

# neotus

Network monitor user guide

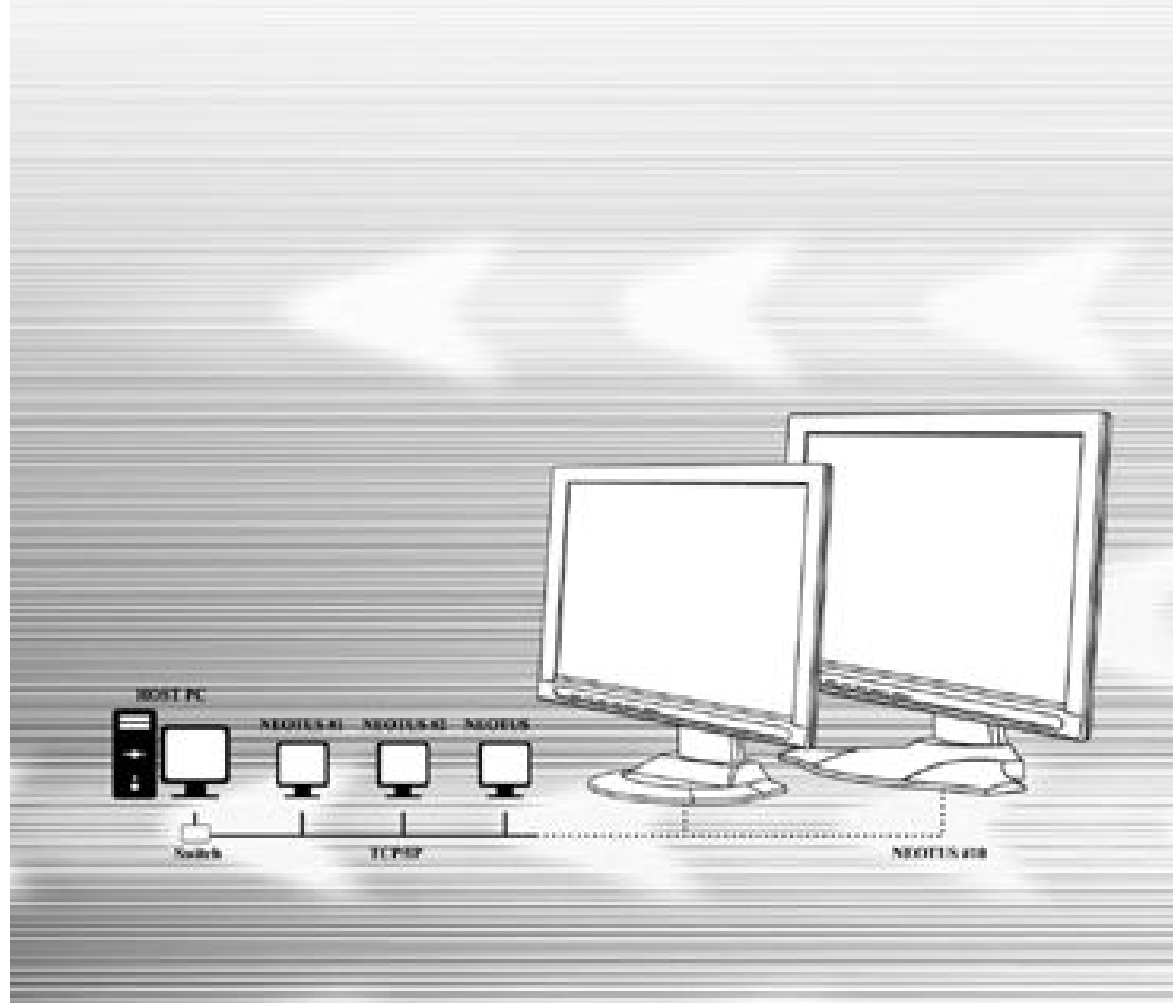
# Erae

## neotus

Network monitor user guide

ELM-1700N Series

ELM-1900N Series

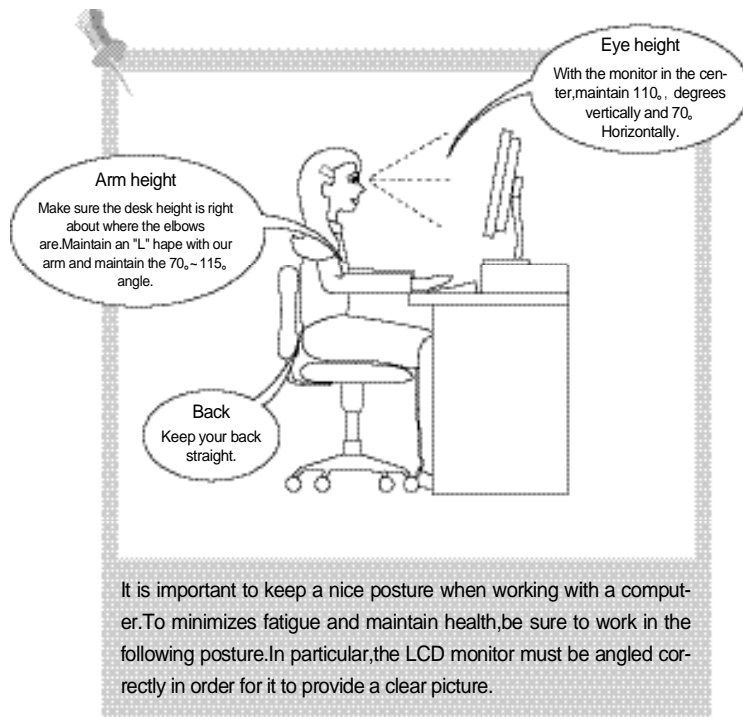


90-R-1977BAN-EI-ERA-00

- Please observe all safety precautions when using this product.
- Please read this manual carefully before using this product.

**Network Ready....**  
**neotus**

## Correct posture for using the LCD monitor



Thank you for using Erae Electronics' products.

This product has been thoroughly tested and is reliable and safe to use.

Please read the safety precautions before using the product.

Depending on the particular model purchased by the user, the content of this manual may not match completely.

Erae does not take any responsibility for damages to the product caused by the use of non-standard parts or by not following the precautions mentioned in this manual.

This product has been optimized for Windows® 2000 Professional, Windows® XP Home Edition, and Windows® XP Professional. Use of the product with any other OS requires a separate software and the user must purchase this software or pay for an upgrade.

This product is not a computer, but an independent device that simulated Windows. Unlike computers, this product does not support other peripheral devices or connection with communication equipment, and it does not support high quality videos or 3D games.

If this product will be used to allow one computer to be shared among multiple people, appropriate configurations should be set in Windows OS for security purposes. NTFS method of file service and the user account configurations must be set in administrator mode in order to maintain security and enable ongoing system maintenance. For more information, refer to guideline on Windows OS.

## CAUTION

Erae Electronics does not guarantee the accuracy of this manual.

Erae Electronics does not approve of the sale for the use of this product for purposes other than what was originally intended and does not take any legal responsibility for any direct or indirect damages caused by the sale and use of this product in a manner not originally intended.

· Windows® XP and Windows® 2000 are the registered trademarks of Microsoft Corporation. Other trademarks are the registered trademarks of each respectable company.

This device has been approved for use in households and maybe used safely in a residence or other areas.

This manual is copyrighted by Erae Electronics.  
This manual may not be duplicated or copied in whole, or in part, without the explicit, prior approval from Erae Electronics.

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Checking content

Check to make sure the product package contain all parts and contact dealer if anything is missing. Contact the dealer if you 'd like to purchase optional parts. The actual parts in the package may look slightly different from the pictures below. The content of the package may be different depending on the model purchased.



Power cord



User guide



RGB cable



Adapter



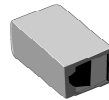
DVI-D cable monitor driver  
And NEOTUS  
application program  
Installation CD



DVI-D cable



Direct LAN (CAT5 LAN) Cable



Crossover adapter(optional)

>References

When directly connecting the PC and NEOTUS,be sure to crossover cable or crossover adapter to connect to both side's direct LAN cable.

When connecting directly to the PC,without using a switch hub,additional LAN card may be required and in this case,connect direct with crossover cable use conversion adapter in direct LAN cable to connect.

To share the Internet,go to <Control Panel>, "Network connections wizard ", "Internet connections wizard" and configure the home network.

This section provides guidelines for user's safety and preventing damage to the product.Be sure to read this carefully.

If these safety precautions are ignored,it can lead to serious injury or even fatality and may also lead to property damage.

Precautionary items are marked as "Warning" or "Caution".

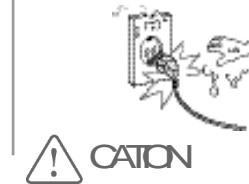
**Warning** : indicates conditions that can cause serious injury or fatality.

**Caution** : indicates conditions that can cause light injury or product damage.

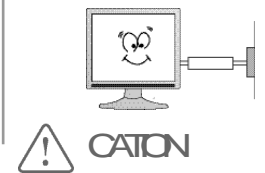
Do not use damaged power cords or loose outlets.  
There may be a risk of electric shock or fire.



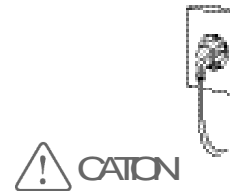
Do not unplug by pulling on the cord or using wet hands.  
There may be a risk of electric shock or fire.



Be sure to plug into an outlet that has been grounded.  
There may be a risk of electric shock.



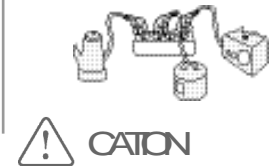
Plug in the power cord securely so that it does not move.  
Improperly plugged in power cord may cause a fire.



Do not severely bend the power cord or place heavy items on top of it.  
There may be a risk of electric shock or fire.



Do not plug in multiple power cords to a single outlet using extension cords.  
There may be a risk of fire.




