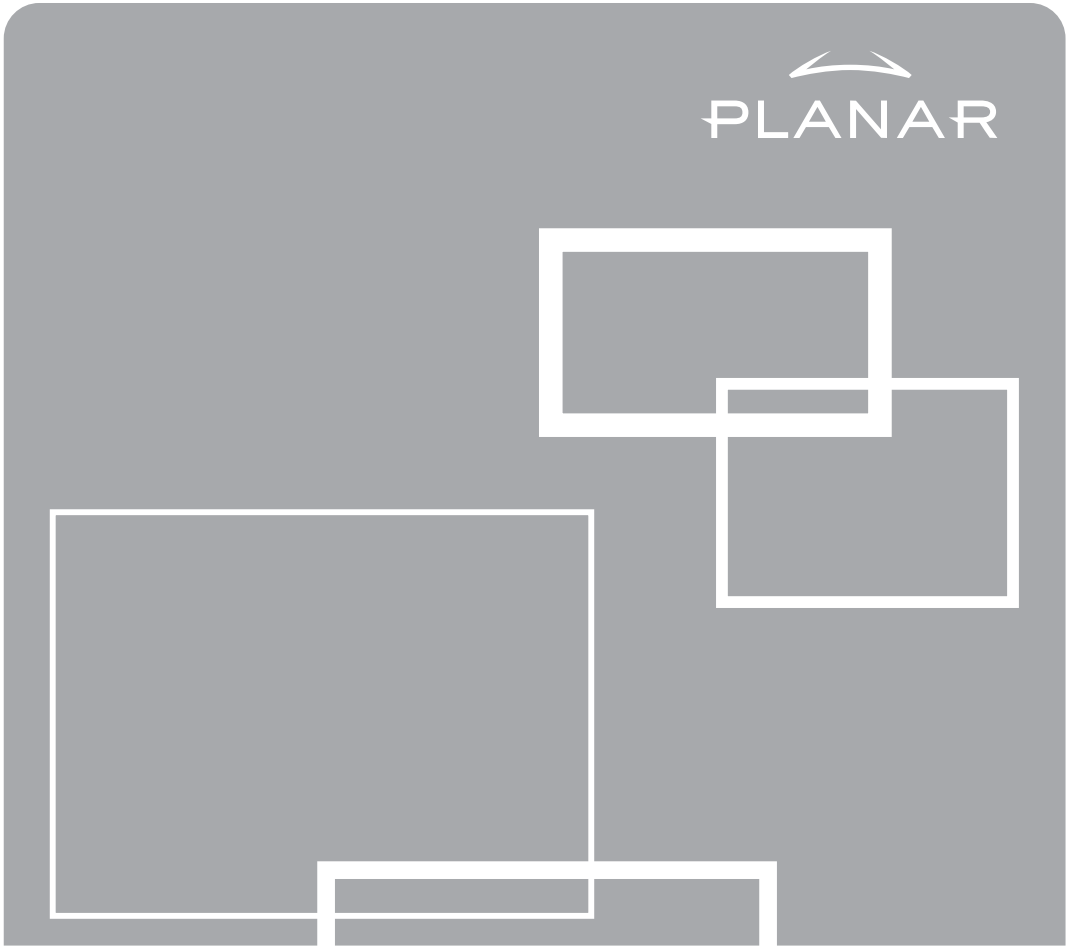

PLANAR **15" LCD** TV MANUAL

www.planar.com

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Chapter 1 Introduction

Thank you for your purchase of this product. With this product you can use your computer monitor to watch TV/CATV, VCR, LD, and DVD or play a video game. Without turning on your computer, the system set up is very easy and there is no additional requirement for hardware or software. You don't need to learn a complicated set-up procedure and you can enjoy your product with just Plug & Play™.

1.1 Important Safety Precautions

Electricity is used to perform many useful functions, but it can also cause personal injuries and property damage if improperly handled. This product has been engineered and manufactured with the highest priority on safety. However, improper use can result in electric shock and/or fire. In order to prevent potential danger, please observe the following instructions when installing, operating and cleaning the product. To ensure your safety and prolong the service life of your LCD color TV product, please read the following precautions carefully before using the product.

