# **TABLE OF CONTENTS**

IMPORTANT INFORMATION	-
PRECAUTIONS	2
SPECIAL NOTES	3
TAKE CARE OF THE MONITOR	3
BEFORE YOU OPERATE THE MONITOR	
FEATURES	
PACKING LIST	
INSTALLATION INSTRUCTIONS	
ADJUSTING THE VIEWING ANGLE	7
OPERATING INSTRUCTIONS	
GENERAL INSTRUCTIONS	
HOW TO RECONFIGURE	
OSD MENU TABLE	_
PLUG AND PLAY	12
TROUBLESHOOTING (FAQ)	13
ERROR MESSAGE & POSSIBLE SOLUTION	14
APPENDIX	
SPECIFICATIONS	
PRESET TIMING TABLE	
CONNECTOR PIN ASSIGNMENT	17

## IMPORTANT INFORMATION

Before operating the monitor, please read this User Guide thoroughly. This User Guide should be retained for future reference.

# FCC Class B Radio Frequency Interference Statement WARNING: (FOR FCC CERTIFIED MODELS)

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

- 1. Reorient or relocate the receiving antenna.
- 2. 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.
- 4. Consult the dealer or an experienced radio/TV technician for help.

#### NOTICE:

- The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- 2. Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.
- The manufacturer is not responsible for any radio or TV interference caused by unauthorized modification to this equipment. It is the responsibilities of the user to correct such interference.

As an ENERGY STAR® Partner our company has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

#### **WARNING:**

To prevent fire or shock hazard, do not expose the monitor to rain or moisture. Dangerous high voltages are present inside the monitor. Do not open the cabinet. Refer servicing to qualified personnel only.

#### **PRECAUTIONS**

- I Do not use the monitor near water, e.g. near a bathtub, washbowl, kitchen sink, laundry tub, swimming pool or in a wet basement.
- I Do not place the monitor on an unstable cart, stand, or table. If the monitor falls, it can injure a person and cause serious damage to the appliance. Use only a cart or stand recommended by the manufacturer or sold with the monitor. If you mount the monitor on a wall or shelf, use a mounting kit approved by the manufacturer and follow the kit instructions.
- I Slots and openings in the back and bottom of the cabinet are provided for ventilation. To ensure reliable operation of the monitor and to protect it from overheating, be sure these openings are not blocked or covered. Do not place the monitor on a bed, sofa, rug, or similar surface. Do not place the monitor near or over a radiator or heat register. Do not place the monitor in a bookcase or cabinet unless proper ventilation is provided.
- I The monitor should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- I The monitor is equipped with a three-pronged grounded plug, a plug with a third (grounding) pin. This plug will fit only into a grounded power outlet as a safety feature. If your outlet does not accommodate the three-wire plug, have an electrician install the correct outlet, or use an adapter to ground the appliance safely. Do not defeat the safety purpose of the grounded plug.
- I Unplug the unit during a lightening storm or when it will not be used for long period of time. This will protect the monitor from damage due to power surges.
- I Do not overload power strips and extension cords. Overloading can result in fire or electric shock.
- I Never push any object into the slot on the monitor cabinet. It may short circuit parts causing a fire or electric shock. Never spill liquids on the monitor.
- I Do not attempt to service the monitor by yourself; opening or removing covers can expose you to dangerous voltages and other hazards. Please refer all servicing to qualified service personnel.
- I To ensure satisfactory operation, use the monitor only with UL listed computers which have appropriate configured receptacles marked between 100 240V AC, Min. 5A.
- I The wall socket shall be installed near the equipment and shall be easily accessible.

#### SPECIAL NOTES

The following symptoms are normal with the monitor and do not indicate a problem.

- Due to the nature of the fluorescent light, the screen may flicker during initial use. Turn off the Power Switch and then turn it on again to make sure the flicker disappears.
- You may find slightly uneven brightness on the screen depending on the desktop pattern you use.
- The LCD screen has effective pixels of 99.99% or more. It may include blemishes of 0.01% or less such as a missing pixel or a pixel lit all the time.
- Due to the nature of the LCD screen, an afterimage of the previous screen may remain
  after switching the image, when the same image is displayed for hours. In this case, the
  screen is recovered slowly by changing the image or turning off the Power Switch for
  hours.
- When the screen becomes black or flashing, or cannot illuminate any more, contact your dealer or service center to replace parts. Don't repair the screen by yourself!