When installing the monitor,leave some space between the wall and the monitor for ventilation.  
If the temperature of the monitor becomes very high,it may cause a fire.



Make sure no table cloth,curtains or other flammable materials cover the ventilation outlet.  
If the temperature of the monitor becomes very high,it may cause a fire.



 Place the monitor on a flat surface, in a safe area, and place the monitor gently on the surface. If the product short circuits, it may cause product damage or injury.

Do not insert picks, tools, or other metal pieces into the ventilation outlet or AV unit. There may be a risk of electric shock or fire.



 **CAUTION**

Do not allow children to hold onto or climb on top of the monitor. They may be injured when the monitor falls.



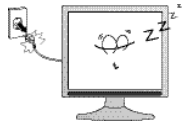
 **CAUTION**

Do not disassemble, repair or modify the monitor on your own. This may cause electric shock or fire. If the monitor requires a repair, please contact our service center.



 **CAUTION**

Unplug the monitor when it will not be used for a long time. Too much dust can cause excessive heat, start a fire or cause smoking.



 **CAUTION**

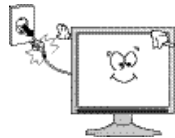
If you smell smoke or if the monitor begins to smoke, immediately turn off the power and contact our service center. There may be a risk of electric shock or fire.



 **CAUTION**

Clean dust and wipe water away from power plug pins and the surrounding area.

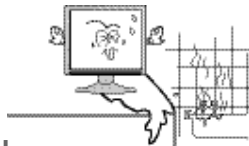
Do not use commercial wax, benzenes, alcohol, paint thinner, soaps and other chemical substances on the monitors and do not clean the monitor with wet cloth.



 **Warning**

Clean dust and wipe water away from power plug pins and the surrounding area.

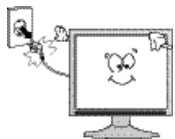
There may be a risk of electric shock or fire.



 **CAUTION**

Do not install in areas where it can be exposed to water (raining), oil, or moisture.

There may be a risk of electric shock, fire or product damage.



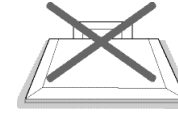
 **CAUTION**

When cleaning the monitor, be sure to unplug it. There may be a risk of electric shock or fire.



 **CAUTION**

Do not place the product face down. TFT-LCD surface may be damaged.



 **Warning**

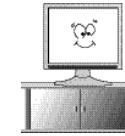
Do not place candles or lit cigarettes on top of the monitor or near the ventilation outlet. There may be a risk of fire.



 **Warning**

Set the PC so that it converts to DPMS mode when the monitor is not used for a while.

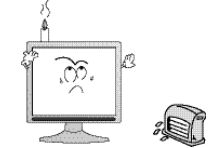
Use a screen saver that has motions.



 **CAUTION**

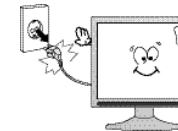
If you smell smoke or if the monitor begins to smoke, immediately turn off the power and contact our service center.

There may be a risk of electric shock or fire.



 **CAUTION**

When cleaning the monitor, be sure to unplug it. There may be a risk of electric shock or fire.



 **CAUTION**

Do not install in bookcases or closets where ventilation is poor. There may be a risk of fire.



 **CAUTION**

Configure the PC to match the product's resolution and frequency. Failure to do so may strain the eye and cause poor eye sight.

17", 19" - 1280 x 1024 @ 60Hz



 **Warning**

Product introduction

"NEOTUS" is a combination of LCD monitor and "WoIP: Windows over IP" technology that allows up to 10 NEOTUS to be connected to a single computer to enable up to 10 people to share the single computer. In addition, the user may use NEOTUS as a normal monitor by connecting the monitor directly to a PC.

Product Features

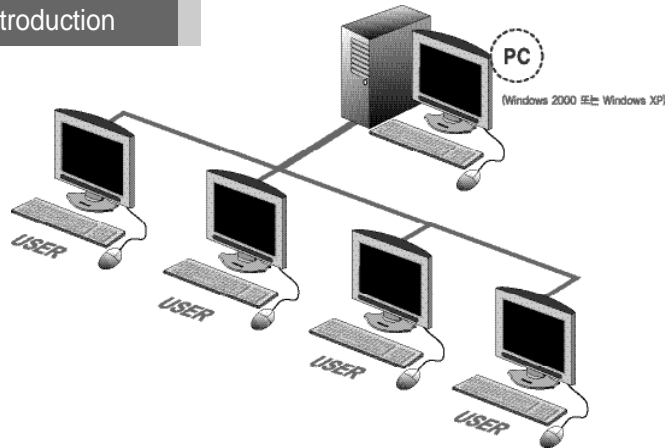
Provides sophisticated design, simple installation and ease of use.

A new concept product that combines monitor with network functions.  
 May be used only as a monitor.  
 Uses standard TCP/IP based Ethernet.  
 Provides high scalability and data security.  
 Uses WoIP (Window over IP) protocol.  
 Requires low power and does not produce noise.

>References

When multiple units are used simultaneously, the PC must have sufficient performance capacity and the user may experience different levels of speed or compatibility depending on the application program being used. Refer to the technical overview section on the website.

Product introduction



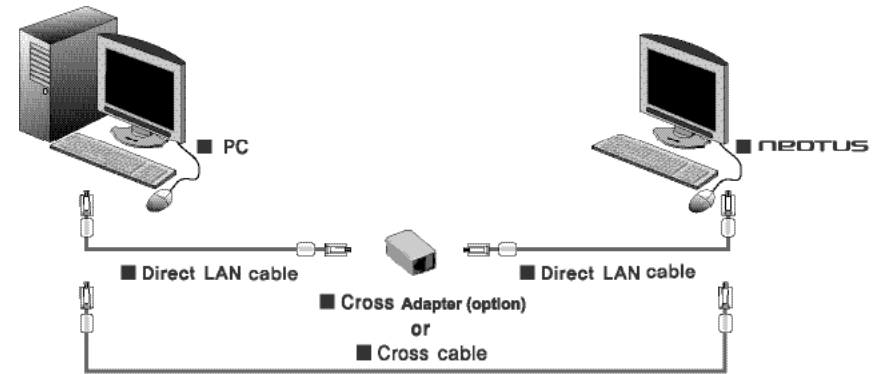
Recommended PC specifications

- When using 1 unit: Intel® Pentium® 4 1.0GHz, main memory of 256MB or more
- When using 2-3 units: HT technology based Intel® Pentium® 4 2.4GHz, main memory of 512MB or more
- When using 4-7 units: HT technology based Intel® Pentium® 4 3.0GHz, main memory of 1024MB or more
- When using 8-10 units: HT technology based Intel® Pentium® 4 3.2GHz, main memory of 2048MB or more

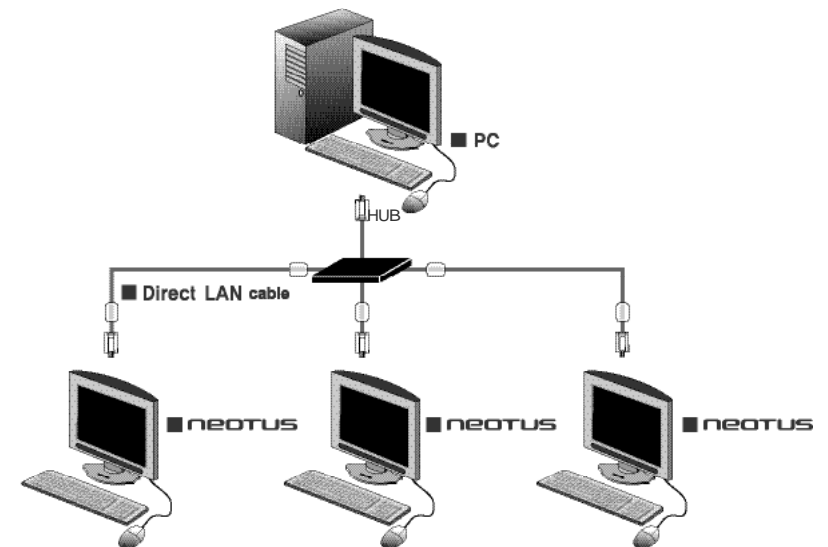
Compatible OS (Operating System) Windows® XP Home/Professional  
 Windows® 2000 Professional

Connecting to the PC

Connecting directly to PC

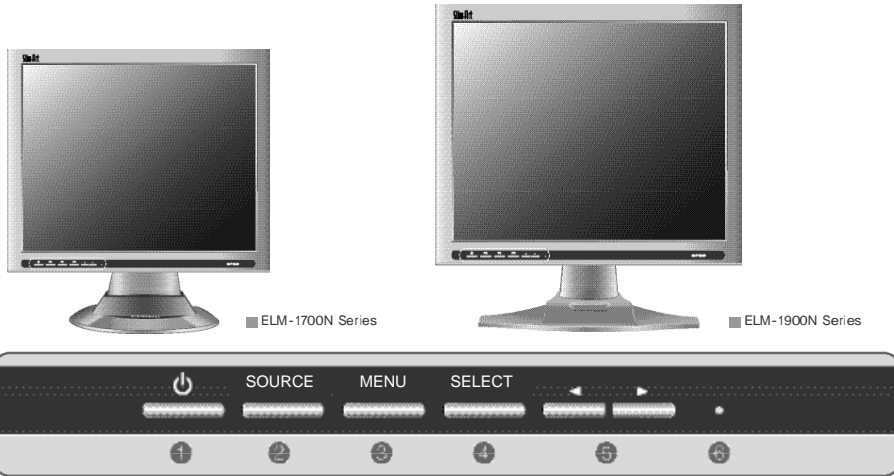


Connect to PC and hub (or router) HUB



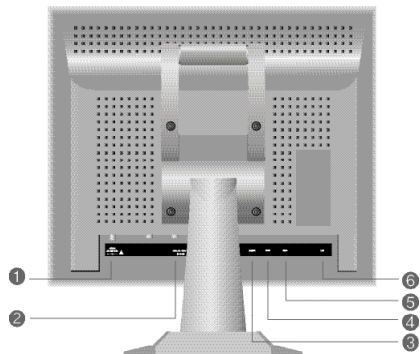
Names and descriptions (when Digital RGB input device is not available)