- Read instructions—All operating instructions must be read and understood before the product is operated.
- Keep this manual in a safe place—These safety and operating instructions must be kept in a safe place for future reference.
- Observe warnings—All warnings on the product and in the instructions must be observed closely.
- Follow instructions—All operating instructions must be followed.
- Attachments—Do not use attachments not recommended by the manufacturer. Use of inadequate attachments can result in accidents.
- Power source—This product must operate on a power source specified on the specification label. If you are not sure of the type of power supply used in your home, consult your dealer or local power company. For units designed to operate on batteries or another power source, refer to the operating instructions.
- Power cord protection—The power cords must be routed properly to prevent people from stepping on them or objects from resting on them. Check the cords at the plugs and product.

- If the AC adapter is misplaced or needs to be replaced, obtain the same type of adapter.
- Overloading—Do not overload AC outlets or extension cords. Overloading can cause fire or electric shock.
- Entering of objects and liquids—Never insert an object into the product through vents or openings. High voltage flows in the product, and inserting an object can cause electric shock and/or short internal parts. For the same reason, do not spill water or liquid on the product.
- Servicing—Do not attempt to service the product yourself. Removing covers can expose you to high voltage and other dangerous conditions. Request a qualified service person to perform servicing.
- Repair—If any of the following conditions occurs, unplug the power cord from the AC outlet, and request a qualified service person to perform repairs.
  a. When the power cord or plug is damaged.
  b. When a liquid was spilled on the product or when objects have fallen into the product.
  c. When the product has been exposed to rain or water.
  d. When the product does not operate properly as described in the operating instructions. Do not touch the controls other than those described in the operating instructions. Improper adjustment of controls not described in the instructions can cause damage, which often requires extensive adjustment work by a qualified technician.
  e. When the product has been dropped or damaged.
  f. When the product displays an abnormal condition. Any noticeable abnormality in the product indicates that the product needs servicing.
- Replacement parts—In case the product needs replacement parts, make sure that the service person uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. Use of unauthorized parts can result in fire, electric shock and/or other danger.
- Safety checks—Upon completion of service or repair work, request the service technician to perform safety checks to ensure that the product is in proper operating condition.
- Polarization—This AC adapter may be equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- For use only with AC adapter, Li-shin LSE9901B1260.

1.1.1 FCC Statement Warning

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 instruction, 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 the 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 signal 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.

1.1.2 Canadian DOC Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B repecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

1.2 Important Notices

Please use the product under a normal environment

1. Try to avoid the following circumstances.
   * Heat or direct sunlight places
   * Unstable or vibrational places
   * Location with huge magnetic field
   * Exposure to rain or moisture places
2. For the unauthorized person, please don't service this product: otherwise the damage caused by unauthorized servicing is not covered by warranty.
3. Unplug this product from AC outlet and remove batteries from remote control when this product is left unused for a long time.

1.3 Product Functions

- With the advanced video processing technology, the TV composite VIDEO, S-VIDEO signal can be displayed on a PC monitor.
- Double scan conversion (15.75 KHz to 31.5 Khz).
- With built-in audio loop the audio signal coming from the PC can pass through to PC speakers in any circumstance.
- Full screen, true color display.
- TV systems: NTSC system.
- Built-in TV tuner for receiving terrestrial or cable TV.
- Easy operation - With one button to switch signals coming from composite VIDEO, S-VIDEO, COMPONENT VIDEO, CABLE/TV or PC.
- Automatic channel scan to detect the program channels.
- On screen display operation with remote controller.
- MTS supported for NTSC system. (Available in North America & Taiwan markets.)

1.4 Package Contents

As you unpack the product, please make sure the following items were included. If any of these items are missing, call your local agencies.

▪ Main body x1	▪ Audio cable x1	▪ Remote control x1
▪ Power supply x1	▪ User manual x1	▪ Power cord x1
▪ VGA cable x1	▪ AAA batteries x2	

1.5 Pull down the base

When you open the box to take the product out, pull down the base first (See figure 1-1)

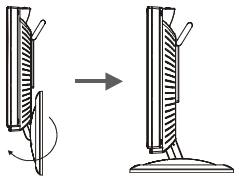


Figure 1-1

1.6 Viewing Angle Adjustment

This product is designed to allow users to have a comfortable viewing angle. The viewing angle can be adjusted from -5°to +25°. (See Figure 1-2).

