
PN 7701
User's Manual

NFEC

Federal Communications Commission (FCC) Statement

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

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

Warning:

Use only shielded cables to connect I/O devices to this equipment.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

Safety Instruction

Caution:

Use a power cord that matches the AC voltage of the power outlet and had been approved by and complies with the safely standard of your particular country.

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Introduction

Congratulations on your purchase of the PN 7701 colour Monitor! The PN 7701 monitor includes Microsoft's Plug and Play, the On Screen Manager (OSM), as well as all the unique features you expect.

The PN 7701 provides you with automatic compatibility with multiple operating platforms and a vast array of graphics standards allowing resolution upgrades without upgrading the monitor.

Screen Technology

The non-glare Surface of the PN 7701 CRT reduces the reflection of ambient illumination and anti-electrostatic coating avoid the dust stick. A 0.28 mm dot pitch in conjunction with the Invar Shadow Mask increases the clarity and displays greater detail.

Good clarity allows your eyes to flow over the screen image and more easily view the on-screen information.

The flat square CRT technology reduce image distortion and glare.

Plug and Play

Plug and Play is the new Microsoft solution with Windows 95 to provide automatic peripheral connections without confusing and time-consuming setup. When used with a Plug and Play compatible system and video card, the PN 7701 monitor automatically tells the system its identification and capabilities.

The System will then select its highest resolution and refresh rate to take advantage of your PN 7701 monitor.

Power Manager

IPM(Intelligent Power Manager) System is an innovative power-saving utility that complies with both the EPA's Energy Star requirements. Energy Star products use less than 30 watts when in the main power saving mode.

When in the maximum power-down mode, the PN 7701 monitor will consume approximately 10% of the total power drawn under normal operation. This innovation adds up to 90% energy savings, longer monitor life, environmental protection, reduced emissions and reduced air conditioning costs of the work environment. The IPM System increases the monitor's life and saves energy and costs by powering down when not in use.

The PN 7701 follow the Video Electronics standard Association (VESA) approved DPMS power-down signalling method. VESA's Display Power Management Signalling (DPMS) method, which is endorsed by the EPA, is the power-down process a system should use to communicate to the monitor to save power. Power-down functions can be utilised only with an Energy Star system or video card which adheres to the VESA DPMS standard. By using the monitor's horizontal and vertical SYNC signals, the monitor can be prompted into the different IPM modes. The following is the description of the LED indicator for the IPM power-down modes:

Mode	LED Indicator	Power Saving
On	Green	None
Stand by/suspend	Yellow	Moderate(<20 Watts, Moderate Recovery)
Off (IPM Mode)	Orange	Maximum(<8Watts, Slow Recovery)
Off (power Switch,Off)	No Light	No Power Used (Fully Off)

Multiple Frequency Technology

Multiple Frequency Technology automatically adjusts the monitor to the video card's scanning frequency, displaying the resolution you desire.

Increased refresh rates at all resolutions provide a flicker-free image. The clearer image is easier on your eyes and extends your viewing time. A wide range of graphics standards, including VESA standards, is supported by the PN 7701 colour monitor including:

- 640 × 480: 60-100Hz vertical refresh
- 800 × 600: 55-100Hz vertical refresh
- 1024 × 768: 55-100Hz vertical refresh (non-interlaced, 75HZ recommended)*
- 1280 × 1024: 60HZ vertical refresh (non-interlaced)**

*NEC cites recommended resolutions for optimal display performance.

**Maximum resolution based on horizontal and vertical frequencies only.

Horizontal and vertical FullScan capability can increase the display size of a variety of video modes to the edges of the monitor bezel. The FullScan capability allows you to use the entire screen area in most resolutions, significantly expanding images size.