Front



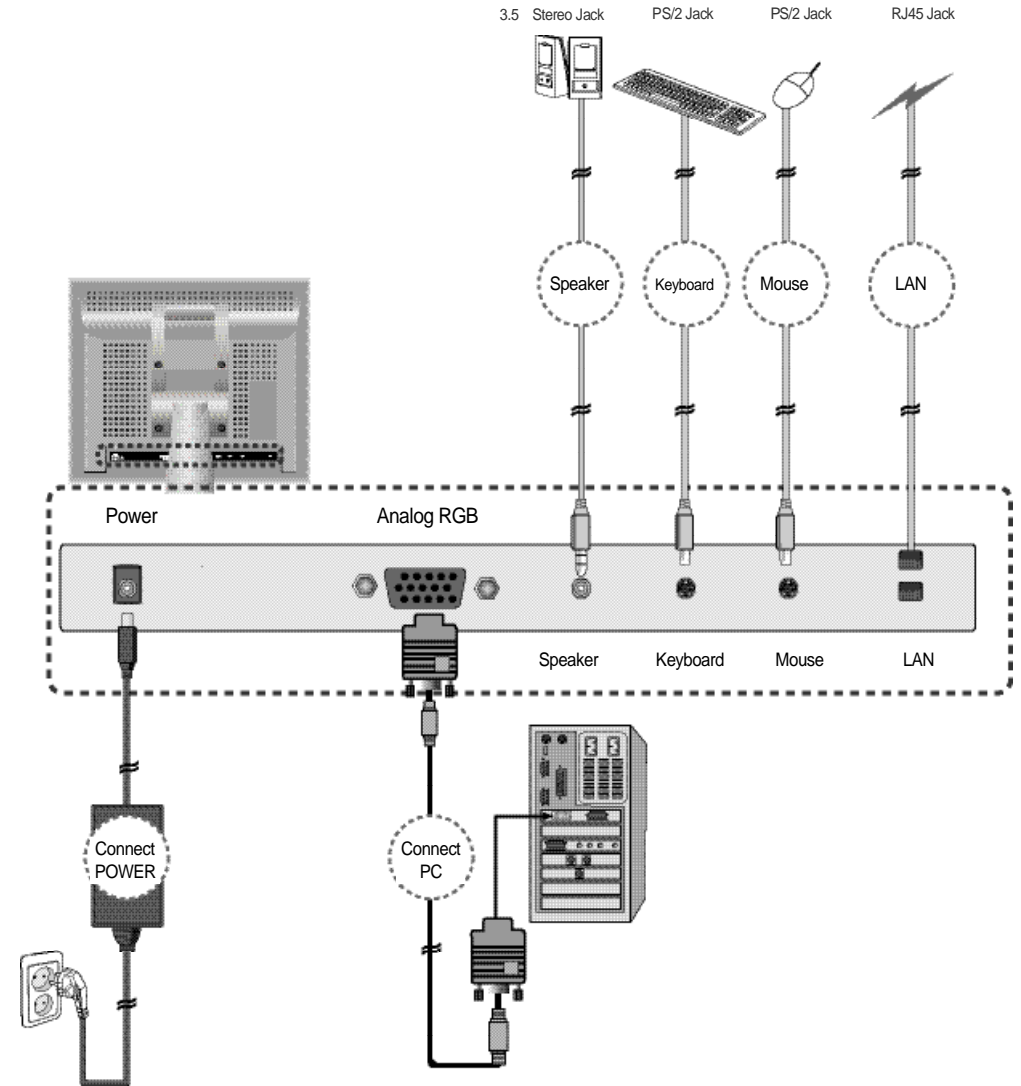
- Turns power on/off.
- SOURCE - press the button to change the input signal.  
(Analog Network Analog)
- MENU - Opens OSD menu.
- SELECT - select a menu item. When the button is pressed while /OSD is off, automatic adjustment will be made.
- Navigate OSD menu or adjust settings.
- LED

Rear



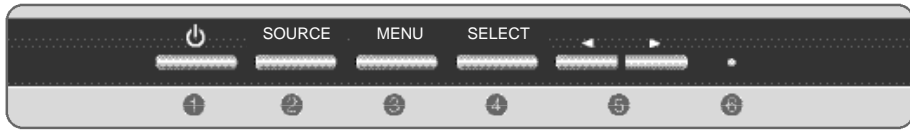
- 1 Power outlet
- 2 Analog RGB outlet
- 3 Speaker connection outlet
- 4 Keyboard connection outlet
- 5 Mouse connection outlet
- 6 LAN connection outlet

Names and descriptions (when Digital RGB input device is not available)



Names and descriptions (when Digital RGB input device is available)

|Front



- Turns power on/off.

SOURCE - press the button to change the input signal.

(Analog Digital Network Analog)

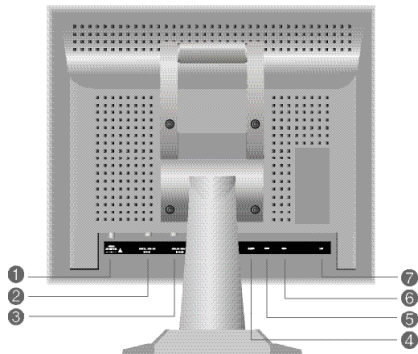
MENU - Opens OSD menu.

SELECT - select a menu item. When the button is pressed while /OSD is off, automatic adjustment will be made.

- Navigate OSD menu or adjust settings.

LED

|Rear



Power outlet

Digital RGB input outlet

Analog RGB input outlet

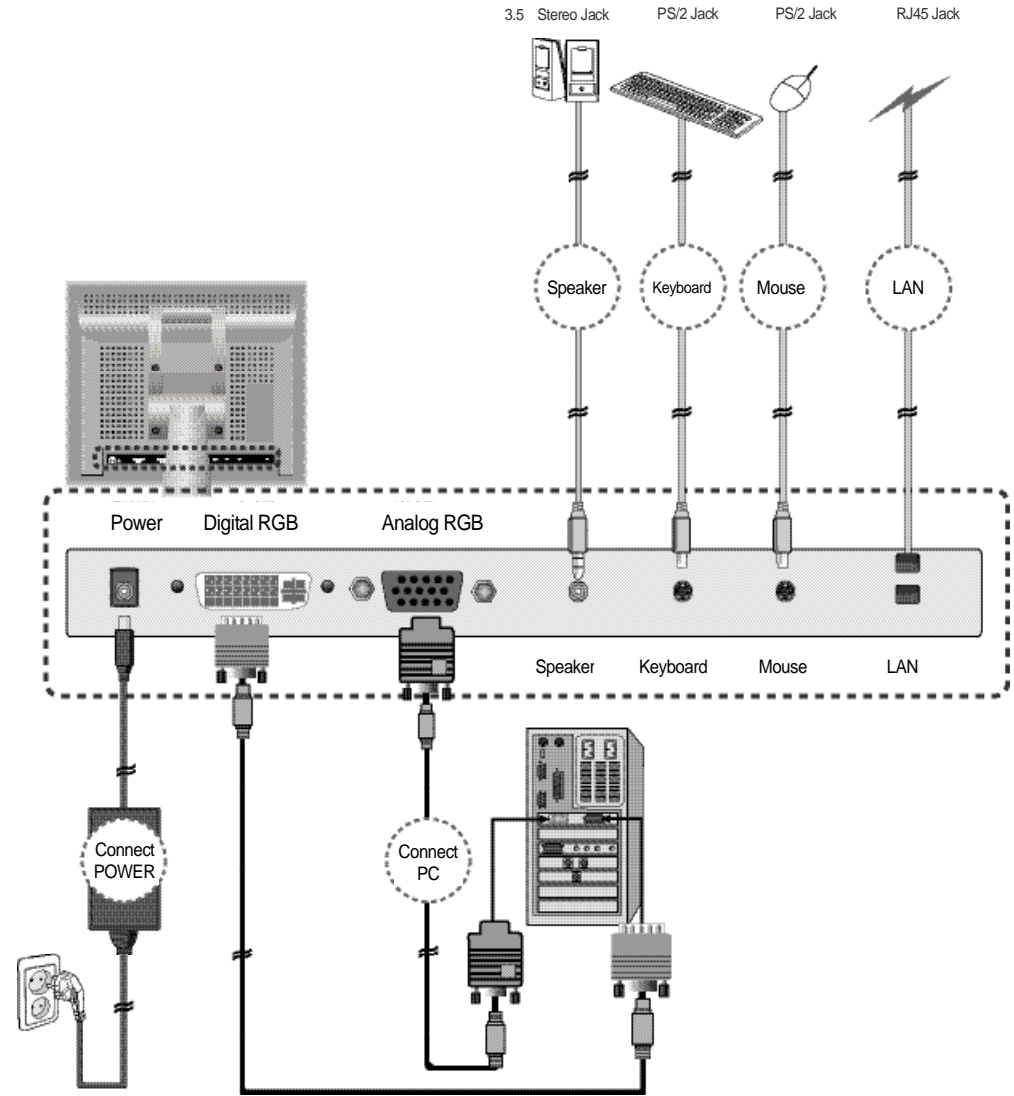
Speaker connection outlet

Keyboard connection outlet

Mouse connection outlet

LAN connection outlet

Names and descriptions (when Digital RGB input device is available)





If the driver program is damaged,download it from the following website.

