



# LCD DISPLAY

## quick start guide

230TSN, 230MXN

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# Introduction

## Package Contents



Please make sure the following items are included with your LCD Display.

If any items are missing, contact your dealer.

Contact a local dealer to buy optional items.

## Unpacking



LCD Display

### Manuals



Quick Setup Guide



Warranty Card  
(Not available in all locations)



User's Guide, **MagicInfo**  
Software CD, **MagicInfo**  
Manual CD

### Cables



Power Cord

### Others



**Others**

Remote Control

Batteries (AAA X 2)

Ferrite Core for LAN cable

(Not available in all locations)

**Sold separately**



Wall Mount KIT



D-Sub Cable



LAN Cable



USB Cable

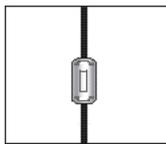


HDMI Cable



RS232C Cable

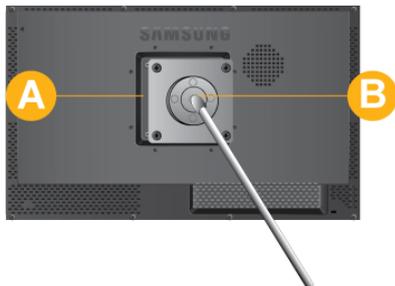
*Ferrite Core*



- The ferrite cores are used to shield the cables from interference.
- When connecting a cable, open the ferrite core and clip it around the cable near the plug.

**Installing a Wall Mount**

This product provides a wall mount of 100 mm x 100 mm that complies with the VESA specifications.



100 mm x 100 mm

- A. Wall Mount Base
- B. Wall Mount Kit (Optional)

1. Turn the product off and unplug the power cord from the wall outlet.
  2. Place a soft cloth or cushion on a flat surface to protect the panel and place the product face down.
  3. Separate the stand.
  4. Align the groove of the Monitor's wall mount base with the groove in the wall mount kit and firmly fix the wall mount kit by fastening the screws.
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 **Note**

- If you use a screw that is longer than the standard specifications, the inside of the product may be damaged.
- For wall mounts that are not compatible with the standard VESA specifications, the length of the screw may differ depending on the corresponding specifications.
- Do not use screws that are incompatible with the standard VESA specifications and do not assemble them using excessive force.

This may result in damage to the product or injury due to the product falling. Samsung shall not be held liable for any damage or injury.

- Samsung shall not be held liable for any damage to the product or injury caused by using a stand that is not compatible with the specified specifications or due to an installation not performed by an authorized installation engineer.
- When installing the product using a wall mount, purchase a wall mount that provides at least 4 inches (10 cm) of space from the wall.
- Samsung shall not be held liable for any problems caused by using a stand that is not compatible with the specified specifications.
- Use a wall mount according to specifications of your country.

## Your LCD Display

### Front



**1** *SOURCE/[PC] button*

Switches from PC mode to Video mode. Selects the input source that an external device is connected to.

[PC] → [HDMI] → [MagicInfo]

Activates a highlighted menu item.

**2** *MENU button [MENU]*

Opens the on-screen menu and exits from the menu. Also use to exit the OSD menu or return to the previous menu.

**3** *- VOL +*

Moves from one menu item to another horizontally or adjusts selected menu values. When OSD is not on the screen, press the button to adjust volume.

**4** *▼ SEL ▲*

Moves from one menu item to another vertically or adjusts selected menu values.

5 *Power button [⏻]*

Use this button for turning the LCD Display on and off.

6 *Brightness Sensor*

Automatically detects the surrounding brightness it accordingly.

7 *Power indicator*

Shows PowerSaver mode by blinking green



**Note**

See PowerSaver described in the manual for further information regarding power saving functions. For energy conservation, turn your LCD Display OFF when it is not needed or when leaving it unattended for long periods.

8 *Remote Control Sensor*

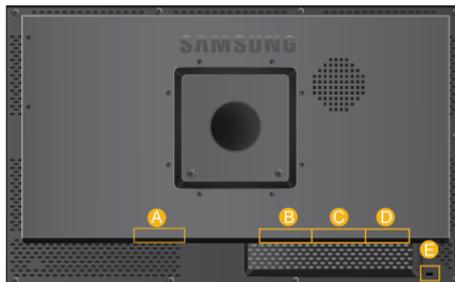
Aim the remote control towards this spot on the LCD Display.

## Rear



**Note**

For detailed information concerning cable connections, refer to Connecting Cables under Setup. The LCD Display 's configuration at the back may vary slightly depending on the model.