#### TAKE CARE OF THE MONITOR

- Do not install the monitor in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, or excessive dust or mechanical vibration or shock.
- Save the original shipping carton and packing materials, as they will come in handy if you
  ever have to ship your monitor.
- For maximum protection, repackage your monitor as it is originally packed in the factory.
- To maintain cleanness of your LCD display, wipe it periodically with clean and soft cloth. The screen may be damaged by any liquid splash.
- To keep the monitor looking new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with mild detergent solution. Never use strong solvents such as thinner, benzene, or abrasive cleaners, since these will damage the cabinet. As a safety precaution, always unplug the monitor before cleaning it.

## BEFORE YOU OPERATE THE MONITOR

#### **FEATURES**

- 43.2cm(17") TFT Color LCD Monitor.
- Recommended Resolutions: SXGA 1280 X 1024 @60Hz.
- 8ms (Tr+Tf) Quick Response Time.
- SPLENDID™ Video Enhancement Technology.
- 5 Video Preset Modes Switiched by Hotkey
- 3 Skin-Tones Selection for Users' Preference.
- Microsoft Windows 95/98/2000/XP Compliance
- VESA Display Data Channel (DDC)1/2B Compliance
- VESA Wall Mount Compliance (100x100mm).
   EPA ENERGY STAR® and Ergonomic Design.
- Cabel Binder and Compact Case Design for Space Saving.
- Both VGA and DVI-D inputs. (for MM17T only)
- 1.2Wx2 Stereo Speakers / Earphone Jack. (for MM17T only)

### **PACKAGE LIST**

#### The product package should include the following items:

- 1. LCD Monitor
- **Quick Start Guide**
- User Guide (CD)
- Power Cord
- 5. VGA Cable
- 6. Audio Cable (for MM17T only)

#### INSTALLATION INSTRUCTIONS

#### **ASSEMBLING THE MONITOR BASE**

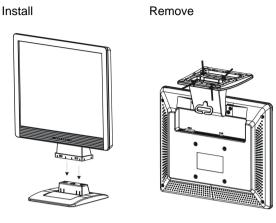


Figure 1

#### **POWER CORD / POWER SOURCE**

- 1. Make sure that the power cord is the correct type required in your area.
- 2. This LCD monitor has an internal universal power supply that allows operation in either 100/120V AC or 220/240V AC voltage area (No user adjustment is required.)
- Connect the power cord into your LCD monitor's power input socket, and then plug the other end into a 3-pin AC power outlet. The power cord may be connected to either a wall power outlet or the power outlet socket on your PC, depending on the type of power cord supplied with your LCD monitor.

#### **NOTES**

A certified power supply cord has to be used with this equipment. The relevant national installation and/or equipment regulations shall be considered. A certified power supply cord not lighter than ordinary polyvinyl chloride flexible cord according to IEC 60227 (designation H05VV-F 3G 0.75mm² or H05VVH2-F2 3G 0.75mm²) shall be used. Alternative a flexible cord be of synthetic rubber according to IEC 60245 (designation H05RR-F 3G 0.75mm²) shall be used.

#### MAKING THE CONNECTIONS

**Connecting the Signal Cable:** Plug one end of the VGA Cableto the LCD monitor's VGA port, the other end to the computer's VGA socket and tighten the two screws on the cable connector. Moreover, for MM17T, you can buy an extra 24-Pin DVI-D cable from your dealer for the digital signal connection if preferred.

**Connecting the Power Cord:** Plug one end of the AC-power cord to the LCD monitor's AC input socket, the other end to the power outlet.

**Connecting the Audio Cable (MM17T only):** Plug the audio cable between the computer multi-media (or audio) card's audio output and monitor's audio jack.

**Caution:** If the AC outlet is not grounded (with three holes), install the proper grounding adapter (not supplied).

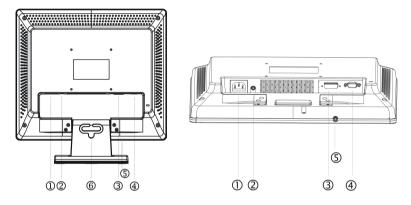


Figure 2

1.	AC Input Socket	2.	Audio Jack (MM17T only)
3.	DVI-D Port (MM17T only)	4.	VGA (D-SUB) Port
5.	Earphone Jack (MM17T only)	6.	Cable Binder

### ADJUSTING THE VIEWING ANGLE

- For optimal viewing it is recommended to look at the full face of the monitor, then adjust the monitor's angle to your own preference.
- Hold the stand so you do not topple the monitor when you change the monitor's angle.
- You are able to adjust the monitor's angle from -5° to 20°.

