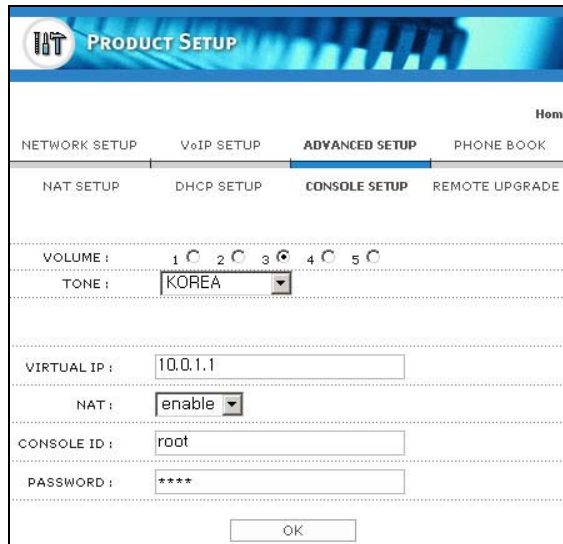
Select 'Advanced Setup' from the main page.



The screenshot shows the 'PRODUCT SETUP' interface. At the top, there is a header with the 'IAT' logo and 'PRODUCT SETUP'. Below the header, there are four main tabs: 'NETWORK SETUP', 'VoIP SETUP', 'ADVANCED SETUP' (which is highlighted with a blue bar), and 'PHONE BOOK'. Under the 'ADVANCED SETUP' tab, there are four sub-tabs: 'NAT SETUP', 'DHCP SETUP', 'CONSOLE SETUP' (which is highlighted with a blue bar), and 'REMOTE UPGRADE'. Below these tabs, there are three rows of settings: 'VOLUME' set to '3', 'TONE' set to 'KOREA', and 'S/W VERSION' set to 'VER3.29k235'. A 'Home' link is visible in the top right corner.

3. Getting Used to Console Setup

Select 'Console Setup' from the submenu of 'Advanced Setup'.



The screenshot shows the 'CONSOLE SETUP' page. It has the same header and tabs as the previous screenshot. Under the 'CONSOLE SETUP' sub-tab, there are several configuration options: 'VOLUME' with five radio buttons (1, 2, 3, 4, 5) where button 3 is selected; 'TONE' with a dropdown menu showing 'KOREA'; 'VIRTUAL IP' with a text input field containing '10.0.1.1'; 'NAT' with a dropdown menu showing 'enable'; 'CONSOLE ID' with a text input field containing 'root'; and 'PASSWORD' with a text input field containing '****'. An 'OK' button is located at the bottom center of the page.



1) Volume Setup

This option is to adjust the volume. Refer to page34 for more detailed procedure.

2) Tone Setup

This option is to select the dial ton according to the different countries. The gateway has 4 types of tone, Korean, Japanese, China 3 (TUP), and Guandong. You may distinguish the tone between the Internet call and PSTN call using this option.

3) Virtual IP Setup

Virtual IP means the network ID of the LAN side of the gateway. This option allows you to change the network ID since there may be the case where same network ID present within the same network. If you change the IP address from 10.0.1.1 (default) to 10.0.10.1, virtual IP addresses that are allocated from the gateway range from 10.0.10.2 to 10.0.10.254.

Virtual IP is used to connect to setup page of the gateway. It is needed to reconnect to the page, so please remember the value after changing it.

(Ex: If Virtual IP is changed to '10.0.10.1', the connecting IP address will change also to 'http://10.0.10.1')

! Caution: After changing the Virtual IP, reboot the gateway and restart the computer that is connected to the gateway. You may not be able to connect to the page if you forget the changed value.

4) NAT Setup

This option is to 'Enable' or 'Disable' NAT function.

5) Console ID and Password Setup

This option is to change Console ID and Password that is used to connect to setup page. Make sure to remember the changed values.

! Caution: You may not be able to connect to the page if you forget the changed value.

