LI2341t Wide Flat Panel Monitor
User's Guide

Product numbers

LI2341twF

3833-HB3

Contents

Safety information
General Safety guidelines

For tips to help you use your computer safely, go to:

http://www.lenovo.com/safety

Before installing this product, read the Safety Information.

⚠

DANGER

To avoid shock hazard:

*   Do not remove the covers.
*   Do not operate this product unless the stand is attached.
*   Do not connect or disconnect this product during an electrical storm.
*   The power cord plug must be connected to a properly wired and grounded power outlet.
*   Any equipment to which this product will be attached must also be connected to properly wired and grounded power outlets.
*   To isolate the monitor from the electrical supply, you must remove the plug from the power outlet. The power outlet should be easily accessible.

To take special precautions to avoid the introduction of hazards when operating, installing, servicing, transporting or storing equipment, the necessary instructions shall be made available.

To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Handling:

*   If your monitor weighs more than 18 kg (39.68 lb), it is recommended that it be moved or lifted by two people.

Chapter 1. Getting started

This User's Guide contains detailed information on the your Flat Panel Monitor. For a quick overview, please see the Setup Poster that was shipped with your monitor.

Shipping contents

The product package should include the following items:
*   Setup Poster
*   Reference and Driver CD
*   Flat Panel Monitor
*   AC/DC Power Adapter
*   Power Cord
*   Analog Interface Cable
*   Audio Cable
*   USB Cable
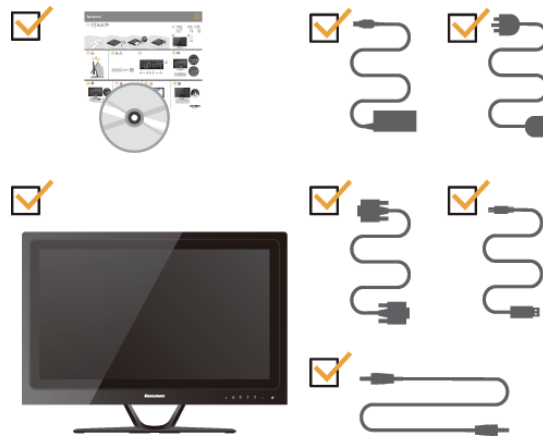
Notice for use

To set up your monitor, please see the illustrations below.

Note: Do not touch the monitor within the screen area. The screen area is glass and can be damaged by rough handling or excessive pressure.

1.   Carefully lay the monitor on a flat surface.
2.   Put the stand and base to the monitor.

Product overview

This section will provide information on adjusting monitor positions, setting user controls, and using the cable lock slot.

Adjusting the tilt

The illustration below shows the tile and swivel range of the monitor. For more information, see "Positioning your monitor"on page 2-1.
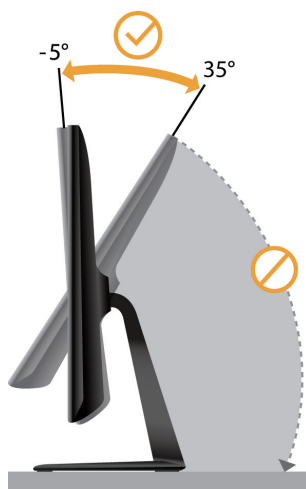
Monitor controls

Your monitor has controls on the front which are used to adjust the display.

For information on how to use these controls, please see "Adjusting your monitor image"on page 2-3.

Cable lock slot

Your monitor is equipped with a cable lock slot located on the rear of your monitor (in the lower position).
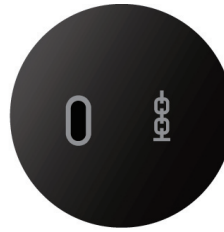
Setting up your monitor

This section provides information on how to set up your monitor.

Connecting and turning on your monitor

Note: Be sure to read the Safety information located on page iii before carrying out this procedure.

1. Power off your computer and all attached devices, and unplug the computer power cord.

2. Connect the cables according to below icon indication.

HDMI   DVI   ♪⊕   ♪⊖   ⊕   USB   D-SUB
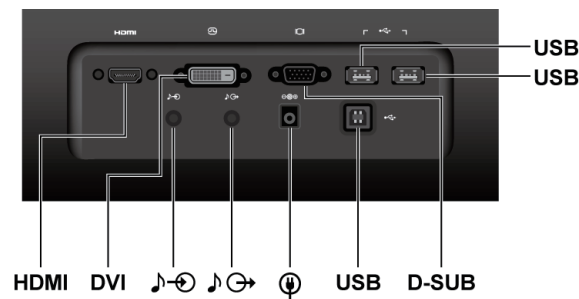
3. Connect one end of the analog signal cable to the monitor D-Sub connector and the other end to the computer.

