

Lenovo[™]

ThinkVision

E24-10 Flat Panel Monitor
User's Guide
Machine Type:61B7

Think

Product Number

61B7-JAR6-WW



First Edition (04 2017)

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Contents

Product Number	i
Contents	ii
Safety information	iii
Safety and Maintenance Guidelines	iv
Chapter 1 Getting started	1-1
Shipping contents	1-1
Notice for use	1-1
Product overview.....	1-2
Types of adjustments.....	1-2
User controls.....	1-2
Cable lock slot.....	1-3
Setting up your monitor.....	1-3
Connecting and turning on your monitor	1-3
Registering your option	1-6
Chapter 2 Adjusting and using your monitor	2-1
Comfort and accessibility.....	2-1
Arranging your work area	2-1
Positioning and viewing your monitor.....	2-1
Quick tips for healthy work habits.....	2-2
Eye Strain	2-2
Low Blue Light.....	2-2
Accessibility information	2-3
Adjusting your monitor image	2-4
Using the direct access controls	2-4
Using the On-Screen Display (OSD) controls	2-4
Selecting a supported display mode.....	2-7
Understanding power management.....	2-7
Caring for your monitor	2-8
Detaching the monitor stand.....	2-8
Wall Mounting (Optional).....	2-8
Chapter 3 Reference information.....	3-1
Monitor specifications	3-1
Troubleshooting.....	3-2
Manual image setup	3-3
Manually installing the monitor driver	3-4
Service information	3-6
Appendix A Service and Support	A-1
Registering your option	A-1
Online technical support	A-1
Telephone technical support	A-1
Appendix B Notices	B-1
Recycling information	B-2
Collecting and recycling a disused Lenovo computer or monitor.....	B-2
Disposing of Lenovo computer components	B-2
Trademarks	B-3
Turkish statement of compliance.....	B-4

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.

مج، يجب قراءة دات السلامة

Antes de instalar este produto, leia as Informações de Segurança.

在安装本产品之前，请仔细阅读 **Safety Information** (安全信息)。

Prije instaliranja ovog proizvoda obavezno pročitajte sigurnosne upute.

Před instalací tohoto produktu si přečtěte příručku bezpečnostních instrukcí.

Læs sikkerhedsforskrifterne, før du installerer dette produkt.

Ennen kuin asennatt ämän tuotteen, lue turvaohjeet kohdasta Safety Information.

Avant d'installer ce produit, lisez les consignes de sécurité.

Vor der Installation dieses Produkts die Sicherheitshinweise lesen.

Πριν εγκαταστήσετε το προϊόν αυτό, διαβάστε τις πληροφορίες ασφαλείας (safety information).

לפני שתתקינו מוצר זה, קראו את הוראות הבטיחות.

A termék telepítése előtt olvassa el a Biztonsági előírásokat!

Prima di installare questo prodotto, leggere le Informazioni sulla Sicurezza.

製品の設置の前に、安全情報をお読みください。

본 제품을 설치하기 전에 안전 정보를 읽으십시오.

Пред да се инсталира овој продукт, прочитајте информацијата за безбедност.

Lees voordat u dit product installeert eerst de veiligheidsvoorschriften.

Les sikkerhetsinformasjonen (Safety Information) før du installerer dette produktet.

Przed zainstalowaniem tego produktu, należy zapoznać się z książką "Informacje dotyczące bezpieczeństwa" (Safety Information).

Antes de instalar este produto, leia as Informações sobre Segurança.

Перед установкой продукта прочтите инструкции по технике безопасности.

Pred inštaláciou tohto produktu si prečítajte bezpečnostné informácie.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Antes de instalar este producto lea la información de seguridad.

Läs säkerhetsinformationen innan du installerar den här produkten.

សូមអានព័ត៌មានសុវត្ថិភាពមុនពេលចាប់ផ្តើមបញ្ចូលកម្មវិធី

安裝本產品之前，請先閱讀「安全資訊」。

Safety and Maintenance Guidelines

Important Safety Information

The power cord is designed for use with your monitor. Don't use a different cord, use only a power source and connection compatible with this monitor.



WARNING: Always connect your monitor, the computer, and other equipment to a grounded (earthed) power outlet. To reduce the risk of electric shock or damage to your equipment, do not disable the power cord grounding feature. The grounding plug is an important safety feature.



WARNING: For your safety, be sure that the grounded power outlet you plug the power cord into is easily accessible to the operator and located as close to the equipment as possible. To disconnect power from the equipment, unplug the power cord from the power outlet by grasping the plug firmly. Never pull on the cord.



CAUTION: To protect your monitor, as well as your computer, connect all power cords for your computer and its peripheral devices (such as a monitor, printer, or scanner) to a surge protection device such as a power strip with surge protection or uninterruptible power supply (UPS). Not all power strips provide surge protection; the power strips must be specifically labelled as having this ability. Use a power strip whose manufacturer offers a damage replacement policy, so you can replace your equipment if surge protection fails.



CAUTION: 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. An alternative flexible cord is synthetic rubber.

