

EMI TEST REPORT



Report Number : KSQ-FCC041021

FCCID : SNPL1904MN

Appendix B - User's Manual

Please see attached document(s).

TFT-LCD Monitor

User Manual



FCC Compliance Statement

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 THE USER

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

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

VCCI Statement

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
取扱説明書に従って正しい取り扱いをして下さい。

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Attachment (guarantee of product)

B grade device :

This device can be used in all areas including residential area as it receives EMI as a non business devices

Part 1. Before using

1. Before using

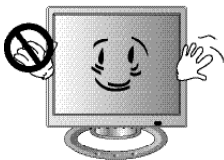
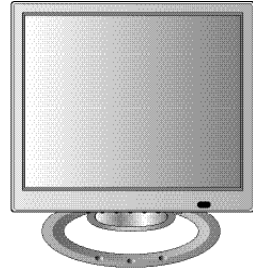
- It is produced for PC and TV as a liquid crystal display
- User can understand easily how to use install after reading this manual.

2. Feature of product

- > 15" : Resolution XGA (1024 X 768) LCD Module
- > 17" : Resolution SXGA(1280 X1024) LCD Module
- > 19" : Resolution SXGA(1280 X 1024) LCD Module
- > 16,581,375 Color Display
- > Viewing angle (F 0 degree, B 15 degree)
- > It is available to use wall mount in a standard of vesa.
- > DPMS(Display Power Management Signaling)
- > OSD(On Screen Display)Control, Multi Language
- > DDC 1/2B use some signals of VGA connector of 15 pins.

If user system supports DDC 1/2B protocol.

It is available to use "plug & play".



Cautions

It is able to apply the system that DDC is not supported depends on situation.

If user monitor does wrong display, please check if the user system is a Video card supported DDC.

Part 1. Before using

3. Cautions for using and installing

Cautions for installation of monitor

- > Install to keep distance from electricity.
- > Do not install it near high heating , dusty, humidly place and use it.
- > Before turning on power, check if the power cords are connected correctly and safety
- > it is dangerous to use with many other electronic products or electric heating equipment at the same time and it can be a reason for firing or an electric shot.
- > Install the monitor at the stable location without any risk of vibration.
- > Do not clean off using volatile things such as an alchol, benezol. It may cause a damage on screen and color change of product.

Cautions for safety

- > Please check power
- > Don't pull the part of power cord or touch plug by wet hand.
- > Do not use by connecting several power plugs to one outlet.
- > Do not make it bend over or be crushed by heavy objective.
- > Plug off power while you are empty for long time of period.
- > Do not let children put plug of adaptor in mouth.
- > Please seperate power cable from monitor in case of using monitor for long time of period.
- > Remove signal cable or power cable connected to system when thunder comes out.

Cautions for moving

- > Please turn off power.
- > Seperate all cables before moving.
- > Be careful not to give any shock to system.
- > Move monitor that towards to front side by holding with two hands. When you drop it, it can be a reason for firing or electric shock from the damage.

Part 1. Before using

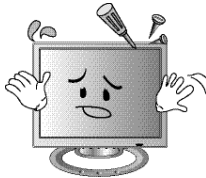
Cautions for using.

- > It is good to take a rest regularly in case of using for long time of period.
- > To protect eyesight, please take a rest often as well.
- > Do not allow scratch on the surface of monitor.
it may give a harm to liquid crystal display.
- > install the monitor at the stable location without any risk of vibration or falling.
- > It is dangerous to use many other electronic products or electric heating equipment at the same time and it can be a reason for firing or an electric shock.
- > Do not clean off using volatile things such as an alcohol, benzol.
It may cause a damage on screen and color change of product.

Proper temperature and humidity

- > working temperature : 10-40
- > keeping temperature : -20 - 45
- > working humidity : 8% - 80%
- > keeping humidity : 5% -90%

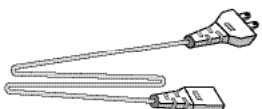
4. Maintenance



There is no extra parts inside monitor. don't open it cause it may be an electric shock.
If monitor doesn't work properly.
Please contact A/S center after working according to the instruction "cautions for using " shown on" manual.