Recommended use

For optimum performance when setting up and using the PN 7701 colour monitor, please note the following:

- The optimum monitor position is away from direct sunlight.
- Allow adequate ventilation around the monitor so that heat can properly dissipate.
- Use the monitor in a clean, dry area.
- Handle with care when transporting.
- We recommend to adjust the brightness in a way that the background raster disappears.
- For ergonomical reasons the preset size and positions is recommended with the standard signals.
- For ergonomical reasons we recommend using non-interlaced signal with a vertical refresh rate between 75 and 100Hz.
- For ergonomical reasons we recommend not to use the primary colour blue on dark background (it is difficult to recognize and produces eye fatigue due to insufficient contrast).
- To separate the equipment from the power source you have to remove the plug from the inlet socket.
- We recommend using the power cord supplied with the monitor. However, if another type of power cord is required, power cord H05VV-F should be used except in U.K.

Connection to Your Personal Computer

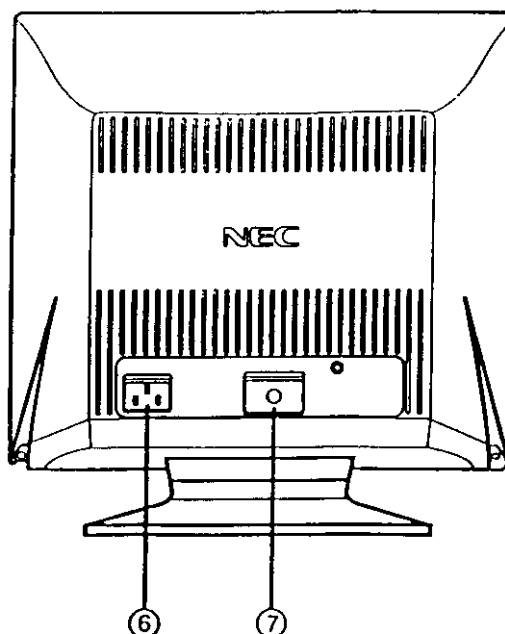
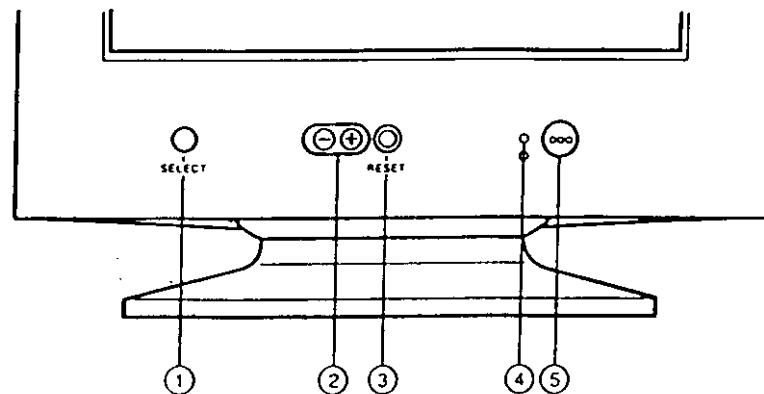
The PN 7701 colour monitor complements NEC computer. To attach the PN 7701 monitor to your system, follow these instructions:

1. Turn off the power to your computer and PN 7701 monitor.
2. Connect the PN 7701 monitor's video cable to the display card's connector on the computer. Tighten screws on all connector.
3. Connect one end of the power cable to the PN 7701 monitor and the other end to the power outlet.
4. Turn on your PN 7701 monitor and computer.
5. This complete the installation.

Note: If you have any problems, please refer to the Troubleshooting section of this manual.

Controls:

- ① “SEKECT” : To display OSM windows, mode changes, or activate the degaussing or OSM window color selection.
- ② CONTROL BUTTON (-,+): Without OSM --- Adjust the contrast.
With OSM--- Select Icon and adjust.
- ③ “RESET”: Return the adjustment item to the factory setting.
- ④ Power indicator LED: The LED indicate Power management state.
- ⑤ POWER SWITCH: Push/push to turn the monitor on and off.
- ⑥ Power Input: To connect with the power cord.
- ⑦ Signal input with the captive cable: To connect with personal computers’ analogue RGB output.



On-Screen Manager (OSM)

To display OWM widow, push “SELECT” button.

To quit OSM window, you just choice “EXIT” ,and push “SELECT” button. When OSM window is displayed over 10 seconds but no active, then the window will be disappeared automatically.

① Menu Construction

- When you push “SELECT “ button, first you can see “Signal status window” with the horizontal and vertical frequencies of the present signal.