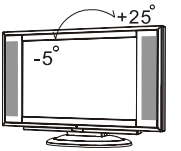


Figure 1-2

When you want to close the base and body to 90°, you need to release a button from 25°. (See fig. 1-3)

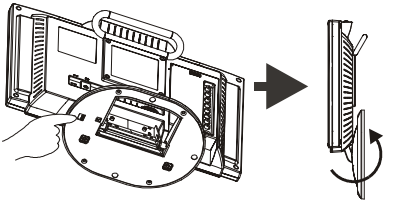


Figure 1-3

Warning: *Do not force the LCD Monitor over its maximum viewing angle settings as stated above. Attempting this will result in damage to the Monitor and Monitor stand.*

1.7 Detaching main body from Its Stand

1. Remove the rear cover from neck ❶ (See Figure 1-4)
2. Unscrew screws of the hinge bracket ❷
3. Remove the stand from main body ❸

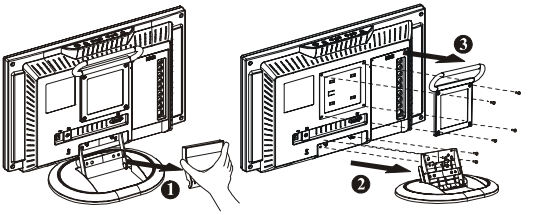


Figure 1-4

1.8 Interface for Arm Applications

Before installing to mounting device, refer to Fig.1-4.

The rear of this LCD display has four integrated 4 mm, 0.7 pitches threaded nuts, as well as four 5 mm access holes in the plastic covering as illustrated in Figure 1-5. These specifications meet the VESA Flat Panel Monitor Physical Mounting Interface Standard (paragraphs 2.1 and 2.1.3, version 1, dated 13 November 1997).

Note :Please using Ø 4mm x 8mm (L) screw for this application.

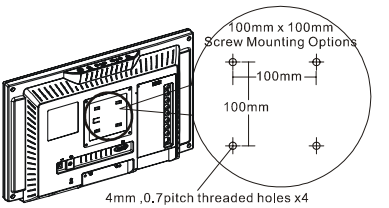


Figure 1-5

Chapter 2 Installation

2.1 Product Description

2.1.1 Front view of main body

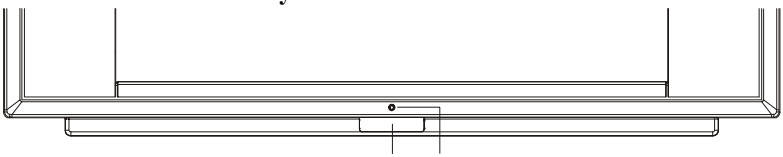


Figure 2-1

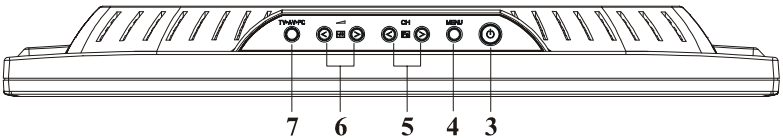


Figure 2-2

1	○	**Indicator for Power**	LED lights Green color --- Power is ON. LED lights Orange --- Monitor is in "Power Saving Mode". LED is off --- Power is OFF.
2	▭	**IR receiver**	IR receiver (Remote).
3	⏻	**Power**	Turn on or off the main body.
4	MENU ○	**Menu**	Open or Close the OSD menu.
5	CH ◁ ▷	**Channel**	Select the next lower channel / higher channel (TV/AV mode) ; OSD function for selecting (PC mode).
6	◁ ▷	**Volume**	Lower / Raise the sound volume (TV/AV mode) ; OSD function for adjusting (PC mode).
7	TV-AV-PC ○	**Source**	Selection CABLE/TV, AV-1(S –VIDEO), AV-2(C-VIDEO) or PC.