Part 2. Installation (RGB Monitor & TV Monitor)

1. Components



Power Cable



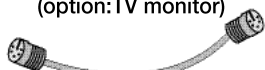
VGA Cable



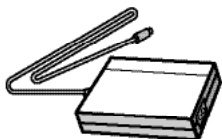
AUDIO Cable



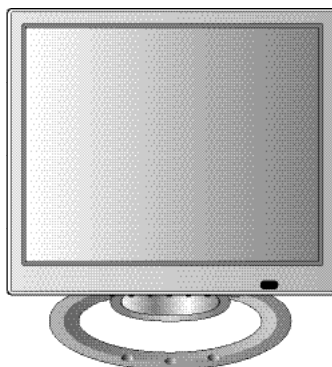
RCA Video Cable
(option:TV monitor)



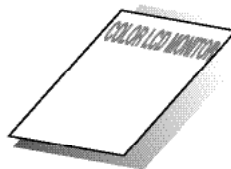
S-VHS Video Cable
(option :TV monitor)



AC/DC Adaptor



TFT-LCD Monitor



User's Manual

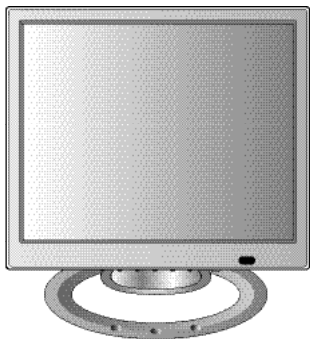


Remote Control
(option : TV monitor)

Part 2. Installation (RGB Monitor & TV Monitor)

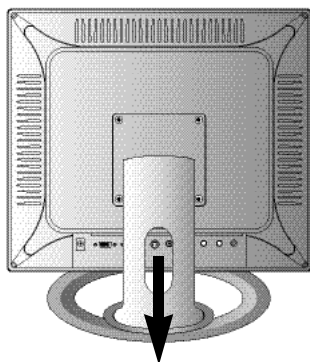
2. Each part of product

Front Viewing



Control with OSD Button & Remote Receiver Part Name

- > EXIT
- > -
- > +
- > UP
- > DOWN
- > MENU
- > POWER(On/Off)
- > Receiver part from remote control

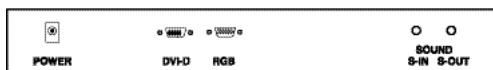


Connecting with I/O Port Name

- > DC 12V Power Adaptor
- > DVI_D
- > RGB
- > S_VIDEO(S-VIDEO INPUT PORT)
- > VIDEO(VIDEO INPUT PORT)
- > A_L(audio-left-input port)
- > A_R(audio-right-input port)
- > S_IN (sound input port)
- > S_OUT(sound out port)
- > ANT (antenna)



(TV Monitor Spec)

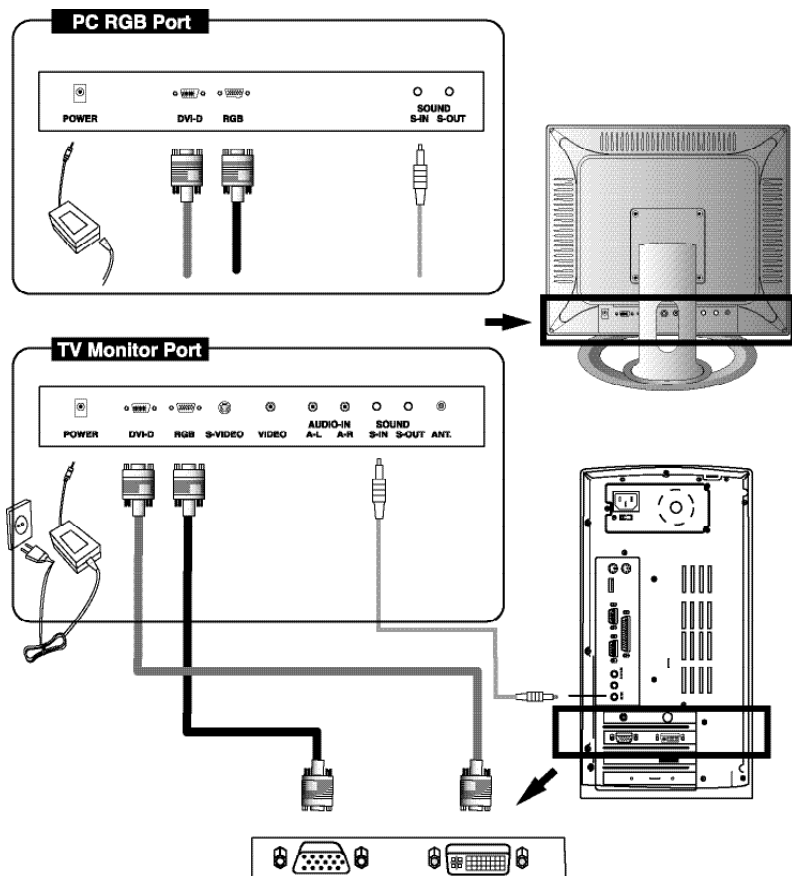


(RGB Monitor Spec)