D-SUB
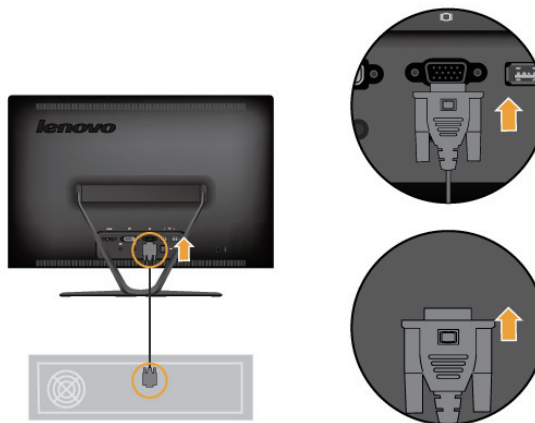
4. Connect the digital cable to the DVI connector of the monitor and the other end on the back of the computer.
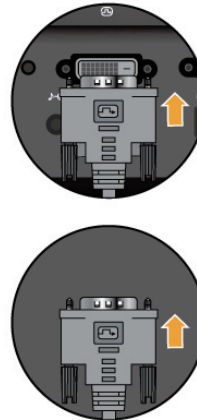
5. Connect one end of the HDMI cable to the monitor HDMI connector and the other end to the computer if it has one HDMI output connector.

HDMI
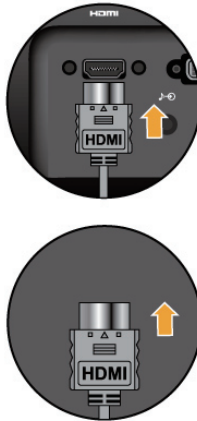
6. Use the USB 2.0 cable (included with the monitor) to connect the monitor to one of the USB 2.0 ports of the computer. Windows will automatically search for the Touch Module, and proceed with the installation of the driver.

Note: Connect Monitor's USB cable to an available USB 2.0 port on computer. Windows automatically detects the device.

USB
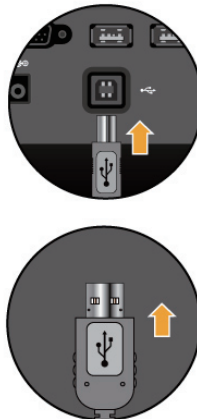
7. Connect the Audio In cable from the audio output of computer to the audio input terminal of the monitor.

8. Connect the headphone to the headphone output terminal of the monitor.

Note: Please be aware that excessive and/or extreme volume might damage your hearing ability.

9. Connect the AC power cord to an AC/DC power adapter, then to the monitor, and plug the monitor power cord and the computer cord into grounded electrical outlets.

Note: 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 3G0.75mm2) shall be used. Alternative a flexible cord be of synthetic rubber according to IEC 60245 (designation H05RR-F 3G 0.75mm2) shall be used.
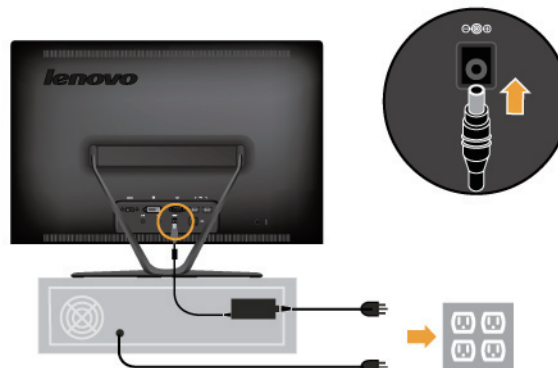
10. Power on the monitor and the computer.

11. To install the monitor driver, insert the Reference and Driver CD, click Install driver, and follow the on-screen instructions.

12. To optimize your monitor image, press the Automatic Image Setup key. Automatic image setup requires that the monitor is warmed up for at least 15 minutes. This is not required for normal operation.

Note: If automatic image setup does not establish the image that you prefer, perform manual image setup. See "Manual image setup"on page 3-4.

Chapter 2. Adjusting and using your monitor

This section will give you information on adjusting and using your monitor.

Comfort and accessibility

Good ergonomic practice is important to get the most from your personal computer and to avoid discomfort. Arrange your workplace and the equipment you use to suit your individual needs and the kind of work that you perform. In addition, use healthy work habits to maximize your performance and comfort while using your computer. For more detailed information on any of these topics, visit the Healthy Computing Web site at: http://www.lenovo.com/healthycomputing/.

Arranging your work area

Use a work surface of appropriate height and available working area to allow you to work in comfort.

Organize your work area to match the way you use materials and equipment. Keep your work area clean and clear for the materials that you typically use and place the items that you use most frequently, such as the computer mouse or telephone, within the easiest reach.

Equipment layout and setup play a large role in your working posture. The following topics describe how to optimize equipment setup to achieve and maintain good working posture.

Positioning your monitor

Position and adjust your computer monitor for comfortable viewing by considering the following items:

- **Viewing distance:** Optimal viewing distances for monitors range from approximately 510mm to 760mm (20 in to 30 in) and can vary depending on ambient light and time of day. You can achieve different viewing distances by repositioning your monitor or by modifying your posture or chair position. Use a viewing distance that is most comfortable for you.
- **Monitor height:** Position the monitor so your head and neck are in a comfortable and neutral (vertical, or upright) position. If your monitor does not have height adjustments, you might have to place books or other sturdy objects under the base of the monitor to achieve the desired height. A general guideline is to position the monitor such that the top of the screen is at or slightly below your eye-height when you are comfortably seated. However, be sure to optimize your monitor height so the line of site between your eyes and the center the monitor suits your preferences for visual distance and comfortable viewing when your eye muscles are in a relaxed state.
- **Tilt:** Adjust the tilt of your monitor to optimize the appearance of the screen content and to accommodate your preferred head and neck posture.
- **General location:** Position your monitor to avoid glare or reflections on the screen from overhead lighting or nearby windows.

