User's Guide

Dell E1916HV
Dell E1916HL
Dell E1916HM
Dell E2016HV
Dell E2016HL
Dell E2016HM
Dell E2216HV
Dell E2216HVM

Regulatory model: E1916HVf / E2016HVf / E2216HVf

NOTE: A NOTE indicates important information that helps you make better use of your computer.

CAUTION: A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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About Your Monitor

Package Contents

Your monitor ships with all the components shown below. Ensure that you have received all the components and Contact Dell if anything is missing.

NOTE: Some items may be optional and may not ship with your monitor. Some features or media may not be available in certain countries.

	· Monitor
	· Stand Riser
	· Stand Base
	· VESA™ Screw Cover
	· Power Cable (varies with countries)
	· VGA Cable
	· Quick Setup Guide · Safety and Regulatory Information

Product Features

The Dell E1916HV / E1916HL / E1916HM / E2016HV / E2016HL / E2016HM / E2216HV / E2216HVM flat-panel display has an active matrix, Thin-Film Transistor, Liquid Crystal Display and LED backlight. The monitor's features include:

- E1916HV / E1916HL / E1916HM : 47.01 cm (18.51 inches) diagonal viewable image size, 1366 x 768 resolution, plus full-screen support for lower resolutions.
- E2016HV / E2016HL / E2016HM : 49.41 cm (19.5 inches) diagonal viewable image size, 1600 x 900 resolution, plus full-screen support for lower resolutions.
- E2216HV / E2216HVM : 54.69 cm (21.53 inches) diagonal viewable image size, 1920 x 1080 resolution, plus full-screen support for lower resolutions.
- Tilt adjustment capability.
- Removable pedestal and Video Electronics Standards Association (VESA) 100 mm mounting holes for flexible mounting solutions.
- Plug and play capability if supported by your system.
- On-Screen Display (OSD) adjustments for ease of set-up and screen optimization.
- ENERGY STAR-certified.
- Security lock slot.
- Asset Management Capability.
- CECP (for China) .
- RoHS compliant.
- Energy Gauge shows the energy level being consumed by the monitor in real time.
- Analog backlight dimming control for flicker free display.

NOTE : Dell monitors are Energy Star certified in all regions except for the following: E2016HV in Asia Pacific, E2216HV in America.

EPEAT registered where applicable. EPEAT registration varies by country. See **www.epeat.net** for registration status by country.

Identifying Parts and Controls

Front View

1	Function buttons (For more information, see **Operating the Monitor**)
2	Power On/Off button (with LED indicator)

Back View

E1916HV / E1916HL / E1916HM / E2016HV / E2016HL / E2016HM:

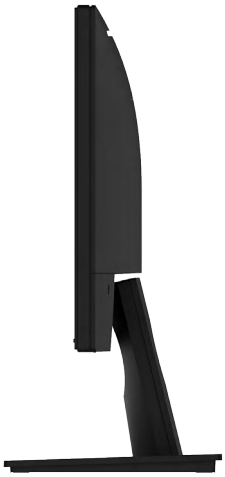
Back View with Monitor Stand

E2216HV / E2216HVM:

Back View with Monitor Stand

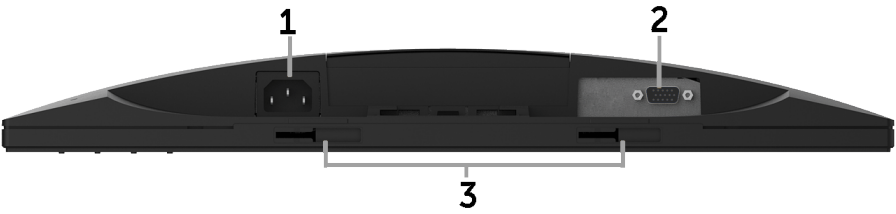
Label	Description	Use
1	VESA mounting holes (100 mm)	To mount the monitor.
2	Regulatory rating label	Lists the regulatory approvals.
3	Security lock slot	Secures monitor with security lock (security lock not included).
4	Barcode serial number label	Refer to this label if you need to contact Dell for technical support.
5	Cable management slot	Use to organize cables by placing them through the slot.

Side View



Right Side

Bottom View



Label	Description	Use
1	AC power connector	To connect the monitor power cable.
2	VGA connector	To connect your computer to the monitor using a VGA cable.
3	Dell soundbar mounting slots	To attach the optional Dell Soundbar.

Monitor Specifications

The following sections give you information about the various power management modes and pin assignments for the various connectors of your monitor.

Power Management Modes

If you have VESA's DPM compliance display card or software installed in your PC, the monitor automatically reduces its power consumption when not in use. This is referred to as Power Save Mode. If the computer detects input from keyboard, mouse, or other input devices, the monitor automatically resumes functioning. The following table shows the power consumption and signaling of this automatic power-saving feature:

E1916HV / E1916HL / E1916HM:

VESA Modes	Horizontal Sync	Vertical Sync	Video	Power Indicator	Power Consumption
Normal operation	Active	Active	Active	White	17 W (Maximum)** 14 W (Typical)
Active-off mode	Inactive	Inactive	Blank	Glowing white	Less than 0.3 W
Switch off	-	-		Off	Less than 0.3 W *

Energy Star	Power Consumption
P_{ON}	10 W***
E_{TEC}	33.2 kWh***

E2016HV:

VESA Modes	Horizontal Sync	Vertical Sync	Video	Power Indicator	Power Consumption
Normal operation	Active	Active	Active	White	17 W (Maximum)** 14 W (Typical)
Active-off mode	Inactive	Inactive	Blank	Glowing white	Less than 0.3 W
Switch off	-	-		Off	Less than 0.3 W *

Energy Star	Power Consumption
P_{ON}	11.98 W***
E_{TEC}	38.6 kWh***

E2016HL / E2016HM:

VESA Modes	Horizontal Sync	Vertical Sync	Video	Power Indicator	Power Consumption
Normal operation	Active	Active	Active	White	19 W (Maximum)** 15 W (Typical)
Active-off mode	Inactive	Inactive	Blank	Glowing white	Less than 0.3 W
Switch off	-	-		Off	Less than 0.3 W *

Energy Star	Power Consumption
P_{ON}	11.98 W***
E_{TEC}	37.9 kWh***

E2216HV / E2216HVM:

VESA Modes	Horizontal Sync	Vertical Sync	Video	Power Indicator	Power Consumption
Normal operation	Active	Active	Active	White	24 W (Maximum)** 18 W (Typical)
Active-off mode	Inactive	Inactive	Blank	Glowing white	Less than 0.3 W
Switch off	-	-		Off	Less than 0.3 W *

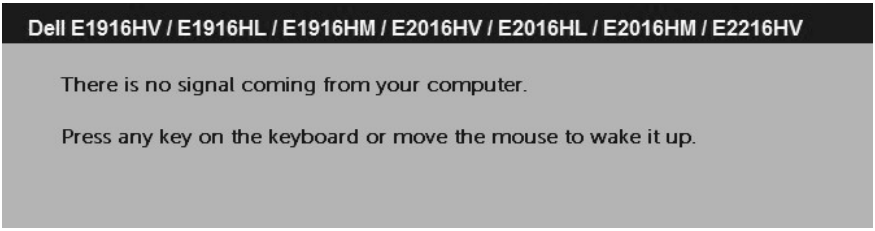
Energy Star	Power Consumption
P_{ON}	15.5 W***
E_{TEC}	49.6 kWh***

NOTE:

PON: Power consumption of on mode as defined in Energy Star 7.0 version.

ETEC: Total energy consumption in kWh as defined in Energy Star 7.0 version.

The OSD will only function in the *normal operation* mode. When any button except power button is pressed in Active-off mode, the following messages will be displayed:



Activate the computer and monitor to gain access to the **OSD**.

NOTE: Dell monitors are Energy Star certified in all regions except for the following: E2016HV in Asia Pacific, E2216HV in America.

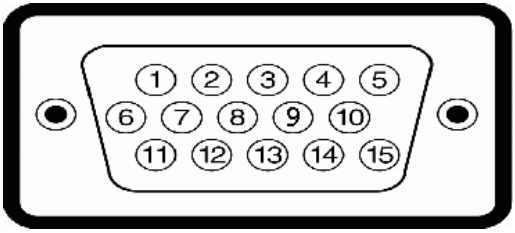
* Zero-power consumption in OFF mode can only be achieved by disconnecting the main cable from the monitor.

** Maximum power consumption with max luminance and contrast.

*** This document is informational only and reflects laboratory performance. Your product may perform differently, depending on the software, components and peripherals you ordered and shall have no obligation to update such information. Accordingly, the customer should not rely upon this information in making decisions about electrical tolerances or otherwise. No warranty as to accuracy or completeness is expressed or implied.

Pin Assignments

15-pin D-Sub connector



Pin Number	Monitor Side of the 15-pin Side Signal Cable
1	Video-Red
2	Video-Green
3	Video-Blue
4	GND
5	Self-test
6	GND-R
7	GND-G
8	GND-B
9	DDC +5 V
10	GND-sync
11	GND
12	DDC data

13	H-sync
14	V-sync
15	DDC clock

Plug and Play Capability

You can install the monitor in any Plug and Play compatible system. The monitor automatically provides the computer with its Extended Display Identification Data (EDID) using Display Data Channel (DDC) protocols so that the system can configure itself and optimize the monitor settings. Most monitor installations are automatic. You can select different settings if required.

Flat-Panel Specifications

Model number	**E1916HV / E1916HL / E1916HM**	**E2016HV**
Screen type	Active matrix - TFT LCD	Active matrix - TFT LCD
Panel Type	TN	TN
Viewable image		
Diagonal	470.1 mm (18.51 inches)	494.1 ± 0.02 mm (19.5 ± 0.05 inches)
Horizontal Active Area	409.8 mm (16.13 inches)	432.0 ± 1.92 mm (17.0 ± 0.08 inches)
Vertical Active Area	230.4 mm (9.07 inches)	239.76 ± 3.42 mm (9.44 ± 0.13 inches)
Area	94417.92 mm^2 (146.35 $inches^2$)	102552.65 ± 1050 mm^2 (158.84± 1.56 $inches^2$)
Pixel pitch	0.30 x 0.30 mm	0.2712 ± 0.0012 x 0.2626 ± 0.0074 mm
Viewing angle:		
Horizontal	90° typical	90° typical
Vertical	65° typical	50° to 65° typical
Luminance output	200 cd/m^2 (typical)	200 cd/m^2 (typical)
Contrast ratio	600 to 1 (typical)	600 to 1 (typical)
Faceplate coating	Antiglare with hard-coating 3H	Antiglare with hard-coating 3H
Backlight	LED light bar system	LED light bar system

Response Time	5 ms typical (white to black, black to white)	5 ms typical (white to black, black to white)
Color Depth	16.7 mil colors	16.7 mil colors
Color Gamut	85 % (typical) **	85 % (typical) **

Model number	**E2016HL / E2016HM**	**E2216HV / E2216HVM**
Screen type	Active matrix - TFT LCD	Active matrix - TFT LCD
Panel Type	TN	TN
Viewable image		
Diagonal	494.1 ± 0.02 mm (19.5 ± 0.05 inches)	546.86 mm (21.53 inches)
Horizontal Active Area	432.0 ± 1.92 mm (17.0 ± 0.08 inches)	476.64 mm (18.77 inches)
Vertical Active Area	239.76 ± 3.42 mm (9.44 ± 0.13 inches)	268.11 mm (10.56 inches)
Area	102552.65 ± 1050 mm^2 (158.84± 1.56 $inches^2$)	127791.95 mm^2 (198.21 $inches^2$)
Pixel pitch	0.2712 ± 0.0012 x 0.2626 ± 0.0074 mm	0.248 x 0.248 mm
Viewing angle:		
Horizontal	170° typical	90° typical
Vertical	160° typical	50° to 65° typical
Luminance output	250 cd/m^2 (typical)	200 cd/m^2 (typical)
Contrast ratio	1000 to 1 (typical)	600 to 1 (typical)
Faceplate coating	Antiglare with hard-coating 3H	Antiglare with hard-coating 3H
Backlight	LED edgelight system	LED light bar system
Response Time	5 ms typical (white to black, black to white)	5 ms typical (white to black, black to white)
Color Depth	16.7 mil colors	16.7 mil colors
Color Gamut	86 % (typical) *	85 % (typical) **

** E1916HV / E1916HL / E1916HM / E2016HV / E2216HV / E2216HVM color gamut (typical) is based on CIE1976 (85 %) and CIE1931 (72 %) test standards. E2016HL / E2016HM color gamut (typical) is based on CIE1976 (86 %) and CIE1931 (72 %) test standards.