Part 2. Installation (RGB Monitor & TV Monitor)

3. Connect to PC

- > Turn off power before connecting monitor to computer and other equipments.
- > Use to plug 220V or 110V power adaptor in outlet.
- > Use after checking that is RGB type or TV monitor type.



Part 2. Installation (TV Monitor)

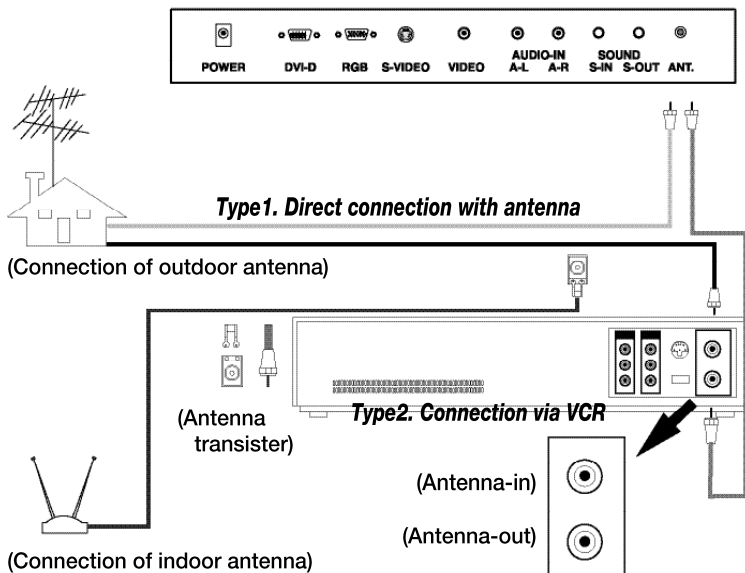
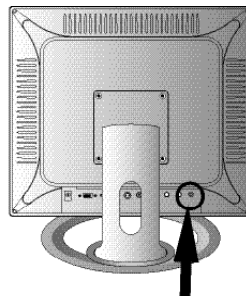
4. Connect to Antenna

Turn off power before connecting computer and other equipments.

※ Cautions

Be careful that rainwater doesn't go to indoor via antenna cable in case of using indoor antenna cable.

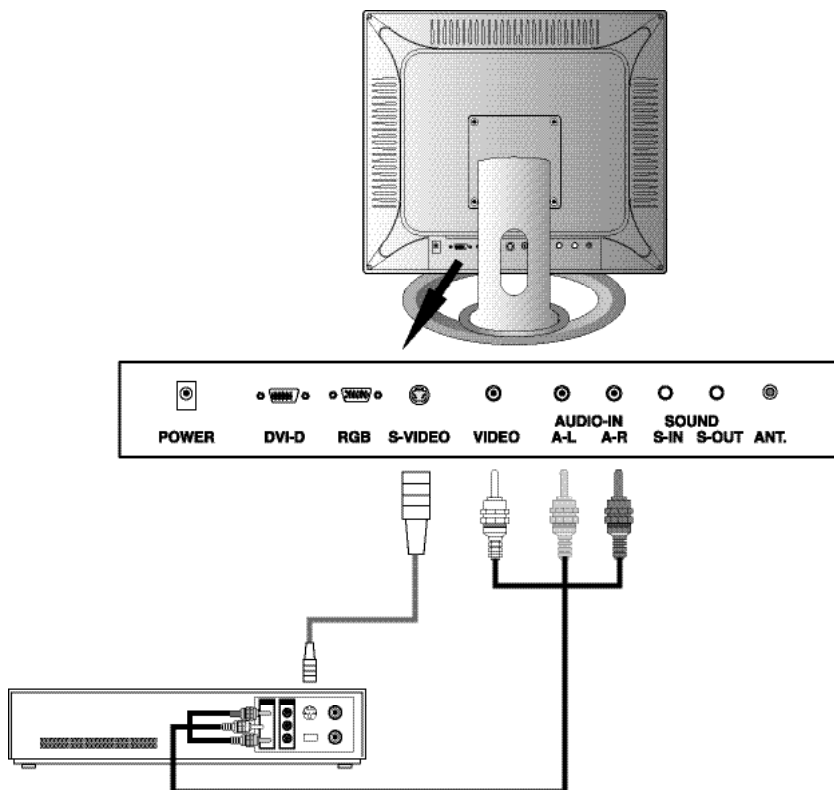
Install external antenna to keep the distance from cable near by the place.