Safety Precautions

- Use only a power source and connection compatible with this monitor, as indicated on the label/back plate of the monitor.
- Be sure the total ampere rating of the products connected to the outlet does not exceed the current rating of the electrical outlet, and the total ampere rating of the products connected to the power cord does not exceed the rating of the power cord. Look on the power label to determine the ampere rating (Amps or A) for each device.
- Install your monitor near a power outlet that you can easily reach. Disconnect the monitor by grasping the plug firmly and pulling it from the outlet. Never disconnect the monitor by pulling the cord.
- Do not allow anything to rest on the power cord. Do not walk on the cord.
- While using VESA mount application, the AC Inlet must face to down side. Do not face any other position.

Maintenance Guidelines

To enhance the performance and extend the life of your monitor:

- Do not open your monitor cabinet or attempt to service this product yourself. If your monitor is not operating properly or has been dropped or damaged, contact your Lenovo authorized dealer, reseller, or service provider.
- Adjust only those controls that are described in the operating instructions.
- Turn your monitor off when not in use. You can substantially increase the life expectancy of the monitor by using a screen saver program and turning off the monitor when not in use.
- Keep your monitor in a well-ventilated area, away from excessive light, heat, or moisture.
- Slots and openings in the cabinet are provided for ventilation. These openings must not be blocked or covered. Never push objects of any kind into cabinet slots or other openings.
- Unplug the monitor from the power outlet before cleaning. Do not use liquid cleaners or aerosol cleaners.
- Do not drop the monitor or place it on an unstable surface.
- When removing the monitor base, you must lay the monitor face down on a soft area to prevent it from getting scratched, defaced, or broken.

Cleaning the Monitor

The monitor is a high-quality optical device that requires special care when cleaning. To clean the monitor, follow these steps:

1. Turn off the computer and the monitor.
2. Unplug your monitor from the power outlet before cleaning.



CAUTION: Do not use benzene, thinner, ammonia, or any volatile substance to clean the monitor screen or cabinet. These chemicals may damage the monitor. Do not use liquid or aerosol cleaners. Never use water to clean an LCD screen.

3. Wipe the screen with a dry, soft, clean cloth. If the screen requires additional cleaning, use an antistatic screen cleaner.
4. Dust the monitor housing. Use a damp cloth to clean the cabinet. If the cabinet requires additional cleaning, use a clean cloth dampened with isopropyl alcohol.
5. Plug in the monitor.
6. Turn on the monitor and the computer.

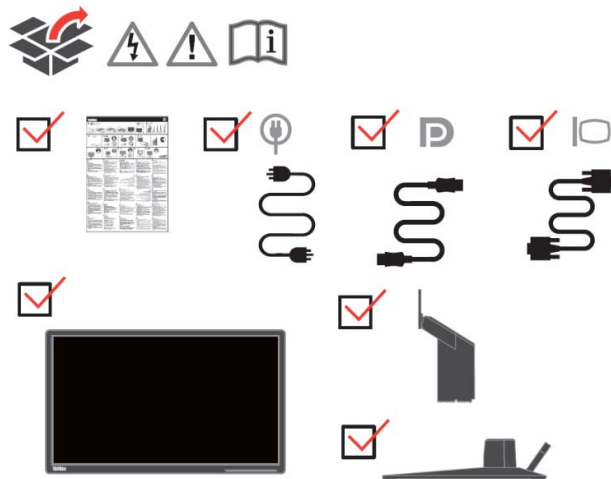
Chapter 1 Getting started

This User's Guide provides detailed operation instructions for the user. For quick instruction overview, please see the Setup Poster for brief information.

Shipping contents

The product package should include the following items:

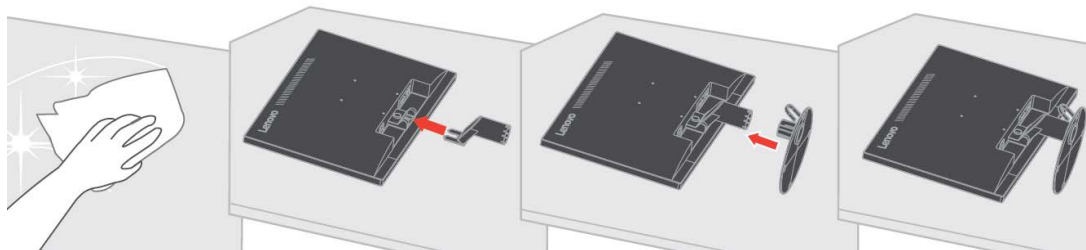
- Information Flyer
- Flat Panel Monitor
- Power Cord
- Analog Interface Cable
- DP Cable
- Monitor Stand
- Monitor base



Notice for use

To setup 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. Place your monitor with the screen face down on a soft flat surface.
2. Align the stand assembly bracket to the monitor.
3. Insert the bracket towards monitor until it locks in place.

Note: To attach a VESA mount, please see "Detaching the monitor stand" on page 2-7.

Product overview

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

Types of adjustments

Tilt

Please see the illustration below for an example of the tilt range.



