DOCSIS Cable Modem MyNetGate 1000

USER'S MANUAL

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1. Safety Precautions

Please do not damage the DC power adaptor or plug.

Please do not connect the cable connector at the back of the cable modem to the TV antenna cable. Only connect to the CATV network providing the cable Internet service.

The cable modem should be located on a safe, flat surface in a space with plenty of ventilation.

Please do not place electronic equipment or other objects on the top of the cable modem.

Korea Network Corporation will not be responsible for damage incurred by user mishandling or misuse, or opening of the product case.

2. Box Contents

Please verify that the cable modem box contains the following.

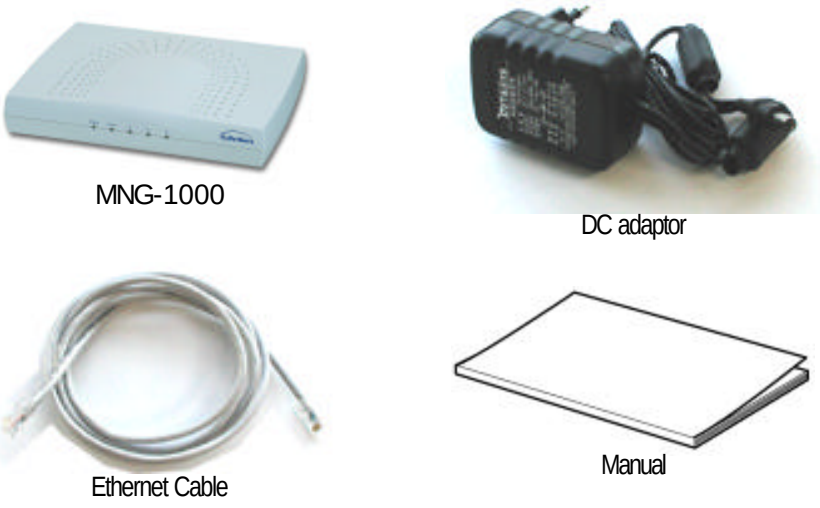


Fig 1. MNG-1000 Box Contents

2.1 Other Requirements

The cable modem requires a user PC running Windows 95/98/NT/2000 supporting TCP/IP, DHCP/BOOTP protocols

The user PC needs to have an Ethernet 10/100 Base-T LAN card installed. The LAN card maybe be purchased by the user or supplied by the Internet Service Provider.

Note : Please record the serial number and MAC address printed at the bottom of the cable modem on the front page of the manual. This information will be required to place an A/S request.

3. MNG-1000 Cable Modem LED's

The front of the MNG-1000 cable modem include five LED's that are marked POWER, STATUS, TX, RX and PC. These are used in indicating the operating status of the cable modem.

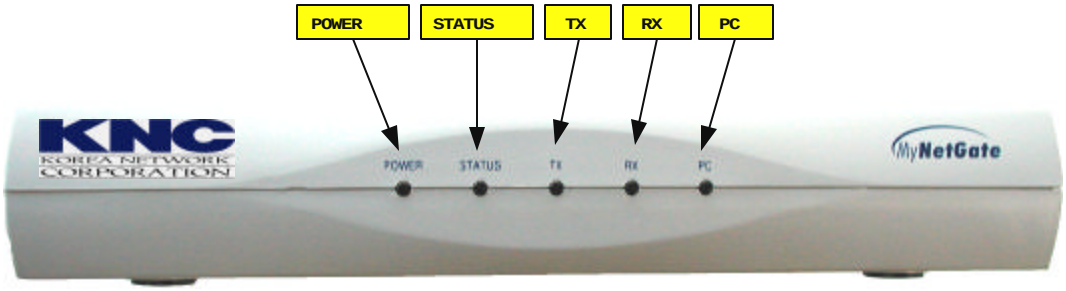


Fig 2. MNG-1000 Front View

3.1 POWER LED

When the DC adaptor plug is connected and power applied to the MNG-1000 cable modem, all five LED's will light up briefly before the POWER led lights up for 1 seconds then starts to flash. This indicates that power has been correctly applied to the modem.

