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XEROX[®]

DP 820

DP 820
projector

user's guide



XEROX®

DP 820

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projector
user's guide



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Welcome

Your new Xerox DP 820 projector is a high-performance, optical projector with these outstanding features:

- Single chip 0.55" Texas Instruments DLP™ (Digital Light Processing) technology
- SVGA (800 x 600 pixels)
- 4.5 lbs (2.0 kgs) compact design, lightweight for portability
- 1.2x manual zoom lens
- Auto image re-sizing (auto-sync) to 800 x 600 full screen with scaling compression compatibility for VGA, SVGA, XGA, and SXGA (the XGA and SXGA designate compression)
- State-of-the-art motion adaptive hardware deinterlacing with 3:2 pull down
- 200 Watt, user-replaceable lamp
- Compatible with IBM-compatible PCs and Apple Macintosh computers
- Compatible with NTSC, PAL, SECAM, and HDTV
- Multi-function remote control that can function as a laser pointer
- D-Sub 15-pin cable for analog video connectivity
- User-friendly multilingual on-screen display menu
- Advanced electronic keystone correction

Precautions

Follow all warnings, precautions and maintenance as recommended in this user's guide to avoid injury, fire, electric shock, and to maximize the life of your projector.



Warning—Do not look into the projector's lens when the lamp is on. The bright light may hurt your eyes. *Never* let children look directly into the lens when the light is on.



Warning—Do not look into the laser beam or shine it into others' eyes when using the remote control as a laser pointer. Laser light can seriously damage eyes.



Warning—Make sure that the projector is grounded properly by connecting the power cord to a grounded electric AC outlet. Always use the power cord that comes with your projector. Do not use an ungrounded adapter with the grounded plug.



Warning—Except for the lamp cover, never open or disassemble the product as this may cause electric shock. Dangerous electrical voltages inside the projector can cause severe injury.



Warning—Do not overload wall outlets, extension cords, or multi-plug receptacles as this can result in a risk of fire or electric shock. Place the unit near an easily accessible wall socket. Do not place the cord where it may be stepped on or become a tripping hazard.



Warning—To reduce the risk of fire or electric shock, do not expose this product to rain or moisture. Do not place drinks on top of the projector. Spilled drinks can cause an electric shock hazard and can also damage the projector. If liquid or any solid object falls into the cabinet, have the projector checked by a qualified technician before operating it further.



Warning—Do not place your hands or objects near the ventilation slots. The air coming out of the slots is *hot*. Do not block the ventilation slots or place anything near these slots that may block the free flow of air. Blocked ventilation may cause internal heat build-up and cause picture degradation or damage to the projector.



Warning—The ventilation fan continues to operate after the projector is powered off and until the projector is sufficiently cooled down. Do not unplug the power cord until the fan stops.



Warning—Keep the plastic packaging material away from children, especially small children. The plastic bags may result in death by suffocation.

Do's and Don'ts

Do:

- Operate the projector in a well-ventilated room to avoid a buildup of ozone from the projector's high-performance lamp.
- Turn off the projector before cleaning.
- Use a dampened soft cloth to clean the display housing.
- Disconnect the power plug from AC outlet if the projector is not being used for a long period of time. To disconnect the cord, pull it out by the plug. Do not pull on the cord.
- Use lint-free gloves or finger cots when changing the lamp. Never touch a lamp with your bare hands. The invisible residue from the natural oil on your hands may shorten the lamp life.

Don't:

- Place the projector on an unstable cart, stand, or table. If the projector falls, it may be seriously damaged.
- Operate the projector near paper, cloth, or other combustible material, or in proximity to inflammable substances, such as paint thinner. Never operate the projector if covered with combustible materials. The projector gets hot and combustible and inflammable materials may catch fire.
- Use abrasive cleaners, waxes or solvents to clean the projector.
- Use under the following conditions:
 - In extremely hot, cold or humid environment.
 - In areas susceptible to excessive dust and dirt.
 - Near any appliance generating a strong magnetic field.
 - In direct sunlight.
 - Near any heat source, such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.
 - In a smoky area. Smoke residue may cause buildup on critical parts, including the lens.

Attempt to service the projector yourself. Opening or removing the coverings of the internal components may damage them and void your warranty.

The Xerox DP 820 Projector

What's in the Box

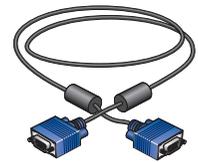
Before proceeding, check the contents of the box. If items are missing or damaged, contact the dealer where you purchased the projector.