Part 2. Installation (TV Monitor)

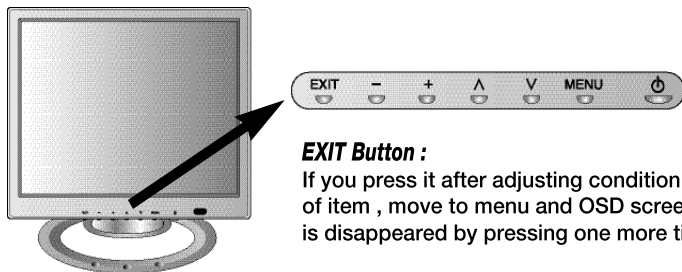
4. Connect to VCR

Turn off power before connecting to computer and other equipments.



Part 3. Function and Adjusting of OSD Key

1. Name & Function of button



EXIT Button :

If you press it after adjusting condition of item , move to menu and OSD screen is disappeared by pressing one more time.

-, + Button :

Adjust sound of speaker higher and lower.

MENU Button

OSD screen is appeared.
move to and select the item you want

UP, DOWN Button :

Set up and move the item you want for adjusting

Power Button :

Turn on and off power of monitor

RECEIVER FROM REMOTE CONTROL :

It is a sensor to receive an electric wave of remote control

Part 3. Function and Adjusting of OSD Key

2. OSD(On Screen Display) function

User needs to adjust a condition of monitor suitable to PC to use the best display.



OSD for RGB Monitor



OSD for TV Monitor

3. Adjustment using Hot-Key

Available to adjust the function of auto adjustment, auto balance without using menu button.

- > Auto balance : [UP] Button (Available for only RGB)
- > Auto adjustment : [DOWN] Button

4. Adjusting of OSD Key



- 1) OSD menu screen is appeared by pressing [MENU] button.
- 2) Move to the item you want by pressing [UP,DOWN]button.
- 3) Select the item you designate by pressing [MENU] button again.
- 4) Adjust the condition you want by pressing [UP,DOWN] button.
- 5) Finsih adjustment of OSD by pressing [EXIT] button .

Part 4. Setting of OSD Key menu item (RGB Monitor)

1. OSD Menu Configuration for RGB Monitor



BRIGHTNESS	
	50
M: EXIT	UP/DOWN: VALUE

Adjust the brightness of screen.



CONTRAST	
	512
M: EXIT	UP/DOWN: VALUE

Adjust the contrast of screen.



COLOR	
RED	
GREEN	
BLUE	
M: EXIT	S: ENTER

Adjust the density of display color.

RED	
	187
M: EXIT	UP/DOWN: VALUE

> Adjust the density of red color.

GREEN	
	183
M: EXIT	UP/DOWN: VALUE

> Adjust the density of green color.

BLUE	
	186
M: EXIT	UP/DOWN: VALUE

> Adjust the density of blue color.



POSITION	
H-POSITION	
V-POSITION	
M: EXIT	S: ENTER

Adjust the vertical and horizontal position.

H-POSITION	
	293
M: EXIT	UP/DOWN: VALUE

> Adjust the horizontal position.

V-POSITION	
	27
M: EXIT	UP/DOWN: VALUE

> Adjust the vertical position.



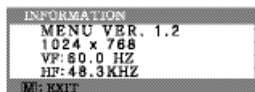
IMAGE	
PHASE	
FREQUENCY	
M: EXIT	S: ENTER

Adjust manually the quality of screen .