  Note: For displays with glossy bezels the user should consider the placement of the display as the bezel may cause disturbing reflections from surrounding light and bright surfaces.

The following are some other tips for comfortable viewing of your monitor:

- Use adequate lighting for the type of work you are performing.
- Use the monitor brightness, contrast controls, if equipped to optimize the image on your screen to meet your visual preferences.
- Keep your monitor screen clean so you can focus on the screen's contents.

Any concentrated and sustained visual activity can be tiring for your eyes. Be sure to periodically look away from your monitor screen and focus on a far object to allow your eye muscles to relax. If you have questions on eye fatigue or visual discomfort, consult a vision care specialist for advice.

Quick tips for healthy work habits

The following information is a summary of some important factors to consider to help you remain comfortable and productive while you use your computer.

- **Good posture starts with equipment setup:** The layout of your work area and the setup of your computer equipment have a large effect on your posture while using your computer. Be sure to optimize the position and orientation of your equipment by following the tips outlined in "Arranging your work area"on page 2-1 so you can maintain a comfortable and productive posture. Also, be sure to use the adjustment capabilities of your computer components and office furniture to best suit your preferences now and as your preferences change over time.

- **Minor changes in posture can help avoid discomfort:** The longer you sit and work with your computer, the more important it is to observe your working posture. Avoid assuming any one posture for an extended period of time. Periodically make minor modifications in your posture to help deter any discomforts that might arise. Make use of any adjustments that your office furniture or equipment provide to accommodate changes in posture.

- **Short, periodic breaks help ensure healthy computing:** Because computing is primarily a static activity, it is particularly important to take short breaks from your work. Periodically, stand up from your work area, stretch, walk for a drink of water, or otherwise take a short break from using your computer. A short break from work gives your body a welcome change in posture and helps to ensure you remain comfortable and productive while you do work.

Adjusting your monitor image

This section describes the control features to adjust your monitor image.

Using the direct access controls

The direct access controls can be used when the On Screen Display (OSD) is not displayed.

Table 2-1. Direct access controls

Icon	Name	Description
⏻	Power	Power On/ Off.
↵	Menu	Enter menu.
		Press and hold for 10 seconds to lock/unlock menu.
	OK	In the OSD menu, confirms the selection.
🔊▲ →	Right	In the OSD menu, moves the selection highlight right or change setting.
	Volume Increase	Increase the volume of speaker and audio out.
🔊▼ ←	Left	In the OSD menu, moves the selection highlight left or change setting.
	Volume Decrease	Decre ase the volume of speaker and audio out.
⌦ ↪	Image Setup	Activates automatic image adjustment.
	DDC-CI	Press and hold for 10 seconds to enable or disable the DDC-CI function.
	Exit	Exit from menu.
✦ 1↹2	Input Change	Switches the video input source.
	Novo Vision	Direct access to Novo Vision adjustment.
🔇	Mute setting	ON/OFF the volume of speaker and audio out.

Using the On-Screen Display (OSD) controls

To adjust the settings, the user controls can be viewed through the OSD.
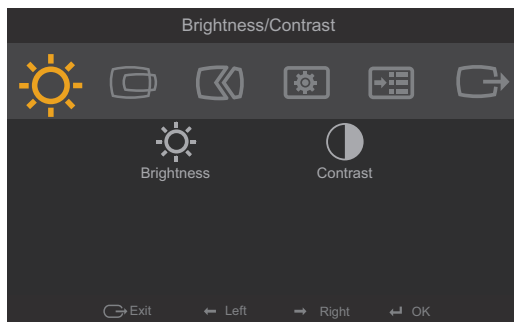
To use the controls:

1. Press ↵ to open the main OSD menu.

2. Use ← or → to move among the icons. Select an icon and press ↵ to access that function. If there is a sub-menu, you can move between options using ← or → , then press ↵ to select that function. Use ← or → to make adjustments. Press ↵ to save.

3. Press ⤷ to move backwards through the sub-menus and exit from the OSD.

4. Press and hold ↵ for 10 seconds to lock the OSD. This will prevent accidental adjustments to the OSD. Press and hold ↵ for 10 seconds to unlock the OSD and allow adjustments to the OSD.

5. Enables DDC/CI by default. Use OSD Exit Key, Press and hold ⤷ for 10 seconds to disable / enable DDC/CI function. The words "DDC/CI disable" shows on the screen.