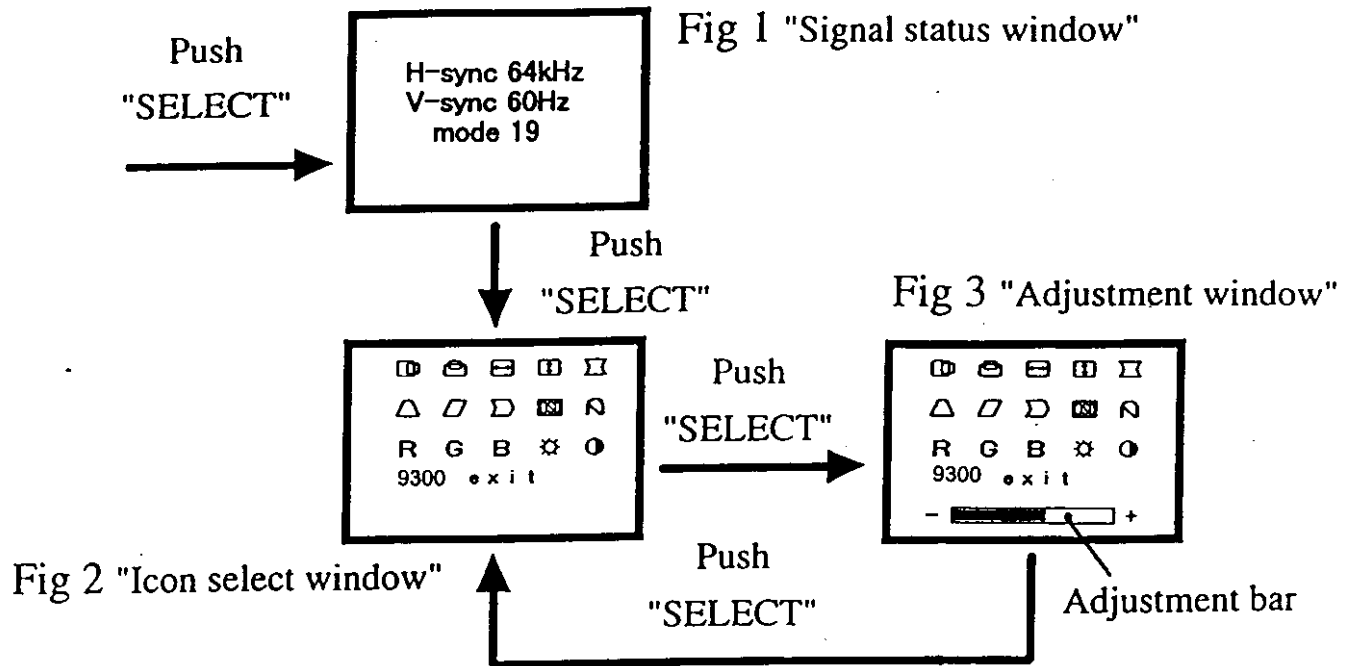
- When you push “SELECT” button again, then you can see “Icon select window”.

You can select the icon that you expect to adjust by “-,+” button.

And push “SELECT” button, then you can see “Adjustment window” that show “adjustment bar” and “adjustment value”.

You can adjust the suitable level in this condition. (See Note 1)

- When you push “SELECT” button in “adjustment windows”, then it will return to “Icon select window”.
- When you push “RESET” button in whatever condition, then it will return to the factory setting of all of adjustment items. (See Note 2)



Note 1: Item of "DEGAUSS", "OSD", and "EXIT" can not be changed to "Adjustment window".

Note 2: Except the present signal that can not be returned to the factory setting. In case the present signal that can not be factory aligned one, the reset function is not activated.

Note 3: OSM window position may be little shifted from the central screen depend upon signals.

② Function explanation



Horizontal position: Moves the image horizontally left or right.



Vertical position: Moves the image vertically up or down.



Horizontal size: Increases or decreases the horizontal size of the image.



Vertical size: Increases or decreases the vertical size of the image.



Pincushion/Barrel: Increases or decreases the curvature of the sides either inward or outward.