Projector with lens cap



Audio Cable



VGA Cable



Carrying Case with Shoulder Strap



S-Video Cable



Composite Video Cable



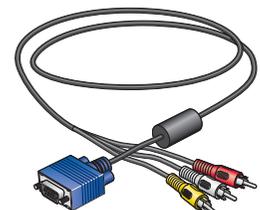
Remote Control



Batteries for Remote Control



Power Cord

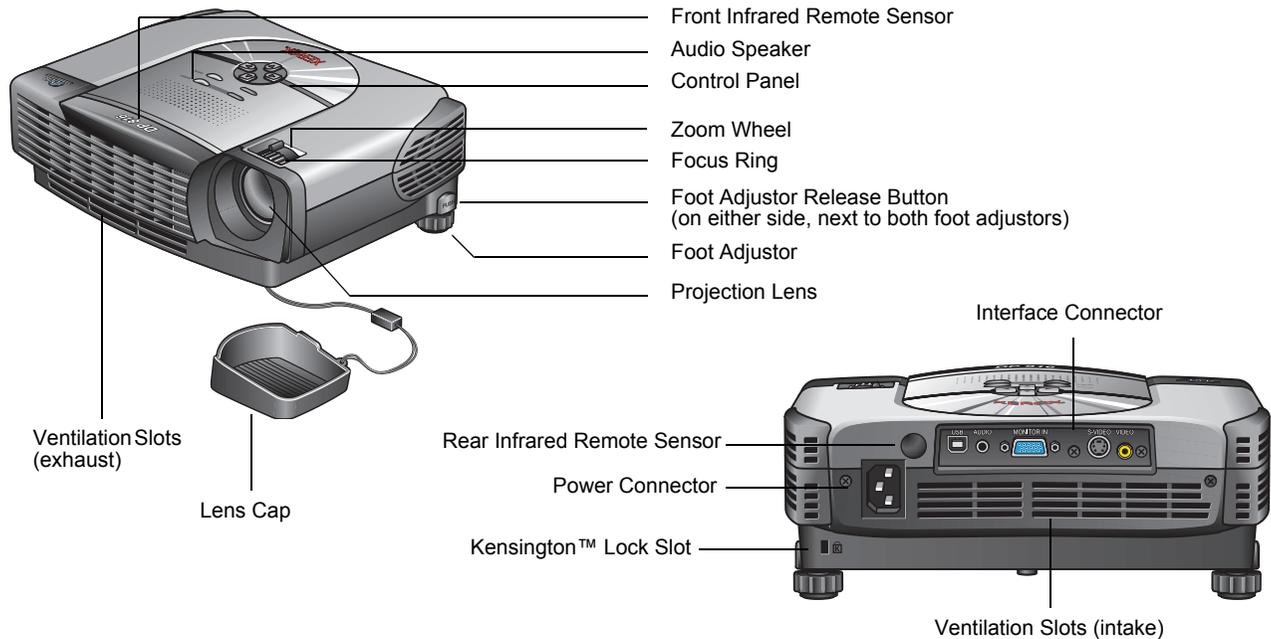


VGA (D-SUB) to HDTV Cable (RCA Jack)
(Optional Accessory - Not Included in Box)



User's Guide CD, Quick Installation Card, and Technical Support Card

The Xerox DP 820 Features and Controls



Front and Rear Infrared Remote Sensors—Infrared receivers that receive signals from the remote control pointed at the front or back of the projector. Do not cover or block these sensors.

Audio Speaker—Provides audio output.

Control Panel—Control buttons and Indicator LEDs. See “Panel Control” on page 16 for a description of the Control Panel.

Zoom Wheel—Rotate to zoom the image in or out.

Focus Ring—Rotate to manually adjust the focus of the image.

Foot Adjustor Release Button(s)—Press to release the foot adjusters on both sides of the projector to lower or raise it.

Foot Adjustors—Turn left or right for fine leveling adjustments.

Projection Lens—Projects the image onto the screen.

Lens Cap—Protective cap to keep the lens from dirt or damage. Always attach the cap when the projector is not in use.

Ventilation Slots—Intake and exhaust slots for ventilation. Do not block these slots. *Careful: Exhaust slots can be HOT.*

Interface Connector—Provides connection ports for video and audio devices. See “Interface Connector” on page 6 for a description of these ports.

Kensington™ Lock Slot—Slot for inserting a Kensington cable and lock to protect your projector from theft.

Power Connector—Plug the power cord into this connector.

Interface Connector



USB Port—Provides a connection for engineering purposes. Not used for connecting video devices.

Audio Input Port—Plug an audio output from the video device into this port.

Computer In (VGA) Port—Plug the VGA cable into this port, then plug the other end into the video port on your computer. Also use this port to connect an HDTV device to your projector.

S-Video Port—Plug your S-Video source in here, such as a professional-quality DVD player or VCR with S-Video output.

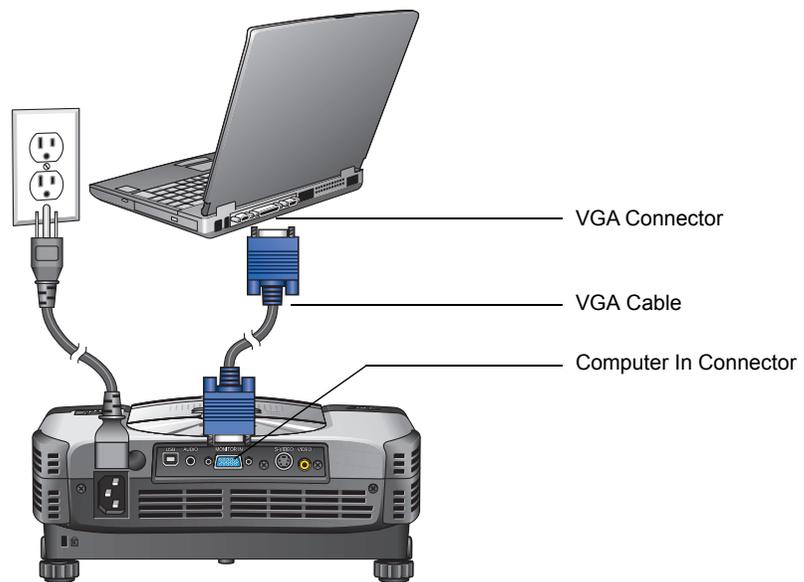
Video Port (Yellow)—Plug your composite video source in here, such as a DVD player or VCR. Connect the yellow (video) plug to your video source and to this video port.

NOTE: When connecting the cables, make sure they are plugged in securely. If the cables are not connected properly, or are loose, the projector will not project an image or play audio.

Connecting the Projector

Connecting the Projector to a Computer

In this configuration, the projector displays the images from your computer's screen. This is the configuration to use to project a presentation from your computer.