6) Confirmation of Setup

Click on 'OK' button after setup.

To store the setup values, disconnect the adapter and reconnect to restart the gateway.

II. Volume Setup

1. Connect to Setup Page

Connect to Setup page. Refer to page20 'Connect to Setup page'. If you are already in Setup page, start from number 2 'Connect to Advanced Setup page'.

2. Connect to Advanced Setup Page

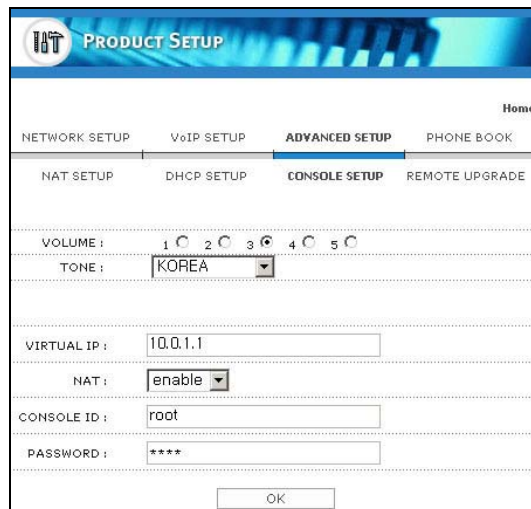
Select 'Advanced Setup' from the main page.



The screenshot shows the 'PRODUCT SETUP' interface with a blue header. Below the header is a navigation bar with 'Home' and several menu items: 'NETWORK SETUP', 'VoIP SETUP', 'ADVANCED SETUP' (highlighted), and 'PHONE BOOK'. Under 'ADVANCED SETUP', there are sub-items: 'NAT SETUP', 'DHCP SETUP', 'CONSOLE SETUP', and 'REMOTE UPGRADE'. The main content area displays three settings: 'VOLUME' set to '3', 'TONE' set to 'KOREA', and 'S/W VERSION' set to 'VER3.29k235'.

3. Volume Setup

- 1) Select 'Console Setup' from the submenu of 'Advanced Setup'.



The screenshot shows the 'PRODUCT SETUP' interface with the 'ADVANCED SETUP' menu highlighted. The 'CONSOLE SETUP' sub-item is selected. The main content area displays several configuration fields: 'VOLUME' with radio buttons for 1 through 5 (radio 3 is selected), 'TONE' with a dropdown menu set to 'KOREA', 'VIRTUAL IP' with a text field containing '10.0.1.1', 'NAT' with a dropdown menu set to 'enable', 'CONSOLE ID' with a text field containing 'root', and 'PASSWORD' with a text field containing '****'. An 'OK' button is located at the bottom right of the configuration area.

- 2) Select the appropriate volume from 1~5 to adjust.
- 3) Click on 'OK' button.
- 4) To store the setup values, disconnect the adapter and reconnect to restart the gateway.

III. DHCP Setup

1. DHCP Setup

This option is to restrict the usage of NAT function.

The default setup of the gateway allows you to connect the several computers and the gateway automatically allocates the private IP. In situation like this, DHCP setup will allows to restrict the allocation of IP to particular PC.

There is setup option of 'Use above IP pool only' in DHCP setup page. If you want to allocate the IP without any restriction, leave it to 'OFF'.

When it is setup to 'ON', PC's, other than that are connected to the gateway already, will not receive any IP address from the gateway. In situation like this, use DHCP setup to manually add PC using MAC address of PC. Using MAC address of PC, you may allocate virtual IP to PC. The procedure is described below.

2. Connect to Setup Page

Connect to Setup page. Refer to page20 'Connect to Setup page'. If you are already in Setup page, start from number 3 'Connect to Advanced Setup page'.

3. Connect to Advanced Setup Page

Select 'Advanced Setup' from the main page.