A



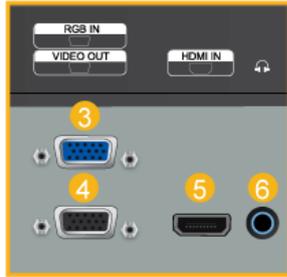
1 *POWER S/W ON [ | ] / OFF [O]*

Switches the LCD Display On/Off.

2 *POWER*

The power cord plugs into the LCD Display and the wall outlet.

B



**3** *RGB IN*

Connect the RGB IN terminal at the back of your product to your computer.

**4** *VIDEO OUT*

Connect between the [VIDEO OUT] port on the product and the D-Sub port on your monitor using a D-Sub cable.

**5** *HDMI IN*

Connect the HDMI terminal at the back of your LCD Display to the HDMI terminal of your digital output device using a HDMI cable.

**6** 

Connect your headphones to the Head-phone connection terminal.

**C**



**7** *LAN*

LAN Connection Terminal

**8** 

Keyboard / Mouse, Mass Storage Device Compatible.

**D**



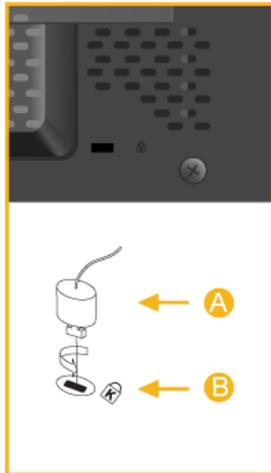
**9** *AUDIO IN*

Connect the audio cable for your product to the audio port on the back of your computer.

**10** *RS232C IN*

MDC(Multiple Display Control) Program Port

**E**



### *Kensington Lock*

The Kensington Lock is a device used to physically fix the system when using it in a public place. The locking device has to be purchased separately. The appearance and locking method may differ from the illustration depending on the manufacturer. Refer to the manual provided with the Kensington Lock for proper use. The locking device has to be purchased separately.

#### **Note**

The location of the Kensington Lock may be different depending on the model.

### **Using the Anti-Theft Kensington Lock**

1. Insert the locking device into the Kensington slot on the Monitor **B** and turn it in the locking direction **A**.
2. Connect the Kensington Lock cable.
3. Fix the Kensington Lock to a desk or a heavy stationary object.

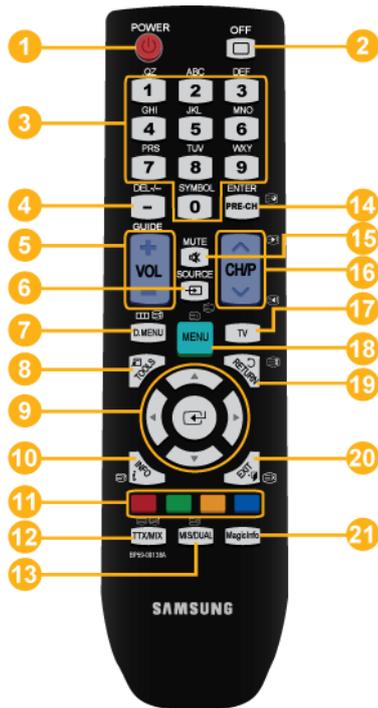
#### **Note**

See Connecting Cables for further information regarding cable connections.

### **Remote Control**

#### **Note**

The performance of the remote control may be affected by a TV or other electronic device operating near the LCD Display, causing a malfunction due to interference with the frequency.



- 1 POWER
- 2 OFF
- 3 Number Buttons
- 4 DEL / GUIDE button
- 5 + VOL -
- 6 SOURCE
- 7 D.MENU
- 8 TOOLS
- 9 Up-Down Left-Right buttons
- 10 INFO
- 11 COLOR BUTTONS
- 12 TTX/MIX
- 13 MTS/DUAL
- 14 ENTER/PRE-CH
- 15 MUTE
- 16 CH/P
- 17 TV
- 18 MENU
- 19 RETURN
- 20 EXIT
- 21 MagicInfo

- 1. POWER  
Turns the product On.
- 2. OFF  
Turns the product Off.
- 3. Number Buttons  
Used to enter the password during the OSD adjustment or to use **MagicInfo**.
- 4. DEL / GUIDE button  
The "-" button is used to select Digital channels.  
Electronic Program Guide (EPG) display.  
- This function does not work for this LCD Display.
- 5. + VOL -  
Adjusts the audio volume.
- 6. SOURCE  
Press the button to change the input signal SOURCE.  
Changing the SOURCE is only allowed for external devices that are connected to the LCD Display at the time.
- 7. D.MENU  
DTV menu display  
- This function does not work for this LCD Display.
- 8. TOOLS  
Use to quickly select frequently used functions.