Resolution Specifications

Model number	E1916HV / E1916HL / E1916HM	E2016HV / E2016HL / E2016HM	E2216HV / E2216HVM
Scan range			
• Horizontal	30 kHz to 83 kHz (automatic)		
• Vertical	56 Hz to 76 Hz (automatic)		
Maximum preset resolution	1366 x 768 at 60 Hz	1600 x 900 at 60 Hz	1920 x 1080 at 60 Hz

Electrical Specifications

Model number	E1916HV / E1916HL / E1916HM / E2016HV / E2016HL / E2016HM / E2216HV / E2216HVM
Video input signals	Analog RGB: 0.7 Volts ± 5 %, 75 ohm input impedance
Synchronization input signals	Separate horizontal and vertical synchronizations, polarity-free TTL level, SOG (Composite SYNC on green)
AC input voltage / frequency / current	100 VAC to 240 VAC / 50 Hz or 60 Hz ± 3 Hz / 1.0 A (typical)
Inrush current	120 V: 30 A (Max.) 240 V: 60 A (Max.)

Preset Display Modes

The following table lists the preset modes for which Dell guarantees image size and centering:

E1916HV / E1916HL / E1916HM:

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (Horizontal/ Vertical)
VESA, 720 x 400	31.5	70.1	28.3	-/+
VESA, 640 x 480	31.5	59.9	25.2	-/-
VESA, 640 x 480	37.5	75.0	31.5	-/-
VESA, 800 x 600	37.9	60.3	40.0	+/+
VESA, 800 x 600	46.9	75.0	49.5	+/+
VESA, 1024 x 768	48.4	60.0	65.0	-/-
VESA, 1024 x 768	60.0	75.0	78.8	+/+
VESA, 1280 x 1024	80.0	75.0	135.0	+/+
VESA, 1366 x 768	47.7	59.8	85.5	+/+

E2016HV / E2016HL / E2016HM:

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (Horizontal/ Vertical)
VESA, 720 x 400	31.5	70.1	28.3	-/+
VESA, 640 x 480	31.5	59.9	25.2	-/-
VESA, 640 x 480	37.5	75.0	31.5	-/-
VESA, 800 x 600	37.9	60.3	40.0	+/+
VESA, 800 x 600	46.9	75.0	49.5	+/+
VESA, 1024 x 768	48.4	60.0	65.0	-/-
VESA, 1024 x 768	60.0	75.0	78.8	+/+
VESA, 1152 x 864	67.5	75.0	108.0	+/+
VESA, 1280 x 1024	64.0	60.0	108.0	+/+
VESA, 1280 x 1024	80.0	75.0	135.0	+/+
VESA, 1600 x 900	55.5	60.0	97.8	+/-

E2216HV / E2216HVM:

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (Horizontal/ Vertical)
VESA, 720 x 400	31.5	70.1	28.3	-/+
VESA, 640 x 480	31.5	59.9	25.2	-/-
VESA, 640 x 480	37.5	75.0	31.5	-/-
VESA, 800 x 600	37.9	60.3	40.0	+/+
VESA, 800 x 600	46.9	75.0	49.5	+/+
VESA, 1024 x 768	48.4	60.0	65.0	-/-
VESA, 1024 x 768	60.0	75.0	78.8	+/+
VESA, 1152 x 864	67.5	75.0	108.0	+/+
VESA, 1280 x 1024	64.0	60.0	108.0	+/+
VESA, 1280 x 1024	80.0	75.0	135.0	+/+
VESA, 1600 x 900	60.0	60.0	108.0	+/+
VESA, 1920 x 1080	67.5	60.0	148.5	+/+

Physical Characteristics

The following table lists the monitor's physical characteristics:

Model Number	E1916HV / E1916HL / E1916HM	E2016HV / E2016HL / E2016HM	E2216HV / E2216HVM
Connector type	15-pin D-subminiature (Black connector)		
Signal cable type	Analog: D-Sub, 15 pins		
Dimensions: (with stand)			
Height	359.0 mm (14.13 inches)	368.9 mm (14.52 inches)	396.7 mm (15.62 inches)
Width	445.4 mm (17.54 inches)	471.5 mm (18.56 inches)	512.2 mm (20.17 inches)
Depth	167.0 mm (6.57 inches)	167.0 mm (6.57 inches)	180.0 mm (7.09 inches)
Dimensions: (without stand)			
Height	266.0 mm (10.47 inches)	275.4 mm (10.84 inches)	303.7 mm (11.96 inches)
Width	445.4 mm (17.54 inches)	471.5 mm (18.56 inches)	512.2 mm (20.17 inches)
Depth	51.5 mm (2.03 inches)	51.5 mm (2.03 inches)	50.5 mm (1.99 inches)
Stand dimensions:			
Height	156.0 mm (6.14 inches)	156.0 mm (6.14 inches)	177.0 mm (6.97 inches)
Width	220.0 mm (8.66 inches)	220.0 mm (8.66 inches)	250.0 mm (9.84 inches)
Depth	167.0 mm (6.57 inches)	167.0 mm (6.57 inches)	180.0 mm (7.09 inches)
Weight:			
Weight with packaging	3.60 kg (7.94 lb)	3.65 kg (8.05 lb)	4.30 kg (9.48 lb)
Weight with stand assembly and cables	3.0 kg (6.61 lb)	3.02 kg (6.66 lb)	3.63 kg (8.0 lb)
Weight without stand assembly (For wall mount or VESA mount considerations - no cables)	2.26 kg (4.98 lb)	2.26 kg (4.98 lb)	2.83 kg (6.24 lb)
Weight of stand assembly	0.46 kg (1.01 lb)	0.46 kg (1.01 lb)	0.52 kg (1.15 lb)

Environmental Characteristics

The following table lists the environmental conditions for your monitor:

Model Number	**E1916HV / E1916HL / E1916HM / E2016HV**	**E2016HL / E2016HM**	**E2216HV / E2216HVM**
Temperature			
• Operating	0 °C to 40 °C (32 °F to 104 °F)		
• Non-operating	Storage: -20 °C to 60 °C (-4 °F to 140 °F) Shipping: -20 °C to 60 °C (-4 °F to 140 °F)		
Humidity			
• Operating	10 % to 80 % (non-condensing)		
• Non-operating	Storage: 5 % to 90 % (non-condensing) Shipping: 5 % to 90 % (non-condensing)		
Altitude			
• Operating	5,000 m (16,404 ft) max		
• Non-operating	12,191 m (40,000 ft) max		
Thermal dissipation	58.0 BTU/hour (maximum) 47.8 BTU/hour (typical)	64.8 BTU/hour (maximum) 51.2 BTU/hour (typical)	81.9 BTU/hour (maximum) 68.3 BTU/hour (typical)

LCD Monitor Quality & Pixel Policy

During the LCD Monitor manufacturing process, it is not uncommon for one or more pixels to become fixed in an unchanging state. The visible result is a fixed pixel that appears as an extremely tiny dark or bright discolored spot. When the pixel remains permanently lit, it is known as a "bright dot." When the pixel remains black, it is known as a "dark dot."

In almost every case, these fixed pixels are hard to see and do not detract from display quality or usability. A display with 1 to 5 fixed pixels is considered normal and within competitive standards. For more information, see Dell Support site at: http://www.dell.com/support/monitors.

Maintenance Guidelines

Caring for Your Monitor

CAUTION: Read and follow the safety instructions before cleaning the monitor.

CAUTION: Before cleaning the monitor, unplug the monitor power cable from the electrical outlet.

For best practices, follow the instructions in the list below while unpacking, cleaning, or handling your monitor:

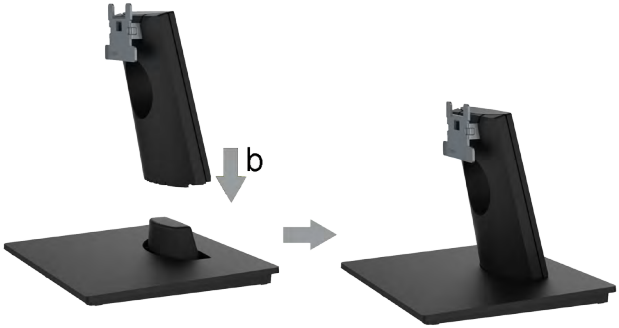
- To clean your antistatic screen, slightly dampen a soft, clean cloth with water. If possible, use a special screen-cleaning tissue or solution suitable for the antistatic coating. Do not use benzene, thinner, ammonia, abrasive cleaners, or compressed air.
- Use a slightly dampened, warm cloth to clean the plastics. Avoid using detergent of any kind as some detergents leave a milky film on the plastics.
- If you notice a white powder when you unpack your monitor, wipe it off with a cloth. This white powder occurs during the shipping of the monitor.
- Handle your monitor with care as a darker-colored monitor may scratch and show white scuff marks more than a lighter-colored monitor.
- To help maintain the best image quality on your monitor, use a dynamically changing screen saver and power off your monitor when not in use.

Setting Up the Monitor

Attaching the Stand

NOTE: The stand base is detached when the monitor is shipped from the factory.

1. Assemble the stand riser to stand base.



   a. Place the monitor stand base on a stable table top.
   b. Slide the monitor stand body in the correct direction down onto the stand base until it clicks into place.

2. Attach the stand assembly to the monitor:

E1916HV/E1916HL/E1916HM
E2016HV/E2016HL/E2016HM

E2216HV/E2216HVM

   a. Place the monitor on a soft cloth or cushion near the edge of desk.
   b. Align the stand assembly bracket to the monitor groove.
   c. Insert the bracket towards monitor until it locks in place.

Connecting Your Monitor

⚠ **WARNING: Before you begin any of the procedures in this section, follow the Safety Instructions.**

To connect your monitor to the computer:

1. Turn off your computer and disconnect the power cable.
2. Connect VGA cable to the corresponding video port on the back of your computer.

Connecting VGA Cable

NOTE: The graphics are used for the purpose of illustration only. Appearance on the computer may vary.

Organizing Your Cables

After attaching all necessary cables to your monitor and computer, (See Connecting Your Monitor for cable attachment), organize all cables as shown above.

Removing the Monitor Stand

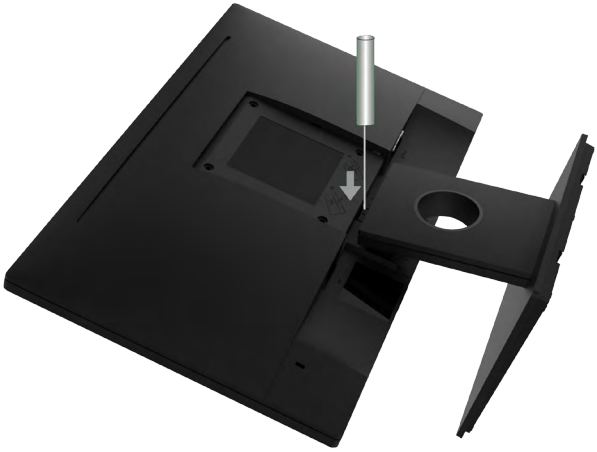
NOTE This is applicable for a monitor with a stand. When any other stand is bought, please refer to the respective stand setup guide for the removal instructions.

1. Remove the VESA Cover.

   a. Place the monitor panel on a soft cloth or cushion.

   b. Lft from both side simultaneously, remove the VESA Cover away from the monitor.

2. Remove the stand assembly to the monitor.



   a. Use a long and thin screwdriver to push the release latch located in a hole just above the stand.

   b. Once the latch is released, remove the base away from the monitor.

Wall Mounting (Optional)

(Screw dimension: M4 x 10 mm). Refer to the instructions that come with the VESA-compatible base mounting kit.

1. Place the monitor panel on a soft cloth or cushion on a stable flat table.
2. Remove the stand.
3. Use a screwdriver to remove the four screws securing the plastic cover. (figure 2)
4. Attach the mounting bracket from the wall mounting kit to the LCD.
5. Mount the LCD on the wall by following the instructions that came with the base mounting kit.

   NOTE: For use only with UL-listed wall-mount bracket with minimum weight/load bearing capacity of 2.26 kg (E1916HV / E1916HL / E1916HM)/2.26kg (E2016HV / E2016HL / E2016HM)/2.83 kg (E2216HV / E2216HVM).

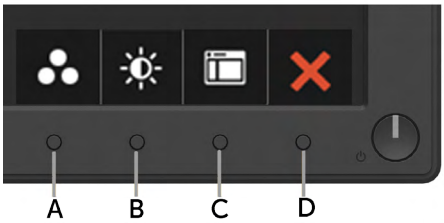
Operating the Monitor

Power On the Monitor

Press the button to turn on the monitor.

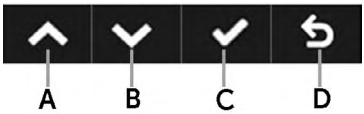
Using the Front-Panel Controls

Use the keys on the front of the monitor to adjust the image settings.



Front-Panel Keys		Description
A	**Preset modes**	Use the **Preset modes** key to choose from a list of preset color modes. See **Using the OSD Menu**.
B	**Brightness /Contrast**	Use the **Brightness / Contrast** key to direct access to the "Brightness" and "Contrast" control menu.
C	**Menu**	Use the **Menu** key to open the on-screen display (OSD).
D	**Exit**	Use the **Exit** key to exit on-screen display (OSD) from menu and sub-menus.

Front-Panel Keys



Front-Panel Keys		Description
A	**Up**	Use the **Up** key to adjust (increase ranges) items in the OSD menu.