- Internet : <http://www.erae.com/> Customer Service User guide and documents
- Internet : <http://www.neotus.co.kr>

Automatic Installation

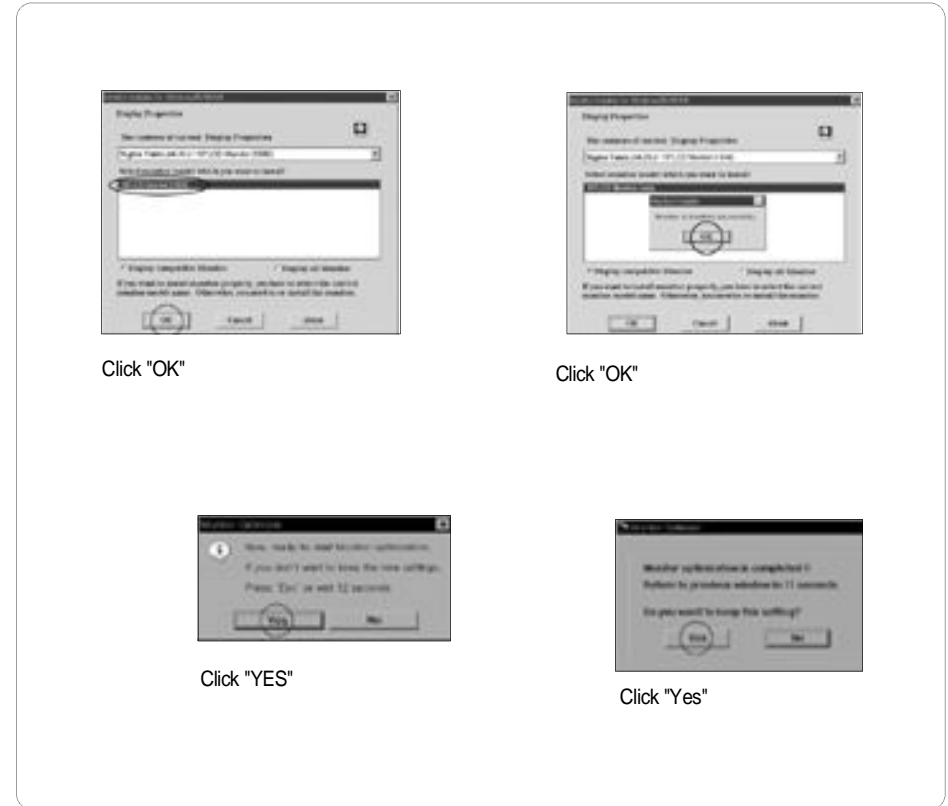
1. Insert the CD packaged with NEOTUS in the CD-ROM.
2. In Windows 95 or later versions of OS,the monitor is automatically detected as shown by the plug &play function.  
(Connecting to Analog RGB or DVI)
3. Complete the installation as follows.



- If the monitor driver is installed,resolution and frequency will be set at optimal settins for clearer picture.

When installation does not work (Window 95/98/ME)

1. Insert the CD packaged with NEOTUS in the CD-ROM.
2. Double click on Monitor Driver/Install.exe file in the CD and follow the below steps.



Monitor installation is complete.

When installation does not work (Windows 2000)

1. Insert the CD packaged with NEOTUS in the CD-ROM.
2. Double click on Monitor Driver/Install.exe file in the CD and follow the below steps.



Click "OK"



Click "OK"



Click "Yes"



Click "Yes"

Monitor installation is complete.

When installation does not work (Windows XP)

1. Insert the CD packaged with NEOTUS in the CD-ROM.
2. Double click on Monitor Driver/Install.exe file in the CD and follow the below steps.



Click "OK"



Click "OK"



Click "OK"



Click "Yes"

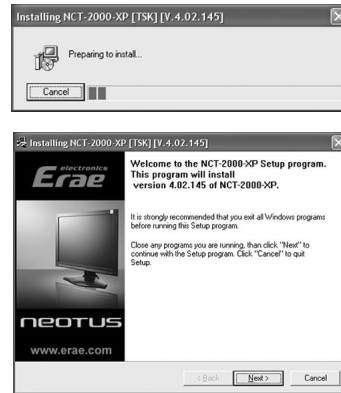
Monitor installation is complete.

Installing the application program

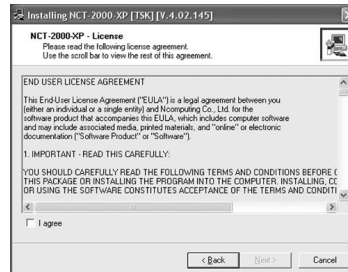
Installing NCT-2000-XP

"NCT-2000-XP" is a software that allows NEOTUS to be connected to a host PC (regular PC) and enable the NEOTUS user to use the PC like the user's own PC.

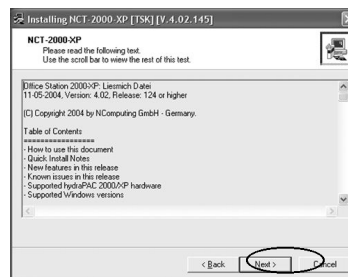
1. When 'NCT-2000-XP' installation screen appears, click <Next> button.



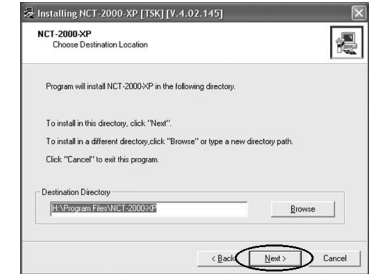
2. When "NCT-2000-XP-User License" screen appears, read the license agreement and click "I agree". (If you do not accept the license agreement, click "Cancel" to exit the application program installation.)



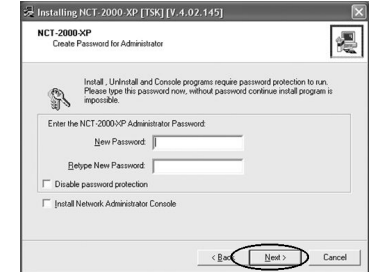
3. When the screen shown to the right appears, verify the items and click <Next>.



4. Select the folder to install the program to and click <Next>. To install to a different folder, click <Browse> and select the desired folder.



5. When the screen shown to the right appears, enter the administrator password, select "Network management console" and click <Next>. (Security is provided by the console manager password, therefore enter the password and re-enter it for confirmation. To install the network management console, select "Network management console" and click <Next>.)

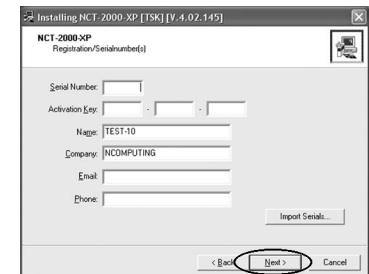


>References

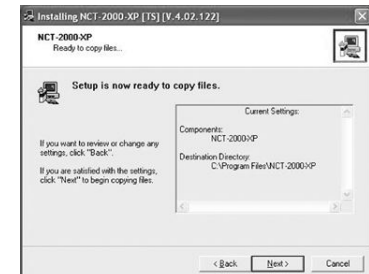
Administrator password : Administrator password is used to restrict the use of network management console.

Network management console : When multiple host PCs are being used, this management program allows the host PCs and the connected NEOTUS to be managed from one place and it can also be used to manage local user groups.

6. When installing the application program, make sure the PC and NEOTUS are connected properly. Refer to the following when installing the application program. "NCT-2000-XP" is a software that allows NEOTUS to be connected to a host PC (regular PC) and enable the NEOTUS user to use the PC like the user's own PC. When the following screen appears, enter the product serial number, license key, company, and email and click <Next>.



7. Click "Next" When the screen shown to the right appears, click <Next> button.

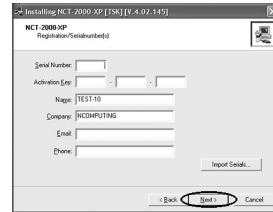


References

Serial number: Enter one serial number for each NEOTUS.

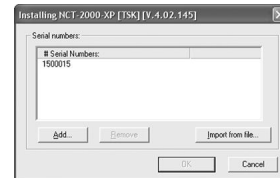
If multiple NEOTUS monitors have been installed, refer to the information below. (Click <Advanced> and enter serial numbers for all NEOTUS units.)

1. Click the <Advanced> button.



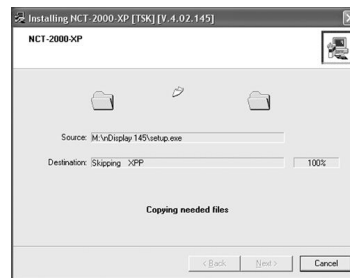
2. Click the <Add> button.

3. When the screen shown to the right appears, enter the serial number and license key and click <Next>. The newly entered serial number is added. (Look at the back of the product for the serial number and license key)

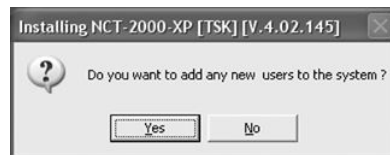


4. Added serial number can be checked.

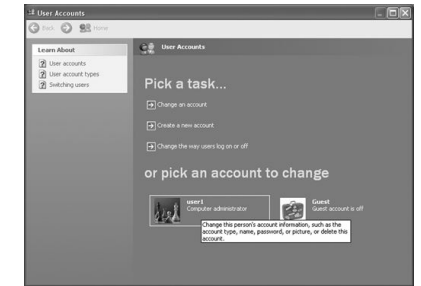
8. Installs the program.



9. Following screen appears during installation, and if you wish to add a new user, click "Yes".



10. In the next screen, select create new account to add a new users (ex:user3)  
Refer to the OS user manual for information on user accounts..

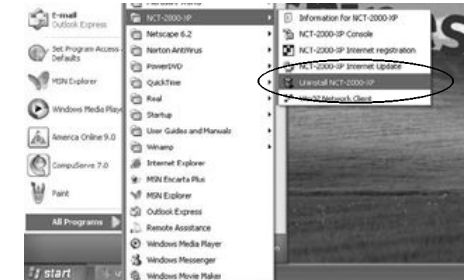


11. Click <Restart> after completing the installation  
When the installation is complete, the following screen appears. Select, "Yes, restart the computer now" and click the <Restart> button.