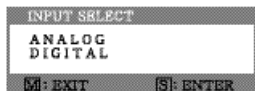
PHASE	
	366
M: EXIT	UP/DOWN: VALUE

FREQUENCY	
	1344

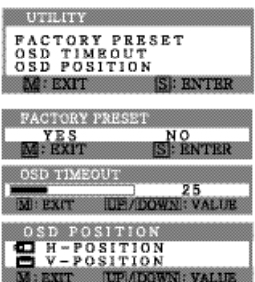
Part 4. Setting of OSD Key menu item (RGB Monitor)



Display the resolution and frequency as presently set.



It can adjust input signal to analog by digital way.

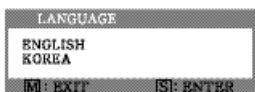


Restore all settings to the initial status.

> Reset Factory product.

> Set OSD display time.

> Adjust position in OSD.



Select the language of OSD menu.

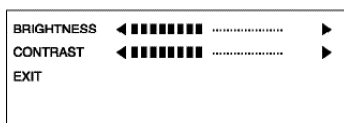


VOLUME

(Selected Sound Option)

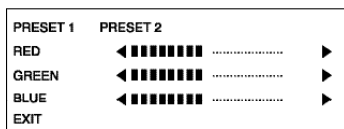
Part 5. Setting of OSD Key menu item (TV Monitor)

1. OSD Menu Configuration for PC Mode



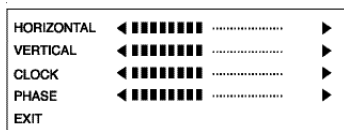
Adjust brightness and contrast.

- > BRIGHTNESS : Adjust the brightness of screen
- > CONTRAST : Adjust the contrast of screen



Adjust the color of screen

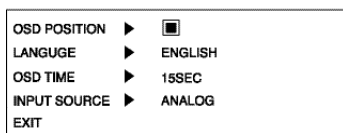
- > PRESET 1,2 : Set in the beginning of stage
- > RED : Adjust the color of red
- > GREEN : Adjust the color of green
- > BLUE : Adjust the color of blue



Adjust the position of screen

- > HORIZONTAL : Adjust horizontal position
- > VERTICAL : Adjust vertical position
- > CLOCK : Adjust diagonal line of screen
- > PHASE : Adjust quality of screen manually

Part 5. Setting of OSD Key menu item (TV Monitor)



Set up screen

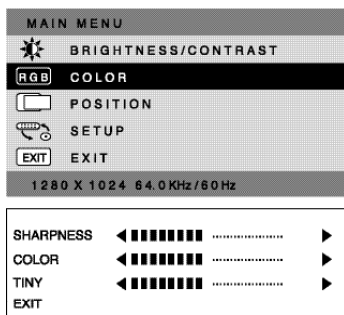
- > OSD POSITION : Adjust position of OSD screen
- > LANGUAGE : Adjust OSD language of selecting
- > OSD TIME : Adjust activating time of OSD screen
- > INPUT SOURCE : Adjust external input signal



Exit from OSD screen

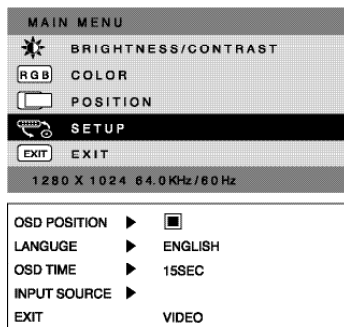
Part 5. Setting of OSD Key menu item (TV Monitor)

2. OSD Menu Configuration for VIDEO Mode



Adjust the color of screen

- > SHARPNESS : Adjust the sharpness of screen
- > COLOR : Adjust the color of screen
- > TINY : Adjust the tiny of color

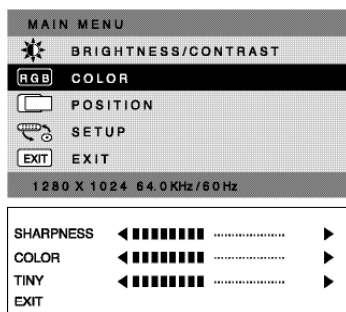


Set up screen

- > OSD POSITION : Adjust position of OSD screen
- > LANGUAGE : Adjust OSD language of selecting
- > OSD TIME : Adjust activating time of OSD screen
- > INPUT SOURCE : Adjust external input signal

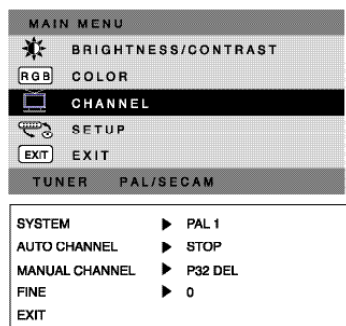
Part 5. Setting of OSD Key menu item (TV Monitor)