User controls

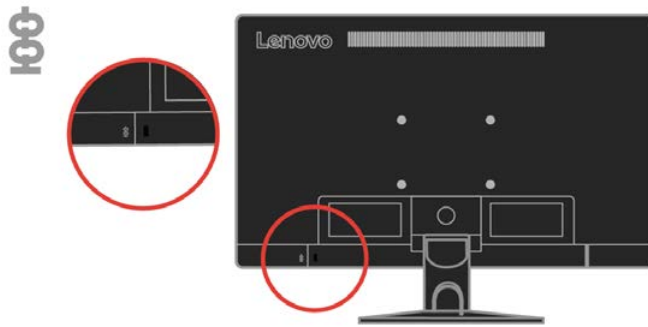
Your monitor has controls on the front which are used to adjust the display.



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. Please follow the instructions that came with the cable lock to attach it.



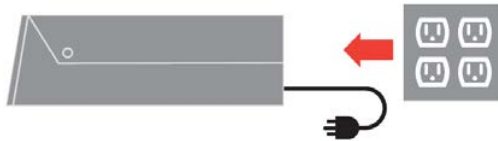
Setting up your monitor

This section provides information to help you set up your monitor.

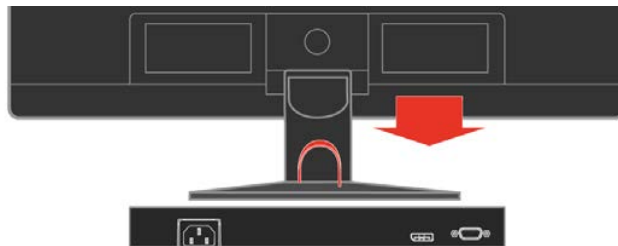
Connecting and turning on your monitor

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

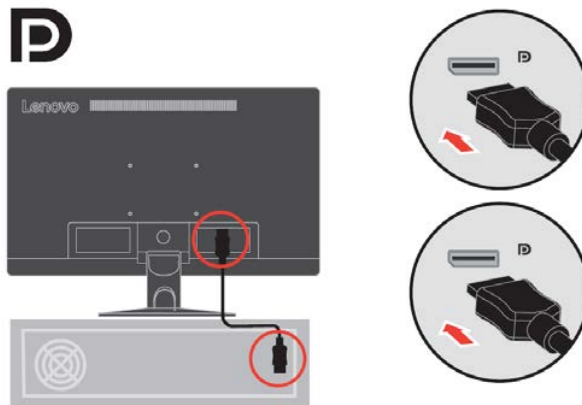
1. Power off your computer and all attached devices, and unplug the computer power cord.



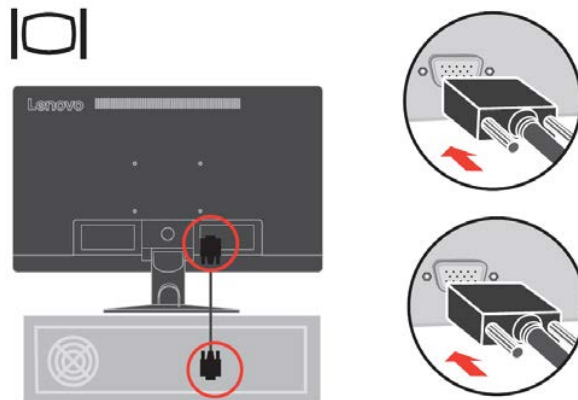
2. Connect the cables according to below icon indication.



3. Connect one end of the DP cable to the DP connector on the back of the computer, and the other end to the DP connector on the monitor. Lenovo recommends that customers who require to use the Display Port input on their monitor purchase the "Lenovo Display Port to Display Port cable 0A36537".
www.lenovo.com/support/monitoraccessories