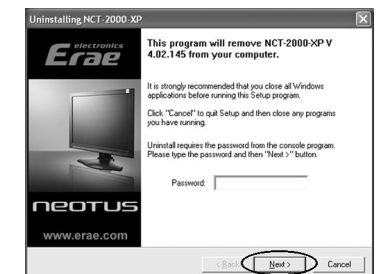


Uninstalling application program

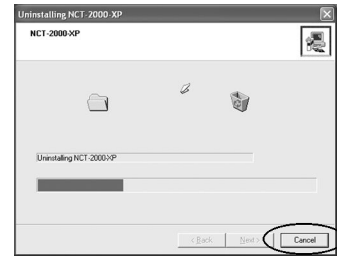
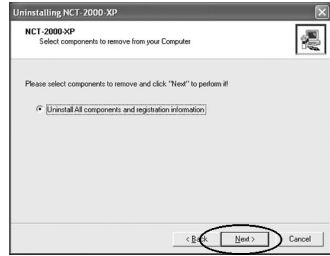
1. From Windows, click <Start>, <All programs> NCT-2000-XP Remove NCT-2000-XP>. Execute "Delete application program" only when needed.



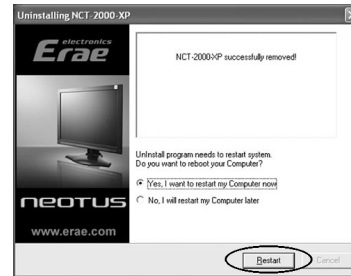
2. When the "NCT-2000-XP" screen appears, click <Next>. (If the administrator password was setup, enter the password and click <Next>.)



3. Select "Remove all componenst and registration information" and click <Next>.



4. Installing and uninstalling application program  
When the uninstallation is complete, the following screen appears. Select, "Yes, restart the computer now" and click the <Restart> button.



Using IP sharing device (supports switching of 100M or more, support DHCP function)

When IP sharing device is used, fixed IP as well as dynamic IP can be used. Except, dynamic IP can only be used if the IP sharing device has DHCP server function and the DHCP function has been enabled. If you wish to IP sharing device but also use fixed IP, refer to section on "Connecting to Hub". Here, we explain using Windows XP. If the PC has Windows XP or Windows 2000 and the network card is installed, the configurations and settings will depend on the type of environment the user wishes to use the system. Refer to the following to check the PC's network settings and configure the NEOTUS settings.

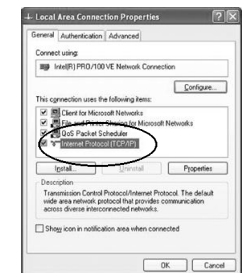
>Precautions during installation

1. Click <Start> from Windows and select "Control Panel".
2. From the "Control Panel", double click on the "Network connections" icon. Select "Local Area connections". right click with the mouse and select "Properties".
3. Click the "Advanced" tab, and if "Internet connection firewall" is checked, click the "Settings" button on the bottom and uncheck "Remote desktop". If this is checked, the desktop may not allow the monitor to connect.

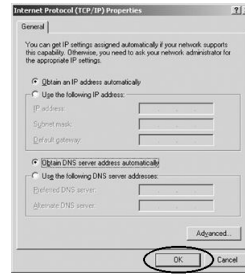
1. To configure the PC, click <Start> from Windows and select "Control Panel".  
(For Windows 200, click <Start> from Windows and select <Setting Control Panel >.)
2. Double click on the "Network connections" icon. (For Windows 2000, double click on the "Network and dial-up connections" icon.)
3. Select "Local Area connections", right click with the mouse and select "Properties".  
(For Windows 2000, select the LAN card, right click with the mouse and select "Properties".)



4. Select "Internet Protocol (TCP/IP)" and click <Properties>. Select "Internet Protocol (TCP/IP)" and click <Properties>.



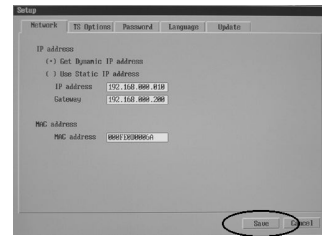
- When the following screen appears,select "Obtain an IP address automatically" and "Obtain DNS server address automatically" and click <OK>.



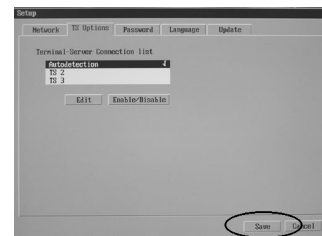
- To configure NEOTUS' Settings,turn on the NEOTUS monitor and press the input signal button to conver to the network and click the "Setup" menu from the start page.



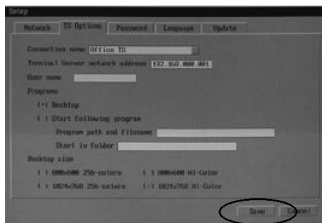
- Click the "Network" tab and select "Get Dynamic IP address (or "Use Static IP address ")and enter the IP address and the gateway.



- Set "Autodetection" for terminal-server connection list,as shown below.



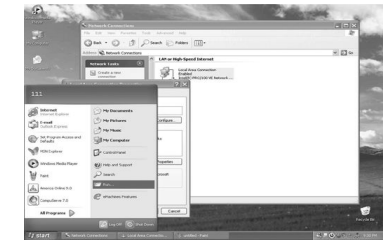
- Click the 'TS Options' tab and configure as follows.(Enter the host computer's IP address in the Terminal Server Network address field.)



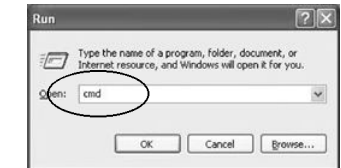
## References

An IP address has been automatically allocated to the PC,and you need to know this IP address.

- Click <Start>from Windows and select "RUN".



- In the "Open" field,enter "cmd" and click <OK>.



- In the Dos prompt window,enter "ipconfig" and hit the <Enter>key to obtain the IP address, subnet mask and gateway assigned to the PC.



- Enter the IP address found here in the Terminal Server network address field of the NEOTUS. Above settings can be verified from the monitor connected directly to the PC or from an already installed NEOTUS monitor.

· You can find the IP address as follows.

10. You can see that PC and NEOTUS are now connected. You can start using the NEOTUS.

11. When configuration is complete, click <Save> to exit the settings screen and click <Connect>.

### Using HUB (supports switching for more than 100M)

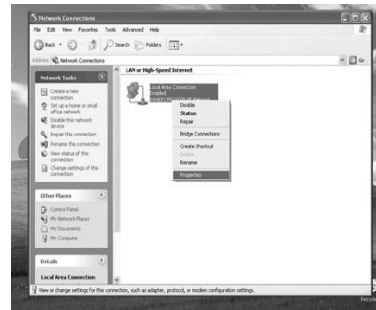
Click <Start> from Windows and select "Control Panel".

To connect to the hub, both the host computer and NEOTUS must use fixed IP. Select "Network Connections" ("Network and dial-up connections") in the "Control Panel" and select the LAN card. Right click with the mouse and select "Properties" ("Registration Information") and set to fixed IP for both the computer and NEOTUS. Set the fixed IP as follows

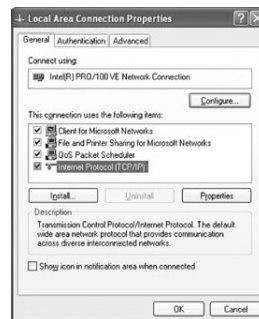
1. Click <Start> from Windows and select "Control Panel".

2. Double click on the "Network Connection" icon.

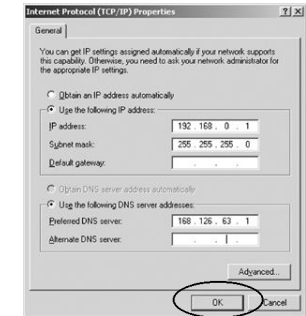
3. Select the LAN card, right click with the mouse and select "Properties". (For Windows 2000, select the LAN card, right click with the mouse and select "Properties".



4. Select "Internet Protocol (TCP/IP)" and click <Properties>. (For Windows 2000, select <Registration Information>.)



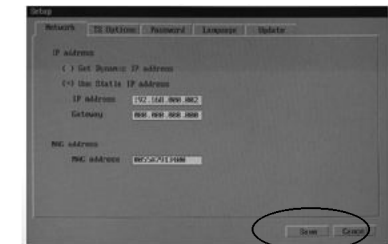
5. Configure the settings as shown in the screen shot to the right and click <OK>. (Select "Use the following IP address" and enter the IP address, subnet mask and default gateway. Then select "Use the following DNS server address" and enter the default DNS server address.)



6. To configure NEOTUS' settings, turn on the NEOTUS monitor and press the input signal button to convert to the network and click the "Setup" menu from the start page.

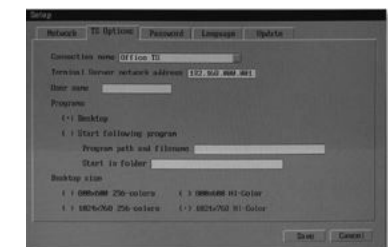


7. Select the "Network" tab, select "Use Static IP address" and enter the IP address and gateway.



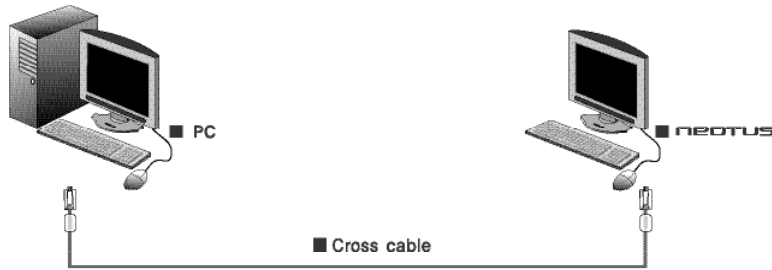
8. Click the 'TS Options' tab and configure as follows. (Enter the host computer's IP address set in step 5 in the Terminal Server Network address field.)