4. DHCP Setup

- 1) Select 'DHCP Setup' from the submenu of 'Advanced Setup'.
- 2) Select 'ON' for the setup option of 'Use above IP Pool only'.
- 3) Select virtual IP address that will be allocated to PC. The IP address that can be used ranges '10.0.1.2' to '10.0.1.254'.
- 4) Check the MAC address of PC and input in the box. Click on 'ADD' button.

The screenshot shows a web-based configuration interface for a device. At the top, there is a header bar with the 'VAT' logo and the text 'PRODUCT SETUP'. Below this, a navigation menu includes 'NETWORK SETUP', 'VoIP SETUP', 'ADVANCED SETUP' (which is highlighted), and 'PHONE BOOK'. Under 'ADVANCED SETUP', there are sub-menus: 'NAT SETUP', 'DHCP SETUP' (which is highlighted), 'CONSOLE SETUP', and 'REMOTE UPGRADE'. The main content area displays a table for DHCP entries. The table has three columns: 'IP Address', 'MAC Address', and 'Status'. The first row shows the IP address '10.0.1.2' and the MAC address '00-04-B0-04-6A-20'. To the right of the MAC address are two buttons: 'ADD' and 'DELETE'. Below the table, there is a section titled 'USE ABOVE IP POOL ONLY.' with two radio buttons: 'ON' (which is selected) and 'OFF'. An 'OK' button is located at the bottom of this section.

IP Address	MAC Address	Status
10.0.1.2	00-04-B0-04-6A-20	<input type="button" value="ADD"/> <input type="button" value="DELETE"/>

USE ABOVE IP POOL ONLY.
☒ ON ☐ OFF

※ Refer to page47 for 'How to check MAC address' of PC.



IV. Using NAT Function

1. NAT Function

NAT Function is to allocate private IP to PC's connected to the gateway and enables the usage of Internet.

However, the speed of Internet Connection may go down, if three or more simultaneous calls are on and more than 20 PC's are connected.

2. Configuration of NAT

Using private IP allocated from the gateway, you may connect more than one PC to use Internet.

1) Configuring NAT

If you would connect one or several PC to the gateway, the gateway allocates private IP to PC for NAT environment.

Connect Several PC's to the gateway using
(Refer to page10 for installation)

Change the network of PC (other than one that used for setup) to 'Obtain IP dynamically' (Refer to page12). After setup, turn of the PC's and disconnect the adapter from the gateway.

Connect the adapter to the gateway and check LED.

Restart the PC and wait for about a minute

Check to make sure you are able
to connect to Internet from every
PC that is connected to the
gateway.

If you are not able to connect to
Internet, refer to page12 for
'Network Setup' of PC.



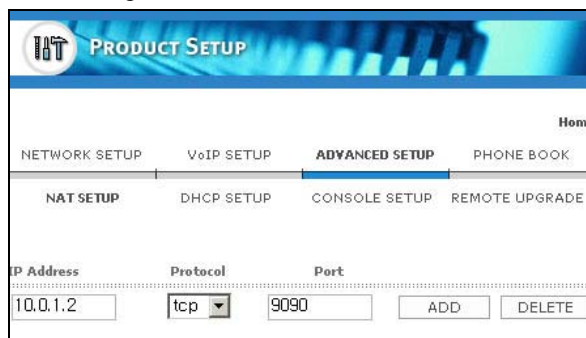
2) Port Forwarding Setup

This function enables you to connect to Internet site that uses special port. If Internet programs don't work properly, you need to setup for IP address and port forwarding according to the programs.

- ① Connect to Setup page. Refer to page20 'Connect to Setup page'. If you are already in Setup page, start from number 2 'Connect to Advance Setup page'.
- ② Select 'Advanced Setup' from main page.



- ③ Select 'NAT Setup' from submenu of 'ADVANCED SETUP'
- ④ Input IP address of PC to setup the option.
- ⑤ Select transmitting protocol and input the port number. Then click on 'ADD' button.
- ⑥ To delete the IP address, input IP address and click on 'DELETE' button.



V. Phonebook Setup

This option allows you to make a direct call using extension without using Gatekeeper.