Trapezoid: Increases or decreases the bottom of the screen to be the same as the top.



Parallelogram: Increases or decreases the tilt of the sides either left or right.



Bow (Pincushion Balance): Increase or decreases the curvature of the sides either left or right.



OSD: There are 3 background colours (Blue, Black, and white). These can be selected by “SELECT” button after the selection of “OSD” on “Icon select window”.



Degauss: Select the degauss icon on “Icon select window” and push “SELECT” button.

It will eliminate the stray magnetic field and correct the scan of the electron beam, will affect the purity, focus, convergence.

Note: Allow a minimum interval of 20 minutes to elapse between uses of the degauss function.

R Red Colour Control: Adjust the red contrast of the display.

G Green Colour Control: Adjust the green contrast of the display.

B Blue Colour Control: Adjust the blue contrast of the display.

 Brightness: Adjust the overall image and background screen brightness.

 Contrast: Adjust the image brightness in relation to the background. (Contrast control is also effective with “-,+” button even though OSM window is not existing.)

9300 Color Temperature: Select the Color Temp icon on “Icon Select Window” and push “SELECT” button. It can be switched the different color Temperature.

→ 9300 → 7500 → User →

User : user adjusted color Temperature.
(Push real : 9300)

exit EXIT: To exit the OSM window. Select “EXIT” on “Icon select window”, then push “SELECT” button to exit OSM window.

Note: If you do not push buttons over 10 seconds in OSM condition, the window will automatically be disappeared.

Troubleshooting/Support

Problem	Check These Items
No Picture	The video card should be completely seated in its slot. Power Switch should be in the ON position. The signal cable should be completely connected to the video card/computer. Check the connector for bent or pushed-in pins.
Image is scrolling or unstable	Signal cable should be completely attached to the computer.
LED on the monitor is not lit (on green, orange or yellow color can be seen)	Power Switch should be in the ON position and the power cord should be connected.
Picture is fuzzy or Color looks blotchy	Adjust the Brightness, then Contrast Controls. Access the Degauss Control though OSM. Activate the Degauss Control. CAUTION: A minimum interval of 20 minutes should exist before the Degauss Function is used a second time.
Picture bounces or a waving pattern is present in the picture	Move electrical devices that may be causing electrical interference away from the monitor.
Edges of the display image are not square	Use the OSM Geometry Controls to straighten the edges.
Display image is not centered, too small, or too large	Use the OSM Size and Position controls to adjust the image.

Specifications

Picture Tube : 43cm(17 inches) (40cm(15.6 inches)viewable image)
size flat square CRT, 90 degree deflection.
Dot type black matrix, Non-glare anti-static coating.
Medium short persistence.

Dot pitch : 0.28mm

Input signal : Video: Analogue 0.7Vp-p, 75 Ω , positive
Sync.: Separate sync. :TTL level
Horizontal sync.: Positive/Negative.
Vertical sync. : Positive/Negative.
Composite sync.: TTL level ,
Positive/Negative

Display Colours : Analogue input : Unlimited colours (Depend on the
graphic board)

Synchronization range: Horizontal: 31 KHz to 69 KHz (Automatically)
Vertical : 55 Hz to 100 Hz (Automatically)

Resolution Maximum 1280 $\times$ 1024**
Recommended 1024 $\times$ 768*

Active Display Area (Factory Setting) : 260mm (H) $\times$ 195mm (V)
(Active display area is depend
upon the signal timing)

Input signal connector: Analogue RGB, Mini D-Sub 15 pin

Rated Voltage: AC 100V-240V 50/60HZ

Rated current : 1.8A

Dimensions : 403mm (W) $\times$ 426mm (H) $\times$ 446mm (D)

Weight : 17.5kg

Environmental	Operating	: Temperature: 5 °C to 35 °C
Consideration	Humidity	: 30% to 80% (No Condensation)
	Storage	: Temperature: -20% to 60%
	Humidity	: 10% to 90% (No Condensation)

*NEC cites recommended resolutions for optimal display performance.

**Maximum resolution based on horizontal and vertical frequencies only.

Technical specifications are subject to change without notice.