Table 2-2. OSD functions

OSD Icon on Main Menu	Submenu	Description	Controls and Adjustments (Analog)		Controls and Adjustments (DVI/HDMI)
☼ Brightness/ Contrast	☼ Brightness	Adjusts overall brightness	☼	☼	Same as Analog
	◑ Contrast	Adjusts difference between light and dark areas	○	◑	
▭ Image Position	▭ Horizontal Position	Moves the image left or right.	▭	▭	Controls Locked - not required for DVI/ HDMI input
	▭ Vertical Position	Moves the image up or down.	▭	▭	
◁ Image Setup	◁ Automatic	Optimizes image (size, position, phase and clock).			
	◁ Manual	Manually optimizes the image. See "Manual image setup"on page 3-4. • Clock • Phase • Save			
⚙ Image Properties	☁ Color	Adjusts intensity of red, green, and blue. Preset mode • Neutral • sRGB • Reddish • Bluish Custom • Red: Increases or decreases the saturation of 'red' in the image. • Green: Increases or decreases the saturation of 'green' in the image. • Blue: Increases or decreases the saturation of 'blue' in the image. • Save: Saves the custom color choices.			Same as Analog
	1⇄2 Input Signal	This monitor can accept video signals through three different connectors. Most desktop computers use a D-SUB connector. Select digital among OSD Controls when you use HDMI&DVI connector. - Selects Analog (D-SUB) - Selects Digital (DVI) - Selects HDMI (HDMI)			
	⊕ Scaling	Selects type of scaled image. • Original AR: same aspect ratio with input signal. • Full Screen: expand image to full screen.			

Table 2-2. OSD functions

OSD Icon on Main Menu	Submenu	Description	Controls and Adjustments (Analog)	Controls and Adjustments (DVI/HDMI)
⚙ Image Properties	✦ Novo Vision	Screen prioritization. • Text Mode • Web pic Mode • Video Mode • Split-screen Display		Same as Analog
➡ Options	ⓘ Information	Shows resolution, refresh rate, and product details. **Note:** This screen does not allow any changes to the settings.		Same as Analog
	💬 Language	Changes languages of menu. **Note:** The language chosen only affects the language of the OSD. It has no effect on any software running on the computer.		
	⊹ Position	Adjusts menu location. Default Default returns the menu position to the default settings. Custom • Horizontal: Changes the horizontal position of the OSD. • Vertical: Changes the vertical position of the OSD. Save • Save the custom position choices.		Same as Analog
	Ⓡ Reset	• Cancel • Reset Reset monitor to the original settings.		
	⏱ Accessibility	Changes button repeat rate and menu time-out setting. ⏱ Button repeat rate: Select ← or → to change. • Off • Default • Slow ⏱ Menu time out: Sets the length of time the OSD will remain active after the last time a button is pressed.		
	♪ Mute	• Mute On: Turn Off the monitor's touch key volume. • Mute Off: Turn On the monitor's touch key volume.		
↪ Exit		Exit from menu.		

Selecting a supported display mode

The display mode the monitor uses is controlled by the computer. Therefore, refer to your computer documentation for details on how to change display modes.

The image size, position and shape might change when the display mode changes. This is normal and the image can be readjusted using automatic image setup and the image controls.

Unlike CRT monitors, which require a high refresh rate to minimize flicker, LCD or Flat Panel technology is inherently flicker-free.

Note: If your system has previously been used with a CRT monitor and is currently configured to a display mode outside the range of this monitor, you may need to reattach the CRT monitor temporarily until you have re-configured the system; preferably to 1920 x 1080 at 60 Hz, which is the Native Resolution Display mode.

The display modes shown below have been optimized at the factory.

Table 2-3. Factory set display modes

Address ability	Refresh rate
PAL	50 Hz
SECAM	50 Hz
640 x 350	70 Hz
720 x 400	70 Hz
640 x 480	60 Hz, 72 Hz, 75 Hz
800 x 600	56 Hz, 60 Hz, 72 Hz, 75 Hz
832 x 624	75 Hz
1024 x 768	60 Hz, 70 Hz, 75 Hz
1152 x 864	75 Hz
1280 x 1024	60 Hz, 70 Hz, 75 Hz
1280 x 768	60 Hz
1366 x 768	60 Hz
1440 x 900	60 Hz
1600 x 900	60 Hz, 75 Hz
1680 x 1050	60 Hz
1920 x 1080	60 Hz
480p	60 Hz
576p	50 Hz
720p	50 Hz, 60 Hz
1080p	50 Hz, 60 Hz

Understanding power management

Power management is invoked when the computer recognizes that you have not used your mouse or keyboard for a user-definable period. There are several states as described in the table below.

For optimal performance, switch off your monitor at the end of each working day, or whenever you expect to leave it unused for long periods during the day.

Table 2-4. Power indicator

State	Power Indicator	Screen	Restoring Operation
On	Steady white	Normal	
Standby/Suspend	Amber	Blank	Press a key or move the mouse There may be a slight delay before the image reappears. Standby also occurs if there is no image output to the monitor.
Off	Off	Blank	Press the power button There may be a slight delay before the image reappears.

Caring for your monitor

Be sure to turn off the power before you perform any maintenance on the monitor.

Do not:

- Apply water or liquid directly to your monitor.
- Use solvents or abrasives.
- Use flammable cleaning materials to clean your monitor or any other electrical equipment.
- Touch the screen area of your monitor with sharp or abrasive items. This type of contact may cause permanent damage to your screen.
- Use any cleaner which contains an anti-static solution or similar additives. This may harm the coating of the screen area.