1. Before Getting Started

- 1) Select the members to form a Group (Maximum 50 person)
- 2) Decide the name of Group (Maximum 14 letters using English, Korean, Number, or Special Character)
- 3) Decide the password of Group (Maximum 14 letters using English, Korean, Number, or Special Character)
- 4) Decide the host name for each member to use within the Group (Maximum 30 letters using English, Korean, Number, or Special Character)
- 5) Decide the extension (3 digit number) of each member to use within the Group.
- 6) Decide the representative gateway within the Group and let members of the group know the IP address of it.

2. Register Individual Information

1) Connect to Setup Page

Connect to Setup page. Refer to page20 'Connect to Setup page'. If you are already in Setup page, start from number 2 'Connect to Phonebook Setup page'.

2) Connect to Phonebook Setup Page

Select 'Phonebook' from the main page.



3) Register Individual Information

- ① Input Group name.
- ② Input Group password.
- ③ Input Hostname.
- ④ Input Extension number.
- ⑤ Select 'Enable' for 'Ext Enable'.

※ 'EXT ENABLE' option allows to register other members of the group automatically even though only one member of the group is registered.

- ⑥ Select 'enable' for 'Renewal Enable'.

※ 'RENEWAL ENABLE' option allows to update the latest information of other members of the group. If IP address of one of the gateway changes, it will automatically update new IP address on the list. And if one of the gateways is disconnected from the network, it will automatically be removed from the list.

- ⑦ Click on 'Register' button to register.

The screenshot shows the 'TAT PRODUCT SETUP' web interface. At the top, there are navigation tabs: 'NETWORK SETUP', 'VoIP SETUP', 'ADVANCED SETUP', and 'PHONE BOOK'. The 'PHONE BOOK' tab is selected. Below the tabs, there is a table with columns: 'IP Address', 'Name', 'Ext1', 'Ext2', 'Ext3', 'Ext4', and 'Select'. Below the table, there are buttons: 'REGISTER', 'ADD', and 'DELETE'. Below the buttons, there is a form with the following fields: 'GROUP: test', 'GROUP PASSWD: 1234', 'HOST NAME: seoul', 'EXT NUM: 100 200', 'EXT ENABLE: enable', 'RENEWAL ENABLE: enable', and an 'OK' button.

- ⑧ Click on 'Home' button to go to main page. You may see the extension information for each channel.

PRODUCT SETUP

Home

NETWORK SETUP VoIP SETUP ADVANCED SETUP PHONE BOOK

NETWORK STATUS	Connected
NETWORK MODE	Static IP
IP ADDRESS	211.214.215.218
MAC ADDRESS	00-04-b0-04-6a-20
CALL MODEL	Gatekeeper Routed
VOIP STATUS	Unregistered
GATEKEEPER	123.123.123.123
CHANNEL[1]	E164=028881234, EXT=100, H323ID=test1
CHANNEL[2]	E164=028881235, EXT=200, H323ID=test1

3. Register Representative Gateway

- 1) Select 'Phonebook' from the main page.
- 2) Input IP address of representative gateway.
- 3) Click on 'ADD' button to register.

PRODUCT SETUP

Home

NETWORK SETUP VoIP SETUP ADVANCED SETUP **PHONE BOOK**

IP Address	Name	Ext1	Ext2	Select
211.214.215.218		101	202	<input type="checkbox"/>

REGISTER ADD DELETE

GROUP: test

GROUP PASSWD: 1234

HOST NAME: seoul

EXT NUM: 100 200

EXT ENABLE: enable

RENEWAL ENABLE: enable

OK

- 4) If representative gateway is added, you will be able to see the information (IP address, Extension and Host name) of other members within the group in the list. Check the list of IP address and extension.

! Caution: If there are same extensions used by two or more people, you can't make a call using that extension. If there is same extension within a Group, please re-register with new extension.