9. When network configuration is complete, click <Save> to exit the settings screen and click <Connect>.



10. You can see that PC and NEOTUS are now connected. You can start using the NEOTUS.

Directly connecting PC and NEOTUS



When there is one LAN card ((supports 100M or higher)(Internet cannot be used)

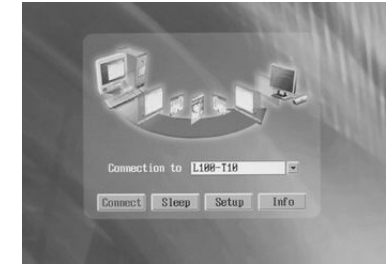
1. To configure the PC,click <Start>from Windows and select "Control Panel". (For Windows 200,click <Start>from Windows and select <Setting Control Panel >.)
2. Double click on "Network Connections" (For Windows 2000,double click on the "Network and dial-up connections" icon.)
3. Select the LAN card ,right click with the mouse and select "Properties".(For Windows 2000, select "Registration Information".)

>References

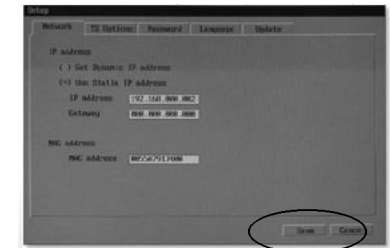
If connecting multiple NEOTUS units,there must the same number of LAN cards installed in the PC as the number of NEOTUS you wish to connect.

4. Select "Internet Protocol (TCP/IP)" and click <Properties>.
5. Configure the settings as shown in the following screen and click <OK>.(For example, IP address:192.168.0.1, Subnet mask:255.255.255.0.IP address and subnet mask are different depending on the PC environment.)

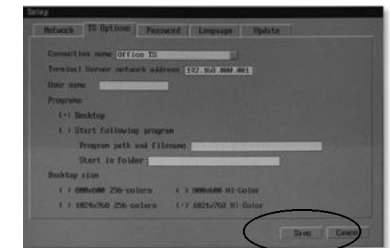
6. To configure NEOTUS' settings,turn on the NEOTUS monitor and press the input signal button to conver to the network and click the "Setup" menu from the start page.



7. Select the 'Network' tab.Then,select the 'Use Static IP address'item to enter as follows.(For example,enter IP Address : 192.168.0.2, Gateway : 000.000.000.000. IP address and gateway are different depending on the host PC's environment.)



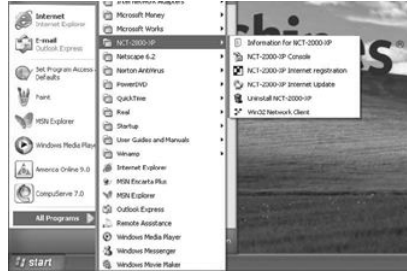
8. When configuration is complete,click <Save>to exit the settings screen and click <Connect>.
9. You can see that PC and NEOTUS are now connected. You can start using the NEOTUS.





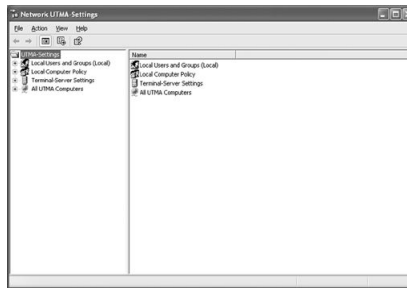
### Using the application NCT-2000-XP

When NCT-2000-XP application program is installed as explained in the previous chapter, the following application program groups are automatically created. From Windows, click <Start> then select <All programs NCT-2000-XP> to check that NCT-2000-XP application program has been installed.



### Executing NCT-2000-XP console

NCT-2000-XP console program can be used to check whether NEOTUS' is running or stopped and check the administrative information of the NEOTUS.

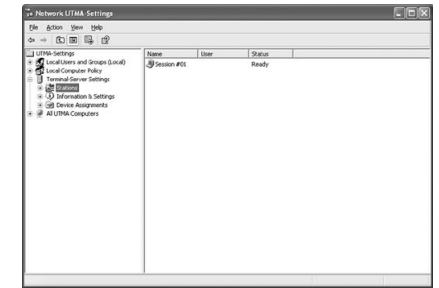


### Terminal-Sever Settings

Optional function in each category can be used. Select "Terminal-Server Setting" menu to open NCT-2000-XP management console screen. Enter the password and click the <OK> button. (If the 'administrator-ignores password' item is selected when installing application, the 'NCT-2000-XP administration console' screen will not be displayed.)

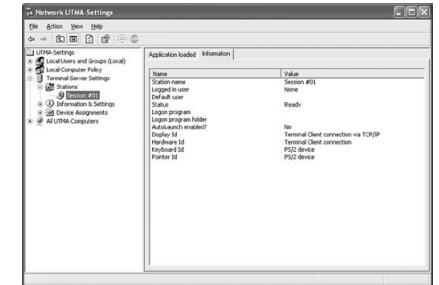
### Station

When you select station, you can see the connected NEOTUS' Information or see that the NEOTUS unit is waiting to be connected.



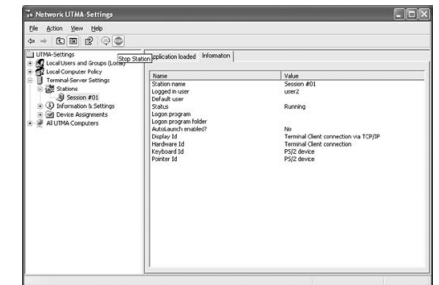
### Session #01

If you select this item, you can see the program currently being used by NEOTUS.



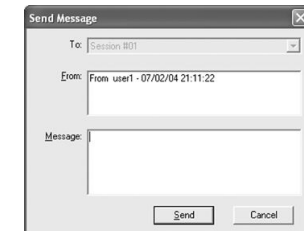
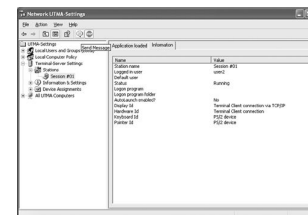
### Stop Station

This item is used to stop a particular monitor and initialize the session, or to reset when the user has requested a reset.



### Send Message

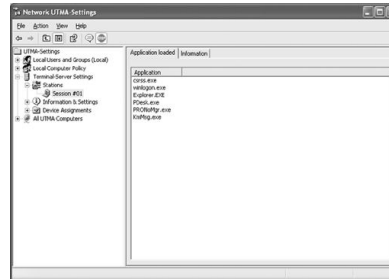
This icon is used to exchange simple messages between host PCs and the NEOTUS units on the network.



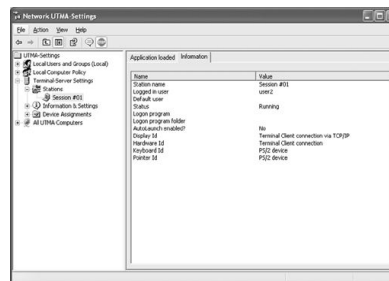
View each station information

Using the application program

Product version, manufactured date, manufacturer, copyright and website for technical support are shown.



Information

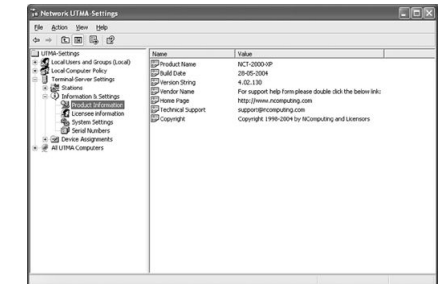


1. Station name : This can be changed by the user. The default name is Station #1.
2. Logon user : Logon name of the NEOTUS user.
3. Default user : Shows the name of the user that last logged in.
4. Status : Show whether the unit is connected and in use or is in standby.
5. Logon program : This menu can be used to designate automatic program start when the user logs on.
6. Logon folder : You can designate a folder to automatically connect to after logon.
7. Enable automatic start : Select whether to enable automatic start.
8. Display ID : Shows the connected NEOTUS' display device.
9. Hardware ID : Shows the connected NEOTUS' virtual hardware.
10. Keyboard ID : Shows the connected NEOTUS' keyboard information.
11. Pointer ID : Shows the connected NEOTUS' mouse information.

description of configuration function

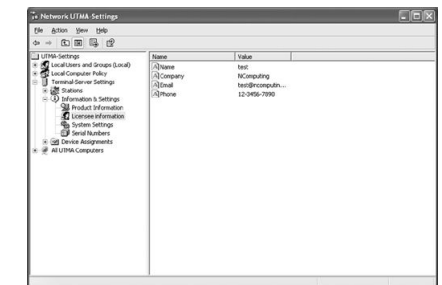
Product Information

Shows the information of the connected NEOTUS.



License Information

This shows user information.



Programs that are ready

1. Maximum number of stations : Indicates the maximum number of monitors that can be connected to a PC.
2. Number of stations : Shows the number of monitors currently connected.
3. Local computer : Name of the computer used as host PC.
4. Local user : User name of the monitor connected to the host PC.

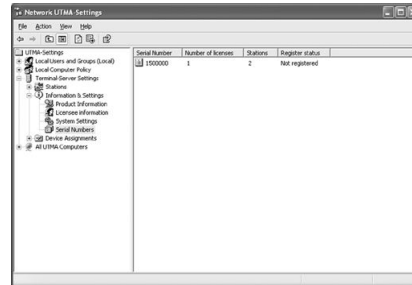
System configuration

5. System start time:Displays the length of time the system was used after the host PC started.
6. Main station automatic logon:If there is no password in the main station,you can choose whether to login automatically.
7. Exit Timeout (Seconds):You can set the exit time.
8. Disable notice transmissions:Yes/No
9. Administrator password:Password can be set to restrict access to console menus.  
The screen where it can be designated during initial application installation,,appears.