During the time that the POWER led is flashing, the cable modem copies its operating program from the flash memory to the DRAM memory. After around 10~13 flashes, the LED will remain constantly on as long as power is applied.

3.2 STATUS LED

The STATUS led remains flashing while the modem is being initialized. After initialization is complete and normal operation is possible, the STATUS led remains green. The STATUS led needs to remain green in order for the Internet access to work properly.

However, if the cable modem is unable to acquire its IP address from the server through DHCP, the STATUS led will flash red. If the modem is unable to acquire its configuration setting from the server through TFTP, the STATUS led will flash orange. In both cases, please contact the customer service center of your ISP.

After power is applied to the cable modem and its operating program is copied to DRAM, the modem searches for the downstream channel.

3.3 RX LED

After the MNG-1000 cable modem as found the downstream channel, the RX led will turn green. During the time that data traffic is flowing through this downstream channel, the RX will begin flashing.

3.4 TX LED

The MNG-1000 cable modem acquires upstream channel information from the downstream channel and performs ranging in order to transmit data on the upstream channel properly. The TX led will turn green following completion of ranging and the modem is now ready transmit data. When transmit is in progress, the TX led will flash. If the upstream channel is lost, the TX led will turn off.

3.5 PC LED

The PC led indicates the status of the link between the MNG-1000 cable modem and computer. If the cable modem and computer is connected via the Ethernet cable, the PC led will turn green. When data traffic between the cable modem and computer is active,the PC led will flash green. If the cable modem and computer is not properly connected, the PC LED will remain off. In this case, please check the Ethernet cable or the Ethernet card inside the computer.

LED Name	Function	Color	Display
POWER	Power and program install	Green	OFF: No power FLASH: Booting and self test ON: Power applied
STATUS	Modem and software initialization status	Green Red Orange	OFF: No power FLASH: Normal progress ON: Normal state FLASH: IP address acquired fail DHCP retry FLASH: Config file acquire fail TFTP retry
TX	Cable port transmit status	Green	OFF: No upstream channel FLASH: Upstream data transfer ON: Upstream channel sync
RX	Cable port receive status	Green	OFF: No downstream channel FLASH: Downstream data transfer ON: Downstream channel sync
PC	Ethernet transmit/receive status	Green	OFF: Ethernet cable un-connected FLASH: Data Tx/Rx in progress ON: Ethernet link OK

TABLE 1. LED STATE SUMMARY

4. MNG-1000 Cable Modem Rear

The rear of the cable modem includes various connectors and switches. Some of the connectors have been included to provide for additional functionality in the future and are not currently being used.

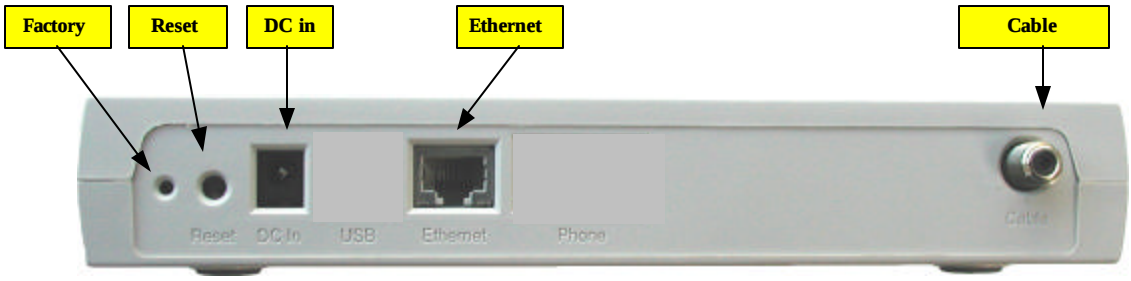


Fig 3. Cable Modem Rear View

4.1 Factory Switch

The factory switch enables the modem to return the modem to the original settings used for factory production. This will enable the cable modem to recover from any problems. The cable modem will then automatically acquire and make settings, which are then stored within the cable modem. However, it may take a long time to make these settings and store them.