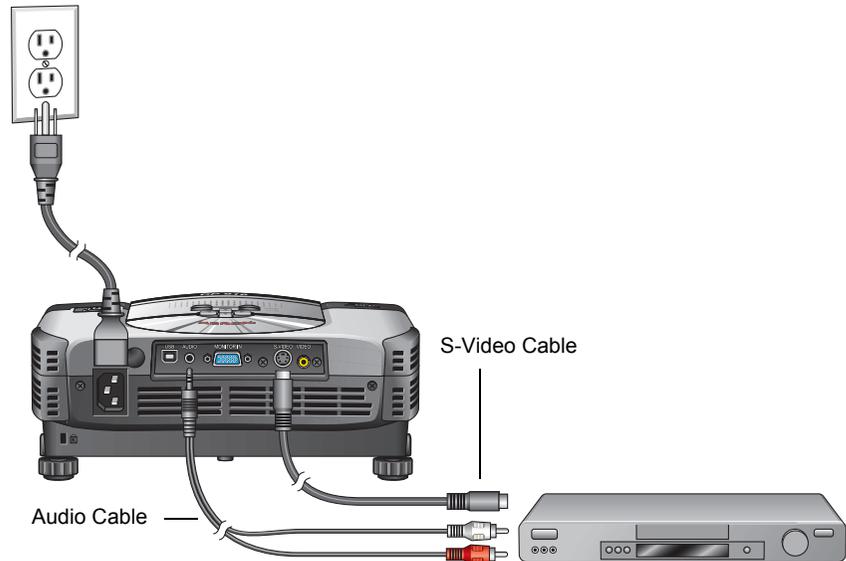


1. Make sure the projector and computer are turned off.
2. Connect one end of the VGA connector to the VGA port on the computer.
3. Connect the other end of the VGA cable to the **Computer In** port on the back of the projector.
4. Plug the power cord into the projector and then into an electrical outlet.
5. Turn on the projector first, and then the computer.
6. If you don't see an image, or if you have multiple video sources connected to the projector simultaneously, press the **Source** button on the projector's control panel, or remote control, to switch to the input source.

NOTE: Your DP 820 projector works best when the computer screen resolution is set to 800 x 600.

Connecting the Projector to an S-Video Source

The typical connection for an S-Video source is a professional-quality DVD, Video Disc, or Videotape player with an S-Video output port.



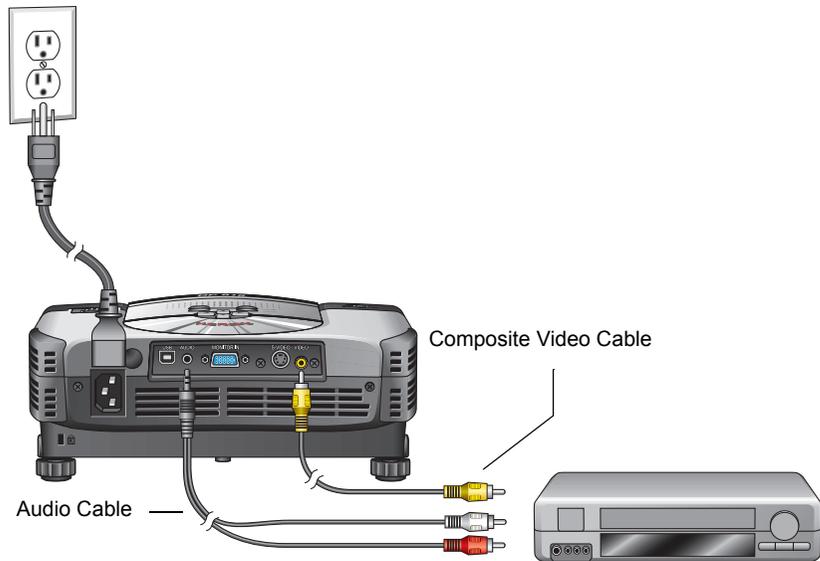
1. Make sure the projector and video source device are turned off.
2. Plug the S-Video cable into the S-Video port on the video source device, and then into the **S-Video** port on the projector.
3. Plug the red and white connectors on the Audio cable into the corresponding red and white ports on the video source. Then plug the other single end of the cable into the **Audio** port on the projector.
4. Do NOT plug the yellow connector into the projector or the video source device.

The audio will play through the projector's built-in audio speaker.

5. Plug the power cord into the projector and then into an electrical outlet.
6. Turn on the projector first, and then the video source.
7. If you don't see an image, or if you have multiple video sources connected to the projector simultaneously, press the **Source** button on the projector's control panel, or remote control, to switch to the input source.

Connecting the Projector to a Composite Video Source

The typical connection for a Composite Video source is a DVD player or VCR.