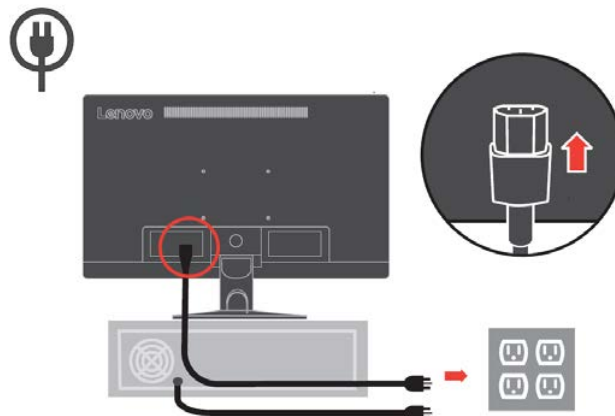


4. Connect the analog signal cable to the D-SUB connector of the monitor and the other end on the back of the computer.

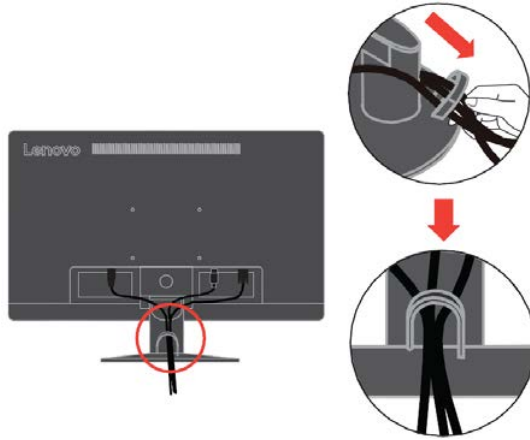


5. Plug the monitor power cord and the computer cord into grounded electrical outlets.

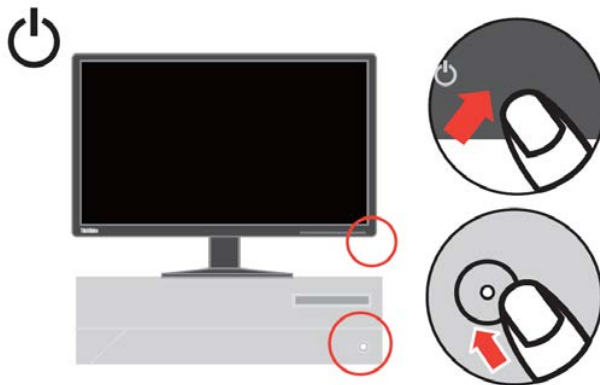
Note: A certified power supply cord has to be used with this equipment. The relevant national installation and/or equipment regulations shall be considered. A certified power supply cord not lighter than ordinary polyvinyl chloride flexible cord according to IEC 60227 (designation H05VV-F 3G 0.75mm²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



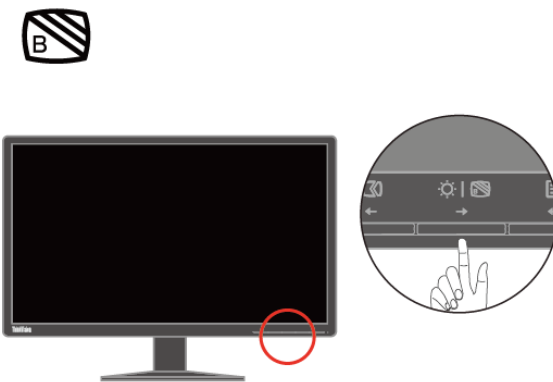
6. Assembled Line Cleaner as shown below.



7. Power on the monitor and the computer.



8. Press and hold 3s to enable/disable "Low Blue Light".



9. To install the monitor driver, you must download it from Lenovo website (http://support.lenovo.com/docs/E24_10) and follow the instructions on page 3-4.



Registering your option

Thank you for purchasing this Lenovo™ product. Please take a few moments to register your product and provide us with information that will help Lenovo to better serve you in the future. Your feedback is valuable to us in developing products and services that are important to you, as well as in developing better ways to communicate with you. Register your option on the following Web site:

<http://www.lenovo.com/register>

Lenovo will send you information and updates on your registered product unless you indicate on the Web site questionnaire that you do not want to receive further information.

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.

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 and viewing 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.

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, and image adjustment 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 in front of 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 in front of 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.

Eye Strain

- **Break Times**

Computer users should take some time away from the screen especially if working for prolonged hours. Generally, it is recommended to take short breaks (5 - 15 min.) after 1 -2 hours of continuous computer work. Taking short and frequent breaks is more advised than longer breaks.

- **Looking at Distant Objects**


Users often blink less when in front of monitor screen. To minimize eye strain and dryness, users should rest the eye periodically by focusing on objects that are far away.

- **Eye Exercises**


1. Alternate looking up and looking down while keeping the body and head upright.
2. Slowly roll your eyes to look to the left and right.
3. Roll eyes to look at objects on the upper right corner and then on lower right. Do same thing to look at objects on the upper left and lower left.

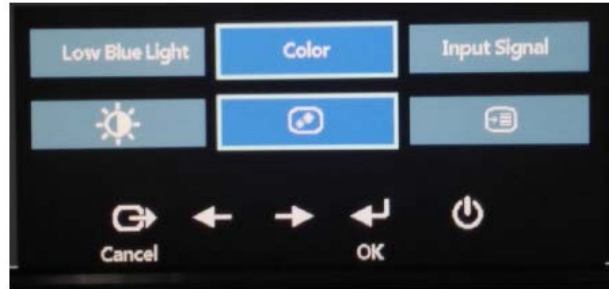
Low Blue Light

Concerns on blue light affecting eye health have risen over the years. Blue light have wavelength between 300 nm to 500 nm. The monitors have a factory setting that reduces blue light emissions. Users can enable low blue light mode on these monitors from the OSD settings.

1. Press  to open the main OSD menu.



2. Use ← or → to move among the icons. Select icon  (Adjusts image properties) and press ↵ to access this function.



3. Use ← or → to move among the items. Select Low Blue Light and press ↵ to access this function.



4. Select Off or On and press ↵ to enable Low blue Light or disable Low Blue Light.

Accessibility information

Lenovo is committed to providing greater access to information and technology to people with disabilities. With assistive technologies, users can access information in the way most appropriate to their disability. Some of these technologies are already provided in your operating system; others can be purchased through vendors or accessed at:

https://lenovo.ssbartgroup.com/lenovo/request_vpat.php

Adjusting your monitor image






This section describes the user control features used 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.