B	Down	Use the **Down** key to adjust (decrease ranges) items in the OSD menu.
C	OK	Use the **OK** key to confirm your selection.
D	Back	Use the **Back** key to go back to the previous menu.

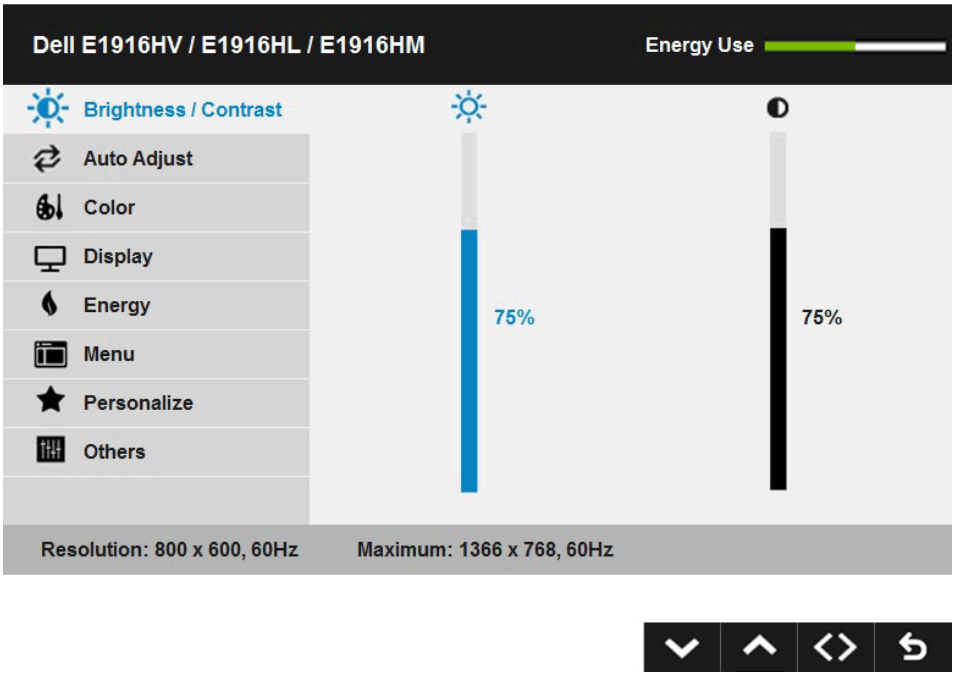
Using the On-Screen Display (OSD) Menu

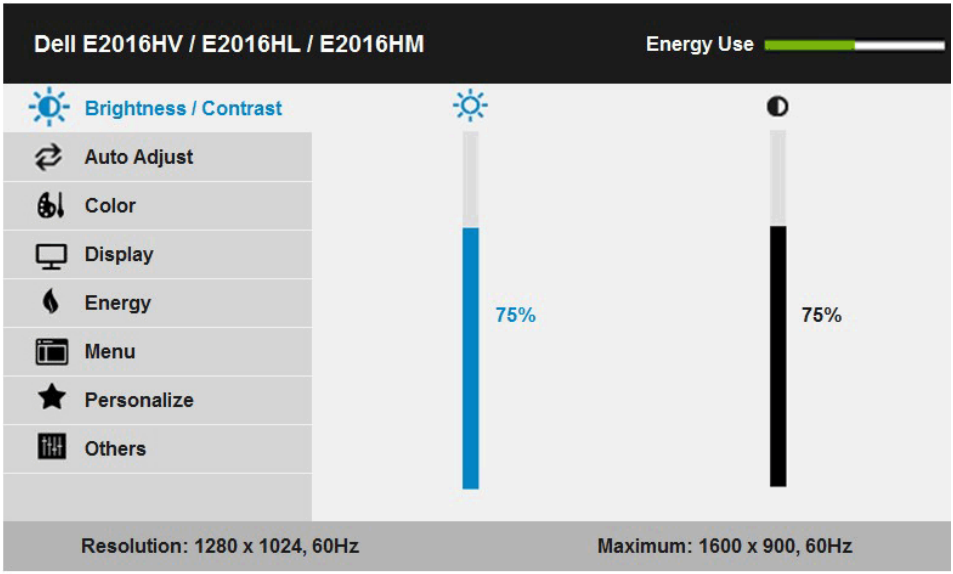
Accessing the Menu System

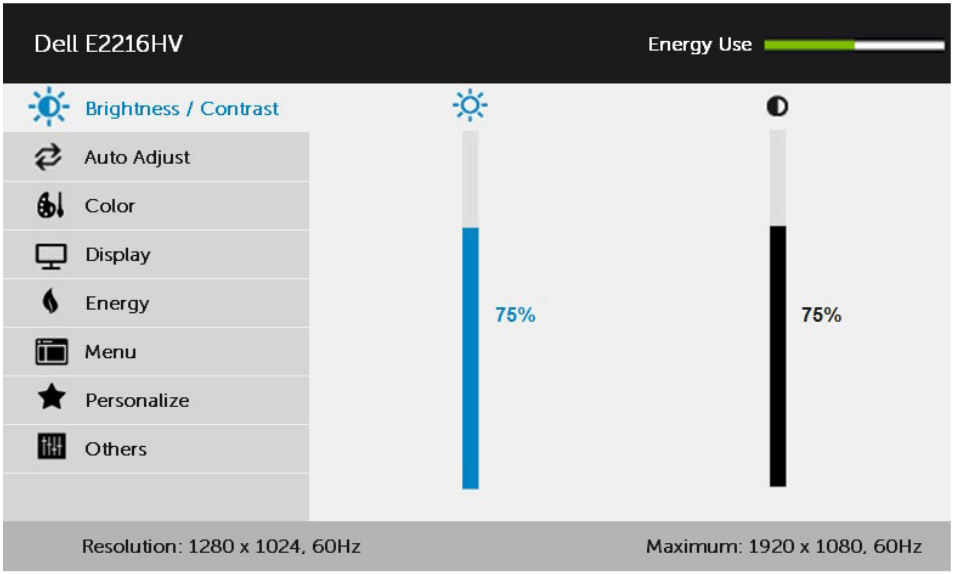
NOTE: If you change the settings and then either proceed to another menu or exit the OSD menu, the monitor automatically saves those changes. The changes are also saved if you change the settings and then wait for the OSD menu to disappear.

1. Press the button to open the OSD menu and display the main menu.

Main Menu

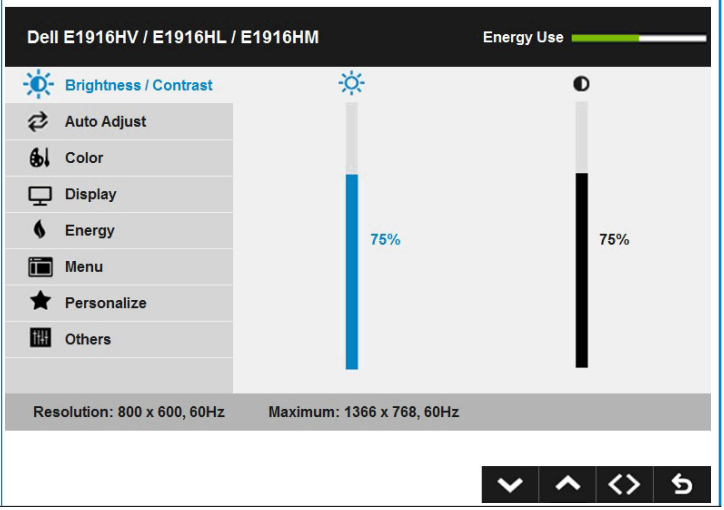


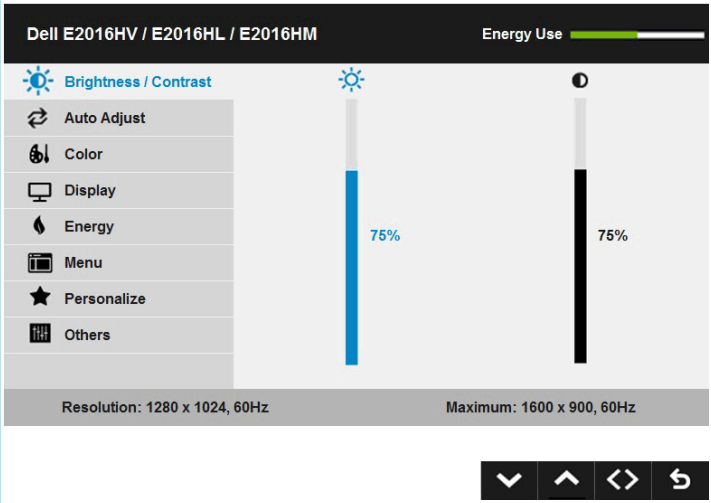

Dell E2016HV / E2016HL / E2016HM
Energy Use
Brightness / Contrast
Auto Adjust
Color
Display
Energy
Menu
Personalize
Others
75%
75%
Resolution: 1280 x 1024, 60Hz
Maximum: 1600 x 900, 60Hz

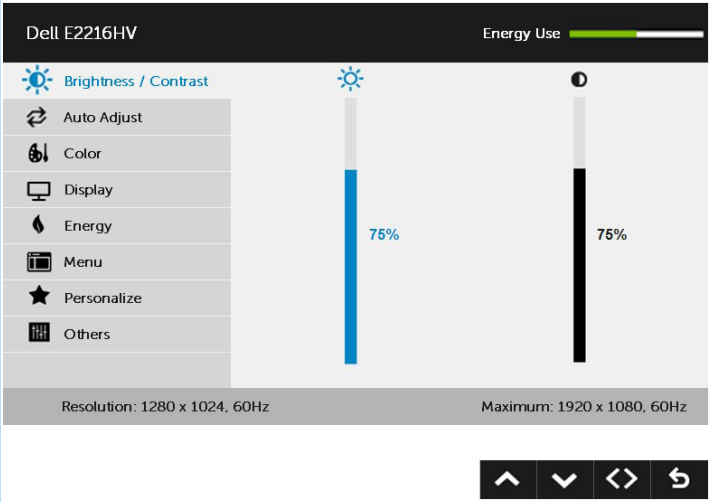

Dell E2216HV
Energy Use
Brightness / Contrast
Auto Adjust
Color
Display
Energy
Menu
Personalize
Others
75%
75%
Resolution: 1280 x 1024, 60Hz
Maximum: 1920 x 1080, 60Hz

2. Press the ▲ and ▼ buttons to toggle between options in the Menu. As you move from one icon to another, the option name is highlighted.
3. To select the highlighted item on the menu press the → button again.
4. Press the ▲ and ▼ buttons to select the desired parameter.
5. Press the → button to enter the slide bar and then use the ▲ or ▼ buttons, according to the indicators on the menu, to make your changes.
6. Select the ↩ to return to previous menu without accepting current settings or ✓ to accept and return to previous menu.

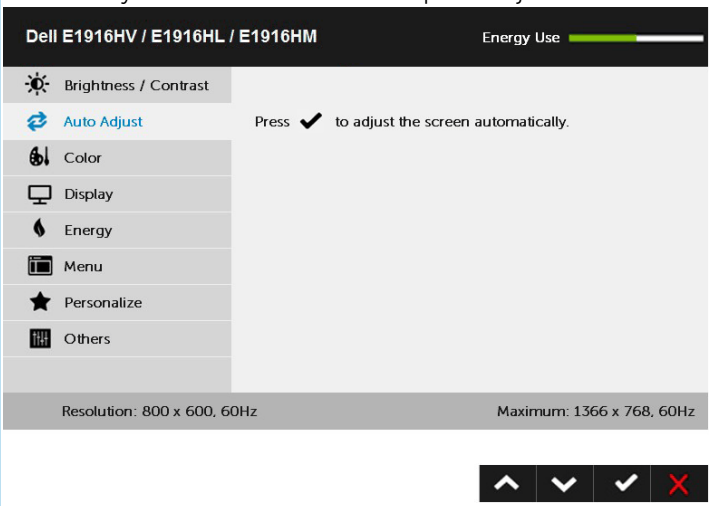
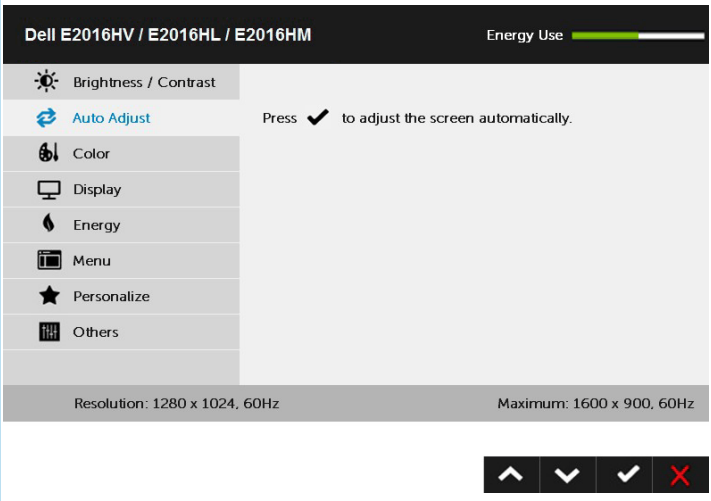
The table below provides a list of all the OSD menu options and their functions.