2.1.2 Rear view of main body

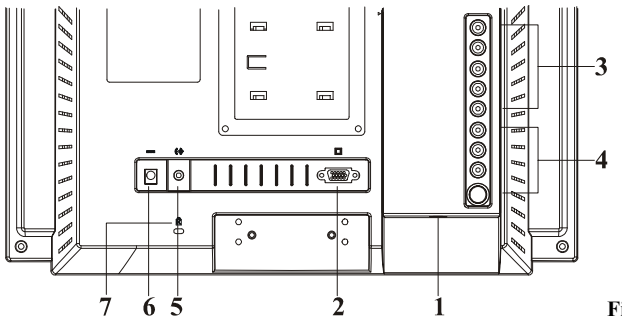
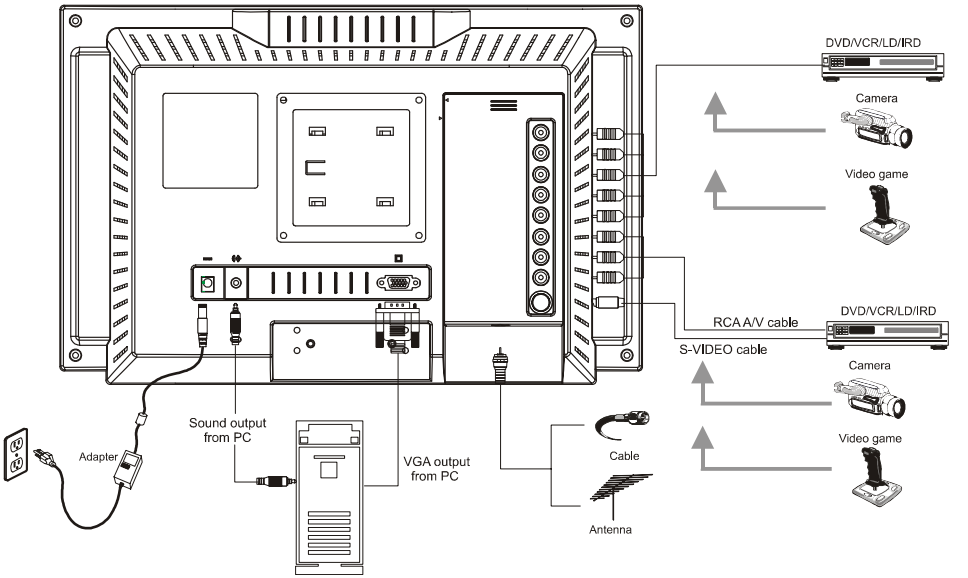


Figure 2-3

1 RF in	Connects to antenna or cable TV signal.
2 VGA input	Use the 15-pin VGA cable in the package contents.
4 AV1-in	For composite video or S-video input and audio.
3 AV2-in	For component Video input and audio.
5 Phone in	Connect the audio from sound card to PHONE IN.
6 DC in	Connect to your 12V power supply.
7 Kensington Lock hole	It can be locked with Kensington lock.

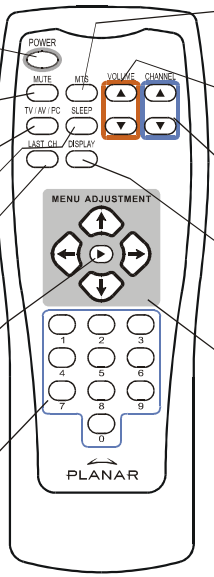
2.2 System Installation:

Refer to the example closest to your configuration.
Turn off the power of all devices before connection. For audio connection, use RCA audio (L+R) connector. For video connection, choose either RCA video connector or s-video connector.
For connection to monitor alone omit those connections associated with PC.



Chapter 3 Operation Instruction

3.1 Remote Control



① **POWER**
Switch between power-on and power-off

② **MUTE**
Turn the sound on/off

③ **TV/AV/PC**
Select input sources of: CABLE/TV,AV1 , AV2, PC

④ **SLEEP**
Select timer to turn power off

⑤ **LAST CH.**
Turn back the last select channel

⑥ ▶
Turn on/off the OSD menu

⑦ **0~9 Number Keys**
Used to select cable TV or Terrestrial program

⑧ **MTS**
Select Stereo, SAP or Mono for sound

⑨ **VOLUME**
Adjust the volume

⑩ **CHANNEL**
Select channels up or down

⑪ **DISPLAY**
Show the information on screen

⑫ ← →
Adjust the selected item on menu or adjust the volume
↑ ↓
Press to select desired item on the menu

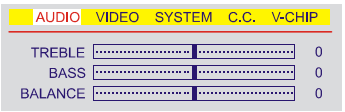
3.2 Advanced Setting

3.2.1 TV/AV

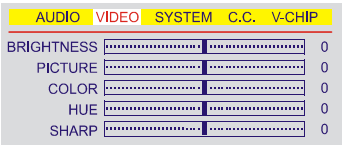
The OSD shown below displays when you press "**MENU**" (on main body) or "►" (on remote control) button.

1. Press " " (on main body) or "←, →" (on remote control) button to adjust content. Select AUDIO, VIDEO, SYSTEM, C.C., V-CHIP.
2. Press " " (on main body) or "↑, ↓" (on remote control) button to select item. Then press " " (on main body) or "←, →" (on remote control) button to adjust content.