Serial number:

This item allows new serial number to be added when a new monitor is to be added.You can right click with the mouse on the serial number category or in the screen to the right to add a new serial number.

- Add a serial number : Serial number can be added one at a time.
- Bring serial number : Group of serial numbers can be saved in text format.This allows the serial number to be inputted without entering each serial number separately.

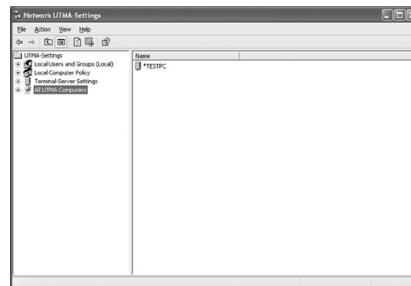


Description of general configuration function

Keyboard and mouse information,and information on removable devices connected to the PC can be verified.

All UTMA Computers category

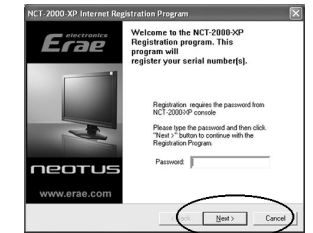
You can see all host PCs and monitors on the network.Refer to the previous section for information on using the monitor.Select 'All UTMA Computers' and the 'NCT-2000-XP management condole' screen will appear.Enter the password and click the <OK>button. (If "Administrator-ignore password" as selected during installation,then the 'NCT-2000-XP management console'will not appear.)



Registering NCT-2000-XP online

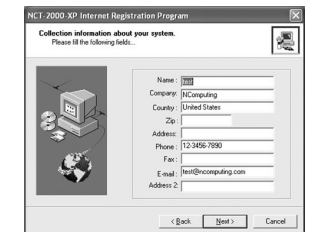
To received NCT-2000-XP program upgrades and other A/S services, you must register your monitor.Following is the directions for registering online.

1. From Windows,click <Start>,then go to <All Programs> NCT-2000-XP Register NCT-2000-XP online.
2. When the screen shown to the right appears,enter the administrator password and click <Next> button.



>References (If 'Administrator-ignore password" was selected during installation,then the 'NCT-2000-XP management console' will not appear.)

3. Enter the user information and click <Next>.



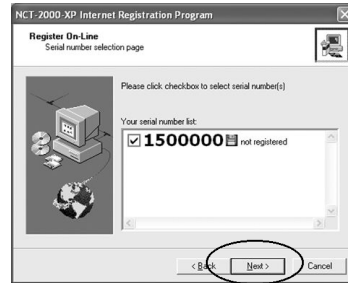
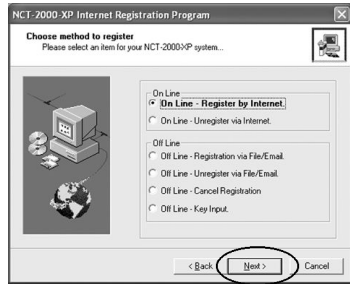
4. Registering and upgrading NCT-2000-XP online using application program Select the registratio method and click <Next>.



References

When "Offline - Create registration file" is selected

1. Select "Online Internet registration" and click <Next>. Select the serial number to register and click <Next>.



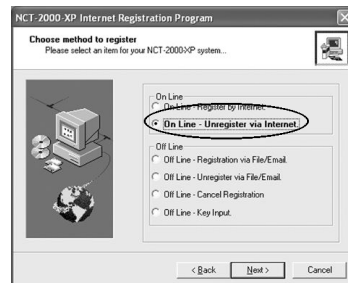
2. This is the user registration screen. To change the information, click <Back> and make the necessary changes and to continue, click <Next>.



3. When all information has been entered correctly, serial number registration starts. Do not turn off the computer or disconnect from the Internet unit the registration is complete.

When "Online - Cancel Internet" is selected

1. After a serial number has been registered, in order to change the computer or to change the hard disk, the serial number registration must be canceled.



When "Online -Internet registration" is selected

Select the serial number to register and click <Next>. If the computer cannot connect to the Internet or it does not support online registration, select "Offline Create registration file" to create the data file and use email from another PC or send the diskette or CDROM with the file to the dealer.

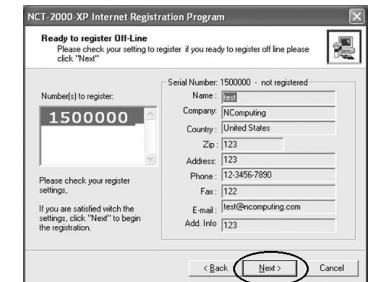
1. Select "Offline Create registration file" and click <Next>.



2. Select the serial number to register and click <Next>.



3. User registration information screen appears. To change the information, click <Back> and make the necessary changes and to continue, click <Next>.



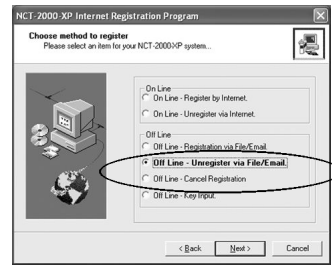
4. Select the file directory and the file name and click <Next>.

5. Send the file with registration information to the registration center or to the dealer.



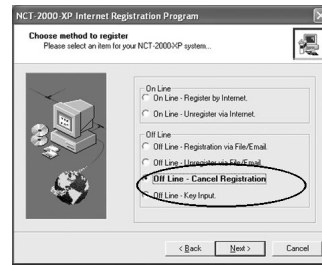
When "Offline Cancel file/e-mail registration" is selected

1.



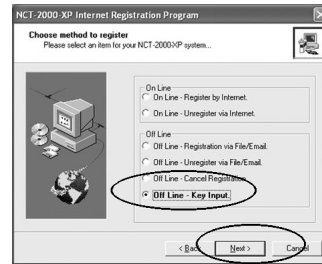
When "Offline - Cancel Registration" is selected

- To cancel the registration offline, select this category and click <Next>.

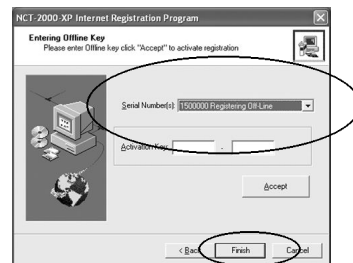


When "Offline - Input registration key" is selected

- To cancel the registration offline, select this category and click <Next>.



- Enter the 'serial number' and 'activation key'. Then, click the <Approve> button. After completing registration, click the <Finish> button.



### Registering and upgrading the NCT-2000-XP on the Internet

Registering and upgrading the NCT-2000-XP on the Internet.

Upgrade using file

Program download from the website and upgrade using CD or floppy disk

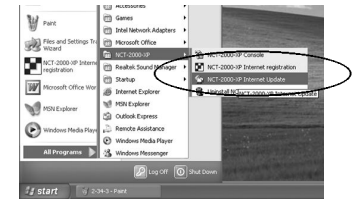
- Note) 1. In this case, user registration must have been completed from the previous version.  
2. Make sure to cancel the serial number registration and delete previous version before installing the new version.  
Users who have completed their registration may upgrade the NCT-2000-XP program as follows.

Direct upgrade through the Internet

In order to upgrade the NCT-2000-XP program online, the user must have completed the user registration. In order to protect the user's data, current user information is temporarily saved before the new version is installed.

This allows the user to restore previous condition should a problem occur during the upgrade.

- From Windows, click <Start>, then go to <All Programs> > NCT-2000-XP > NCT-2000-XP online upgrade. (If the user is not registered, select the registration icon and go to the registration screen.)



- When "Enter password" appears, enter the password and click the <OK> button.

- To continue with the upgrade, click <No>.

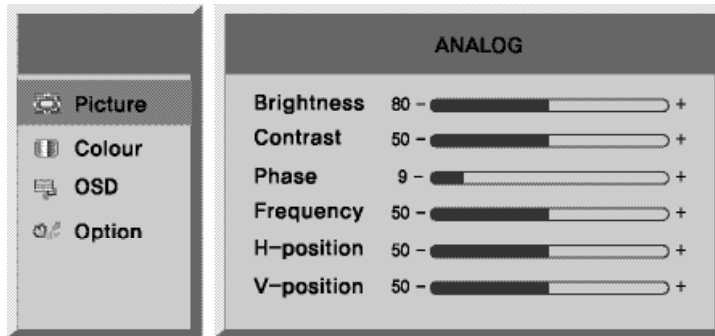


- Click <Connect> to begin the upgrade.



Screen adjustment

[OSD] start screen



OSD(On Screen Display) selection and screen adjustment

1. Click "Menu" to open OSD screen.
2. Click / to select desired main menu.
3. Click "Select" after selecting the main menu.
4. The cursor moves to the lower menu. Use / button to go to the desired menu.
5. Click "Select" after selecting the lower menu.
6. Use / to adjust the settings.
7. Click the "Menu" button 3 times to close the OSD screen and save the adjustments.

If "Menu" button is clicked during configuration, the screen will go to the previous screen.  
The number may change according to the saved value.

Monitor screen adjustment



Selecting and adjusting OSD screen

> Brightness	Adjusts brightness.	
: Dims the screen. : Brightens the screen.		
> Contrast	Adjusts contrast.	
: Darkens the contrast. : Lightens the contrast.		
> Phase	Fine adjustment of phase.	
This cannot be adjusted in the digital mode.  : The fine adjustment value decreases. : The fine adjustment value increases.		
Frequency	Adjusts frequency sampling.	
This cannot be adjusted in the digital mode.  : Reduces sampling frequency value. : Increases sampling frequency value.		
H position	Adjusts H position.	
This cannot be adjusted in the digital mode.  : Screen moves toward the right. : Screen moves toward the left.		
V position	Adjusts V position.	
This cannot be adjusted in the digital mode.  : Screen moves toward the bottom. : Screen moves toward the top.		