3. OSD Menu Configuration for TV Mode



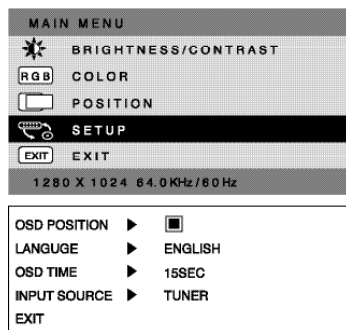
Adjust the color of screen

- > SHARPNESS : Adjust the sharpness of screen
- > COLOR : Adjust the color of screen
- > TINY : Adjust the tiny of color



Adjust of TV channel

- > SYSTEM : Adjust the receiving way of signal
- > AUTO CHANNEL : Adjust the TV channel automatically
- > MANUAL CHANNEL : Memorize and delete TV channel
- > FINE : Adjust tiny thing

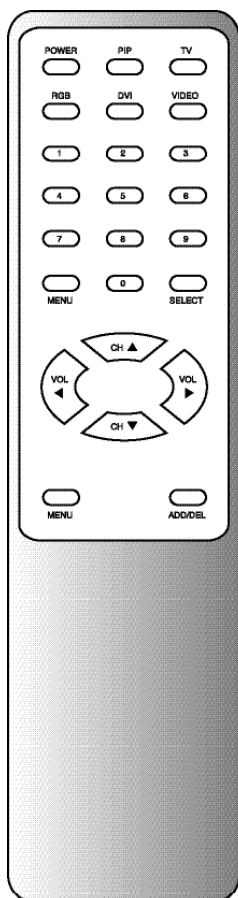


Set up screen

- > OSD POSITION : Adjust the position of OSD screen
- > LANGUAGE : Adjust the selection of OSD language
- > OSD TIME : Adjust the activating time of OSD screen
- > INPUT SOURCE : Adjust the selection of external input signal

Part 6. Remote control

1. Explanation on remote control (TV monitor type)



POWER

Turn on/off power of monitor

PIP

PIP mode

TV

TV mode

RGB

Analog input mode

DVI

Digital input mode

VIDEO

S-VIDEO mode

0~9

Select channel of TV

MENU

Turn on/off menu of monitor

SELECT

Select menu

CH UP

Select channel(up)

CH DOWN

Select channel (down)

VOL UP

Adjust volume (up)

VOL DOWN

Adjust volume (down)

MUTE

Make sound be mute

ADD/DEL

Memorize and delete channel

Part 7. Other explanation

1. Power saving function

- > This monitor demonstrates power saving function when you use video card supporting DPMS(display power management system) according to the signal standard of VESA(video electronic standard association)
- > Please turn off power when you don't use it even if minimizing power is consumed.

MODE	LED
Operation Mode	Green
Stand by Mode	Red/Amber blinking
Power saving Mode	Red/Amber blinking
Off	Off
PC Off	Red blinking

2. The connection of monitor with video card

Monitor has a close connection with video card , video card input in monitor by changing digital signal suitable to analogue signal.

The signal input can be divided into controlling signal horizontal frequency and an image signal(red,blue,green) showing information on screen. In case video card input these signal wrongly, monitor works abnormally.

3. Compatibility with PC

MODE	Vertical Frequency
640 X 480	60 / 72 / 75
800 X 600	60 / 70 / 72 / 75
1024 X 768	60 / 70 / 72 / 75
1280 X 1024	60 / 70 / 72 / 75
DOS 640 X 480	60
DOS 720 X 400	70

Part 7. Other explanation

4. Before asking service

- > If any problem happens during your using, check the followings.
- > If the problem is continued, contact service center.