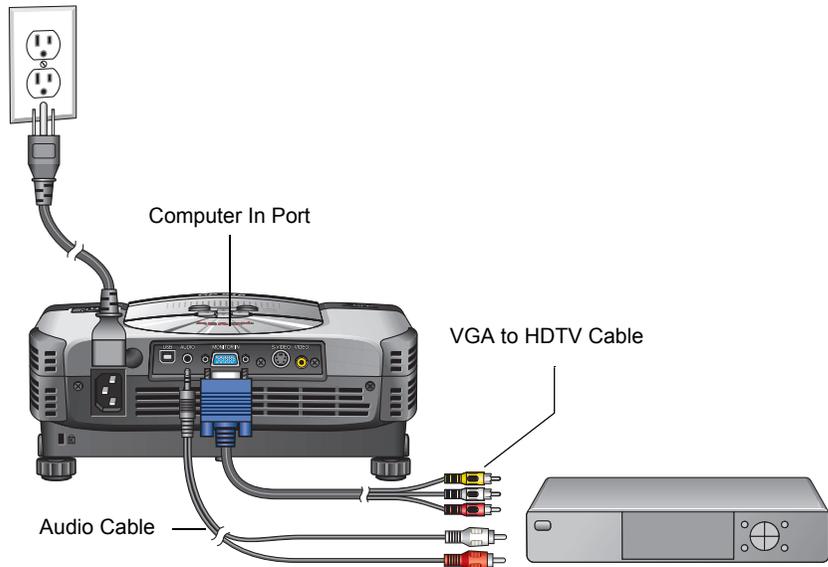


1. Make sure the projector and video source device are turned off.
2. Plug the yellow Composite Video cable into the yellow video port on the video source device.
3. Plug the other end of the yellow video cable into the yellow **Video** port on the back of the projector.
4. Plug the red and white connectors on the Audio cable into the corresponding red and white ports on the video source. Then plug the other single end of the cable into the **Audio** port on the projector.
5. Plug the power cord into the projector and then into an electrical outlet.
6. Turn on the projector first, and then the video source.
7. If you don't see an image, or if you have multiple video sources connected to the projector simultaneously, press the **Source** button on the projector's control panel, or remote control, to switch to the input source.

Connecting the Projector to an HDTV Video Source

The typical connection for an HDTV Video source is an HDTV digital tuner.

NOTE: Connecting to an HDTV Video Source requires the optional VGA to HDTV Cable. Please see your retailer where you purchased the projector for the optional cable.



1. Make sure the projector and video source device are turned off.
2. Plug the VGA end of the VGA to HDTV cable into the **Computer In** port on the back of the projector.
3. Plug the three connectors on the other end of the cable into the corresponding color-coded ports on the HDTV device.
4. Plug the red and white connectors on the Audio cable into the corresponding red and white ports on the HDTV device. Then plug the other end of the cable into the projector's **Audio** port.
5. Plug the power cord into the projector and then into an electrical outlet.
6. Turn on the projector first, and then the HDTV device.
7. If you don't see an image, or if you have multiple video sources connected to the projector simultaneously, press the **Source** button on the projector's control panel, or remote control, to switch to the input source.

Powering On/Off the Projector

To turn on the projector's power

1. Remove the lens cap.
2. Make sure that the power cord and the cables from the video and audio sources are securely connected to the projector.

When you plug in the power cord, the Power LED flashes green.

3. Turn on the lamp by pressing the  **Power** button on the remote control or the  **Power** button on the control panel.

The Power and Lamp LEDs turn green, indicating the lamp is in good condition and is projecting at maximum brightness.

4. Turn on all the other connected components.

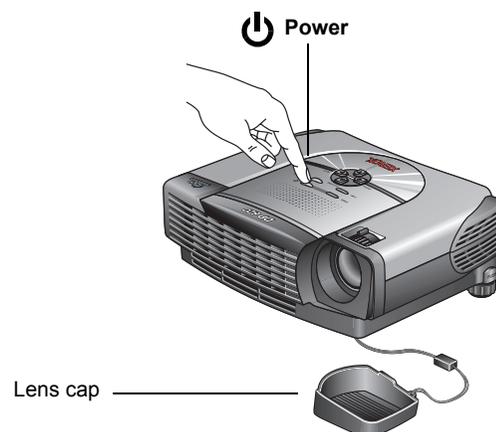
The projector then automatically detects the type of components attached to it.

If the message “**Searching for source**” appears, check the cables to make sure they are securely connected.

After about **30 seconds**, the image for your projection appears.

5. If you don't see an image, or if you have multiple video sources connected to the projector simultaneously, press the **Source** button on the projector's control panel, or remote control, to switch to the input source.
6. (*Optional, but recommended*) Press the **Auto** button on the control panel or the **Resync** button on the remote control to automatically adjust the frequency and phase for the attached components.

NOTE: Turn the projector on first, then the computer and other components.



To turn off the projector power

1. Press the  **Power** button on the remote control or the  **Power** button on the control panel to turn off the projector lamp.

An on-screen message appears asking if you're sure you want to turn off the power.



2. Press the **Power** button again to turn off the power.

NOTE: If you don't press the button within a few seconds, the message disappears and the lamp remains lit. This convenient design is in case you accidentally press the **Power** button in the middle of a show and do not want to turn off the projector.

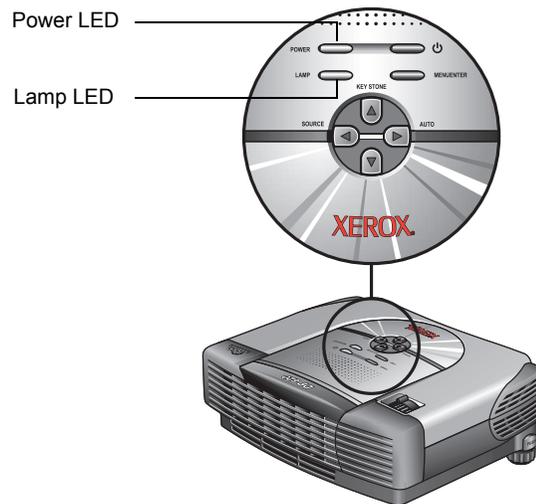
When you press the **Power** button a second time, the Lamp LED indicator flashes green. This indicates that the lamp has turned off, but the fan is still running to cool the lamp.

3. Do NOT turn off the power or unplug the power cable before the Lamp LED turns off.

The fan *must* continue to run to cool the lamp. This protects the lamp from overheating and possible damage.

4. Do not turn on the projector again for at least five minutes. Faster on/off cycles will damage the lamp and reduce lamp life.
5. After about two minutes, disconnect the power cord.