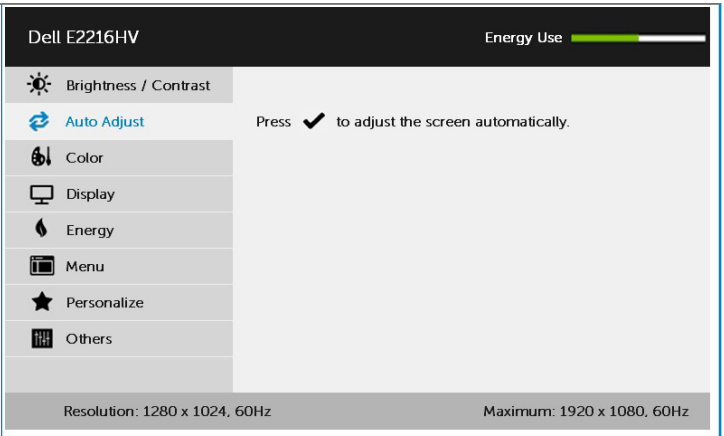
Icon	Menu and Submenus	Description
	Energy Use	This meter shows the energy level being consumed by the monitor in real time.
	Brightness/ Contrast	Use the **Brightness** and **Contrast** menu to adjust the Brightness/ Contrast. 





Brightness	Allows you to adjust the brightness or luminance of the backlight. Press the ^ key to increase brightness and press the v key to decrease brightness (min 0 ~ max 100).
Contrast	Allows you to adjust the contrast or the degree of difference between darkness and lightness on the monitor screen. Adjust brightness first, and adjust contrast only if you need further adjustment. Press the ^ key to increase contrast and press the v key to decrease contrast (min 0 ~ max 100).

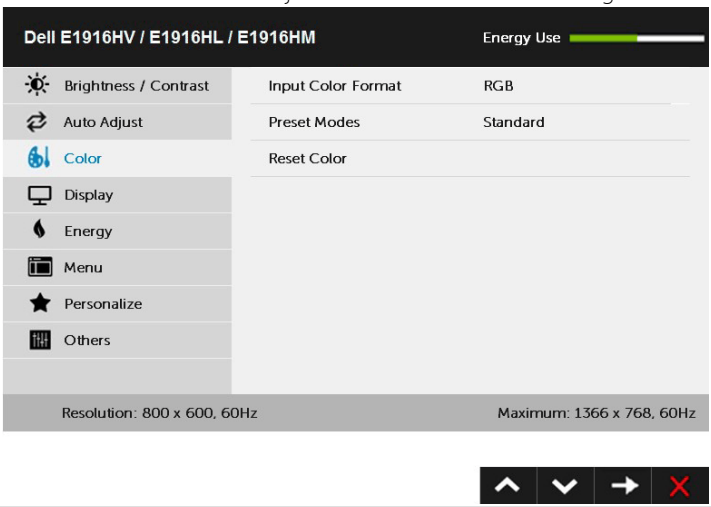
	Auto Adjust	Use this key to activate automatic setup and adjust menu.  

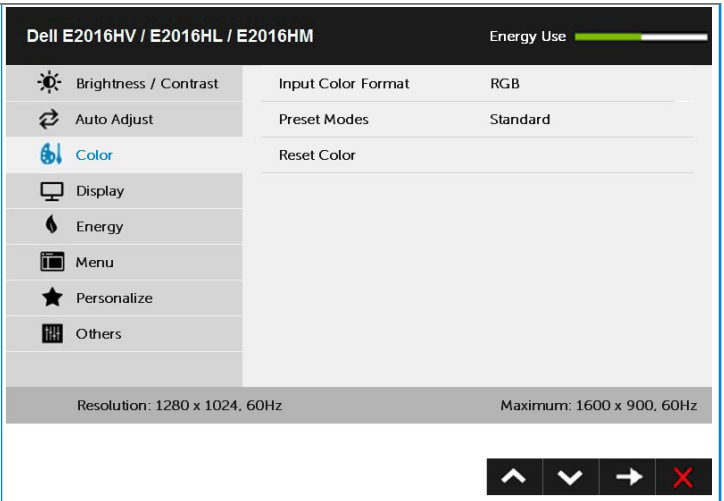


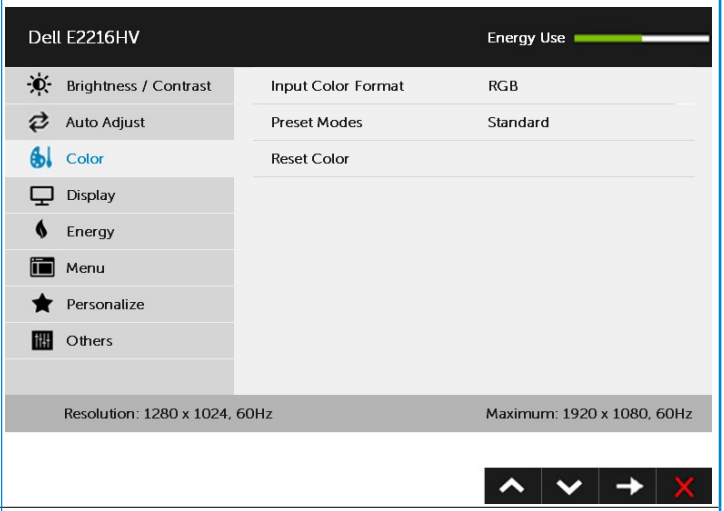
The following dialog appears on a black screen as the monitor self-adjusts to the current input:

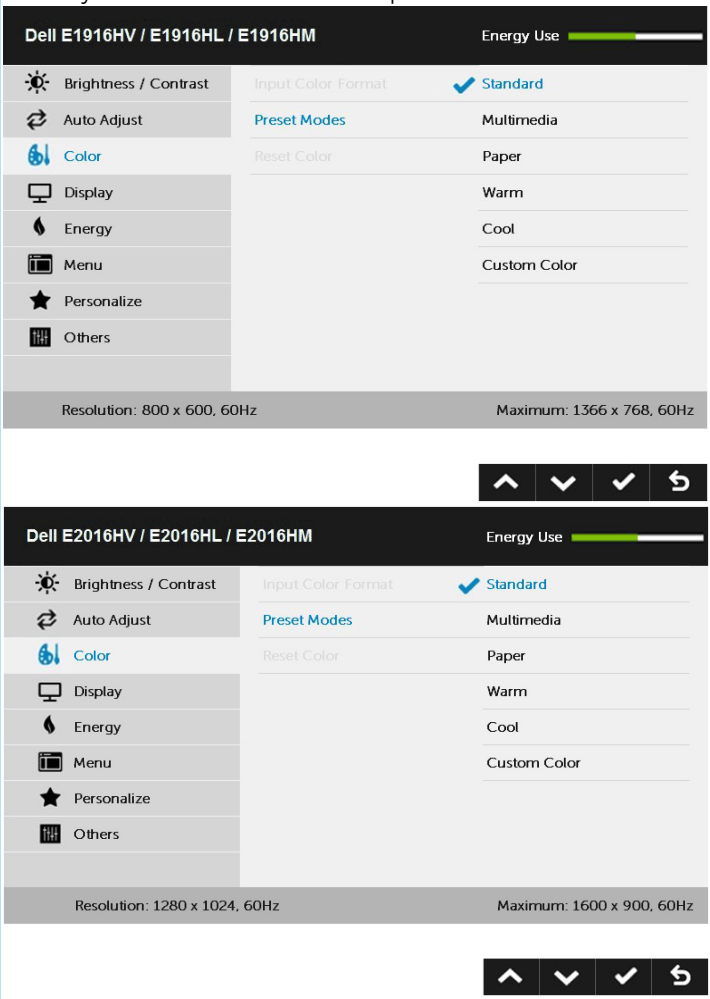
Auto Adjustment allows the monitor to self-adjust to the incoming video signal. After using Auto Adjustment, you can further tune your monitor by using the Pixel Clock (Coarse) and Phase (Fine) controls under **Display**.

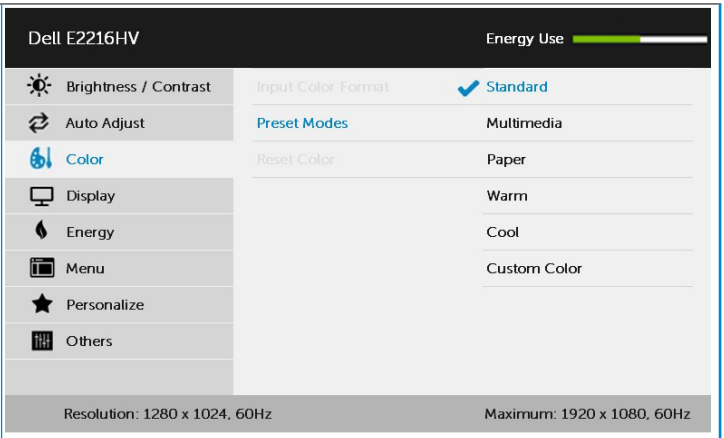
NOTE: Auto Adjust does not occur if you press the button while there are no active video input signals or attached cables.

	Color	Use the **Color** menu to adjust the monitor's color settings. 

<table>
<tr><td></td><td></td><td> 


</td></tr>
<tr><td></td><td>Input Color Format</td><td>Allows you to set the video input mode to RGB or YPbPr</td></tr>
</table>

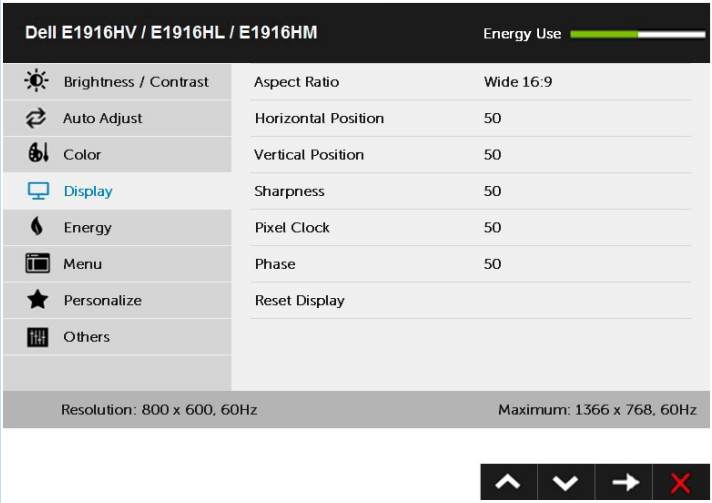
	Preset Modes	Allows you to choose from a list of preset color modes. 

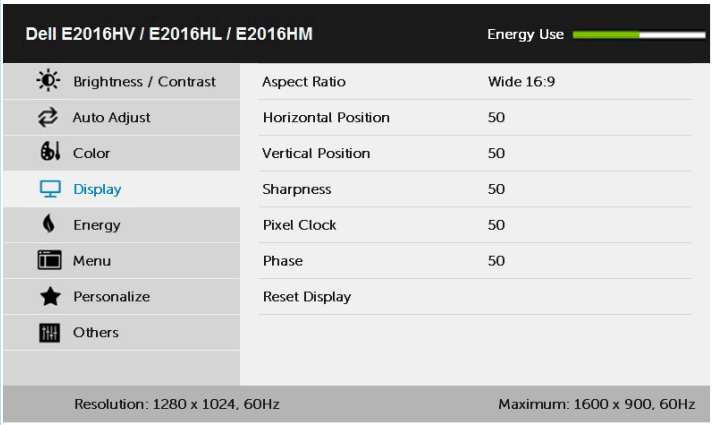


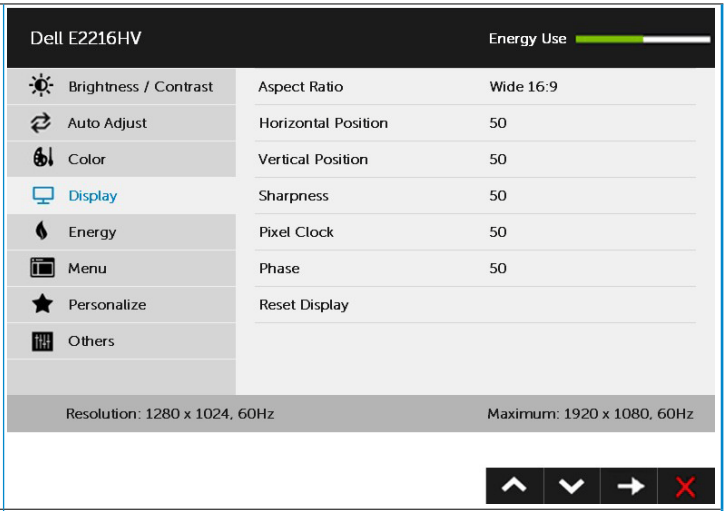
- **Standard**: Loads the monitor's default color settings. This is the default preset mode.
- **Multimedia**: Loads color settings ideal for multimedia applications.
- **Paper**: Loads brightness and sharpness settings ideal for viewing text. Blend the text background to simulate paper media without affecting color images. Applies to RGB input format only.
- **Warm**: Increases the color temperature. The screen appears warmer with a red/yellow tint.
- **Cool**: Decreases the color temperature. The screen appears cooler with a blue tint.
- **Custom Color**: Allows you to manually adjust the color settings. Press the ▲ and ▼ keys to adjust the Red, Green, and Blue values and create your own preset color mode.