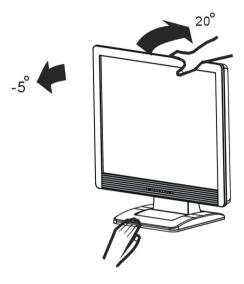


Figure 3

#### **NOTES**

- Do not touch the LCD screen when you change the angle. It may cause damage or break the LCD screen.
- Careful attention is required not to catch your fingers or hands when you change the angle.

## **OPERATING INSTRUCTIONS**

#### GENERAL INSTRUCTIONS

Press the power button to turn the LCD monitor on or off. The other control buttons are located on the front bezel (See Figure 4). By changing these settings, the picture can be adjusted to your personal preferences.

- The power cord should be connected.
- Connect the signal cable from the LCD monitor to your computer.
- Press the power button to turn on the LCD monitor. The power indicator will light up.

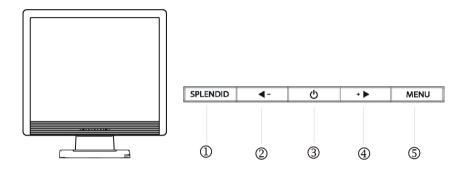


Figure 4

#### 1. SPLENDID™ Button:

- Hotkey for switching between 5 advanced video preset modes (Scenery Mode, Standard Mode, Theater Mode, Game Mode, Night Mode) with SPLENDID™ Video Enhancement Technology.
- Automatically adjust the image to its optimized position, clock, and phase by pressing the button for 2 seconds.
- Exit the OSD menu or go back to the previous menu as the OSD menu is active.

#### 2. —/ **◄** Button :

- Activate Volume (MM17T)/ Contrast (MM17D) adjustment menu.
- Decrease the level of the function selected or move to the previous function as the OSD menu is activated.

#### 3. Power Button / Power LED Indicator:

- · Switch the LCD monitor on or off.
- LED lights blue(MM17T)/green(MM17D): normal operation mode.
- LED lights amber: power saving mode.
- LED is off: power off mode.

#### 4. +/ ▶ Button :

- Activate Brightness adjustment menu.
- Increase the level of the function selected or move to the next function as the OSD menu is activated.

#### 5. Menu Button:

- Activate the OSD (On-Screen Display) main menu.
- Enter/select the icon(function) highlighted as the OSD menu is activated.

#### **HOW TO RECONFIGURE**

- 1. Press the MENU-button to activate the OSD main menu (Figure 5).
- Press 

  or 

  to navigate through the functions. Once the desired function is highlighted, press the MENU-button to activate it. If the function selected has a sub-menu, press 
  or 

  again to navigate through the sub-menu functions. Once the desired function is highlighted, press MENU-button to activate it.
- 3. Press ◀ or ▶ to change the settings of the selected function.
- 4. To exit and save, select the exit function. If you want to adjust any other function, repeat steps 2-3.



Figure 5

## **OSD MENU TABLE**

The table describes the function of each OSD icon

Main Menu Item		Sub Menu Item	Sub Menu Icon		Descri	ption
	ø	Scenery Mode		Advance for scenery use with SPLENDID™ Video Enhancement		
		Standard Mode		(SPLENDID	al Windows use	
Scenario		Theater Mode	<b>P</b>	Advance for movie use with SPLENDID™ Video Enhancement		
		Game Mode		Advance for game use with SPLENDID™ Video Enhancement		
		Night Mode		Advance for dark-display use with SPLENDID™ Video Enhancemen		
	W	RGB		Color R	R	Adjust red gain
				Color G	G	Adjust green gain
				Color B	В	Adjust blue gain
		Skin Tone		Reddish		Select reddish skin stone
Color Adjust				Natural	A	Select natural skin stone
				Yellowish		Select yellowish skin stone
		Color Temp		Cool	<u> </u>	The image appears bluer. (9300°K)
				Normal	米	Normal image color. (7500°K)
				Warm	<b>Q</b>	The image appears redder. (6500°K)
Luminance	<b>D</b>	Brightnes s	0	Adjust brigh	tness le	evel
Luminance		Contrast	<b>③</b>	Adjust contr	ast leve	el .
OSD Setup	OSD	OSD H- Position	<b>#</b> :::	Adjust horizontal position of the OSD		