- 9. Up-Down Left-Right buttons
- This function does not work for this LCD Display.

Moves from one menu item to another horizontally, vertically or adjusts selected menu values.
- 10.  INFO
Current picture information is displayed on the upper left corner of the screen.
- 11. COLOR BUTTONS
Press to add or delete channels and to store channels to the favorite channel list in the "Channel List" menu.

- This function does not work for this LCD Display.
- 12.  TTX/MIX
TV channels provide written information services via teletext.

- Teletext Buttons

- This function does not work for this LCD Display.
- 13. MTS/DUAL
- This function does not work for this LCD Display.

*MTS-*

You can select MTS (Multichannel Television Stereo) mode.

	Audio Type	MTS/S_Mode	Default
FM Stereo	Mono	Mono	Manual Change
	Stereo	Mono ↔ Stereo	
	SAP	Mono ↔ SAP	Mono

*DUAL-*

STEREO/MONO, DUAL I / DUAL II and MONO/NICAM MONO/NICAM STEREO can be operated depending on the broadcasting type by using the DUAL button on the remote control while watching TV.
- 14.  ENTER/PRE-CH
This button is used to return to the immediately previous channel.

- This function does not work for this LCD Display.
- 15.  MUTE
Pauses (mutes) the audio output temporarily. The audio comes back on if MUTE or - VOL + is pressed in the Mute mode.
- 16.  CH/P 
In **TV** mode, selects TV channels.

- This function does not work for this LCD Display.
- 17. TV
Selects the TV mode directly.

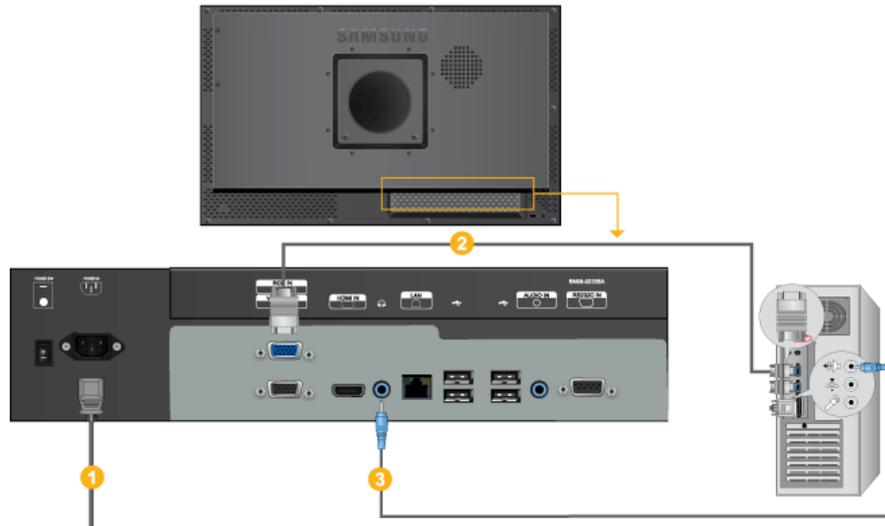
- This function does not work for this LCD Display.
- 18.  MENU
Opens the on-screen menu and exits from the menu or closes the adjustment menu.

- 19.  RETURN Returns to the previous menu.
- 20.  EXIT Exits from the menu screen.
- 21. MagicInfo MagicInfo Quick Launch Button.

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# Connections

## Connecting a Computer



- 1 Connect the power cord for your LCD Display to the power port on the back of the LCD Display. Turn on the power switch.
- 2 Connect the D-sub to the 15-pin, RGB port on the back of your LCD Display and the 15 pin D-sub Port on the computer.



- 3 Connect the audio cable for your LCD Display to the audio port on the back of your computer.

### Note

- Turn on both your computer and the LCD Display.
- Contact a local SAMSUNG Electronics Service Center to buy optional items.