Reset Color	Resets your monitor's color settings to the factory defaults.

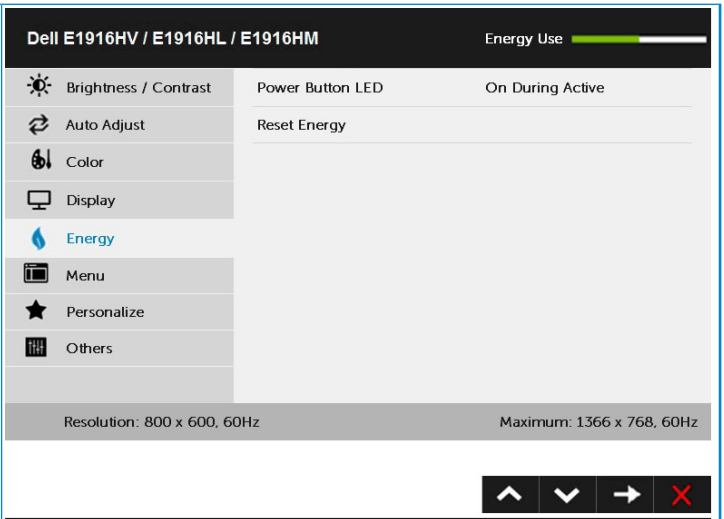
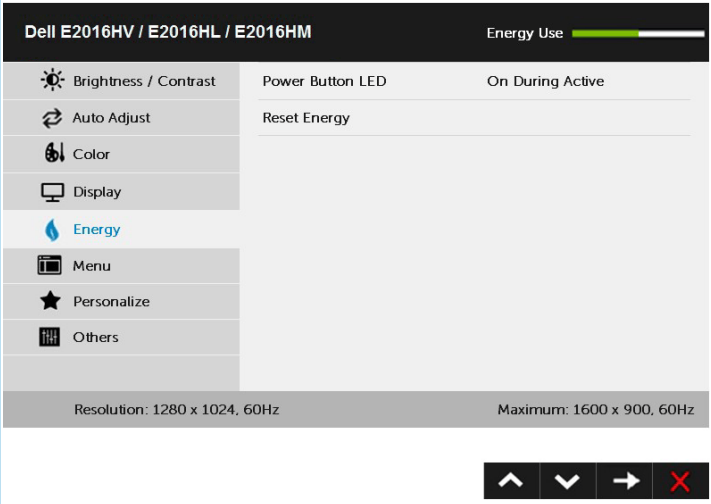
	Display	Use the **Display** menu to adjust the monitor's display settings.

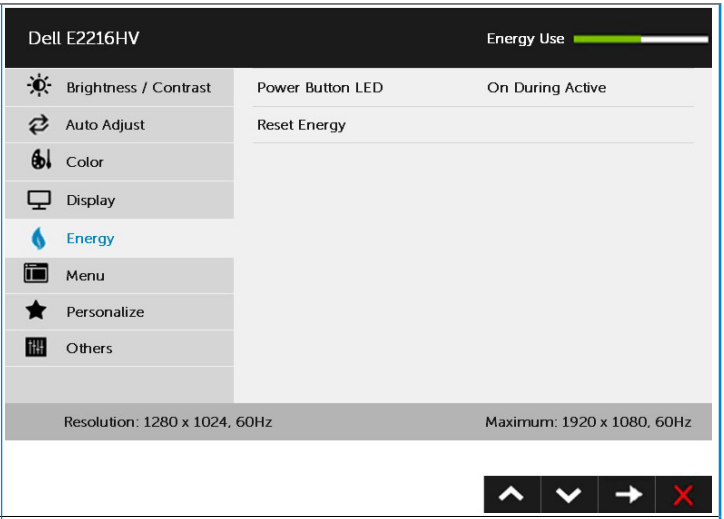
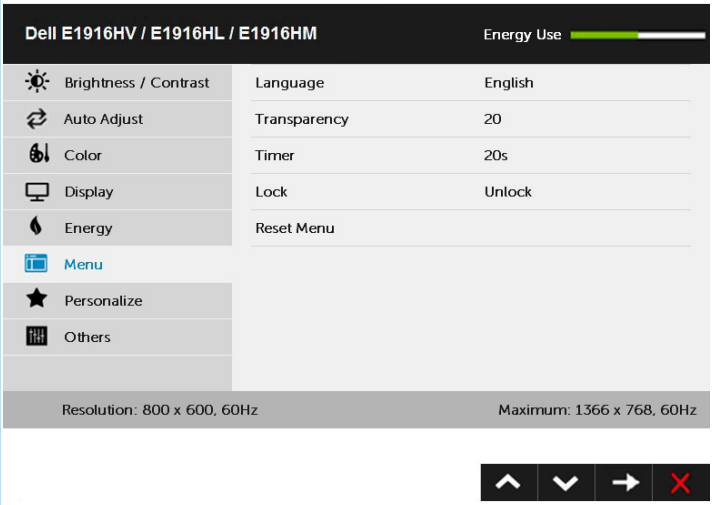


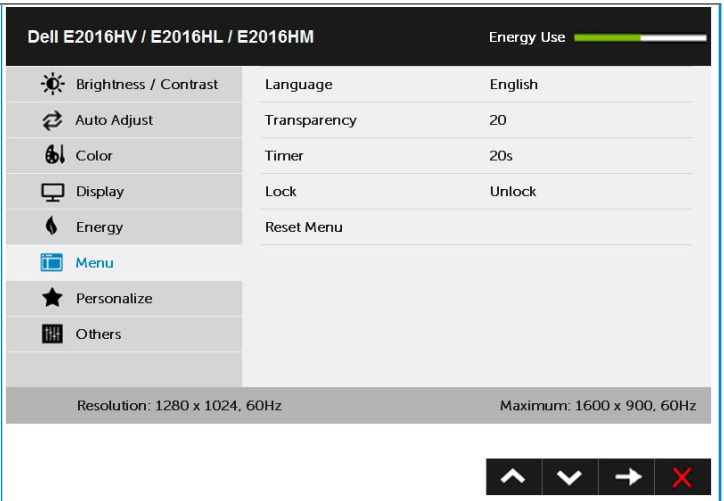


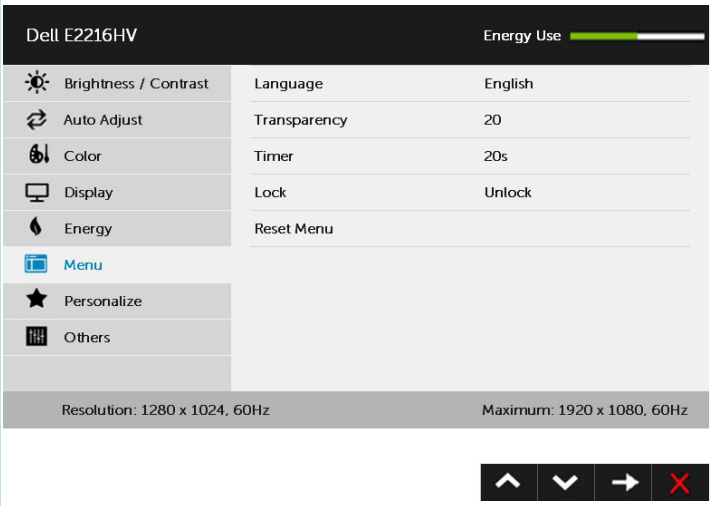


Aspect Ratio	Adjusts the image ratio as Wide 16:9, 4:3, or 5:4. **NOTE:** Wide 16:9 adjustment is not required at maximum preset resolution 1366 x 768 (for E1916HV / E1916HL / E1916HM) or 1600 x 900 (for E2016HV / E2016HL / E2016HM) or 1920 x 1080 (for E2216HV / E2216HVM).
Horizontal Position	Use ▲ or ▼ the buttons to adjust image left and right. Minimum is '0' (-). Maximum is '100' (+).
Vertical Position	Use the ▲ or ▼ buttons to adjust image up and down. Minimum is '0' (-). Maximum is '100' (+).
Sharpness	This feature can make the image look sharper or softer. Use ▲ or ▼ to adjust the sharpness from '0' to '100'.
Pixel Clock	The Phase and Pixel Clock adjustments allow you to adjust your monitor to your preference. Use ▲ or ▼ buttons to adjust for best image quality.
Phase	If satisfactory results are not obtained using the Phase adjustment, use the Pixel Clock (coarse) adjustment and then use Phase (fine), again.
Reset Display	Select this option to restore default display settings.

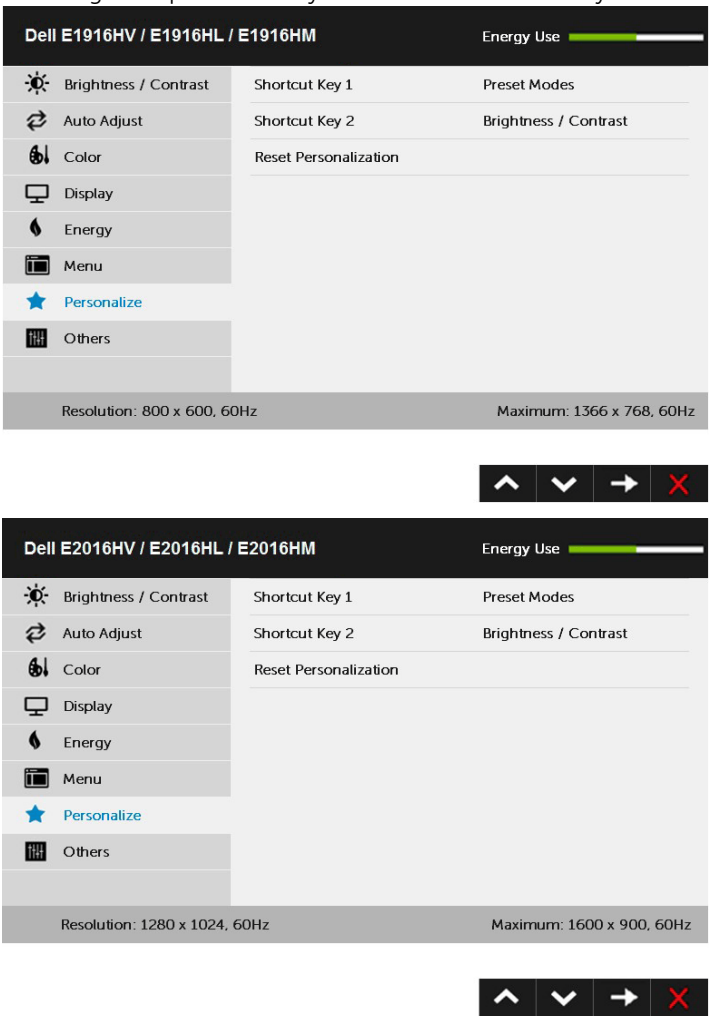
	Energy	 Dell E1916HV / E1916HL / E1916HM Energy Use Brightness / Contrast Auto Adjust Color Display Energy Menu Personalize Others Power Button LED On During Active Reset Energy Resolution: 800 x 600, 60Hz Maximum: 1366 x 768, 60Hz  Dell E2016HV / E2016HL / E2016HM Energy Use Brightness / Contrast Auto Adjust Color Display Energy Menu Personalize Others Power Button LED On During Active Reset Energy Resolution: 1280 x 1024, 60Hz Maximum: 1600 x 900, 60Hz

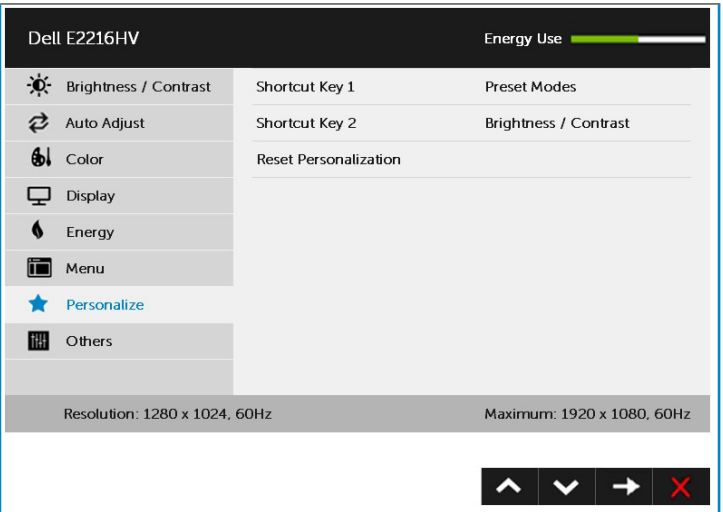
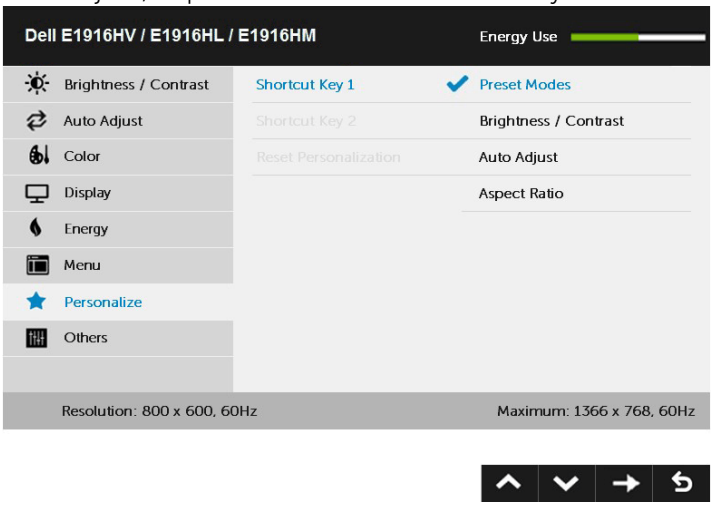
		
	Power Button LED	Allows you to set the power LED indicator on or off during active to save energy.
	Reset Energy	Select this option to restore default Energy settings.
	Menu	Select this option to adjust the settings of the OSD such as, the languages of the OSD, the amount of time the menu remains on screen, and so on. 