Do:

- Lightly dampen a soft cloth with water and use this to gently wipe the covers and the screen.
- Remove grease or finger marks with a damp cloth and a little mild detergent.

Detaching the monitor base

step 1: Place the monitor on a soft and flat surface.

step 2: Remove the base from the monitor.

Chapter 3. Reference information

This section contains monitor specifications, instructions to manually install the monitor driver, troubleshooting information, and service information.

Monitor specifications

Table 3-1. Monitor specifications for type-model LI2341twF

Dimensions	Depth	196.4 mm (7.7 in.)
	Height	446.5 mm (17.6 in.)
	Width	589.2 mm (23.1 in.)
Stand	Tilt	Range: -5°~35°
Image	Viewable image size	584.2 mm (23 in.)
	Maximum height	286.416 mm (11.28 in.)
	Maximum width	509.184 mm (20.05 in.)
	Pixel pitch	0.265 mm (0.01 in.)
Power input	Supply voltage	90-264VAC (100~240VAC+/-10%)
	Max supply current	19Vdc ⎓ 3.42A (FSP, FSP065-REB/ Li Shin, PA-1650-52/) 20Vdc ⎓ 2.0A (Liteon, PA-1400-12)
Power consumption **Note:** Power consumption figures are for the monitor and the power supply combined	Normal operation	<40W
	Standby/Suspend	<0.5W (Analog), <0.5W(Digital), <0.5W HDMI
	Off	<0.5W at 100Vac & 240Vac
Audio	Speaker	1.5W x 2
Video input (Analog)	Input signal	Analog Direct Drive, 75 ohm 0.7V
	Horizontal addressability	1920 pixels (max)
	Vertical addressability	1080 lines (max)
	Clock frequency	205 MHz
Video input (DVI)	Interface	DVI
	Input signal	VESA TMDS (Panel Link™)
	Horizontal addressability	1920 pixels (max)
	Vertical addressability	1080 lines (max)
	Clock frequency	165 MHz

Table 3-1. Monitor specifications for type-model LI2341twF

Video input (HDMI)	Input signal	HDMI
	Horizontal addressability	1920 pixels (max)
	Vertical addressability	1080 lines (max)
	Clock frequency	165 MHz
Communications	VESA DDC	CI
Supported Display Modes	Horizontal frequency	30 kHz - 83 kHz
	Vertical frequency	50 Hz - 75 Hz
	Native Resolution	1920 x 1080 at 60 Hz
Temperature	Operating	0° to 40° C (32° to 104° F)
	Storage	-20° to 60° C (-4° to 140° F)
	Shipping	-20° to 60° C (-4° to 140° F)
Humidity	Operating	8% to 80% non-condensing
	Storage	5% to 95% non-condensing
	Shipping	5% to 95% non-condensing

Troubleshooting

If you have a problem setting up or using your monitor, you might be able to solve it yourself. Before calling your dealer or Lenovo, try the suggested actions that are appropriate to your problem.

Table 3-2. Troubleshooting

Problem	Possible cause	Suggested action	Reference
The words "Out of Range" are shown on the screen, and the power indicator is flashing white.	The system is set to a display mode which is not supported by the monitor.	If you are replacing an old monitor, reconnect it and adjust the display mode to within the specified range for your new monitor. If using a Windows system, restart the system in safe mode, then select a supported display mode for your computer. If these options do not work, contact the Support Center.	"Selecting a supported display mode"on page 2-7
The image quality is unacceptable.	The video signal cable is not connected with the monitor or system completely.	Be sure the signal cable is firmly plugged into the system and monitor.	"Connecting and turning on your monitor"on page 1-4
	The color settings may be incorrect.	Select another color setting from the OSD menu.	"Adjusting your monitor image"on page 2-3
	The automatic image setup function was not performed.	Perform automatic image setup.	"Adjusting your monitor image"on page 2-3
The power indicator is not lit and there is no image.	• The monitor's power switch is not switched on. • The power cord is loose or disconnected. • There is no power at the outlet.	• Be sure the power cord is connected properly. • Be sure the outlet has power. • Power on the monitor. • Try using another power cord. • Try using another electrical outlet.	"Connecting and turning on your monitor"on page 1-4
Screen is blank and power indicator is amber.	The monitor is in Standby/Suspend mode.	• Press any key on the keyboard or move the mouse to restore operation. • Check the Power Options settings on your computer.	"Understanding power management"on page 2-8

Table 3-2. Troubleshooting

Problem	Possible cause	Suggested action	Reference
The power indicator is amber, but there is no image.	The video signal cable is loose or disconnected from the system or monitor.	Be sure the video cable is connected with the system properly.	"Connecting and turning on your monitor"on page 1-4
	The monitor brightness and contrast are at the lowest setting.	Adjust the brightness and contrast setting on the OSD menu.	"Adjusting your monitor image"on page 2-3
One or more of the pixels appear discolored.	This is a characteristic of the LCD technology and is not an LCD defect.	If there are more than five pixels missing, contact the Support Center.	Appendix A."Service and Support"on page A-1
• Fuzzy lines in text or a blurry image. • Horizontal or vertical lines through the image.	• Image setup has not been optimized. • Your system Display Properties setting have not been optimized.	Adjust the resolution settings on your system to match the native resolution for this monitor: 1920 x 1080 at 60 Hz.	"Adjusting your monitor image"on page 2-3
		Perform automatic image setup. If automatic image setup does not help, perform manual image setup.	"Selecting a supported display mode"on page 2-7
		When working in the native resolution, you may find additional improvements by adjusting the Dots Per Inch (DPI) setting on your system.	See the Advanced section of your system's display properties.