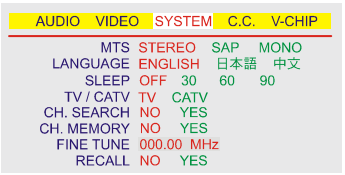
AUDIO: Treble, Bass and Balance.
VIDEO: Brightness, Picture, Color, Hue and Sharp.
SYSTEM: MTS, Language, Sleep, TV/CATV, Channel search, Channel memory, Fine tune and Recall.
C.C. (Closed Caption)
V-CHIP: TV, MPAA, Change Pin.



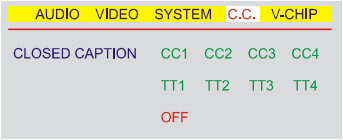
AUDIO	
TREBLE	Lower or raise the treble for sound.
BASS	Lower or raise the bass for sound.
BALANCE	Adjust the speaker balance on L/R.



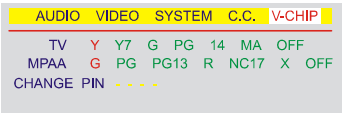
VIDEO	
BRIGHTNESS	Increases or decreases the brightness of the image.
PICTURE	Increases or decreases the contrast of the image.
COLOR	Lower or raise the color intensity.
HUE	Toward purple or green adjusting.
SHARP	Adjust the picture for soft or sharp.



SYSTEM	
MTS	Select different type for Audio.
LANGUAGE	Select the language for the screen.
SLEEP	Select the sleep timer..
TV/CATV	Select TV or CATV.
CH. SEARCH	Scan program channels automatically.
CH. MEMORY	Add or remove a channel.
FINE TUNE	0.05 MHz for pre time (±2.0 MHz)
RECALL	Recall the video setting to original.



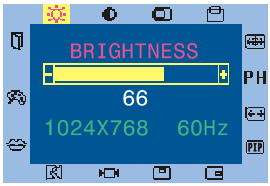
CLOSED CAPTION	
CLOSED CAPTION	Select different system in caption.



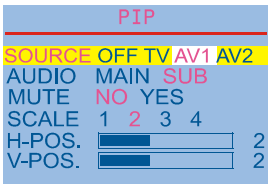
V-CHIP	
TV	Sets the TV grade.
MPAA	Sets the MPAA grade.
CHANGE PIN	Changes the pin number. The original pin number is "1234", If you forget your pin, please follow the process: 1. Turn off the power on main body. 2. Press " TV、AV、PC " key on main body and keep it depressed. 3. Turn on the power on main body. 4. Reset it.

3.2.2 PC

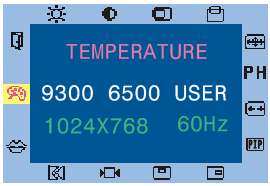
The OSD shown below displays when you press "**MENU**"(on main body) or "►" button. (on remote control)

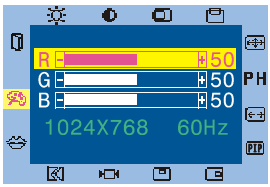


Press " Fn " (on main body) or "↑, ↓" (on remote control) button to select item. Then press " ⇔ " (on main body) or "←, →" (on remote control) button to adjust content.



After you choose the “PIP”, then press “MENU” (on main body) or “►” (on remote control) to enter the second page and finish adjustment to press “MENU” (on main body) or “►” (on remote control) return to main menu.





When you choose the user mode in color temperature, then press “MENU” (on main body) or “►” (on remote control) to enter second page to adjust the R,G,B and finish adjustment to press “MENU” (on main body) or “►” (on remote control) return to main menu.