		OSD V- Position		Adjust vertical position of the OSD		
		OSD Timeout	(T)	Adjust OSD timeout		
		Focus		Phase		Adjust image Phase to reduce Horizontal-line noise of the image
Image Setup				Clock		Adjust image Clock to reduce Vertical-line noise of the image
		Image Position	<b>⊕</b>	H-Position	<b>*</b>	Adjust horizontal position of the image
				V-Position	*	Adjust vertical position of the image
		Auto	AUTO	/vertical pos of the image	itions, p	t the horizontal chase and clock
Input Select		Select an input signal from analog/digital source (MM17T only)				
Information		Show the resolution,H/V frequency and input port of current input timing				
Language	<b>6</b>	Select the desired language				
Reset	ř.	Recall default setting				
Exit		Exit OSD				

## **NOTES**

- PHASE adjusts the phase of the pixel clock signal. With a wrong phase adjustment the screen shows horizontal disturbances.
- CLOCK (pixel frequency) controls the number of pixels scanned by one horizontal sweep. If the frequency is not correct, the screen shows vertical stripes and the image has no correct width.

### PLUG AND PLAY

#### Plug & Play DDC2B Feature

This monitor is equipped with VESA DDC2B capabilities according to the VESA DDC STANDARD. It allows the monitor to inform the host system of its identity and, depending on the level of DDC used, communicate additional information about its display capabilities. The DDC2B is a bidirectional data channel based on the I²C protocol. The host can request EDID information over the DDC2B channel.

# THIS MONITOR WILL APPEAR TO BE NON-FUNCTIONAL IF THERE IS NO VIDEO INPUT SIGNAL. TO OPERATE PROPERLY, THERE MUST BE VIDEO INPUT SIGNAL.

This monitor meets the Green monitor standards as set by the Video Electronics Standards Association (VESA) and/or the United States Environmental Protection Agency (EPA) and The Swedish Confederation Employees (NUTEK). This feature is designed to conserve electrical energy by reducing power consumption when there is no video-input signal present. When there is no video input signal this monitor, following a time-out period, will automatically switch to an OFF mode. This reduces the monitor's internal power supply consumption. After the video input signal is restored, full power is restored and the display is automatically redrawn. The appearance is similar to a "Screen Saver" feature except the display is completely off. The display is restored by pressing a key on the keyboard, or clicking the mouse.

#### **USING THE RIGHT POWER CORD:**

The accessory power cord for the Northern American region is the wallet plug with NEMA 5-15 style and is UL listed and CSA labeled. The voltage rating for the power cord shall be 125 volts AC.

Supplied with units are intended for connection to power outlet of personal computer: Please use a cord set consisting of a minimum No. 18 AWG, type SJT or SVT three conductors flexible cord. One end terminates with a grounding type attachment plug, rated 10A, 250V, CEE-22 male configuration. The other end terminates with a molded-on type connector body, rated 10A, 250V, having standard CEE-22 female configuration.

Please note that power supply cord needs to use VDE 0602, 0625, 0821 approval power cord in European counties.

# TROUBLESHOOTING (FAQ)

Problem & Question	Possible Solution
Power LED is not ON	<ul> <li>I Press the Power Button to check if the monitor is in the ON mode.</li> <li>I Check if the Power Cord is properly connected the monitor and the power outlet.</li> </ul>
The Power LED lights amber and there is no screen image	<ol> <li>Check if the monitor and the computer are in the ON mode.</li> <li>Make sure the Signal Cable is properly connected the monitor and the computer.</li> <li>Inspect the Signal Cable and make sure none of the pins are bent.</li> <li>Connect the computer and another available monitor to check if the computer is properly working.</li> </ol>
Screen image is too light or dark	Adjust the Contrast and Brightness settings via OSD.
Screen image is not centered or sized properly	<ul> <li>I Press the SPLENDID™ Button for 2 seconds to automatically adjust the image.</li> <li>I Adjust the H-Position or V-Position settings via OSD</li> </ul>
Screen image bounces or a wave pattern is present in the image	Make sure the Signal Cable is properly connected the monitor and the computer.      Move electrical devices that may cause electrical interference.
Screen image has color defects (white does not look white)	<ul> <li>I Inspect the Signal Cable and make sure that none of the pins are bent.</li> <li>I Perform Reset via OSD.</li> <li>I Adjust the R/G/B color settings or select the Color Temperature via OSD.</li> </ul>
Screen image is blurry or fuzzy	<ul> <li>I Press the SPLENDID™ Button for 2 seconds to automatically adjust the image.</li> <li>I Adjust the Phase and Clock settings via OSD.</li> </ul>
No sound or sound is low (MM17T only).	<ul> <li>I Ensure that the Audio Cable is properly connected the monitor and the computer</li> <li>I Adjust the volume settings of both your monitor and computer.</li> <li>I Ensure the computer sound card driver is properly installed and activated.</li> </ul>

## **ERROR MESSAGE & POSSIBLE SOLUTION**

### NO SIGNAL:

- 1. Check that the signal-cable is properly connected, If the connector is loose, tighten the connector's screws.
- 2. Check the signal-cable's connection pins for damage.