Manual image setup

If automatic image setup does not establish the image that you prefer, perform manual image setup.

Note: Have your monitor powered on for about 15 minutes, until the monitor warms up.

1. Press ↵ at the bottom of the monitor to open the OSD menu.
2. Use ← or → to select ⟨⟨ and press ↵ to access.
3. Use ← or → to select manual and press ↵ to access.
4. Use ← or → to select Clock and Phase adjustment.
    *   Clock (pixel frequency) adjusts the number of pixels scanned by one horizontal sweep. If the frequency is not correct, the screen shows vertical stripes and the picture does not have the correct width.
    *   Phase adjusts the phase of the pixel clock signal. With a wrong phase adjustment, the picture has horizontal disturbances in light picture.
5. When the image no longer looks distorted, save the Clock and Phase adjustments.
6. Press ⟶ to leave the OSD menu.

Manually installing the monitor driver

Below are steps for manually installing the monitor driver in Microsoft Windows 8, Microsoft Windows 7, Microsoft Windows Vista.

Installing the monitor driver in Windows 8

To use the Plug and Play feature in Microsoft Windows 8, do the following:

Note: You must download file from the Reference and Driver CD to use the Plug and Play feature in Windows 8.

1. Turn off the computer, all attached devices.
2. Ensure that the monitor is connected correctly.
3. Turn on the monitor and then the system unit. Allow your computer to start the Windows 8 operating system.
4. Open the **Display Properties** window by clicking **Start**, **Control Panel** and **Hardware** and **Sound** icon. and then clicking the **Display** icon.
5. Click the **Change the display settings** tab.
6. Click the **Advanced Settings** icon.
7. Click the **Monitor** tab.
8. Click the **Properties** button.
9. Click the **Driver** tab.
10. Click **Update Driver**, then click **Browse the computer to find the driver program**.
11. Select **Pick from the list of device driver program on the computer**.
12. Click the Have **Disk button**. Click the **Browse** button and navigate to the following directory:
     X:\Monitor Drivers
      (where X is the drive letter designator for the **CD-ROM** drive).
13. Select the "**LI2341t Wide.inf**" file and click the **Open** button. Click the **OK** button.
14. Select **LEN LI2341t Wide** and click **Next**. The files will be copied from the CD to your hard disk drive.
15. Close all open windows and remove the CD.
16. Restart the system. The system will automatically select the maximum refresh rate and corresponding Color Matching Profiles.

Note: On LCD monitors, unlike CRTs, a faster refresh rate does not improve display quality. Lenovo recommends using either 1920 x 1080 at a refresh rate of 60 Hz, or 640 x 480 at a refresh rate of 60 Hz.

Installing the monitor driver in Windows 7

To use the Plug and Play feature in Microsoft Windows 7, do the following:

Note: You must download file from the Reference and Driver CD to use the Plug and Play feature in Windows 7.

1. Turn off the computer, all attached devices.

2. Ensure that the monitor is connected correctly.

3. Turn on the monitor and then the system unit. Allow your computer to start the Windows 7 operating system.

4. Open the **Display Properties** window by clicking **Start**, **Control Panel** and **Hardware** and **Sound** icon. and then clicking the **Display** icon.

5. Click the **Change the display settings** tab.

6. Click the **Advanced Settings** icon.

7. Click the **Monitor** tab.

8. Click the **Properties** button.

9. Click the **Driver** tab.

10. Click **Update Driver**, then click **Browse the computer to find the driver program**.

11. Select **Pick from the list of device driver program on the computer**.

12. Click the Have **Disk button**. Click the **Browse** button and navigate to the following directory:

    X:\Monitor Drivers
    (where X is the drive letter designator for the **CD-ROM** drive).

13. Select the "**LI2341t Wide.inf**" file and click the **Open** button. Click the **OK** button.

14. Select **LEN LI2341t Wide** and click **Next**. The files will be copied from the CD to your hard disk drive.

15. Close all open windows and remove the CD.

16. Restart the system. The system will automatically select the maximum refresh rate and corresponding Color Matching Profiles.

Note: On LCD monitors, unlike CRTs, a faster refresh rate does not improve display quality. Lenovo recommends using either 1920 x 1080 at a refresh rate of 60 Hz, or 640 x 480 at a refresh rate of 60 Hz.

Installing the monitor driver in Windows Vista

To use the Plug and Play feature in Microsoft Windows Vista, do the following:

Note: You must download file from the Reference and Driver CD to use the Plug and Play feature in Windows Vista.