Power of monitor is turned off.	Connect power cord correctly and press power switch.
Screen is too bright.	Adjust to make bright / contrast be lower.
LED of monitor is blinking and screen is not turned up.	Check that VGA cable is correctly inserted.
Any special color is turned up or nothing is turned up.	Check that pin of VGA cable is curved or un-inserted and any special part is pressed from other objectives.
The resolution is continuously shown to 800 x 600 in spite of changing the screen mode to 1024x 768.	It is a problem of video card or system, mostly in case of installing driver of video card wrongly. You should reboot after deleting driver of video card under control board-system display after booting safety mode. The problem can be solved out by installing video card driver provided in purchasing PC after re-booting.
The resolution 1024 x 768 is supported in 256 colors, but it is not available in true color	It can happen for old video card due to a shortage of memory, change the video card in case of this.
"Out of Range" is shown and screen is changed to black for changing to 1024x768 mode.	It is a symptom appeared for the case that vertical frequency of screen is set more than 75Hz, 1024 x 768 mode supports frequency only for 60/70/72/75Hz, normal screen is shown if you change the frequency in recording information (Refer) It is not available to change that nothing is shown on screen, insert floppy diskette in floppy disk driver and the frequency is automatically changed to 60HZ if you press window -R-A-C-ENTER button on keyboard in order.

Part 7. Other explanation

Screen on window is shown to the one side in the beginning of booting

It appears that the signal of video card and the signal installed in monitor is different.
(Refer) Stop the screen pressing "Break" button on keyboard and adjust it by adjusting button and then it is automatically saved . It prints out by the change when you boot later.

Shadow turns up when you use it

It is a noise caused from the signal feature and signal change of video card, it can be solved by 100%, but it can be adjusted by the function "Phase".

Screen slightly incline toward one side during using.

Try to install driver of video card again if the symptom turns up continuously.

Noise turns up on the beginning of screen installing system.

Video signal from the beginning of screen turned up for installing system, it can't be normally appeared on TFT LCD. It can get better screen by adjusting "CLOCK/PHASE" after working "Auto". (CLOCK:50 PHASE :67)

Part 7. Other explanation

5. FAQ

Q What is DPMS(Display Power Management Signalling)

A It is a power saving function to reduce the power consumption when the system is not used for certain period of time and is the standard determined by VESA. Monitor demonstrates its function when it is used with video card or PC that supports power saving function. Move a mouse or press any key to automatically return to original state in power saving status.

.....

Q What is resolution and how i can change resolution?

A It is an information that displays up to finite parts of image on the monitor. For example, the monitor with resolution of 1024 x 768 has horizontal and vertical resolution composed of 1024 horizontal points and 768 vertical lines. To change resolution, press the right button on the desktop screen of WIN95/WIN98 to display (Registration information) menu. Click this menu to display the registration information screen. Select (setup) tab to change resolution.

.....

Q Screen is still unstable, flickering and causes noises even if adjust the screen in reference to manual

A Change vertical frequency in display registration information windows of system. Please note that change of vertical frequency may differ depending on Windows environment or VGA card. In addition, if you use power distributor with poor performance, the screen may be flickering unstably and cause noises.

.....

Q I use notebook PC and the screen does not come out, but only (no signal) message come out.

A Check the switch of notebook PC that functions to convert to external monitor if you connect the external monitor to notebook PC.

.....

Q What is DDC(Display Data Channel)?

A Change an information through DDC that connect monitor with PC, user doesn't need to adjust the screen, it makes optimal screen.

Part 7. Other explanation

6. Specification

Input Signal	PC Graphic Video Video Sound	Analog RGB(Sync Separate) DVI Composite S-Video Tunner Volume Control
Operation Frequency	Horizontal Frequency Vertical Frequency Pixel Frequency	30~80 kHz 56~85 kHz Max 70 MHz
Resolution	XGA (10.4", 14", 15") SXGA (17", 18.1", 19")	1024 X 768 1280 X 1024
Display Color	Full Color	1.2M ~ 1.7M Ture Color
Compatibility	VGA 640 X 480 60~75Hz SVGA 800 X 600 56~75Hz XGA 1024 X 768 60~75Hz SXGA 1280 X 1024 60~75Hz	Expand to SXGA 1280 X 1024 Expand to SXGA 1280 X 1024 Expand to SXGA 1280 X 1024 SXGA 1280 X 1024 60~75Hz
Power Management Plug & Play Support DC Input Power Consumption	VESA DPMS DDC 1/2B DC 12V 4.5A TBD	
OSD / User Control	PC	H,V Position / H size(Clock), Brightness, Contrast Color, Phase, Auto Adjustment, Adjustment Video, Language
	NTSC PAL Video	H,V Position, Sharpness, Color, Tiny, Brightness, Contrast
	TV	Sharpness, Color, Tiny, Brightness, Contrast, Air/CATV, Auto/Manual