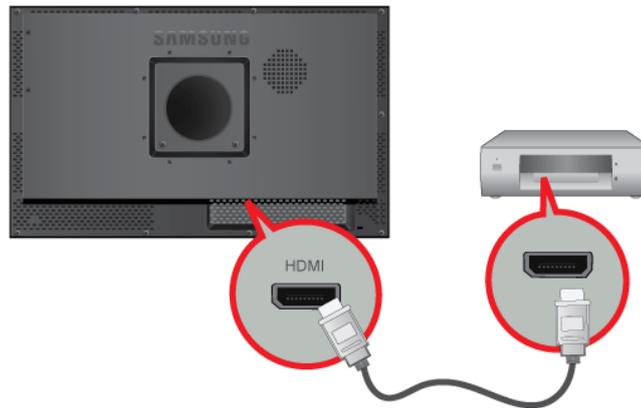
## Connecting to Other devices

### Note

AV input devices such as DVD players, VCRs or camcorders as well as your computer can be connected to the LCD Display. For detailed information on connecting AV input devices, refer to the contents under Adjusting Your LCD Display.

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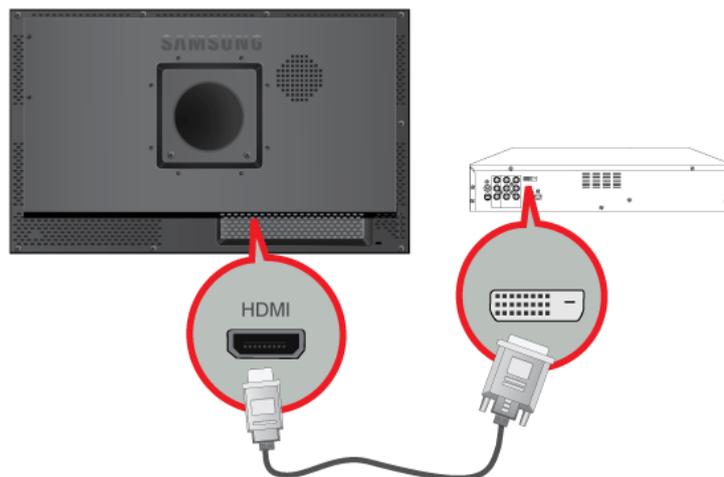
## Connecting Using a HDMI Cable



 **Note**

- Connect input devices such as a Blu-Ray/DVD player to the HDMI IN terminal of the LCD Display using an HDMI cable.
- You cannot connect a PC to the HDMI terminal.

## Connecting Using a DVI to HDMI Cable



 **Note**

- Connect the DVI output terminal of a digital output device to the HDMI terminal of the LCD Display using a DVI to HDMI cable.
- Connect the red and white jacks of an RCA to stereo (for PC) cable to the same colored audio output terminals of the digital output device, and connect the opposite jack to the AUDIO IN terminal of the LCD Display.

## Connecting to another Monitor

Connect between the [VIDEO OUT]port on the product and the D-Sub port on your monitor using a D-Sub cable.

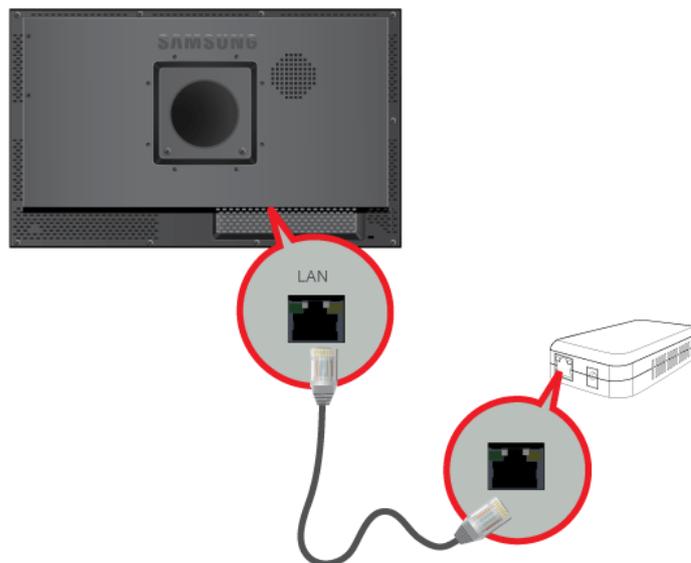
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 **Note**

- Connect to the [VIDEO OUT] port to display the same picture on another monitor.  
(For presentation purposes)

### Connecting a LAN Cable



 **Note**

Connect the LAN cable.