3.2.3 PC OSD function description

Icon	Function	Function Description
	Brightness	This function increases or decreases the brightness of the image.
	Contrast	This function increases or decreases the difference between the dark and light color.
	H-Position	This function shifts the entire display image left or right.
	V-Position	This function shifts the entire display image up or down.
	Auto Adjustment	This function will adjust the display size automatically to fit full screen.
PH	**Phase**	This function is available to adjust the focus and clarity of the display.
	Clock	This function carries a frequency-tracking feature that offers the user to have better stability and clarity. Increasing Clock value can be up to +50 scales. The number of decreasing Clock (minus) depends on the input timing.
PIP	**Picture in picture**	The function is to open video picture in screen.
	Source	This function is to select video source.
	Audio	This function is to select sound from PC (Main) or Video (Sub).
	Scale	This function is to choose 4 scales size for picture.
	H-Pos.	This function moves the video window left or right.
	V-Pos.	This function moves the video window up or down.
	OSD H-Position	This function moves the OSD menu window left or right.
	OSD V-Position	This function moves the OSD menu window up or down.
	Graph Text	This function is to choose a display that allows maximum graphics text quality. The resolution selection can either be 640 x 400 or 720 x 400. Please refer to Chapter 3 " Standard Timing" Table for of different timing modes.
	Recall	The recall function will return all adjusted parameters to factory preset values.
	Language	Three OSD languages options are available: English, Japanese, Chinese.
	Color Temperature	This function selects a different color temperature. Please see the diagram below for function and description.
	Save Exit	Saves the values of this setting and exits the OSD menu function.

Icon	Description	
9300	Set CIE coordinated at 9300°K color temperature.	
6500	Set CIE coordinated at 6500°K color temperature.	
USER	There are 3 colors (Red, Green, Blue) for user to adjust from OSD menu.	
	R	Adjust Red color on screen.
	G	Adjust Green color on screen.
	B	Adjust Blue color on screen.

Chapter 4 Technical Information

4.1 Specifications

LCD Panel

Size	15" (43 cm)
Display Type	Active matrix color TFT LCD
Resolution	1024 x 768
Display Dot	1024 x (RGB) x 768
Display Area (mm)	304.1 x 228 (H x V)
Brightness	450 cd/m^2 (typical)
Contrast Ratio	400:1 (typical)
Response Time	Ta=25°C 16ms (Tr+Tf)
Lamp Voltage	590 Vrms (typical)
Lamp Current	8 mA rms. (typical)
Viewing Angle	Vertical: -75° ~ +75° Horizontal: -70° ~ +70°

Display colors 16.7M with frame rate conversion or Dithering

Video

Input Signal	Analog RGB 0.7Vp-p
Input Impedance	75 Ohm ± 2%
Polarity	Positive, Negative
Amplitude	0 - 0.7 ± 0.05 Vp
Multi-mode Supported	Horizontal Frequency: 30 ~ 60 KHz Vertical Frequency: 55 ~ 75 Hz

Speaker 3W, 8 OHM

Control

Power switch (hard and soft types)	On/Off switch with LED indicator

OSD (On Screen Display)

Brightness	Digital
Contrast	Digital
Horizontal Position	Digital
Vertical Position	Digital
Phase	Digital
Clock	Digital
Display Mode Setup	Use EEPROM to save settings in memory
OSD Format	20 characters x 9 rows

Power Management

Mode	Power Consumption*	AC Input	LED Color
On	60W maximum	240 VAC	Green
Off	5W maximum	240 VAC	Orange
Soft switch off	5W maximum	240 VAC	Dark
Disconnected	5W maximum	240 VAC	Orange: Standby, Suspend, Off Dark: DC Power off

* Meeting VESA DPMS requirements measured from AC Input end of AC power cord.

Sync Input

Signal	Separate TTL compatible horizontal and vertical synchronization
Polarity	Positive and negative

Plug & Play Supports VESA DDC1 and DDC2B functions

External Connection

Power Input (AC input)	AC socket
Video Cable	1.5M with 15-pin D-sub connector
Audio Cable	1.5M with Stereo Jack

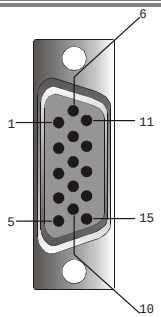
Environment

Operating Condition:	Temperature	5°C to 35°C/41°F to 95°F
	Relative Humidity	20% to 80%
Storage Condition:	Temperature	-20°C to 60° C/-4°F to140° F
	Relative Humidity	5% to 85%

Power Supply (AC Input)

Input Voltage	Single phase, 100 ~ 240VAC, 50 / 60 Hz
Input Current	1.2 A maximum

Pin Assignment



Signal		Signal	
PIN	*Description*	*PIN*	*Description*
1	Red	9	+5V
2	Green	10	Hot Plug Detect
3	Blue	11	NC
4	NC	12	SDA
5	Digital GND	13	H. Sync.
6	Red Rtn	14	V. Sync.
7	Green Rtn	15	SCL
8	Blue Rtn		

4.2 Standard Timing Table

If the selected timing is NOT included in table below, this LCD monitor will use the most suitable available timing.