1. Turn off the computer and all attached devices.
2. Ensure that the monitor is connected correctly.
3. Turn on the monitor and then the system unit. Allow your computer to start the Windows Vista operating system.
4. Click **Start**, **Control Panel** and then click the **Hardware** and **Sound** icon.
5. Click the **Personalization** icon.
6. Click the **Display Settings** icon.
7. Click the **Advanced Settings** button.
8. Click the **Monitor** tab.
9. Click the **Properties** button.
10. Click the **Driver** tab.
11. Click **Update Driver**, then click **Browse the computer to find the driver program**.
12. Select **Pick from the list of device driver program on the computer**.
13. Click the **Have Disk** button. Click the **Browse** button and navigate to the following directory:
    X:\Monitor Drivers
    (where X is the drive letter designator for the **CD-ROM** drive).
14. Select the "**LI2341t Wide.inf**" file and click the **Open** button. Click the **OK** button.
15. Select **LEN LI2341t Wide** and click **Next**. The files will be copied from the CD to your hard disk drive.
16. Close all open windows and remove the CD.
17. Restart the system. The system will automatically select the maximum refresh rate and corresponding Color Matching Profiles.

Note: On LCD monitors, unlike CRTs, a faster refresh rate does not improve display quality. Lenovo recommends using either 1920 x 1080 at a refresh rate of 60 Hz, or 640 x 480 at a refresh rate of 60 Hz.

Appendix A. Service and Support

The following information describes the technical support that is available for your product, during the warranty period or throughout the life of your product. Refer to the Lenovo Limited Warranty for a full explanation of Lenovo warranty terms.

Registering your option

Register to receive product service and support updates, as well as free and discounted computer accessories and content. Go to:
http://www.lenovo.com/register

Online technical support

Online technical support is available during the lifetime of a product at:
http://www.lenovo.com/support

Product replacement assistance or exchange of defective components also is available during the warranty period. In addition, if your option is installed in a Lenovo computer, you might be entitled to service at your location. A Lenovo technical support representative can help you determine the best alternative.

Telephone technical support

Installation and configuration support through the Customer Support Center will be available until 90 days after the option has been withdrawn from marketing. After that time, the support is cancelled, or made available for a fee, at Lenovo's discretion. Additional support is also available for a nominal fee.

Before contacting a Lenovo technical support representative, please have the following information available: option name and number, proof of purchase, computer manufacturer, model, serial number and manual, the exact wording of any error message, description of the problem, and the hardware and software configuration information for your system.

Your technical support representative might want to walk you through the problem while you are at your computer during the call.

Telephone numbers are subject to change without notice. The most up-to-date telephone list for Lenovo Support is always available at:
http://www.lenovo.com/support

Country or Region	Telephone Number
China	800-810-8888 400-810-8888
South Africa	800982393
Argentina	0800-444-2722(Spanish)
Australia	1300-557-073
Austria	800295730(German)

Country or Region	Telephone Number
Belgium	80076524(French, Dutch)
Bolivia	800-100-764(Spanish)

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Any performance data contained herein was determined in a controlled environment. Therefore, the result obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Recycling information

Lenovo encourages owners of information technology (IT) equipment to responsibly recycle their equipment when it is no longer needed. Lenovo offers a variety of programs and services to assist equipment owners in recycling their IT products. For information on recycling Lenovo products, go to:

http://www.lenovo.com/lenovo/environment/recycling

環境配慮に関して

本機器またはモニターの回収リサイクルについて

企業のお客様が、本機器が使用済みとなり廃棄される場合は、資源有効
利用促進法の規定により、産業廃棄物として、地域を管轄する県知事あ
るいは、政令市長の許可を持った産業廃棄物処理業者に適正処理を委託
する必要があります。また、弊社では資源有効利用促進法に基づき使用
済みパソコンの回収および再利用・再資源化を行う「PC 回収リサイク
ル・サービス」を提供しています。詳細は、
http://www.ibm.com/jp/pc/service/recycle/pcrecycle/ をご参照ください。

また、同法により、家庭で使用済みとなったパソコンのメーカー等に
よる回収再資源化が 2003 年 10 月 1 日よりスタートしました。詳細は、
http://www.ibm.com/jp/pc/service/recycle/pcrecycle/ をご参照ください。

重金属を含む内部部品の廃棄処理について

本機器のプリント基板等には微量の重金属（鉛など）が使用されてい
ます。使用後は適切な処理を行うため、上記「本機器またはモニターの
回収リサイクルについて」に従って廃棄してください。

Collecting and recycling a disused Lenovo computer or monitor

If you are a company employee and need to dispose of a Lenovo computer or monitor that is the property of the company, you must do so in accordance with the Law for Promotion of Effective Utilization of Resources. Computers and monitors are categorized as industrial waste and should be properly disposed of by an industrial waste disposal contractor certified by a local government. In accordance with the Law for Promotion of Effective Utilization of Resources, Lenovo Japan provides, through its PC Collecting and Recycling Services, for the collecting, reuse, and recycling of disused computers and monitors. For details, visit the Lenovo Web site at www.ibm.com/jp/pc/service/recycle/ pcrecycle/. Pursuant to the Law for Promotion of Effective Utilization of Resources, the collecting and recycling of home-used computers and monitors by the manufacturer was begun on October 1, 2003. This service is provided free of charge for home-used computers sold after October 1, 2003. For details, visit the Lenovo Web site at www.ibm.com/jp/pc/service/recycle/personal/.