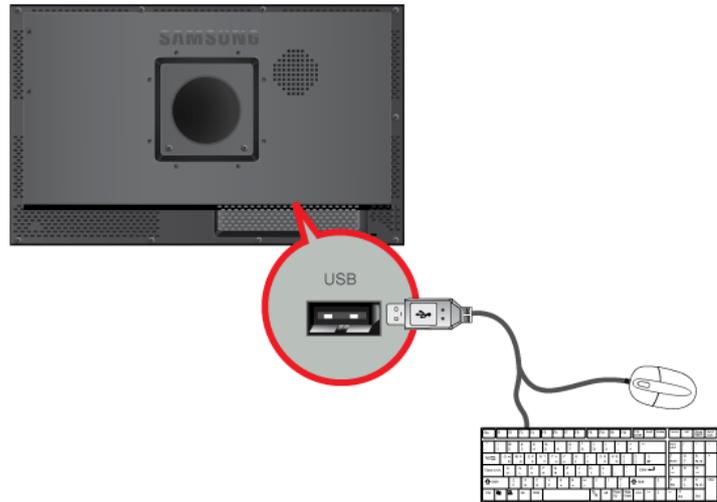
### Connecting a USB device

You can connect USB devices such as a mouse or keyboard.

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## Connections

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# Troubleshooting

## Self-Test Feature Check



Check the following items yourself before calling for assistance. Contact a Service Center for problems that you cannot solve by yourself.

## Self-Test Feature Check

1. Turn off both your computer and the LCD Display.
2. Unplug the video cable from the back of the computer.
3. Turn on the LCD Display.

The figure shown below ("**Check Signal Cable**") appears on a black background when the LCD Display is working normally even though no video signal is detected: While in the Self-Test mode, the LED power indicator remains green and the figure moves around on the screen.



4. Turn off your LCD Display and reconnect the video cable; then turn on both your computer and the LCD Display

If your LCD Display screen remains blank after using the previous procedure, check your video controller and computer system; your LCD Display is functioning properly.

## Warning Messages

You can even view the screen at a resolution of 1920 x 1080. However, you will receive the following message for a minute; You can choose to change the screen resolution or stay in the current mode during that time. If the resolution is more than 85Hz, you will see the black screen because the LCD Display does not support over 85Hz.



Refer to Specifications > Preset Timing Modes for the resolutions or frequencies supported by the LCD Display.

## Maintenance and Cleaning

- 1) Maintaining the LCD Display Case.

Clean with a soft cloth after disconnecting the power cord.

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- Do not use benzene, thinner or other flammable substances.

## 2) Maintaining the Flat Panel Display Screen.

Clean with a soft cloth (cotton flannel).



- Never use acetone, benzene or thinner.  
(They may cause flaws or deformation of the screen surface.)
- The user is responsible for any damage caused by using these substances.

## Symptoms and Recommended Actions



### Note

A LCD Display recreates visual signals received from the computer. Therefore, if there is a problem with the computer or the video card, this can cause the LCD Display to become blank, have poor coloring, become noisy, etc. In this case, first check the source of the problem, and then contact a Service Center or your dealer.

1. Check if the power cord and the video cables are properly connected to the computer.
2. Check if the computer beeps more than 3 times when booting.  
(If it does, request service.)
3. If you installed a new video card or if you assembled the PC, check if you installed the Adaptor(video).
4. Check if the scanning ratio of the video screen is set to between 50 Hz ~ 85 Hz.  
(Do not exceed 60Hz when using the maximum resolution.)
5. If you have problems in installing the Adaptor (video) driver, boot the computer in Safe Mode, remove the Display Adaptor in the "Control Panel -> System -> Device Administrator" and then reboot the computer to reinstall the Adaptor (video) driver.

## Check List



### Note

- The following table lists possible problems and their solutions. Before calling for assistance, check the information in this section to see if you can remedy any problems for yourself. If you do need assistance, please call the phone number on the Information section or contact your dealer.
- For more network-related information, refer to the MagicInfo Troubleshooting section.

## Problems related to the Installation (PC Mode)



### Note

Problems related to the LCD Display installation and their solutions are listed.

Q: The LCD Display screen flickers.

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A: Check if the signal cable between the computer and the LCD Display is securely connected.

(Refer to Connecting a Computer)

## Problems related to the Screen



Problems related to the LCD Display screen and their solutions are listed.

Q: The screen is blank and the power indicator is off.

A: Ensure that the power cord is firmly connected and the LCD Display is on.

(Refer to the Connecting a Computer)

Q: "**Check Signal Cable**" message.

A: Ensure that the signal cable is firmly connected to the PC or video sources.