The factory switch should never be used at owner's discretion. If there are any problems, please first contact the ISP customer service center.

4.2 Reset Switch

The reset switch is used to reset the cable modem. Pressing the reset switch has the same effect as unplugging and reapplying the DC power supply.

4.3 DC in Connector

This connector is used to supply the DC power to the cable modem and is connected to the plug from the 7.5V DC adaptor. The modem will undergo the initialization routine described in chapter 3 upon power on.

Please do not use a DC power adaptor other than that included in the original box. Using an unknown adaptor may cause a serious damage to the cable modem.

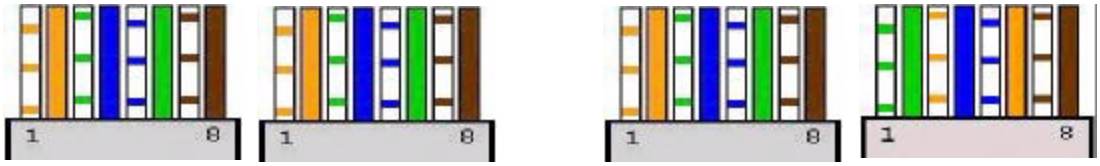
4.4 USB Jack

Currently Ethernet is used to connect the cable modem to the computer but in the future, USB may be used instead. The current MNG-1000 operating program does not support USB by default. The program supporting USB will be released in the near future and available for upgrade on the current modem In this case, the computer will not require the LAN card but it will need a software driver, which will be provided on a floppy disk.

4.5 Ethernet Jack

The MNG-1000 cable modem and computer can be linked using the Ethernet cable included in the box. This cable is a "direct" connected cable.

There are two types of Ethernet cables, "direct" and "cross". The "cross" type cable can be used to connect the modem and hub. The diagram below is a enlargement of the Ethernet connectors.



Direct Cross

FIG. 4 Ethernet Cable Wiring Diagram

4.6 Phone Port

The MNG-1000 cable modem includes two connectors labeled "Phone". These ports will be used to support VoIP telephony in the future. Currently, the ports are used by developing engineers and installation people and should not be used by users.

4.7 Cable Connector

The cable connector is used to connect the RF coaxial cable from the CATV network to the modem. The cable modem is connected to the ISP via this connector.

5. Cable Modem Installation

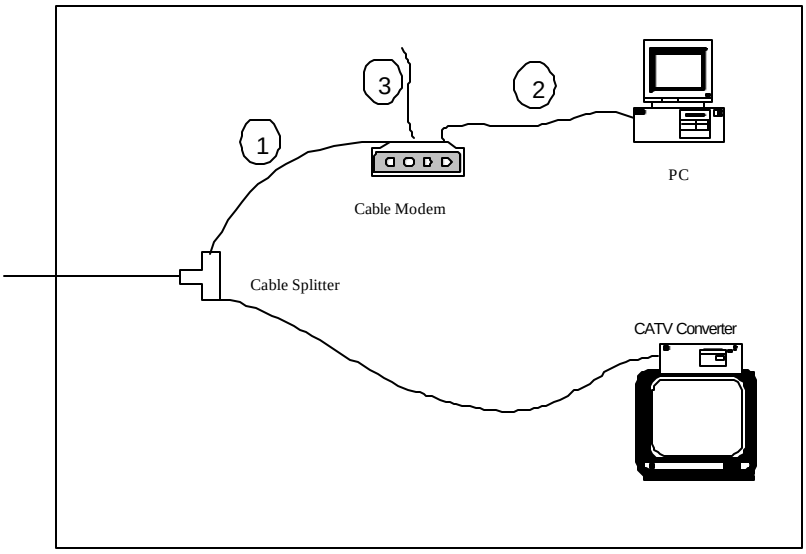


Fig. 5 Installation Setup

The figure below shows the rear of the MNG-1000 cable modem. The cable modem installation can be setup as shown in figure 5.