Disposing of Lenovo computer components

Some Lenovo computer products sold in Japan may have components that contain heavy metals or other environmental sensitive substances. To properly dispose of disused components, such as a printed circuit board or drive, use the methods described above for collecting and recycling a disused computer or monitor.

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    ThinkPad
    ThinkVision
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Appendix C. Touch screen description

Touch-Screen Specifications

General Specification

Accuracy	±1.0 mm 100% of touchable area; compliant with Microsoft Windows 8 Logo requirements.
Aspect Ratio	16:9
Drift	No drift within operating temperature range.
Ambient light rejection	No effect from 50 W halogen or 58 W fluorescent lights. Test position 1 m above the display, 30° forward of the display plane. 50/60 Hz elimination enabled.
Sensor response time	Less than 20 ms for two touches.
Static touch height	0.5 mm.
Capabilities	Point-and-click, signature capture, sketching, painting and gestures where enabled in Windows 7 and Windows8.
Touch durability	Unlimited.
Scratch resistance	Touch operation is not affected by scratches.
Touch activation force	Optical touch technology requires no pressure to activate.
Touch method	Finger, gloved hand, brush or stylus.
Stylus diameter	7 mm minimum.

Environmental Specifications

Altitude	Operating: 0 to 2500 m. Storage: 0 to 4572 m.
Temperature	Operating: 0ºC to 55ºC. Storage: -30ºC to 65ºC.
Relative humidity	10% to 90% RH, non-condensing.

Software Specifications

NextWindow driver capabilities	Windows 8: Microsoft Device Logo for Win8 multi-touch. Windows 7: Microsoft Device Logo for Win7 multi-touch. Vista: Digitiser and mouse emulation. XP: Mouse emulation.
Mouse emulation	Click, drag, double-click, right-click.
Multi-touch	Windows 7, Windows 8 multi-touch gestures supported.

Capabilities

The following table shows the touch functionality provided by the Lenovo LI2341t Wide Monitor touch screen with different operating systems.

			Windows 7		Windows 8	
	XP	Vista	Starter Home Basic	Home Premium Professional Ultimate Enterprise	Starter Home Basic	Home Premium Professional Ultimate Enterprise
Single touch mouse [1]	Yes	Yes	Yes	Yes	Yes	Yes
Digitiser mode [2]	No	Yes	Yes	Yes	Yes	Yes
Win 7 multi-touch	No	No	No	Yes	Yes	Yes
Win 8 multi-touch	No	No	No	Yes	Yes	Yes
Multi-touch API [3]	No	No	Yes	Yes	Yes	Yes

[1] HID-compliant, plug-and-play mouse functionality (click, drag, double-click and right-click).
[2] HID-compliant USB digitiser.
[3] NextWindow's Application Programming Interface.

Connecting and Switching On

Connect the cables and switch on power in the following order:
- Connect the video cable from the computer to the monitor.
- Connect power to the monitor and switch on.
- Connect power to the computer and switch on.
- Connect the USB cable from the touch screen to the computer.

Once the cable is connected, the computer automatically detects the USB device (the touch screen) and, aftera short pause, displays a series of messages on screen.

(Note: the computer only displays the above message the first time you plug in the USB cable. The next time you plug in the cable, the computer will be already configured for the device.)

Operating the Touch Screen

Single-Touch Mouse Operation

The Lenovo LI2341t Wide Monitor touch screen provides full mouse functionality—click, drag, double-click and right-click.

•   Single click is performed by tapping you finger once on the screen.
•   Double click is performed by tapping your finger twice on the screen in quick succession.
•   Drag is performed by touching and moving your finger across the screen without lifting off.
•   Right click is performed by touching and holding your finger in one position for a short time.

The sensitivity of double-click and right-click can be set using <Configuration Software>. You can disable the right-click function completely by setting its response time to zero.

Operating notes

The touch screen does not require pressure to sense a touch.

For best results, point at roughly right angles to the screen and keep the rest of your hand clear of the glass.

When removing your finger, lift it straight off the screen, making sure you don't drag it across the screen.
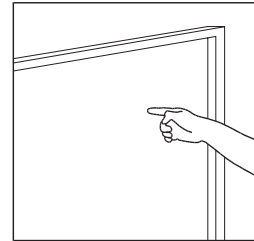
Cleaning the Touch Screen

To clean the touch screen, use a lint-free, soft cloth dampened with standard, household glass cleaningsolution as follows:

1. Spray a small amount of glass cleaner onto the cloth.
2. Wipe the glass of the touch screen to remove any dirt, dust, or finger marks.
3. Wipe the clear surfaces around the edges of the screen.
4. Remove any residual glass cleaner with a dry, soft, lint-free cloth.

WARNING:

Do not spray the cleaner directly onto the touch screen as this could leave residue on the optical surfaces.

Do not use an abrasive cleaner or rough cloth as this could damage the optics.