LED Indicators



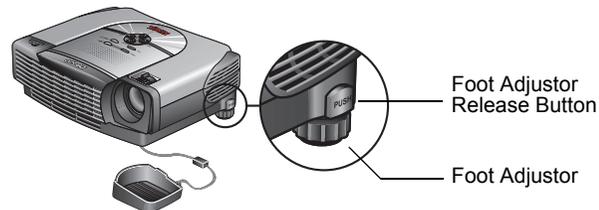
LED	Color	Status	Description
Power	Green	Flashing	Normal operation. The projector is powered and ready.
	Amber	Solid	The fan has problems or has malfunctioned. The projector will not start.
Lamp	Green	Solid	Normal operation. The lamp is in good condition and is projecting at maximum brightness.
	Green	Flashing	Normal operation. The lamp is shutting down. Do not turn off or unplug the power until the LED turns off. The fan will turn off when the lamp has cooled.
	Red	Solid	Warning: The lamp has reached the end of its life and must be changed soon. If running, the lamp will continue to operate until it fails. If not running, the lamp will not operate. Change the lamp.
	Amber	Flashing	Warning: The temperature is too high. The lamp will turn off. Do not turn off or unplug the power until the LED turns off. The fan will turn off when the lamp has cooled.

Adjusting the Projected Image

NOTE: The projector is equipped with two “foot adjustors” for adjusting the projector height.

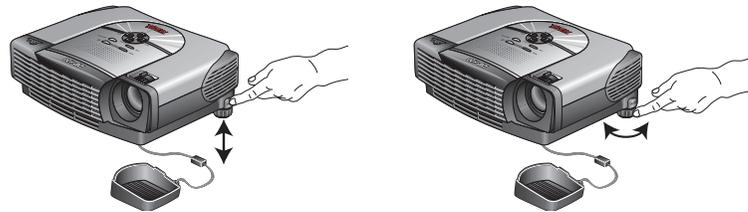
To raise the projector

1. Lift the projector up and press the two foot adjustor release buttons on each side of the projector.



The foot adjustors pop out.

2. Keeping pressing the foot adjustor release buttons while raising the projector to the display angle you want, then release the buttons to lock the feet into position.
3. Turn the foot adjustors to make fine adjustments to the height.



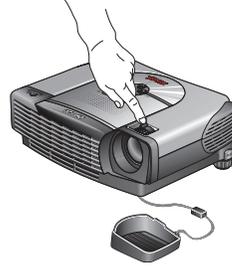
To lower the projector

1. Hold the projector with both hands, then press and hold down both foot adjustor release buttons.
2. Lower the projector, then release the foot adjustor release buttons to lock the foot in position.

NOTE: When placing the projector in its carrying case, please first retract both foot adjustors to avoid breakage.

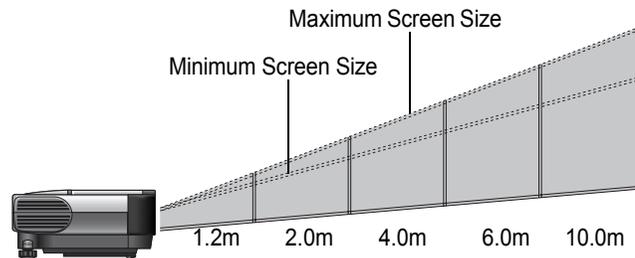
Adjusting the Projector Zoom/Focus

You adjust the focus and zoom in/out with the focus ring and zoom wheel. Rotate the focus ring and zoom wheel.



Adjusting Projection Image Size

Use the following figure and table to select the best projection distance and screen size. Maximum and minimum screen sizes are diagonal measurements. The table is for reference only.



Projection Distance	4:3 Screen Size Diagonal (inches)		16:9 Screen Size Diagonal (inches)	
	Wide Screen	Television	Wide Screen	Television
1.2m (47")	33.0	27.5	30.2	25.2
1.5m (59")	41.2	34.3	37.8	31.5
2m (79")	55.0	45.8	50.4	42.0
2.2m (86")	60.5	50.4	55.5	46.2
3m (118")	82.5	68.7	75.7	63.1
4m (157")	110.0	91.6	100.9	84.1
5m (197")	137.5	114.5	126.2	105.1
6m (236")	165.0	137.5	151.4	126.2
7m (275")	192.5	160.4	176.6	147.2
8m (314")	220.0	183.3	201.9	168.2
9m (354")	247.5	206.2	227.1	189.3
10m (393")	275.0	229.1	252.4	210.3

User Controls

Panel Control and Remote Control

Panel Control



Control	Description
Power (LED) Lamp (LED)	Indicates status of projector power and lamp. See "LED Indicators" on page 13 for details.
 Power	Turns projector power on and off. See "Powering On/Off the Projector" on page 11 for the specific power on/off sequences.
Menu/Enter	Press to display and activate the OSD menu. If the menus are displayed, confirms your selection of items on the menus.
Keystone (▲ ▼)	Adjusts image distortion caused by tilting the projector. Images are wider at the top or bottom due to tilting the projector. Not recommended for spreadsheets or text displays to avoid text distortion.
Auto (►)	Automatically adjusts the frequency and phase for the connected components to produce the optimum projected image.
Directional Selection Buttons (▲ ▼ ◀ ▶)	When the OSD menus are displayed, scrolls through menus and selects items or adjusts settings.
Source (◀)	Manually selects an input source.

Remote Control



Button	Description
 Power	Turns projector power on and off.
 (Enter)	When the OSD menus are displayed, selects OSD option.
Directional Selection Buttons (   )	When the OSD menus are displayed, scrolls through menus and selects items or adjusts settings.
Menu	Press to display the OSD menus. Press again to exit the OSD menus.
Laser 	Press to activate a laser beam for use as a pointer. Warning —Do not look into the laser beam or shine it into others' eyes when using the remote control as a laser pointer. Laser light can seriously damage eyes.
Keystone (+ -)	Adjusts image distortion caused by tilting the projector. Images are wider at the top or bottom due to tilting the projector. Not recommended for spreadsheets or text displays to avoid text distortion.
Volume (+ -)	Adjusts volume level. Press Volume + to increase the volume. Press Volume - to decrease the volume.
Mute	Turns off sound. Press one of the Volume buttons to resume sound.
Resync ()	Adjust the frequency and phase for the connected components to produce the optimum projected image.
Source ()	Manually selects an input source.
Hide	Hides image being displayed and displays a blank screen. Press again to resume display of image. Typically used to pause a presentation.
4:3/16:9	Toggles the image aspect ratio to 4:3 or 16:9.