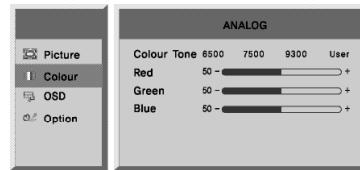
Color adjustment



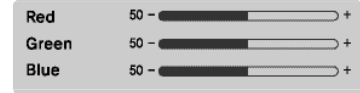
Color adjustment detailed categories

> Color intensity adjustment - Color intensity adjustment can be used to select the desired color.  
The default value is 7500K.

- [6500K] Warm colors
- [7500K] Standard colors
- [9300K] Cool colors



[User] User can adjust the intensity of "Red", "Green", and "Blue" colors.



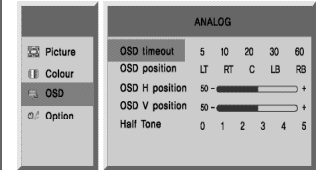
OSD



OSD

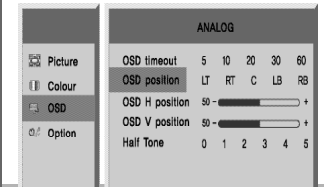
>Menu time adjustment Adjusts time display on the menu.

[OSD] : Use this button to adjust the position of the OSD menu.



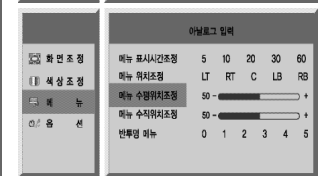
>Adjusts menu position. Menu location adjustment

[OSD] : Menu vertical position adjustment - Adjusts menu's vertical position.



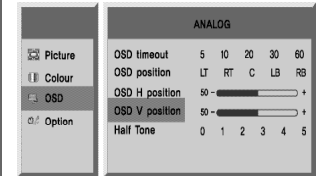
>Menu horizontal position adjustment Adjusts menu' horizontal position.

[OSD] : Screen moves toward the left.  
[OSD] : Screen moves toward the right.



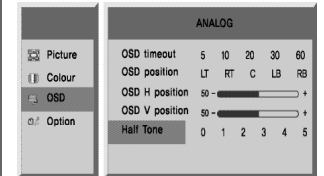
>Menu vertical position adjustment Adjusts menu' vertical position.

[OSD] : Screen moves toward the bottom.  
[OSD] : Screen moves toward the top.



>Semi-transparent menu turns the menu semi-transparent.

[OSD] / [OSD] : Use this button to adjust the transparency of the OSD background.



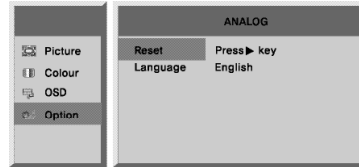
## Options



## Options

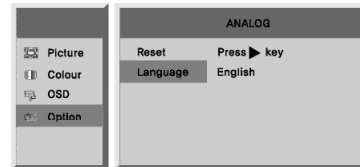
## &gt;Factory reset

Select Factory reset and click " " key to reset the monitor's settings.



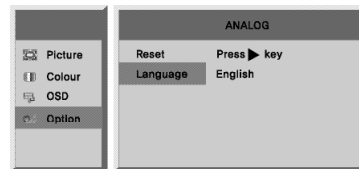
## &gt; language

Select Language and use , buttons to select the desired language.



## &gt;Resolution

Shows the current resolution.



## Recommendations

To enjoy the optimal picture quality

- >1. TFT-LCD monitors have one specific resolution at which it provides the best picture quality. Therefore, the display quality may be lower if not set to the optimal resolution. Be sure to use the optimal resolution whenever possible.

The optimal resolution for each TFT LCD type is as follows.  
17"/19" : 1280 x 1024 @ 60Hz

- >2. Due to the limitation of the current LCD panel manufacturing technology, items on the LCD screen may look 1PPM brighter or darker, but this does not affect the product's performance. Monitor's location can influence the display quality and other characteristics.

LCD Panel Number of pixels : 17"/19":3,932,160

- >3. When cleaning the monitor, use a soft cloth with moderate amount of screen cleaner. Do not rub the surface of the screen too harshly. If you put too much pressure on the screen, it may cause a damage.
- >4. If you are not satisfied with the picture quality, use the Auto Adjustment function for better picture quality. If noise appears even after conducting the auto adjustment, use the fine adjustment.
- >5. If the screen stay on one picture for a long time it may cause shadowing. Set the computer to convert to sleep/save power mode when the monitor is not used for a certain period of time.

## Environmental Influence

Monitor's location can influence the display quality and other characteristics.

- >1. If the speaker is close to the monitor, move the speaker away from the monitor.
- >2. Place radios, fans, clocks, phones and other electronics at least 1M from the monitor.

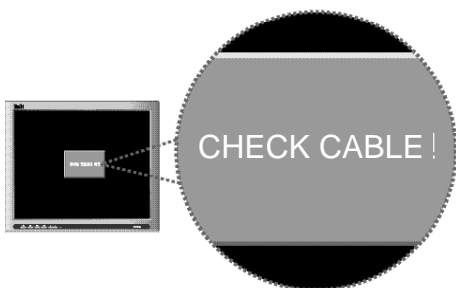


## Self check function

If the monitor remain black even when it is properly connected to the computer, and the power light is blinking, use the following method to conduct self diagnosis.

### Cable connection check function

- >1. Turn off the computer and the monitor.
- >2. Unplug the video cable from the monitor or the video card.
- >3. Turn on the monitor. Input signal bandwidth check function.

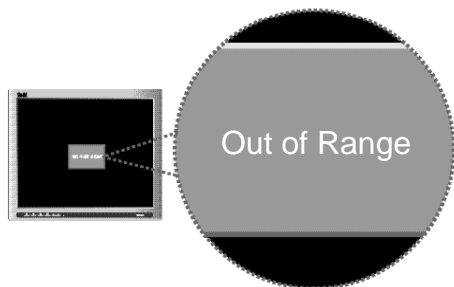


If the computer and the monitor are connected properly and the message does not disappear even after the cable is changed, please contact our service center.  
This monitor has a self test function that can test the status of its cable connection with the PC.

- >4. Turn off the monitor and reconnect the video cable, then turn on the computer and the monitor.

If a small box resembling the screen appears, check to see if the cable came loose in the PC or the monitor.

### Input signal bandwidth check function



If there is a problem with the input signal, the power light will blink red and the following message appears. Either there is a signal that is beyond the resolution supported by the monitor in this message, or the signal cable needs to be checked. Reboot in safe mode and adjust to the optimal resolution.

## Warning

Please clean the exterior with dry cloth.

Use screen cleaner and a soft cloth to clean the screen.

Do not scratch the panel with fingernails or a sharp object.  
Do not use benzene, paint thinner or other abrasive substance or a wet cloth.

Do not use acetone, benzene or paint thinner.

**Product standards** (model without DVI input outlet)

>Display portion(ELM-1700N/ELM-1900N Series(Without DVI unit))

Model	ELM-1700N Series	ELM-1900N Series
Screen	337.92(H) x 270.336(V) 17.0 inch	376.32(H) x 301.056(V) 19.0inch
Pixel pitch	0.264(H) x 0.264(W)	0.294(H) x 0.294(W)
Maximum visual periphery	75, / 60, / 75, / 75,(	85, / 85, / 85, / 85,
Display colors	16.2M	16.7M
Response speed	13msec	25msec
Brightness	300cd/ m <sup>2</sup>	250cd/ m <sup>2</sup>
Contrast	500:1	500:1
Recommended resolution	1280 x 1024 (60Hz)	
Horizontal frequency	31KHz 79.98KHz	
Vertical frequency	56Hz 75Hz	
Signal input	Analog RGB(15pin D-sub)	
AC (Adaptor)	110V 240V, 50Hz/60Hz	
DC (Monitor)	12V, 3.5A	
power	Maximum power use 42W, power save mode 2W	
Excluding stand	387 x 328.9 x 53.5	431.2 x 364 x 55.9
Including stand	387 x 409.1 x 196	431.2 x 443.8 x 190
Weight	5.7Kg	6.4Kg
Stand adjustment angles upward	up 30, down 5,	
Features	Graphic OSD,automatic adjustment	

>Network

Support port	1 x PS/2 Keyboard port	Protocol	WoIP(Windows over IP)
	1 x PS/2 mouse port		TCP/IP
	1 x SPEAKER port	Support OS	Windows XP Home/Pro.
	1 x RJ45 LAN port		Windows 2000 Pro.

**Product standards**(model with DVI input outlet)

>Display portion(ELM-1700N/ELM-1900N Series(With DVI unit))

Model	ELM-1700N Series	ELM-1900N Series
Screen	337.92(H) x 270.336(V) 17.0 inch	376.32(H) x 301.056(V) 19.0inch
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	1 x RJ45 LAN port		Windows 2000 Pro.

Table of supported modes

Resolution	horizontal frequency (Khz)	vertical frequency (Hz)
640 x 480	31.47	60
	37.86	72
	37.50	75
720 x 400	31.47	70
	35.16	56
800 x 600	37.88	60
	48.08	72
	46.88	75
	48.36	60
1024 x 768	56.48	70
	60.02	75
	63.98	60
1280 x 1024	79.98	75

Power save function

This reduces power use.

When the monitor is in power save (sleep) mode, this can be seen by the colored power light that stays on, and the screen will come back on when you click the mouse or any key.

This function works only if it is connected to a computer with a power save function. Power save function works as follows.

	Power save function works as follows.	Power save mode's sleep status
color	green	orange
Maximum power usage	37W	2W

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 that may cause undesired operation.

This equipment has been tested and found to comply with the limit 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, it 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, it can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or 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.

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