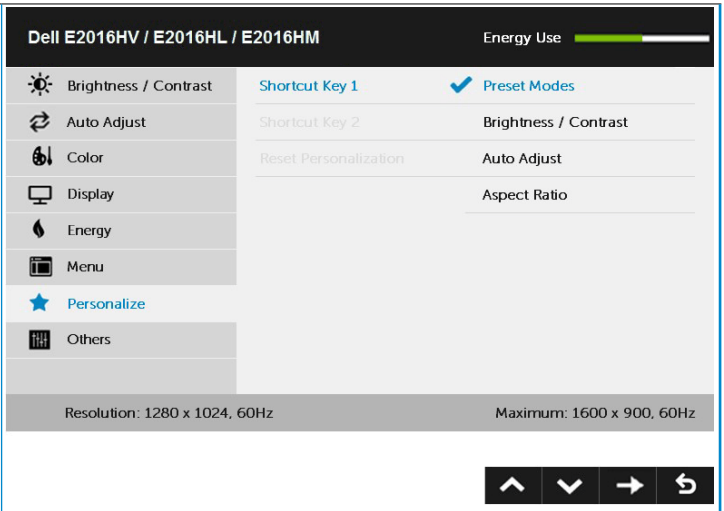


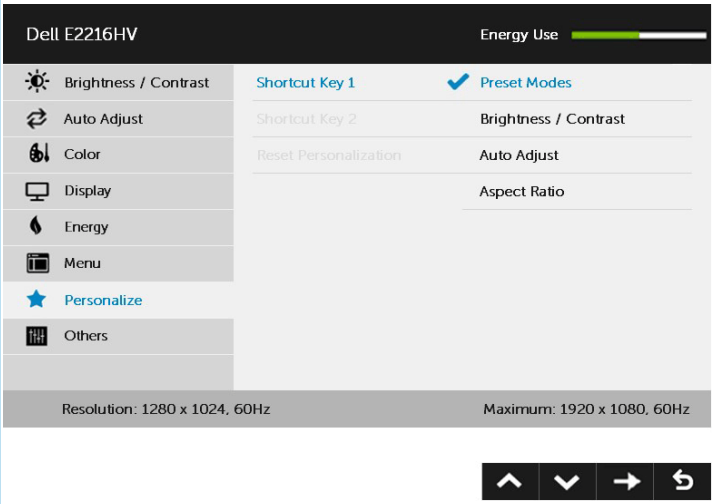


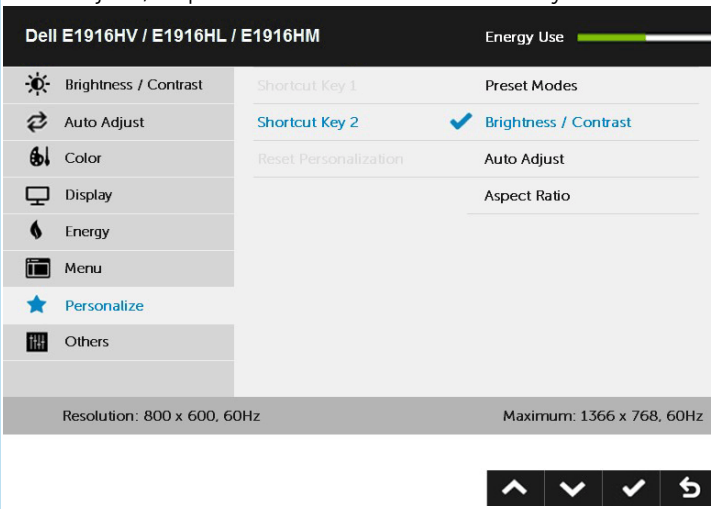
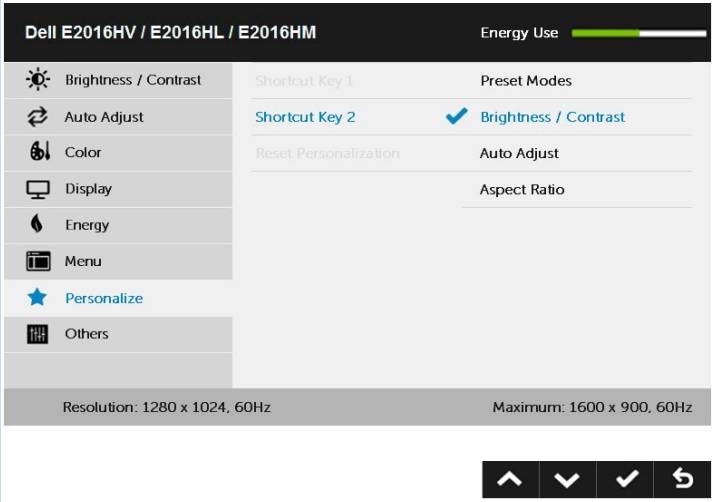
Language	Allows you to set the OSD display to one of eight languages: English, Spanish, French, German, Brazilian Portuguese, Russian, Simplified Chinese, or Japanese.
Transparency	Allows you to adjust the OSD background from opaque to transparent.
Timer	Allows you to set the time for which the OSD remains active after you press a key on the monitor. Use the ▲ and ▼ keys to adjust the slider in 1 second increments, from 5 to 60 seconds.

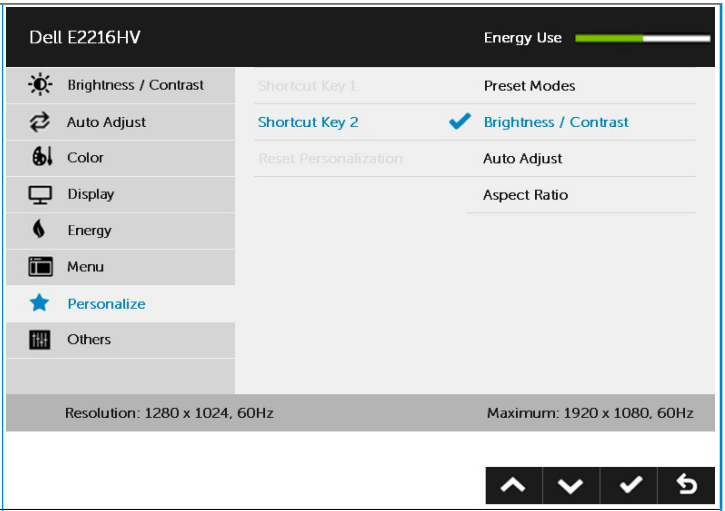
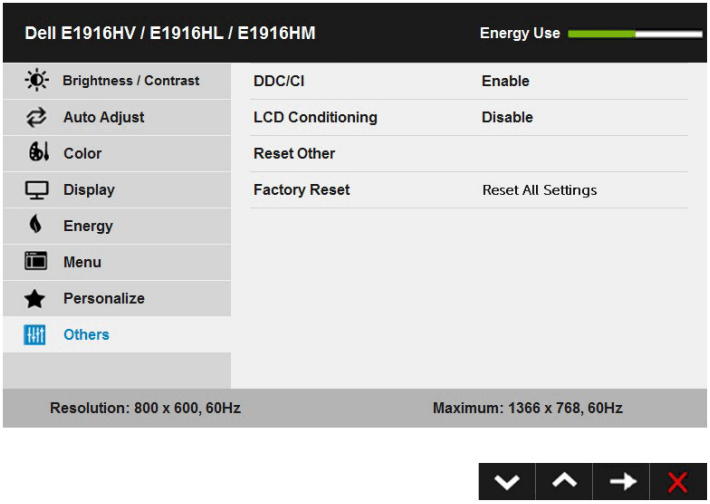
	Lock	Controls user access to adjustments. When Lock is selected, no user adjustments are allowed. All keys are locked except ↩ key. **NOTE:** When the OSD is locked, pressing the menu key takes you directly to the OSD settings menu, with 'OSD Lock' pre-selected on entry. Press and hold ↩ key for 6 seconds to unlock and allow user access to all applicable settings.
	Reset Menu	Select this option to restore default menu settings.
★	**Personalize**	Selecting this option allows you to set two shortcut keys. 

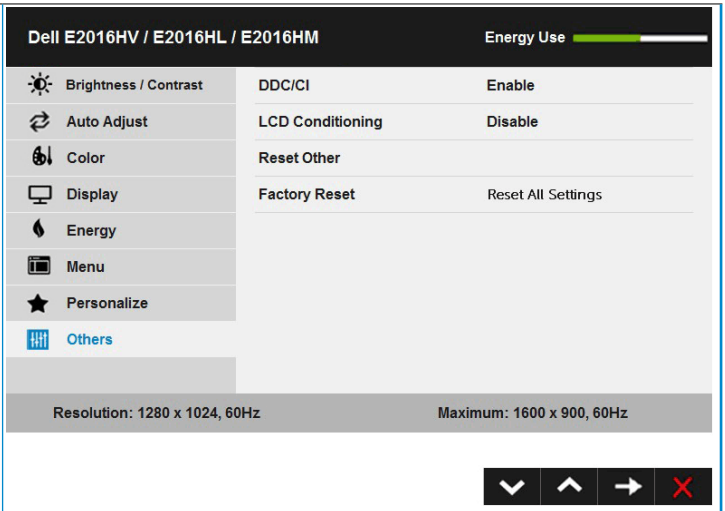
		
	Shortcut Key 1	User can select from "Preset Modes", "Brightness/Contrast", "Auto Adjust", "Aspect Ratio" and set as shortcut key. 

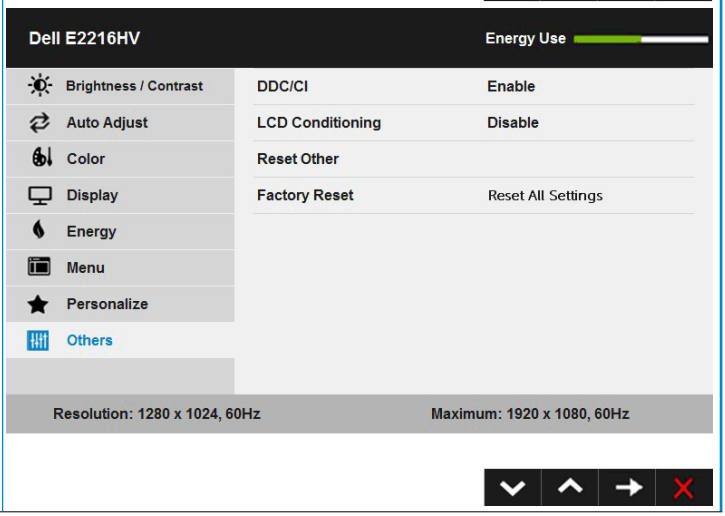

Dell E2016HV / E2016HL / E2016HM
Energy Use
Brightness / Contrast
Auto Adjust
Color
Display
Energy
Menu
Personalize
Others
Shortcut Key 1
Shortcut Key 2
Reset Personalization
Preset Modes
Brightness / Contrast
Auto Adjust
Aspect Ratio
Resolution: 1280 x 1024, 60Hz
Maximum: 1600 x 900, 60Hz

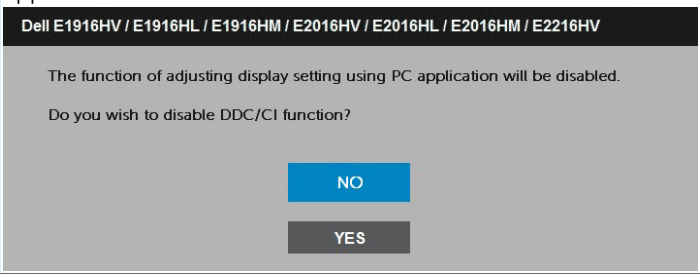
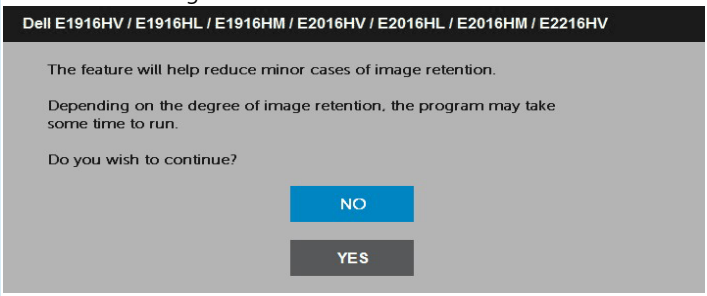

Dell E2216HV
Energy Use
Brightness / Contrast
Auto Adjust
Color
Display
Energy
Menu
Personalize
Others
Shortcut Key 1
Shortcut Key 2
Reset Personalization
Preset Modes
Brightness / Contrast
Auto Adjust
Aspect Ratio
Resolution: 1280 x 1024, 60Hz
Maximum: 1920 x 1080, 60Hz

	Shortcut Key 2	User can select from "Preset Modes", "Brightness/Contrast", "Auto Adjust", "Aspect Ratio" and set as shortcut key.  