VI. Firmware Upgrade

Firmware Upgrade should be performed automatically. This option is for user to manually upgrade the firmware.

1. Connect to Setup Page

Connect to Setup page. Refer to page20 'Connect to Setup page'. If you are already in Setup page, start from number 2 'Connect to Advanced Setup page'.

2. Connect to Advanced Setup Page

Select 'Advanced Setup' from the main page.



3. Firmware Upgrade

- 1) Select 'Remote Upgrade' from the submenu of 'Advanced Setup'.
- 2) Confirm the version of the firmware.
- 3) Leave IP address of server and input the filename that is needed to be downloaded. (Make sure to use the correct filename.)
- 4) Click on 'OK' button.
- 5) Check to make sure that you see a message 'Success' for 'Upgrade Status'. You may check the version of firmware after downloading is done.



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I. Media Gateway Setup

Certain service company uses Media gateway for VoIP service. When this is the case, follow the procedure below to setup to use media gateway.

1. Connect to Setup Page

Connect to Setup page. Refer to page20 'Connect to Setup page'. If you are already in Setup page, start from number 2 'Connect to VoIP Setup page'.

2. Connect to VoIP Setup Page

Select 'VoIP setup' from the main page.

3. Media Gateway Setup

- 1) Enter gateway address in the 'GATEWAY' box.
- 2) Select 'Direct' for 'CALL MODEL'.

The screenshot shows the 'VoIP SETUP' page of the IAT Product Setup interface. The 'COMMON' section is active, displaying the following fields and values:

- GATEKEEPER: [Empty]
- GATEWAY: 123.123.123.123
- AREA CODE: [Empty]
- CALL MODEL: Direct (selected from a dropdown)
- TERMINAL TYPE: Gateway (selected from a dropdown)

Below the common section, there are two channel configuration sections, 'CHANNEL [1]' and 'CHANNEL [2]', each containing fields for H323 ID, E164 ID, and EXTENSION, all of which are currently empty. An 'OK' button is located at the bottom center of the form.

- 3) Click on 'OK' button.
- 4) When you see the confirmation page, you may check the result of the setup.

4. Make a call using Media Gateway

To get information regarding making a call, contact the service company.

II. Direct call Setup

This option is to make a direct call between gateways without VoIP service. If setup is done for direct call, you may call to Netmeeting or PC Phone.

1. Connect to Setup Page

Connect to Setup page. Refer to page20 'Connect to Setup page'. If you are already in Setup page, start from number 2 'Connect to VoIP Setup page'.

2. Connect to VoIP Setup Page

Select 'VoIP Setup' from the main page.

3. Direct Call Setup

- 1) Select 'Direct' for 'CALL MODEL'
- 2) Click on 'OK' button.

The screenshot shows the 'PRODUCT SETUP' web interface for a T8T device. The 'VoIP SETUP' tab is selected, showing a 'COMMON' section with fields for GATEKEEPER, GATEWAY, AREA CODE, CALL MODEL (set to 'Direct'), and TERMINAL TYPE (set to 'Gateway'). Below this are two channel configuration sections, 'CHANNEL [1]' and 'CHANNEL [2]', each with fields for H323 ID, E164 ID, and EXTENSION. An 'OK' button is at the bottom.

- 3) When you see the confirmation page, you may check the result of the setup.

4. Extension Call setup

Refer to page39 for 'Phonebook setup' for extension call.

5. Make a Direct Call

Dial Extension number that is designated to each channel of the gateway.