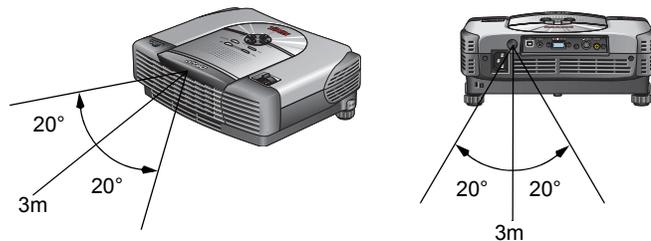
NOTE: The battery compartment for the remote control is on the back. The instructions on the compartment show how to install the batteries properly.

Remote Control Operation

The infrared emitter is at the top of the remote control next to the laser pointer. The infrared emitter has a range of about 3m (about 10 feet) at an angle of about 20° from the center of the sensors (both front and back).

Do not block the infrared emitter. If the projector does not pick up the signals from the remote control, make sure the emitter and sensors on the projector are not blocked and that the emitter is within range.

You can operate the remote control when pointed at either the front or the back of the projector.



Notes about the remote control:

- The remote control may not operate in strong sunlight or when other strong lights, such as fluorescent lighting, are shining on the sensors.
- The remote control may not operate well in unusual areas or in particular locations or surroundings. If that occurs, change the direction of the remote control with respect to the projector.
- Do not drop, jolt, or disassemble the remote control.
- Do not get the remote control wet, or place wet objects on it.
- Keep the remote control out of locations with excessively high temperature or humidity.

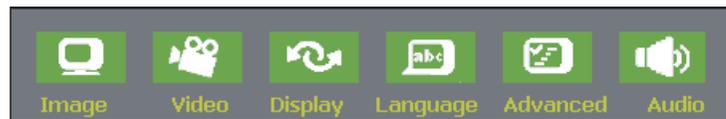
On-Screen Display (OSD) Menus

The On-Screen Display (OSD) menus provide the options to make image adjustments and change a variety of settings.

The menu can be displayed only when an input source is connected to the projector. If the source is a computer, you can make changes to the Display settings, and if the source is a video device you can make changes to the Video settings. The projector automatically detects the type of input source.

Displaying the OSD Main Menu and Selecting Settings

1. To display the OSD Main Menu, press the **Menu** button on the remote control, or the **Menu/Enter** button on the projector's control panel.



2. To close the OSD Main Menu, press the **Menu** or **Menu/Enter** button again.

The OSD Main Menu closes after a few seconds if you don't select from one of the menus. Use the OSD Timeout setting on the Advanced menu to set how long the menu remains on the screen before automatically closing.

3. To select one of the menus on the OSD Main menu, press the ◀ ▶ buttons.
4. To view a selected menu press the ▼ button.
5. Press the ▲ ▼ buttons to toggle through the options on a menu.
6. Press the ◀ ▶ buttons to adjust the selected option.
7. To accept a new setting from the projector's control panel, press the ▲ button to go back to the OSD Main Menu and then press the **Menu/Enter** button again.

To accept a new setting from the remote control, press the **Menu** button.

The OSD Main Menu closes and your new settings are in effect.

NOTE: The menus in this section show typical settings, but the actual settings you see may differ.

Image Menu



Contrast—Controls the degree of difference between the lightest and darkest parts of the image. Adjusting the contrast changes the amount of black and white in the image. The higher the number the greater the contrast.

- Press the ◀ button to decrease the contrast.
- Press the ▶ button to increase the contrast.

Brightness—Lightens or darkens the image. The higher the number, the lighter the image.

- Press the ◀ button to darken the image.
- Press the ▶ button to lighten the image.

You may need to readjust the Brightness after the projector warms up.

Keystone—Adjusts image distortion caused by tilting the projector.

- Press the ◀ button to reduce the upper width.
- Press the ▶ button to reduce the lower width.

Do not change this setting when displaying text or spreadsheets. Changing the Keystone setting may distort the displayed text.

Aspect Ratio—Adjusts the length-to-width aspect ratio of the image to be 1:1, 16:9, or 4:3.

The 1:1 setting is available only for a computer connection (with the VGA cable) with a resolution of less than SVGA (800 x 600). If the input signal is a computer signal greater than SVGA, or component 1080i/720p, only the 16:9 or 4:3 aspect ratios are available.

The correct aspect ratio to select is based on the type of video source you are using. If the image seems to be distorted or stretched, change the setting.

- Press the ◀ ▶ buttons to select one of the aspect ratios.

1:1—The image is displayed without scaling.

16:9—The input source is displayed in wide screen mode without scaling. The source is scaled to fit the width of the screen.

4:3—The input source is scaled to fit the screen.

Blank Screen—Blanks the screen temporarily and selects the screen color for when the Blank Screen is active.

- Press the ◀ ▶ buttons to select one of the screen colors.

The options are: White, Black, Blue, Gray, Red, Green, Yellow, Cyan, and Magenta.

Gamma—Adjusts the Gamma Mode for the image.

Film—Dark video image mode

Photographic—Computer photo mode

RGB—Computer text mode

Video—Common video mode

White Peaking—Sets the white peaking for brightness or color reproduction quality.

- Press the ◀ ▶ buttons to set the white peaking.

Setting 10 maximizes brightness.

Setting 0 maximizes color reproduction quality.

Color Temperature—Adjusts the color temperature range. Higher temperatures make the screen look colder, lower temperatures make the screen look warmer.