Note: The direct access controls are coloured.

Table 2-1. Direct access controls

Icon	Control	Description
	Input change	Switches the video input source.
	Image Setup	Activates automatic image adjustment.
	Brightness	Direct access to Brightness adjustment.
	Low Blue Light	Press and hold for 3 seconds to enable/disable Low Blue Light.
	Main menu	Open OSD main menu

Using the On-Screen Display (OSD) controls

The settings adjustable with the user controls are viewed through the On-Screen Display (OSD), as shown below.



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 the  buttons for 10 seconds to disable/enable DDC/CI function. The words " DDC/CI Disable/DDC/CI/Enable" shows on the screen.

Table 2-2. OSD functions



















OSD Icon on Main Menu	Submenu	Description	Controls and Adjustments
 Brightness/Contrast	Brightness	Adjusts overall brightness	← →
 Brightness/Contrast	Contrast	Adjusts difference between light and dark areas.	← →
 Brightness/Contrast	DCR	Enable dynamic contrast ratio.	On Off
 Image Position	Horizontal Position	Moves the image left or right.	← →
 Image Position	Vertical Position	Moves the image up or Down.	← →
 Image Setup	Automatic	Automatically optimizes the image.	
 Image Setup	Manual	Manually optimizes the image. See “Manual image setup” on page 3-3 <ul style="list-style-type: none"> ● Clock ● Phase 	
 Image Properties	Input Signal	Analog DISPLAYPORT	Select Analog Signal Select DP Signal
 Image Properties	Color	Adjusts intensity of red, green, and blue. Preset mode <ul style="list-style-type: none"> ● Neutral ● sRGB ● Reddish ● Bluish Custom <ul style="list-style-type: none"> ● 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 colour choices. 	
 Image Properties	Scaling	<ul style="list-style-type: none"> ● Full Screen ● Original AR 	
 Image Properties	Low Blue Light	Enable Low Blue Light <ul style="list-style-type: none"> ● On ● Off 	
 Image Properties	Over Drive	Response time enhancement <ul style="list-style-type: none"> ● Normal ● Extreme ● Off 	

Table 2-2. OSD functions

OSD Icon on Main Menu	Submenu	Description
 Options	Information	Shows resolution, refresh rate, and product details. Note: This screen does not allow any changes to the settings. This section lists the languages supported by your monitor.
 Options	Language	Note: The language chosen only affects the language of the OSD. It has no effect on any software running on the computer.
 Options	Menu Position Default Custom	Menu position adjusts menu location on the screen. Returns the menu position to the default settings. <ul style="list-style-type: none"> • Horizontal: Changes the horizontal position of the OSD • Vertical: Changes the vertical position of the OSD.
 Options	Factory Default	<ul style="list-style-type: none"> • Cancel • Reset Resets monitor to the original factory settings. Controls button and menu settings for accessibility preferences.
 Options	Accessibility	Button repeat rate: Select ← or → to change. <ul style="list-style-type: none"> • Off • Default • Slow Menu time out: Sets the length of time the OSD will remain active after the last time a button is pressed.
 Options	DP Select	Select DP1.1 or DP1.2: <ul style="list-style-type: none"> • DP1.1 • DP1.2 Controls button and menu settings for DP transmit speed.
<p>*Low Blue Light Mode is reducing the blue light content.</p> <p>*The use of Extreme Mode (response time) may result in reduced display quality when fast moving video graphics are displayed.</p> <p>Users should check Extreme Mode (response time) to verify if it is compatible with any applications they would like to use it with.</p>		

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 re-attach the CRT monitor temporarily until you have re-configured the system; preferably to 1920x1080 at 60Hz, 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

Addressability	Refresh rate
PAL	50Hz
640x350	70Hz
640x480	60Hz, 72Hz, 75Hz
720x400	70Hz
800x600	56Hz, 60Hz, 72Hz, 75Hz
832x624	75Hz
1024x768	60Hz, 70Hz, 75Hz
1152x864	75Hz
1280x1024	60Hz, 70Hz, 75Hz
1366x768	60Hz
1440x900	60Hz
1600x900	60Hz, 75Hz
1680x1050	60Hz
1920x1080	60Hz

Understanding power management

Power management is invoked when the computer recognizes that you have not using 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	Compliance
On	Steady green	Normal		
Standby/ Suspend	Steady amber	Blank	Press a key or move the mouse. There may be a slight delay reappears. Note: Standby also occurs if there is no image output to the monitor.	ENERGY STAR
Off	Off	Off	Press power key to switch on There may be a slight delay before the image reappears.	ENERGY STAR

Caring for your monitor

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

Do not:

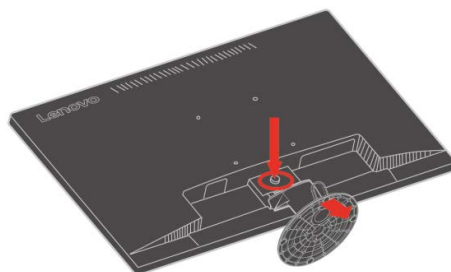
- Apply water or liquid directly to your monitor.
- Use solvents or abrasives.
- Use flammable cleaning materials to clean your monitor or any other electrical equipment.
- Touch the screen area of your monitor with sharp or abrasive items. This type of contact may cause permanent damage to your screen.
- 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 stand

1. After placing the monitor face down on a clean surface or soft cloth, Press the release button to remove the stand and base from the monitor



Wall Mounting (Optional)

Refer to the instructions that come with the VESA compatible base mounting kit.