#### **OUT OF RANGE:**

Your computer has been set to unsuitable display mode ,set the computer to display mode given in the following Preset Timing Table.

# **APPENDIX**

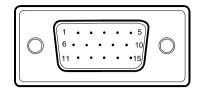
# **SPECIFICATIONS**

Model	MM47T	MM17D			
Visible Diagonals	MM17T MM17D 17.0" (43.2cm)				
	, ,				
Screen Size	Horizontal: 337.92mm, Vertical: 270.34m				
Max. Resolution	SXGA 1280x				
Pixel Pitch	0.264				
Brightness	300cd/m² (Typ.),	400cd/m² (Max.)			
Contrast Ratio	500:1 (Typ.),	600:1 (Max.)			
Viewing Angle (CR≥10)	150°(H)/	130°(V)			
Display Colors	16.2	2M			
Response Time	8m	าร			
Signal Frequency	Horizontal: 30~80 kHz, Vertical: 55 ~ 75Hz				
Max. Pixel Clock	135MHz				
Plug & Play	VESA DDC2B™				
Video Input	DVI-D & D_Sub	D_Sub			
Audio Input/ Earphone	3.5mm Mini-jack				
Speaker (Built-in)	1.2W x 2 Stereo				
Tilt	+20°-	~ -5°			
VESA Wall Mount	100x10	00mm			
Power Source	100~240VA	C,47~63Hz			
Power Consumption	Power On: <40W	/, Standby: <2W			
Phys. Dimension	380(W) x 390(H) x 180mm(D)				
Net Weight	4 kg (approx.)				
Environmental Conditions	Operating Temp: 5° to 35°C Storage Temp.: -20° to 60°C Operating Humidity: 10% to 85%				
Regulatory Approvals	TCO99, Energy Star, UL/cUL, TUV-GS, CB, CE, FCC, CCC, BSMI, Gost-R, C-Tick, VCCI, ISO13406-2 ClassII				

# PRESET TIMING TABLE

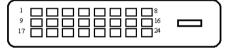
STANDARD	RESOLUTION	HORIZONTAL FREQUENCY	VERTICAL FREQUENCY
Dos-mode	640 × 350	31.47kHz	70Hz
Dos-mode	720 × 400	31.47kHz	70Hz
	640 × 480	31.47kHz	60Hz
VGA	640 × 480	35.00kHz	66.6Hz
VGA	640 × 480	37.50kHz	75Hz
	640 × 480	37.86kHz	72Hz
	800 × 600	37.879kHz	60Hz
	800 × 600	46.875kHz	75Hz
SVGA	800 × 600	35.16kHz	56Hz
	800 × 600	48.01kHz	72Hz
	832 × 624	49.725kHz	75Hz
	1024 × 768	48.363kHz	60Hz
XGA	1024 × 768	56.476kHz	70Hz
	1024 × 768	60.02kHz	75Hz
SXGA	1280 × 1024	64.00kHz	60Hz
UNGA	1280 × 1024	80.00kHz	75Hz

## **CONNECTOR PIN ASSIGNMENT**



15 - Pin Color Display Signal Cable

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1.	Red	9.	+5V
2.	Green	10.	Detect Cable
3.	Blue	11.	RXD
4.	TXD	12.	DDC-Serial Data
5.	Ground	13.	H-Sync
6.	R-Ground	14.	V-Sync
7.	G-Ground	15.	DDC-Serial Clock
8.	B-Ground		



24 - Pin Color Display Signal Cable(MM17T only)

PIN NO.	DESCRIPTION	PI N NO.	DESCRIPTION
1.	TMDS Data 2-	13.	TMDS Data 3+
2.	TMDS Data 2+	14.	+5V Power
3.	TMDS Data 2/4 Shield	15.	Ground(for+5V)
4.	TMDS Data 4-	16.	Hot Plug Detect
5.	TMDS Data 4+	17.	TMDS Data 0-
6.	DDC Clock	18.	TMDS Data 0+
7.	DDC Data	19.	TMDS Data 0/5 Shield
8.	N.C.	20.	TMDS Data 5-
9.	TMDS Data 1-	21.	TMDS Data 5+
10.	TMDS Data 1+	22.	TMDS Clock Shield
11.	TMDS Data 1/3 Shield	23.	TMDS Clock +
12.	TMDS Data 3-	24.	TMDS Clock -