To adjust the color temperatures individually, select **User**.

- Press the ◀ ▶ buttons to select the temperature range.

Hi—Warmest color temperature

Mid—Medium color temperature

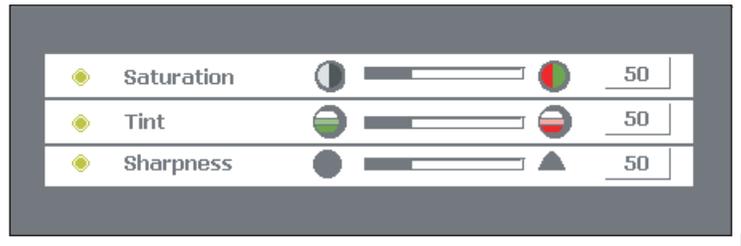
Low—Coolest color temperature

User—Activates the Red/Green/Blue color temperature settings

Red/Green/Blue Color Temperatures—Adjusts the color temperatures individually.

- Press the ◀ button to decrease the color temperature.
- Press the ▶ button to increase the color temperature.

Video Menu



Saturation—Adjusts the image from black and white to fully saturated color. The higher the number, the greater the color saturation.

- Press the ◀ button to decrease the amount of color in the image.
- Press the ▶ button to increase the amount of color in the image.

Tint—Adjusts the balance between the red and green colors in the image. Increasing the Tint increases the amount of red in the image. Decreasing the Tint increases the amount of green in the image.

- Press the ◀ button to increase the amount of green in the image.
- Press the ▶ button to increase the amount of red in the image.

Sharpness—Adjusts the sharpness of the image. The higher the number, the sharper the image.

- Press the ◀ button to decrease the sharpness.
- Press the ▶ button to increase the sharpness.

Display Menu



Phase—Synchronizes the signal timing of the display with the timing of your computer's graphics card. If the image flickers or is unstable, adjust the phase until the image is stable.

- Press the ◀ button to decrease the phase.
- Press the ▶ button to increase the phase.

Tracking—Changes the display data frequency to match the frequency of your computer's graphics card. If vertical flickering lines appear on the image, adjust the frequency until they disappear.

- Press the ◀ button to decrease the frequency.
- Press the ▶ button to increase the frequency.

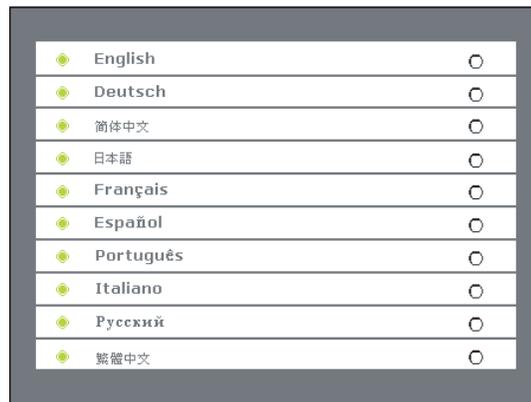
H. Position—Moves the image left and right on the screen.

- Press the ◀ button to move the image left.
- Press the ▶ button to move the image right.

V. Position—Moves the image up and down on the screen.

- Press the ◀ button to move the image up.
- Press the ▶ button to move the image down.

Language Menu

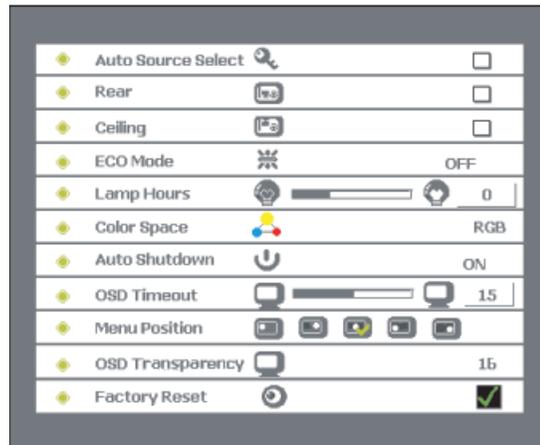


Selects the language for the menus and messages displayed on the screen.

1. Use the ▲ ▼ keys to select the language you want.
2. Press the **Menu/Enter** button on the projector control panel or the  button on the remote control.

The menus will be displayed in the selected language.

Advanced Menu



Auto Source Select—The projector automatically scans the connected input sources and selects the type that is connected.

- To activate this option, select it, then press the **Menu/Enter** button on the projector control panel or the  button on the remote control.

Rear—Projects a reversed image so you can project from behind a translucent screen.

- To activate this option, select it, then press the **Menu/Enter** button on the projector control panel or the  button on the remote control.

Ceiling—Projects an image upside down for a ceiling-mounted projection.

- To activate this option, select it, then press the **Menu/Enter** button on the projector control panel or the  button on the remote control.

ECO Mode—Dims the projector's lamp output to lower power consumption and increase lamp life.

- Press the   buttons to select this mode.

ON—The lamp output is reduced

OFF—The lamp output is not reduced

Lamp Hours—Displays the lamp's elapsed operating time (in hours) since the lamp timer was reset. The lamp hours counter that tells you the elapsed operating time cannot be manually adjusted.

Color Space—Selects the type of input signal.

- Press the   buttons to select the color space.

RGB

YCbCr

YPbPr

Auto Shutdown—Sets the projector lamp to automatically shut down if it doesn't receive an input signal within 30 minutes.

- Press the ◀ ▶ buttons to select this option.

ON—The lamp will automatically shut down in 30 minutes if it doesn't receive a signal

OFF—The lamp will remain lit, even if no signal is received

OSD Timeout—Sets the duration the OSD menus remain on the screen before automatically closing if you don't make a selection.

- Press the ◀ ▶ buttons to increase or decrease the OSD Timeout duration.