1. Place the monitor face down on a non-abrasive surface on stable flat table.
2. Remove the stand.
3. Attach the mounting bracket from the wall mounting kit to the monitor.
4. Mount the monitor on the wall by following the instructions that come with the base mounting kit.

NOTE: For use only with UL and GS Listed Wall Mount Bracket with minimum weight/load bearing capacity of 6.00 kg. In order to fulfil TCO Certification for this wall mounting option, shielded power cable is mandatory to be used.

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 61B7-JAR6-WW

Dimensions	Height	404 mm (15.91 in.)
	Depth	205 mm (8.07 in.)
	Width	554 mm (21.81 in.)
Stand	Tilt range	Range: -5°/+22°
VESA mount	Supported (UL&GS approved)	100 mm (3.94 in.)
Image	Viewable image size	605 mm (23.8 in.)
	Maximum height	296 mm (10.54 in.)
	Maximum width	527 mm (18.74 in.)
	Pixel pitch	0.2745mm (0.0098 in.) (V)
Power input	Supply voltage	100-240 VAC, 60/50 Hz
	Max supply current	1.5 A
Power consumption Note: Power consumption figures are for the monitor and the power supply combined.	Max Consumption (Without USB hub)	22W
	Typical Consumption	20W
	Standby/Suspend	0.3W
	Off	0.3W
Video input (Analog)	Input signal	Analog Direct Drive, 75 ohm 0.7 V
	Horizontal addressability	1920 pixels (max)
	Vertical addressability	1080 lines (max)
	Clock frequency	205 MHz
Video input (Digital)	Input signal	DP
	Horizontal addressability	1920 pixels (max)
	Vertical addressability	1080 lines (max)
	Clock frequency	10.8Gpbs(max)
Communications	VESA DDC	CI
Altitude Test	Operation	6561.68 ft
Supported Display Modes (VESA Standard modes between noted ranges)	Horizontal frequency	30 kHz - 83 kHz
	Vertical frequency	50 Hz - 75 Hz
	Native Resolution	1920 x 1080 at 60 Hz
Temperature	Operating	0° to 45°C (32°F to 113° F)
	Storage	-20° to 60°C (-4°F to 140° F)
	Shipping	-20° to 60°C (-4° F to 140° F)
Humidity	Operating	10% to 80%
	Storage	5% to 95%
	Shipping	5% to 95%

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.

Table3-2. Troubleshooting

Problem	Possible cause	Suggested action	Reference
The words " Out of Range" are shown on the screen, and the power indicator is flashing green.	The system is set to a display mode which is not supported by the monitor.	<ul style="list-style-type: none"> • 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 Customer Support Centre. 	"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 1-3
	The color settings may be incorrect.	Select another colour setting from the OSD menu.	"Adjusting your monitor image" on page 2-4
	The automatic image setup function was not performed.	Perform automatic image setup.	"Adjusting your monitor image" on page 2-4
The power indicator is not lit and there is no image.	<ul style="list-style-type: none"> • The monitor's power switch is not switched on. • The power cord is loose or disconnected. • There is no power at the outlet. 	<ul style="list-style-type: none"> • 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 1-3

Table3-2.Troubleshooting (continued)

Problem	Possible cause	Suggested action	Reference
Screen is blank and power indicator is steady amber or flashing green	The monitor is in Standby/Suspend mode	<ul style="list-style-type: none"> 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 2-7
The power indicator is green, 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 1-3
	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 2-4
One or more of the pixels appear discoloured	This is a characteristic of the LCD technology and is not an LCD defect.	If there are more than five pixels missing, contact the Customer Support Centre.	Appendix A, "Service and Support," on page A-1
<ul style="list-style-type: none"> Fuzzy lines in text or a blurry image. Horizontal or vertical lines through the image. 	<ul style="list-style-type: none"> 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: 1920x1080 at 60 Hz.	"Adjusting your monitor image" on page 2-4 "Manual image setup" on page 3-3
		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.
The image is not acceptable when switching to dual mode	It has not set the optimum resolution for each mode	<ul style="list-style-type: none"> Use ThinkVision Duo software to optimize the dual screen operation Adjust graphic card resolution manually 	"Using the direct access controls" on page 2-4

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 \blacktriangleleft at the bottom of the monitor to open the OSD menu.
2. Use \leftarrow or \rightarrow to select C and press \blacktriangleleft to access.
3. Use \leftarrow or \rightarrow to select Manual and press \blacktriangleleft to access.
4. Use \leftarrow or \rightarrow 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 7, Microsoft Windows 10.