Mode	Resolution	Total	Nominal Frequency (KHz)	Sync Polarity	Nominal Freq. (Hz)	Sync Polarity	Nominal Pixel Clock (MHz)
			Horizontal		Vertical		
VESA MODES							
VGA	640x480@60Hz	800 x 525	31.469	N	59.940	N	25.175
	640x480@72Hz	832 x 520	37.861	N	72.809	N	31.500
	640x480@75Hz	840 x 500	37.500	N	75.00	N	31.500
SVGA	800x600@56Hz	1024 x 625	35.156	N/P	56.250	N/P	36.000
	800x600@60Hz	1056 x 628	37.879	P	60.317	P	40.000
	800x600@72Hz	1040 x 666	48.077	P	72.188	P	50.000
	800x600@75Hz	1056x625	46.875	P	75.000	P	49.500
XGA	1024x768@60Hz	1344x806	48.363	N	60.004	N	65.000
	1024x768@70Hz	1328x806	56.476	N	70.069	N	75.000
	1024x768@75Hz	1312x800	60.023	P	75.029	P	78.750
IBM MODES							
DOS*	720x400@70Hz	900 x 449	31.469	N	70.087	P	28.322
DOS	640x350@70Hz	800 x 449	31.469	P	70.087	N	25.175

Chapter 5 Other Information

5.1 Specifications

POWER IN	12VDC 5A
VIDEO INPUT	Composite /Component video RCA connector
S-VIDEO INPUT	S-Video 4-pin mini DIN
AUDIO INPUT	Stereo L+R RCA connectors
PHONE IN	Phone Jack 3.5
RF IN	F-Female connector for NTSC system
VGA INPUT	D-Sub 15 pin connector
Power Consumption	60W maximum
Operating Temperature	5 ~ 35°C
Operating Humidity	5% ~ 80%
IR Control	28 Buttons (AAA batteries x2)
Dimensions	430 (W) x 325.5 (H) x 198 (D) mm
Net Weight	4.0 ± 0.3 kg
Gross Weight	5.8 ± 0.3 kg

Chapter 6 Troubleshooting

This LCD Monitor was pre-adjusted using factory standard VGA timings. Due to the output timing differences among various VGA cards in the market, users may initially experience an unstable or unclear display whenever a new display mode or new VGA card is selected.

Attention

This LCD Monitor Supports Multiple VGA Modes.

Refer to the Standard Timing Table for a listing of modes supported by this LCD Monitor.

PROBLEM Picture is unclear and unstable

The picture is unclear and unstable, please perform the following steps :

1. Enter PC to "Shut Down Windows" status while you're in MS-Windows environment.
2. Check the screen to see if there are any black vertical stripes. If there are, take advantage of the "Clock" function in OSD menu and adjust (by increment or decrement numbers) until those bars disappear.
3. Move to "Phase" function in OSD menu again and adjust the monitor screen to the most clear display.
4. Click "No" on "Shut Down Windows" and back to the normal PC operating environment.

PROBLEM There is no picture on LCD Monitor

If there's no picture on the LCD Monitor, perform the following steps:

1. Make sure the power indicator on the LCD Monitor is ON, all connections are secured, and the system is running on the correct timing. Refer to Chapter 3 for information on timing.
2. Turn off the LCD Monitor and then turn it back on again. If there is still no picture, press the Adjustment Control button several times.
3. If step 2 doesn't work, connect your PC system to another external CRT. If your PC system Functions properly with a CRT Monitor but it does not function with the LCD Monitor, the output timing of the VGA card may be out of the LCD's synchronous range. Please change to an alternative mode listed in the Standard Timing Table or replace the VGA card, and then repeat steps 1 and 2.

PROBLEM There is no picture on LCD Monitor

If you have chosen an output timing that is outside of the LCD Monitor's synchronous range (Horizontal: 30 ~ 60 KHz and Vertical: 55 ~ 75 Hz), the OSD will display an "***Over Range***" message. Choose a mode that is supported by your LCD Monitor.

PROBLEM The IR control can't control product

Make sure if batteries are installed they are not weak batteries

If you still have difficulties you can't resolve using the tips described above, unplug and plug in the AC cord to reset your product. Otherwise, call your local representative for servicing.

Also, if the signal cable is not connected to LCD monitor at all or properly, the monitor screen will display a message "***No Signal***".