Ex) If extension is 200, 200+ #(send)



Chapter 8 Appendix

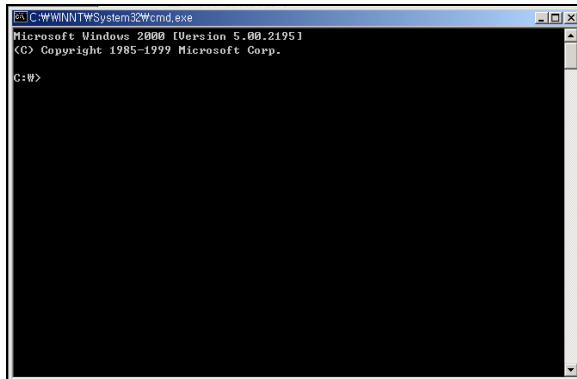
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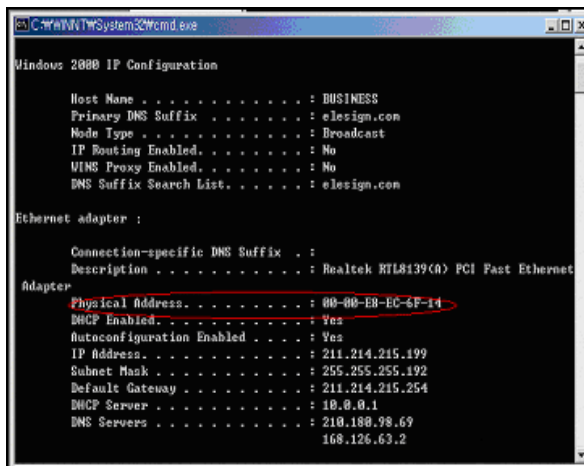
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I. How to check MAC Address

1. Open 'Command' window. (Dos window)

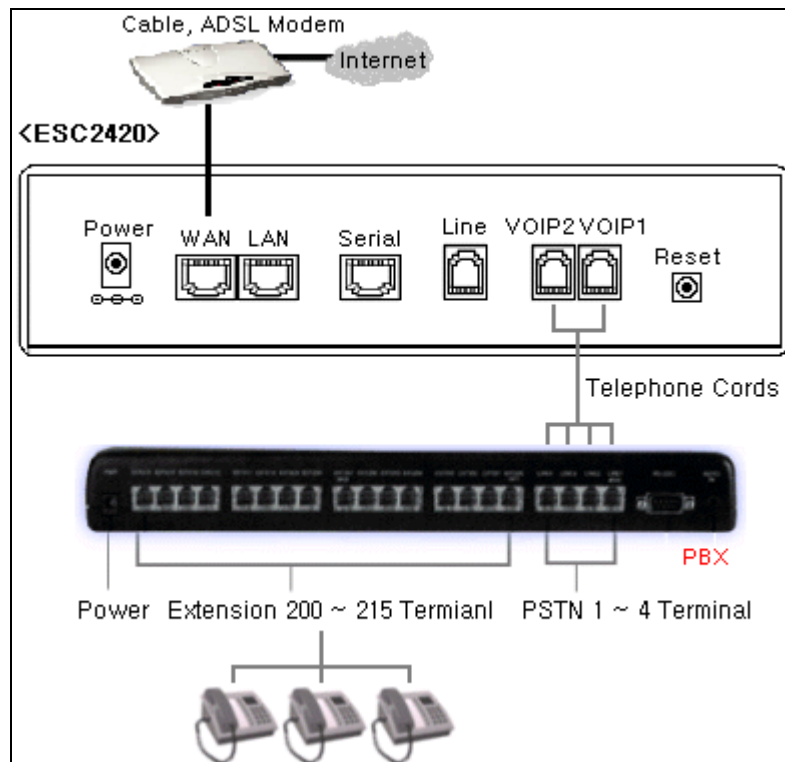


2. When you see a prompt, 'C:\>', input 'ipconfig/all' and hit enter. You will see 'Physical address', and that is the MAC address of PC.

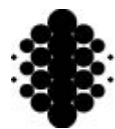


II. Configuration and Installation with other equipments

1. Connect to PBX



The telephones that can be directly connected to the gateway are two. You may connect more than two telephones to use Internet call using PBX. You may connect the gateway to PBX, and you can make Internet call from any telephone that is connected to PBX. But you may only make two simultaneous Internet calls at once since the Gateway has only two FXS ports. For more detailed information regarding the installation, contact the specialist.



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