Installing the monitor driver in Windows 7

To install the device driver in Microsoft® Windows 10, do the following:

1. Turn off the computer and all attached devices.
2. Ensure that the monitor is connected correctly.
3. Turn on the monitor and then turn on the computer. Allow your computer to boot into Windows 7 operating system.
4. From the Lenovo website http://support.lenovo.com/docs/E24_10, find the corresponding monitor driver and download it to a PC to which this monitor is connected (such as a desktop).
5. Open the Display Properties window by right-clicking Start, Control Panel, Hardware and Sound icon, and then click the Display icon.
6. Click the Change the display settings tab.
7. Click the **Advanced Settings** icon.
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. By clicking the Browse button, browse and point to the following path:
X:\Monitor Drivers\Windows 7
(Where X indicates "the folder in which the downloaded driver is located" (such as a desktop))
14. Select the "**E24-10.inf**" file and click the Open button. Click the OK button.
15. Select **Lenovo E24-10** and click **Next**.
16. After the installation is complete, delete all downloaded files and close all windows.
17. Restart the system. The system will automatically select the maximum refresh rate and corresponding Colour 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 refresh rate of 60 Hz.

Installing the monitor driver in Windows 10

To use the Plug and Play feature in Microsoft Windows 10, do the following:

1. Turn off the computer and all attached devices.
2. Ensure that the monitor is connected correctly.
3. Turn on the monitor and then turn on the computer. Allow your computer to boot into Windows 10 operating system.
4. From the Lenovo website http://support.lenovo.com/docs/E24_10, find the corresponding monitor driver and download it to a PC to which this monitor is connected (such as a desktop).
5. On the Desktop, move mouse to bottom-left corner of screen, right-click choose Control Panel, then double click the icon of Hardware and Sound, and then click Display.
6. Click the Change the display settings tab.
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 **"Let me pick from a list of device drivers on my computer"**.
13. Click the Have Disk button. By clicking the Browse button, browse and point to the following path:
X:\Monitor Drivers\Windows 10
(where X indicates "the folder in which the downloaded driver is located" (such as a desktop))
14. Select the **"E24-10.inf"** file and click the **Open** button. Click the **OK** button.
15. In the new window, select **Lenovo E24-10** and click Next.
16. After the installation is complete, delete all downloaded files and close all windows.
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.

Getting further help

If you still can't solve your problem, please contact the Customer Support Center. For more information on contacting the Customer Support Center, please see Appendix A, "Service and Support," on page A-1.

Service information

Customer responsibilities

The warranty does not apply to a product which has been damaged due to accident, misuse, abuse, improper installation, usage not in accordance with product specifications and instructions, natural or personal disaster, or unauthorized alterations, repairs or modifications.

The following are examples of misuse or abuse and not covered by warranty:

- Images burned on to the screen of a CRT monitor. Burned image is preventable by utilizing a moving screen saver or power management.
- Physical damage to covers, bezel, base and cables.
- Scratches or punctures on monitor screens.

Service parts

The following parts are for use by Lenovo service, or Lenovo authorized dealers, to support the customer warranty. Parts are for service use only. The table below shows information for model 61B7-JAR6-WW.

Table 3-3. List of service parts

FRU (Field Replaceable Unit) Part number	Description	colour	Machine Type Model (MTM)
00PC193	E24-10 23.8 inch FHD Monitor (VGA+DP)	Raven Black	61B7-JAR6-WW
00PC194	E24-10 DP cable (1.8m, RoHS)	Raven Black	61B7-JAR6-WW
00PC195	E24-10 FRU Stand and Base	Raven Black	61B7-JAR6-WW
03T8517	E24-10 Analog cable (1.8m, RoHS)(pickup E1922 Wide Analog cable)	Raven Black	61B7-JAR6-WW

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 the product. Refer to your Lenovo Statement of Limited Warranty for a fully 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/support>

Online technical support

Online technical support is available during the life of your product through the Lenovo Support Web site at <http://www.lenovo.com/support>.

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

Telephone technical support

Installation and configuration support through the Customer Support Center will be withdrawn or made available for a fee, at Lenovo's discretion, 90 days after the option has been withdrawn from marketing. Additional support offerings, including step-by-step installation assistance, are 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://consumersupport.lenovo.com>