(Refer to the Connecting a Computer)

A: Ensure that the PC or video sources are turned on.

Q: "**Not Optimum Mode**" message.

A: Check the maximum resolution and the frequency of the video adaptor.

A: Compare these values with the data in the Preset Timing Modes Chart.

Q: The picture rolls vertically.

A: Check if the signal cable is securely connected. Re-connect it, if necessary.

(Refer to Connecting a Computer)

Q: The image is not clear; picture is blurred.

A: Run Frequency **Coarse** and **Fine** tuning.

A: Turn on again after removing all accessories (video extension cable, etc.)

A: Set the resolution and frequency to the recommended ranges.

Q: The picture image is unstable and shakes.

A: Check if the resolution and frequency set for the computer video card falls in the range supported by the LCD Display. If not, reset them referring to the current Information under the LCD Display menu and Preset Timing Modes

Q: Ghost images are shown in the picture.

A: Check if the resolution and frequency set for the computer video card falls in the range supported by the LCD Display. If not, reset them referring to the current Information under the LCD Display menu and Preset Timing Modes

Q: The image is too light or too dark.

A: Adjust the **brightness** and **contrast**.

(Refer to the **Brightness, Contrast**)

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- Q: The screen color is inconsistent.
- A: Adjust color using **Custom** under OSD Color Adjustment menu.
- Q: The color image is distorted by dark shadows.
- A: Adjust color using **Custom** under OSD Color Adjustment menu.
- Q: The color white is poor.
- A: Adjust color using **Custom** under OSD Color Adjustment menu.
- Q: The Power Indicator blinks.
- A: The LCD Display is currently saving the changes made in the settings to the OSD memory.
- Q: The screen is blank and the power indicator light blinks every 0.5 or 1 seconds.
- A: The LCD Display is using its power management system.
- A: Press any key on the keyboard.
- Q: The screen is blank and it is blinking.
- A: If you see the "**TEST GOOD**" message on the screen when you pressing the MENU button, check the cable connection between the LCD Display and the computer to ensure that the connector is properly connected.

### Problems related to Audio



Problems related to audio signals and their solutions are listed below.

- Q: No sound.
- A: Ensure that the audio cable is firmly connected to both the audio-in port on your LCD Display and the audio-out port on your sound card.
- (Refer to the Connecting a Computer)
- A: Check the volume level.
- Q: The sound level is too low.
- A: Check the volume level.
- A: If the volume is still too low after turning the control to its maximum, check the volume control on the computer sound card or software program.
- Q: The sound is too high or too low.
- A: Adjusts the **Treble** and **Bass** to the appropriate levels.

### Problems related to the Remote Control



Problems related to the remote control and their solutions are listed.

- Q: The remote control buttons do not respond.
-

- A: Check the polarities (+/-) of the batteries.
- A: Check if the batteries are empty.
- A: Check if the power is on.
- A: Check if the power cord is securely connected.
- A: Check if a special fluorescent or neon lamp is on in the vicinity.

## Q & A

Q: How can I change the frequency?

A: The frequency can be changed by reconfiguring the video card.



### Note

That video card support can vary, depending on the version of the driver used. (Refer to the computer or the video card manual for details.)

Q: How can I adjust the resolution?

A: Windows XP:

Set the resolution in the Control Panel → Appearance and Themes → Display → Settings.

A: Windows ME/2000:

Set the resolution in the Control Panel → Display → Settings.

\* Contact the video card manufacturer for details.

Q: How can I set the Power Saving function?

A: Windows XP:

Set the resolution in the Control Panel → Appearance and Themes → Display → Screen Saver.

Set the function in the BIOS-SETUP of the computer. (Refer to the Windows / Computer Manual).

A: Windows ME/2000:

Set the resolution at the Control Panel → Display → Screen Saver.

Set the function in the BIOS-SETUP of the computer. (Refer to the Windows / Computer Manual).

Q: How can I clean the outer case/LCD Panel?

A: Disconnect the power cord and then clean the LCD Display with a soft cloth, using either a cleaning solution or plain water.

Do not leave any detergent or scratches on the case. Do not let any water enter the LCD Display.

Q: How can I play the video?

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A: The video supports the MPEG1 and WMV codecs only. Install the corresponding codec to play the video. Note that some of the codecs can be incompatible.



**Note**

Before calling for assistance, check the information in this section to see if you can remedy any problems yourself. If you do need assistance, please call the phone number on the Information section or contact your dealer.