		
	Reset Personaliza-tion	Allows you to restore shortcut key to the default setting.
	Others	

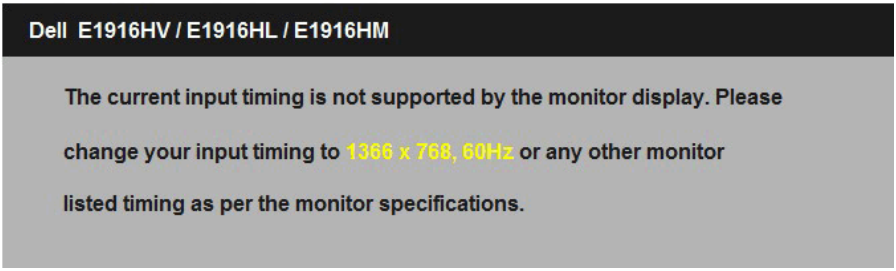

Dell E2016HV / E2016HL / E2016HM
Energy Use
Brightness / Contrast
Auto Adjust
Color
Display
Energy
Menu
Personalize
Others
DDC/CI
Enable
LCD Conditioning
Disable
Reset Other
Factory Reset
Reset All Settings
Resolution: 1280 x 1024, 60Hz
Maximum: 1600 x 900, 60Hz

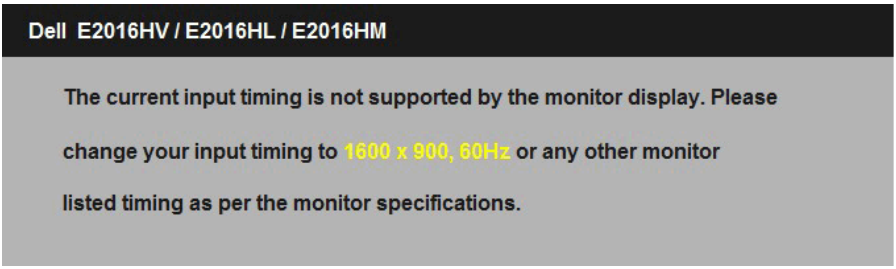

Dell E2216HV
Energy Use
Brightness / Contrast
Auto Adjust
Color
Display
Energy
Menu
Personalize
Others
DDC/CI
Enable
LCD Conditioning
Disable
Reset Other
Factory Reset
Reset All Settings
Resolution: 1280 x 1024, 60Hz
Maximum: 1920 x 1080, 60Hz

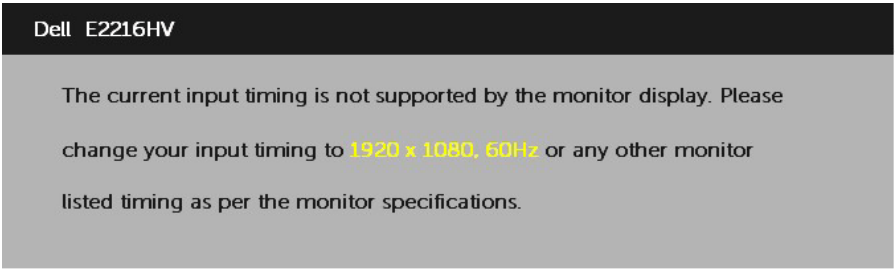
	DDC/CI	DDC/CI (Display Data Channel/Command Interface) allows a software on your computer to adjust the monitor display settings like the brightness, color balance etc. Enable (Default): Optimizes the performance of your monitor and provides a better customer experience. Disable: Disables the DDC/CI option and the following message appears on the screen. 
	LCD Conditioning	This feature will help reduce minor cases of image retention. If an image appears to be stuck on the monitor, select **LCD Conditioning** to help eliminate any image retention. Using the LCD Conditioning feature may take some time. LCD Conditioning feature cannot remove severe cases of image retention or burn-in. **NOTE**: Use LCD Conditioning only when you experience a problem with image retention. The below warning message appears once user selects "Enable" LCD Conditioning. 
	Reset Other	Select this option to restore default other settings, such as DDC/CI.
	Factory Reset	Resets all OSD settings to the factory preset values.

OSD Messages

When the monitor does not support a particular resolution mode you will see the following message:

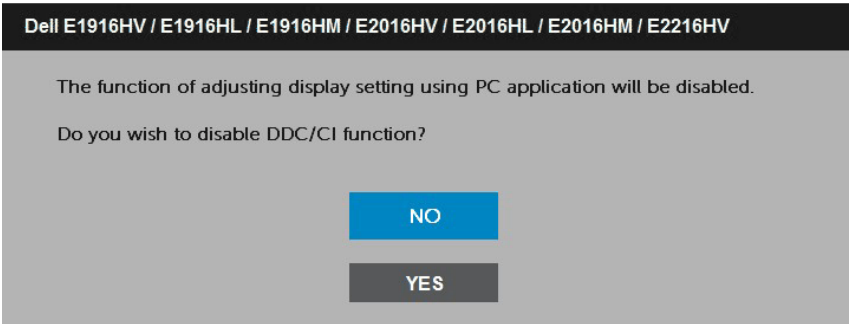






This means that the monitor cannot synchronize with the signal that it is receiving from the computer. See **Monitor Specifications** for the horizontal and vertical frequency ranges addressable by this monitor. Recommended mode is 1366 x 768 (for E1916HV / E1916HL / E1916HM) or 1600 x 900 (for E2016HV / E2016HL / E2016HM) or 1920 x 1080 (for E2216HV / E2216HVM).

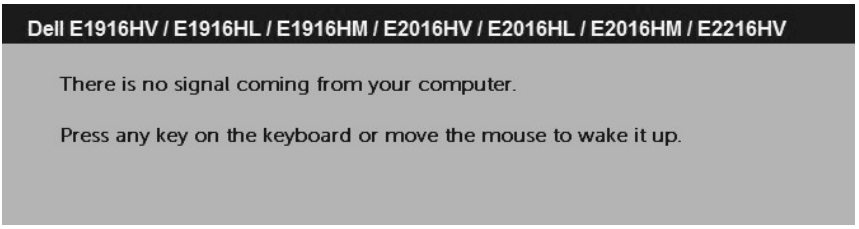
You will see the following message before the DDC/CI function is disabled.



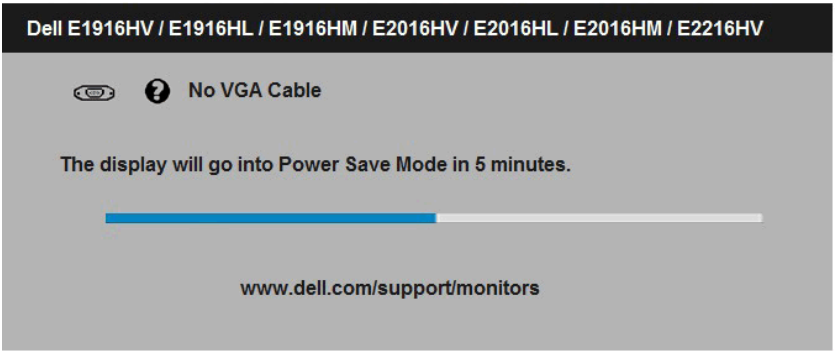
When the monitor enters the **Power Save** mode, the following message appears:

Activate the computer and wake up the monitor to gain access to the **OSD**.

If you press any button other than the power button, the following messages will appear depending on the selected input:



If VGA cable is not connected, a floating dialog box as shown below appears. The monitor will enter **Power Save Mode after 5 minutes** if left at this state.



See **Solving Problems** for more information.

Setting the Maximum Resolution

For optimal display performance while using the Microsoft Windows operating systems, set the display resolution to 1366 x 768 (for E1916HV / E1916HL / E1916HM) or 1600 x 900 (for E2016HV / E2016HL / E2016HM) or 1920 x 1080 (for E2216HV / E2216HVM) pixels by performing the following steps:

In Windows Vista, Windows 7, Windows 8 or Windows 8.1:

1. For Windows 8 or Windows 8.1 only, select the Desktop tile to switch to classic desktop.
2. Right-click on the desktop and click **Screen Resolution**.
3. Click the dropdown list of the screen resolution and select 1366 x 768 (for E1916HV / E1916HL / E1916HM) or 1600 x 900 (for E2016HV / E2016HL / E2016HM) or 1920 x 1080 (for E2216HV / E2216HVM).
4. Click OK.

In Windows 10:

1. Right-click on the desktop and click **Display settings**.
2. Click **Advanced display settings.**
3. Click the dropdown list of **Resolution** and select 1366 x 768 (for E1916HV / E1916HL / E1916HM) or 1600 x 900 (for E2016HV / E2016HL / E2016HM) or 1920 x 1080 (for E2216HV / E2216HVM).
4. Click **Apply**.

If you do not see 1366 x 768 (for E1916HV / E1916HL / E1916HM) or 1600 x 900 (for E2016HV / E2016HL / E2016HM) or 1920 x 1080 (for E2216HV / E2216HVM) as an option, you may need to update your graphics driver. Please choose the scenario below that best describes the computer system you are using, and follow the provided

1:**If you have a Dell desktop or a Dell portable computer with Internet access**

2:**If you have a non Dell desktop, portable computer, or graphics card**

If you have a Dell desktop or a Dell portable computer with Internet access

1. Go to http://www.dell.com/support, enter your service tag, and download the latest driver for your graphics
2. After installing the drivers for your graphics adapter, attempt to set the resolution to 1366 x 768 (for E1916HV / E1916HL / E1916HM) or 1600 x 900 (for E2016HV / E2016HL / E2016HM) or 1920 x 1080 (for E2216HV / E2216HVM) again.

NOTE: If you are unable to set the resolution to 1366 x 768 (for E1916HV / E1916HL / E1916HM) or 1600 x 900 (for E2016HV / E2016HL / E2016HM) or 1920 x 1080 (for E2216HV / E2216HVM), please contact Dell to inquire about a graphics adapter that supports these resolutions.

If you have a non Dell desktop, portable computer, or graphics card

In Windows Vista, Windows 7, Windows 8 or Windows 8.1:

1. For Windows 8 or Windows 8.1 only, select the Desktop tile to switch to classic desktop.
2. Right-click on the desktop and click Personalization.
3. Click Change Display Settings.
4. Click Advanced Settings.
5. Identify your graphics controller supplier from the description at the top of the window (e.g. NVIDIA, ATI, Intel etc.).
6. Please refer to the graphics card provider website for updated driver (for example, http://www.ATI.com OR http://www.NVIDIA.com).
7. After installing the drivers for your graphics adapter, attempt to set the resolution to 1366 x 768 (for E1916HV / E1916HL / E1916HM) or 1600 x 900 (for E2016HV / E2016HL / E2016HM) or 1920 x 1080 (for E2216HV / E2216HVM) again.

In Windows 10:

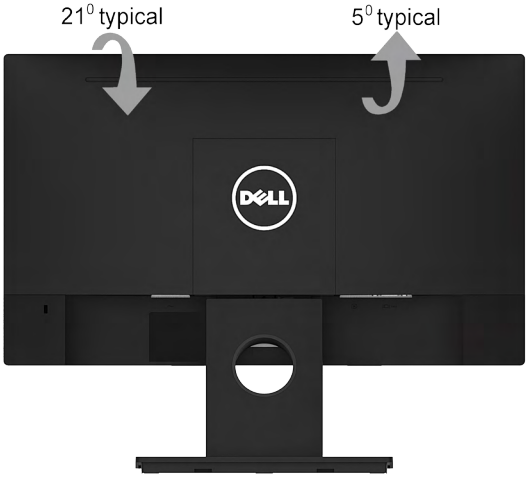
1. Right-click on the desktop and click **Display settings**.
2. Click **Advanced display settings.**
3. Click **Display adapter properties.**
4. Identify your graphics controller supplier from the description at the top of the window (e.g. NVIDIA, ATI, Intel etc.).
5. Please refer to the graphics card provider website for updated driver (for example, http://www.ATI.com OR http://www.NVIDIA.com).
6. After installing the drivers for your graphics adapter, attempt to set the resolution to 1366 x 768 (for E1916HV / E1916HL / E1916HM) or 1600 x 900 (for E2016HV / E2016HL / E2016HM) or 1920 x 1080 (for E2216HV / E2216HVM) again.