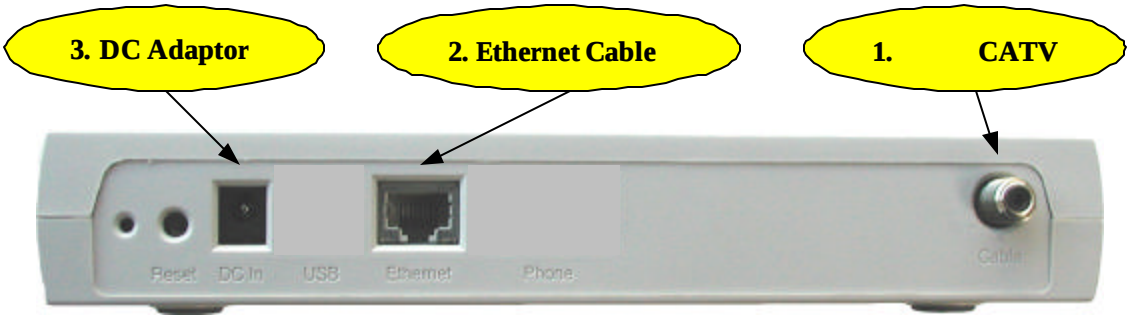


Fig. 6 MNG-1000 Cable Modem Rear

Connect the RF cable inside the home or office to the Cable connector.

Use the Ethernet cable included inside the box to connect the modem to the computer. The computer must have a LAN installed with the proper LAN card driver installed on Windows 95/98/NT/2000

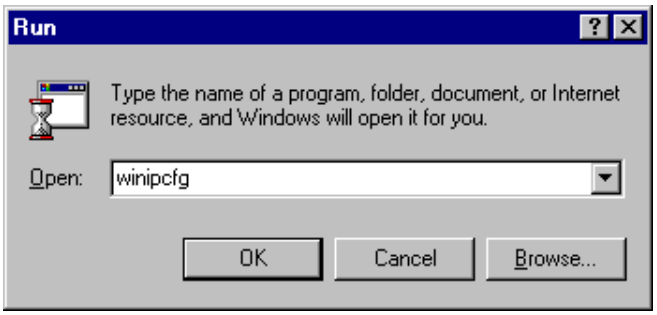
Lastly, power up the modem by connecting the DC adaptor plug into the "DC in" jack of the modem. You will be able to use your Internet within around 1.5 minuites.

6. Cable Modem Inspection

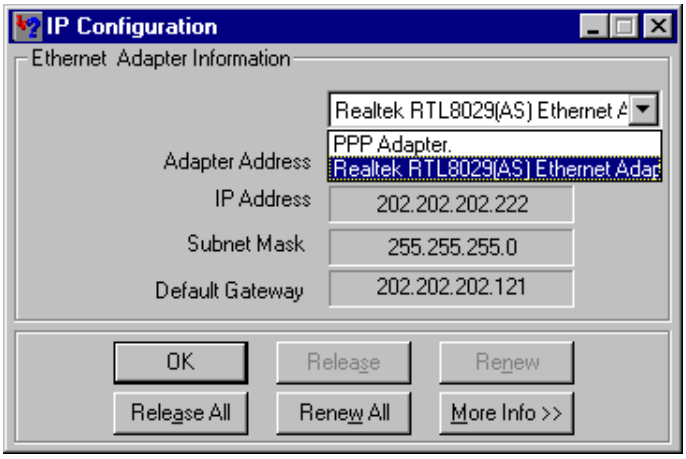
In order to verify proper operation of the cable modem, the user must first inspect the LED status and then verify that the computer as acquired IP correctly. The LED status is detailed in chapter 3.

6.1 Computer IP Address Verification

Following proper operation of the cable modem based on LED indicators, the status of the modem can be verified from the computer side as follows. From the desktop, select [start]=>[run] and type “winipcfg” inside the popup window before clicking OK.



From the IP Configuration popup window, select the correct Ethernet Adaptor.