Country or Region	Telephone Number
Africa	Africa: +44 (0) 1475-555-055 South Africa: +27-11-3028888 and 0800110756 Central Africa: Contact the nearest Lenovo Business Partner
Argentina	0800-666-0011 (Spanish)
Australia	131-426 (English)
Austria	Warranty service and support: 01-211-454-610 (German)
Belgium	Warranty service and support: 02-225-3611 (Dutch, French)
Bolivia	0800-10-0189 (Spanish)
Brazil	Sao Paulo region: (11) 3889-8986 Outside Sao Paulo region: 0800-701-4815 (Brazilian Portuguese)
Brunei	801-1041 (English , Bahasa Melayu)
Canada	Toronto:416-383-3344 Outside Toronto: 1-800-565-3344 (English , French)
Chile	Toll Free: 188-800-442-488 800-361-213 (Spanish)
China	86-10-58851110 800-990-8888 (Mandarin)
China (Hong Kong S.A.R.)	(852)3071-3561 (Cantonese, English, Mandarin)
China (Macau S.A.R.)	ThinkCentre Commercial PC: 795-9892 Multimedia Home PC: 0800-336 (Cantonese, English, Mandarin)
Colombia	1-800-912-3021 (Spanish)
Costa Rica	0-800-011-1029(Spanish)
Croatia	0800-0426
Cyprus	+357-22-841100
Czech Republic	+420-2-7213-1316
Denmark	Warranty service and support: 7010-5150 (Danish)
Dominican Republic	1-866-434-2080(Spanish)
Ecuador	1-800-426911(Spanish)
Egypt	+202-35362525
El Salvador	800-6264 (Spanish)
Estonia	+372 6776793 +372 66 00 800
Finland	Warranty service and support: +358-800-1-4260(Finnish)
France	Warranty service and support (hardware): 0810-631-213 Warranty service and support (software): 0810-631-020 (French)
Germany	Warranty service and support: 01805-00-46-18 (German)
Greece	+30-210-680-1700
Guatemala	1800-624-0051 (Spanish)
Honduras	Tegucigalpa: 232-4222 San Pedro Sula: 552-2234 (Spanish)
Hungary	+36-1-382-5716 +36-1-382-5720 (English, Hungarian)
India	1800-425-2666 +91-80-2535-9182 (English)
Indonesia	021 5238 823 Local number only: 001-803-606-282 DID (Direct Inward Dialing): +603 8315 6859 (English, Bahasa Indonesia)

A-2 Service and support

Country or Region	Telephone Number
Ireland	Warranty service and support: 01-881-1444 (English)
Israel	Givat Shmuel Service and Center: +972-3-531-3900 (Hebrew, English)
Italy	Warranty service and support: +39-800-820094 (Italian)
Japan	Toll Free: 0120-20-5550 International: +81-46-266-4716 The above numbers will be answered with a Japanese language voice prompt. For telephone support in English, please wait for the Japanese voice prompt to end, and an operator will answer. Please say "English support please", and your call will be transferred to an English-speaking operator. PC software: 0120-558-695 Overseas calls: +81-44-200-8666(Japanese)
Kazakhstan	Call center: +77273231427(Standard charges Apply) (Russian , English)
Kingdom of Saudi Arabia	800 85 000 52 (Standard Charges Apply)
Korea	1588-6782 (Korea)
Latvia	+371 7070360
Lithuania	+370 5 278 66 00
Luxembourg	+352-360-385-343(French)
Malaysia	Local number only: 1800-88-1889 DID: +603 8315 6855 (English, Bahasa Melayu)
Malta	+35621445566
Mexico	001-866-434-2080(Spanish)
Middle East	+44 (0)1475-555-055
Netherlands	+31-20-514-5770 (Dutch)
New Zealand	0800-733-222 (English)
Nicaragua	001-800-220-1830 (Spanish)
Norway	Warranty service and support: 8152-1550(Norwegian)
Panama	Lenovo Customer Support Center: 001-866-434-2080 (Toll Free) 206-6047(Spanish)
Peru	0-800-50-866 (Spanish)
Philippines	1800-1601-0033 (English, Filipino)
Poland	+48-22-878-6999 (Polski)
Portugal	+351-21-892-7046 (Portuguese)
Romania	+4-021-224-4015
Russia	Moscow: +7-(495)-258-6300 Toll Free: +8-800-200-6300 (Russian)
Singapore	Local number only: 800-6011-343 DID: +603 8315 6859 (English)
Slovakia	+421-2-4954-5555
Slovenia	+386-1-200-50-60 (Slovenian)
Spain	91-714-7983,0901-100-000 (Spanish)
Sri Lanka	+9411 2493547 +9411 2493548 (English)
Sweden	Warranty service and support: 077-117-1040 (Swedish)

Country or Region	Telephone Number
Switzerland	Warranty service and support: 0800-55-54-54 (German, French, Italian)
Taiwan	886-2-8723-9799,0800-000-700 (Mandarin)
Thailand	Local number only: 1-800-060-066 66 2273 4088 DID: +603 8315 6857 (Thai, English)
Turkey	02123360366 00800448825165 (Turkish)
Ukraine	044 362 42 81 (Standard Charges Apply)
United Arab Emirates	800035702810 (Standard Charges Apply)
United Kingdom	Standard warranty support: 08705-500-900 (English)
United States	1-800-426-7378 (English)
Uruguay	000-411-005-6649 (Spanish)
Venezuela	0-800-100-2011 (Spanish)
Vietnam	For Northern Area and Hanoi City: 844 3 946 2000 or 844 3 942 6457 For Southern Area and Ho Chi Minh City: 848 3 829 5160 or 844 3 942 6457(Vietnamese, English)

Appendix B Notices

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

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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 in 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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EEE Yönetmeliğine Uygundur.

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Power cords and power adapters

Use only the power cords and power adapters supplied by the product manufacturer. Do not use the ac power cord for other devices.