NOTE: If you are unable to set the resolution to 1366 x 768 (for E1916HV / E1916HL / E1916HM) or 1600 x 900 (for E2016HV / E2016HL / E2016HM) or 1920 x 1080 (for E2216HV / E2216HVM), please contact the manufacturer of your computer or consider purchasing a graphics adapter that will support the video resolution of 1366 x 768 (for E1916HV / E1916HL / E1916HM) or 1600 x 900 (for E2016HV / E2016HL / E2016HM) or 1920 x 1080 (for E2216HV / E2216HVM) .

Using the Tilt

Tilt

With the stand assembly, you can tilt the monitor for the most comfortable viewing angle.



NOTE: The stand base is detached when the monitor is shipped from the factory.

Troubleshooting

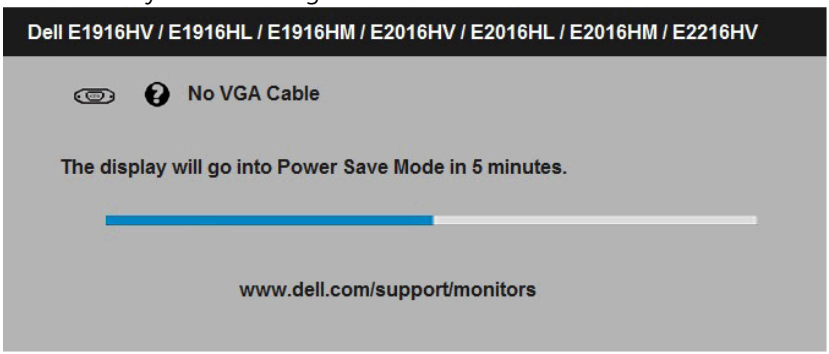
⚠ **WARNING: Before you begin any of the procedures in this section, follow the Safety Instruction**

Self-Test

Your monitor provides a self-test feature that allows you to check whether your monitor is functioning properly. If your monitor and computer are properly connected but the monitor screen remains dark, run the monitor self-test by performing the following steps:

1. Turn off both your computer and the monitor.
2. Unplug the video cable from the back of the computer. To ensure proper Self-Test operation, remove VGA cables from the back of computer.
3. Turn on the monitor.

   The floating dialog box should appear on-screen (against a black background) if the monitor cannot sense a video signal and is working correctly. While in self-test mode, the power LED remains white. Also, depending upon the selected input, one of the dialogs shown below will continuously scroll through the screen.

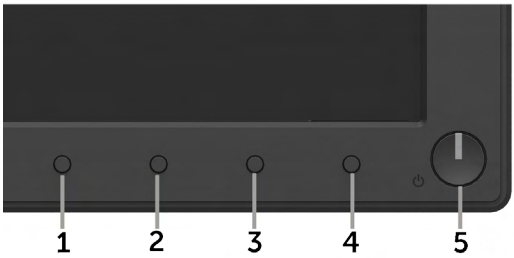


4. This box also appears during normal system operation, if the video cable becomes disconnected or damaged. The monitor will enter **Power Save Mode after 5 minutes** if left at this state.
5. Turn off your monitor and reconnect the video cable; then turn on both your computer and the monitor.

If your monitor screen remains blank after you use the previous procedure, check your video controller and computer, because your monitor is functioning properly.

Built-in Diagnostics

Your monitor has a built-in diagnostic tool that helps you determine if the screen abnormality you are experiencing is an inherent problem with your monitor, or with your computer and video card.



NOTE: You can run the built-in diagnostics only when the video cable is unplugged and the monitor is in self-test mode.

To run the built-in diagnostics:

1. Ensure that the screen is clean (no dust particles on the surface of the screen).
2. Unplug the video cable(s) from the back of the computer or monitor. The monitor then goes into the self-test mode.
3. Press and hold the **Button 1** and **Button 4** on the front panel simultaneously for 2 seconds. A gray screen appears.
4. Carefully inspect the screen for abnormalities.
5. Press the **Button 4** on the front panel again. The color of the screen changes to red.
6. Inspect the display for any abnormalities.
7. Repeat steps 5 and 6 to inspect the display in green, blue, black, white screens.

The test is complete when the Text screen appears. To exit, press the **Button 4** again.

If you do not detect any screen abnormalities upon using the built-in diagnostic tool, the monitor is functioning properly. Check the video card and computer.

Common Problems

The following table contains general information about common monitor problems you might encounter and the possible solutions.

Common Symptoms	What You Experience	Possible Solutions
No Video/Power LED off	No picture	• Ensure that the video cable connecting the monitor and the computer is properly connected and secure. • Verify that the power outlet is functioning properly using any other electrical equipment. • Ensure that the power button is depressed fully. • Ensure that the correct input source is selected via the **Input Source** Select button. • Check the "Power LED Button" option under Energy in OSD Menu.
No Video/Power LED on	No picture or no brightness	• Increase brightness & contrast controls via OSD. • Perform monitor self-test feature check. • Check for bent or broken pins in the video cable connector. • Ensure that the correct input source is selected via the **Input Source** Select menu. • Run the built-in diagnostics.
Poor Focus	Picture is fuzzy, blurry, or ghosting	• Perform Auto Adjust via OSD. • Adjust the Phase and Pixel Clock controls via OSD. • Eliminate video extension cables. • Reset the monitor to **Factory Settings**. • Change the video resolution to the correct aspect ratio (16:9).
Shaky/Jittery Video	Wavy picture or fine movement	• Perform Auto Adjust via OSD. • Adjust the Phase and Pixel Clock controls via OSD. • Reset the monitor to **Factory Settings**. • Check environmental factors. • Relocate the monitor and test in another room.

Missing Pixels	LCD screen has spots	• Cycle power on-off. • Pixel that is permanently off is a natural defect that can occur in LCD technology. For more information on Dell Monitor Quality and Pixel Policy, see Dell Support site at: **http://www.dell.com/support/monitors**.
Stuck-on Pixels	LCD screen has bright spots	• Cycle power on-off. • Pixel that is permanently off is a natural defect that can occur in LCD technology. For more information on Dell Monitor Quality and Pixel Policy, see Dell Support site at: **http://www.dell.com/support/monitors**.
Brightness Problems	Picture too dim or too bright	• Reset the monitor to **Factory Settings**. • Auto Adjust via OSD. • Adjust brightness & contrast controls via OSD.
Geometric Distortion	Screen not centered correctly	• Reset the monitor to **Factory Settings**. • Auto Adjust via OSD. • Adjust brightness & contrast controls via OSD.
Horizontal/Vertical Lines	Screen has one or more lines	• Reset the monitor to **Factory Settings**. • Perform Auto Adjust via OSD. • Adjust Phase and Pixel Clock controls via OSD. • Perform monitor self-test feature check and determine if these lines are also in self-test mode. • Check for bent or broken pins in the video cable connector.

Synchronization Problems	Screen is scrambled or appears torn	• Reset the monitor to **Factory Settings**. • Perform Auto Adjust via OSD. • Adjust Phase and Pixel Clock controls via OSD. • Perform monitor self-test feature check to determine if the scrambled screen appears in self-test mode. • Check for bent or broken pins in the video cable connector. • Restart the computer in the safe mode.
Safety-Related Issues	Visible signs of smoke or sparks	• Do not perform any troubleshooting steps. • Contact Dell immediately.
Intermittent Problems	Monitor malfunctions on & off	• Ensure that the video cable connecting the monitor to the computer is connected properly and is secure. • Reset the monitor to **Factory Settings**. • Perform monitor self-test feature check to determine if the intermittent problem occurs in self-test mode.
Missing Color	Picture missing color	• Perform monitor self-test feature check. • Ensure that the video cable connecting the monitor to the computer is connected properly and is secure. • Check for bent or broken pins in the video cable connector.
Wrong Color	Picture color not good	• Change the Color Mode in the Color OSD to Graphics or Video depending on the application. • Try different Color Preset Settings in Color OSD. Adjust R/G/B value in Color OSD if the Color Management is turned off. • Change the Input Color Format to PC RGB or YPbPr in the Color OSD.

Image retention from a static image left on the monitor for a long period of time	Faint shadow from the static image displayed appears on the screen	• Use the Power Management feature to turn off the monitor at all times when not in use (for more information, see **Power Management Modes**. • Alternatively, use a dynamically changing screensaver.

Product-Specific Problems

Specific Symptoms	What You Experience	Possible Solutions
Screen image is too small	Image is centered on screen, but does not fill entire viewing area	• Check the **Aspect Ratio** setting in the **Display** OSD. • Reset the monitor to **Factory Settings**.
Cannot adjust the monitor with the buttons on the front panel	OSD does not appear on the screen	• Turn off the monitor, unplug the power cord, plug back, and then turn on the monitor. • Check whether the OSD menu is locked. If yes, press and hold the button beside the Power button for 10 seconds to unlock (for more information, see Lock).
No Input Signal when user controls are pressed	No picture, the LED light is white. When you press "up", "down" or "Menu" key, the message " No input signal" will appear.	• Check the signal source. Ensure the computer is not in the power saving mode by moving the mouse or pressing any key on the keyboard. • Check whether the signal cable is plugged in properly. Re-plug the signal cable if necessary. • Reset the computer or video player.
The picture does not fill the entire screen	The picture cannot fill the height or width of the screen	• Due to different video formats (aspect ratio) of DVDs, the monitor may display in full screen. • Run the built-in diagnostics.

Dell Soundbar Problems

Common Symptoms	What You Experience	Possible Solutions
No sound for system where the Soundbar draws power from an AC adapter	No power to Soundbar - the power indicator is off	• Turn the Power/Volume knob on the Soundbar clockwise to the middle position; check if the power indicator (white LED) on the front of the Soundbar is illuminated. • Confirm that the power cable from the Soundbar is plugged into the adapter.
No Sound	Soundbar has power - power indicator is on	• Plug the audio line-in cable into the computer's audio out jack. • Set all volume controls to their maximum and ensure that the mute option is not enabled. • Play some audio content on the computer (example, audio CD, or MP3). • Turn the Power/Volume knob on the Soundbar clockwise to a higher volume setting. • Clean and reseat the audio line-in plug. • Test the Soundbar using another audio source (For example: portable CD player, MP3 player).

Distorted Sound	Computer's sound card is used as the audio source	• Clear any obstructions between the Soundbar and the user. • Confirm that the audio line-in plug is completely inserted into the jack of the sound card. • Set all Windows volume controls to their midpoints. • Decrease the volume of the audio application. • Turn the Power/Volume knob on the Soundbar counter-clockwise to a lower volume setting. • Clean and re-seat the audio line-in plug. • Troubleshoot the computer's sound card. • Test the Soundbar using another audio source (For example: portable CD player, MP3 player). • Avoid using an audio cable extension or audio jack converter.
Distorted Sound	Other audio source is used	• Clear any obstructions between the Soundbar and the user. • Confirm that the audio line-in plug is completely inserted into the jack of the audio source. • Decrease the volume of the audio source. • Turn the Power/Volume knob on the Soundbar counter-clockwise to a lower volume setting. • Clean and reseat the audio line-in plug.
Unbalanced Sound Output	Sound from only one side of Soundbar	• Clear any obstructions between the Soundbar and the user. • Confirm that the audio line-in plug is completely inserted into the jack of the sound card or audio source. • Set all Windows audio balance controls (L-R) to their midpoints. • Clean and reseat the audio line-in plug. • Troubleshoot the computer's sound card. • Test the Soundbar using another audio source (For example: portable CD player, MP3 player).

Low Volume	Volume is too low	• Clear any obstructions between the Soundbar and the user. • Turn the Power/Volume knob on the Soundbar clockwise to the maximum volume setting. • Set all Windows volume controls to their maximum. • Increase the volume of the audio application. • Test the Soundbar using another audio source (For example: portable CD player, MP3 player)

Appendix

Safety Instructions

⚠ **WARNING: Use of controls, adjustments, or procedures other than those specified in this documentation may result in exposure to shock, electrical hazards, and/or mechanical hazards.**

For information on safety instructions, see the *Product Information Guide*.

FCC Notices (U.S. Only) and Other Regulatory Information

For FCC notices and other regulatory information, see the regulatory compliance website located at www.dell.com\regulatory_compliance.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference

(2) this device must accept any interference received including interference that may cause undesired operation

Contact Dell

For customers in the United States, call 800-WWW-DELL (800-999-3355).

NOTE If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services

may not be available in your area.

To get online monitor support content:

1. Visit **www.dell.com/support/monitors**

To contact Dell for sales, technical support, or customer service issues:

1. Visit **www.dell.com/support**.
2. Verify your country or region in the **Choose A Country/Region** drop-down menu at the top left of the page.
3. Click **Contact Us** on the top left side of the page.
4. Select the appropriate service or support link based on your need.
5. Choose the method of contacting Dell that is convenient for you.