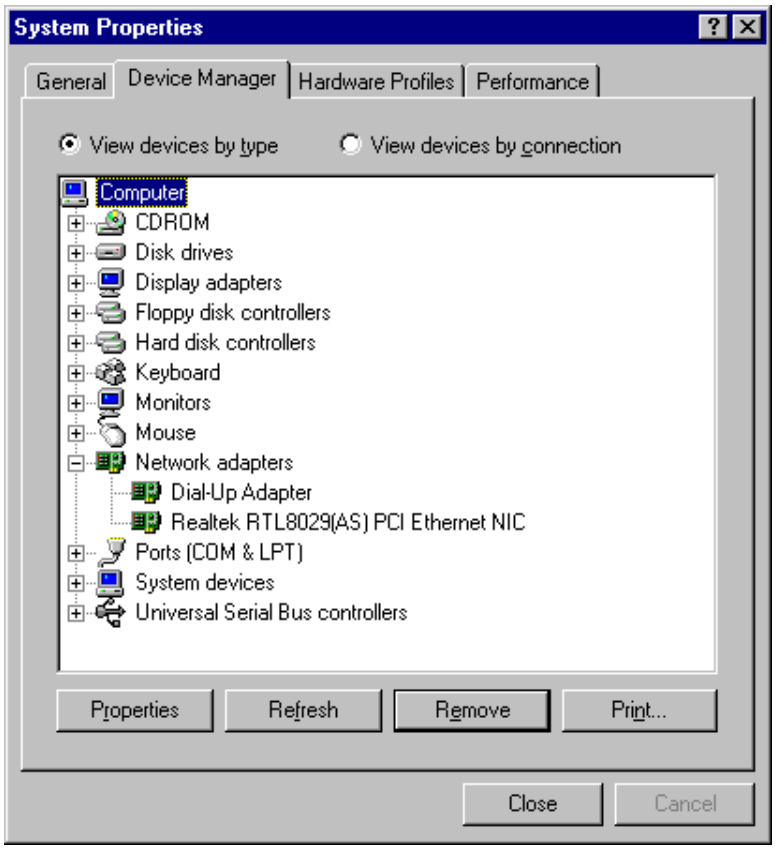
If the Ethernet adaptor's IP is [0.0.0.0] or [169.X.X.X], the IP needs to be re-assigned for proper Internet access. First, click [Release All] to release all previously assigned IP’s. The IP Address should show either [0.0.0.0] or [169.X.X.X]. A new IP address will be assigned after [Renew All] button is clicked.

If the IP does not change from [0.0.0.0] or [169.X.X.X] after the above procedure #3, there

are three possible reasons. Firstly, the cable modem may not be operating properly. Secondly, LAN card may not be installed properly and thirdly, the server may be down.

In order to make sure that the cable modem may be the reason, it may be useful to unplug and then re-connect the DC power from the modem and let it initialize again.

If the IP address is still not correct, select the menu [Start]=>[Settings]=>[Control Panel]=>[System]=>[Device Manager]=>[Network Adaptors] and make sure that there is no (!) in front of the LAN card. The (!) mark shows that the LAN card is not installed properly. In this case, please try re-installing the LAN card after referring to the LAN card user's manual.



If the IP address still cannot be acquired after procedures 5 & 6, please contact the customer service center of your ISP.

7. Check Points for Modem Problems

Please verify proper Ethernet connection between the modem and the computer.

Please verify that the RF cable is properly connected to the cable modem.

Please verify proper installation of the computer OS, TCP/IP protocol and LAN card.

Please verify that the cable modem information(MAC address) is properly registered with the ISP.

If the problem remains unresolved, please refer to this manual again or contact the purchase company or store.

8. Contact Information

Sales Contact
E-mail: hnyoun@knc.co.kr, smhan@knc.co.kr

Web Page : www.knc.co.kr

9. US FCC Class B Notice

Federal communications Commission(FCC) Statements

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 operations.

Radio Frequency Interference Statement

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 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.