Menu Position—Sets the position of the OSD menus on the screen.

- Press the ◀ ▶ buttons to select the menu position as indicated by the icons.

OSD Transparency—Sets the amount of transparency of the OSD menus on the screen. As transparency increases, the image underneath the menus becomes more visible. At the setting of 4, the menus are at maximum transparency; at 16 the menus are opaque.

- Press the ◀ button to increase the transparency.
- Press the ▶ button to decrease the transparency.

Factory Reset—Resets the projector's settings to their default factory settings.

- Press the ◀ ▶ buttons to select the Factory Reset, then press the **Menu** button on the projector's control panel or the Ⓜ button on the remote control to confirm the reset.

Audio Menu



Volume—Adjusts the overall volume.

- Press the ◀ button to decrease the volume.
- Press the ▶ button to increase the volume.

Mute—Mutes the audio.

- Press the ◀ ▶ buttons to mute the audio.

ON—The audio is muted.

OFF—The audio plays normally.

Maintenance

The projector needs proper maintenance. Keep the lens clean because dust, dirt, or spots will project on the screen and diminish image quality.

Keep the projector housing clean to maintain its appearance.

Before cleaning the lens or housing, always turn off the power first and unplug the power cord.

Note that only the lamp is replaceable. If any other parts need replacing, contact your dealer or qualified service personnel.



Warning—Never open any of the covers on the projector except the lamp cover. Dangerous electrical voltages inside the projector can cause serious injury. Do not attempt to service the projector yourself. Refer all servicing to qualified service personnel.

Cleaning the Lens

1. Turn off the projector and let it cool down. Make sure the lens is also cool.
2. Wipe the lens in a circular motion with lens cleaning paper.
Do not touch the lens with your hands.

Always keep the lens cap on the lens when the projector is not in use.

Cleaning the Projector

1. Turn off the projector and let it cool down.
2. Unplug the power cord.
3. Using a soft cloth, clean the projector's case, and then carefully remove any dust blocking the projector's ventilation vents.

If dirt and stains are not easily removed, dampen the cloth with water, or water and a neutral detergent.

4. Wipe dry with a soft, dry cloth.

Never use abrasive cleanser, detergents, or cleaning solvent on the case or the vents. Never use benzene, thinners, or chemical sprays.

Do not try to clean dust from the inside the projector's case.

Changing the Lamp

The projector automatically monitors the lamp life. As the lamp reaches the end of its life, the image becomes darker and the color hues weaker. The projector's Lamp LED turns red to let you know that the lamp must be changed soon before it fails completely.

When you see the red Lamp LED, please change the lamp as soon as possible.

Note that lamp lifetimes vary according to the operating environment and type of use. Lamp lifetimes are not guaranteed and some lamps may end their lifetimes earlier than others.

NOTE: To order a new replaceable lamp module, please go to www.xeroxprojectors.com.

Precautions When Changing a Lamp

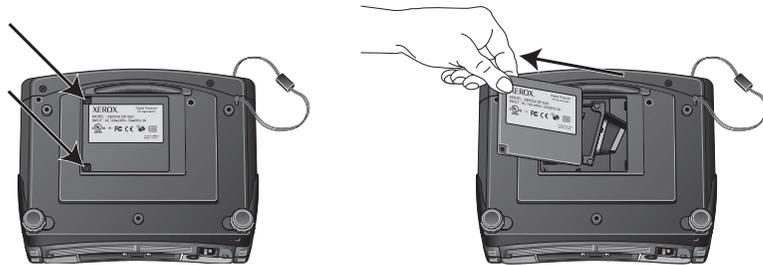
- The lamp module is the only user-replaceable part in the projector. To prevent electric shock, do not open the projector case.
- Always wear protective gloves and eyeglasses when fixing or replacing the lamp. Lamp contains mercury.
- To reduce the risk of personal injury, do not drop the lamp module or touch the lamp bulb at any time. The lamp module may explode if handled incorrectly, and may shatter and cause injury if dropped.
- The lamp is *hot!* If you touch the lamp, you may scald your fingers. Allow the projector to cool down at least 45 minutes before opening the lamp compartment or changing the lamp.
- In the event that the lamp is dropped or broken, and explodes or bursts, please leave the area immediately and ventilate it for at least 30 minutes.
- Do not operate the projector with the lamp cover removed.
- Do not attempt to reuse an old lamp. An old lamp may explode if reused.

To Change the Lamp Module

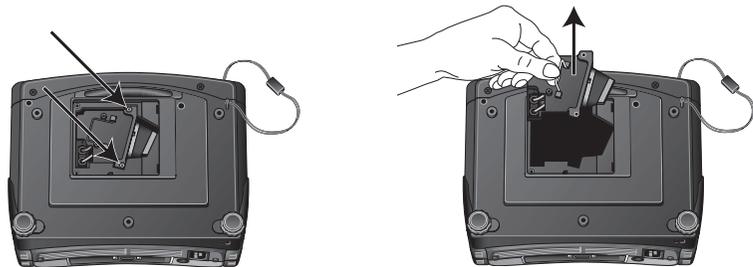
1. Turn off the projector's power.
2. Disconnect the power cord.
3. Let the projector lamp cool completely, at least 45 minutes.
4. Place a protective cloth beneath the projector and turn it over so you can access the lamp cover.

NOTE: Wear lint-free gloves or finger cots when changing the lamp.

5. Remove the lamp cover screws and lift it off.



6. Remove the screws holding the lamp in place, then grasp the lamp handle and lift the lamp directly up and out of the projector.



7. Hold the new lamp by its handle and carefully slide it down into the projector. Make sure it properly seats in place.

NOTE: Handle the lamps carefully to avoid breaking or scratching the glass.

8. Replace the lamp screws and screw the lamp into the projector.
9. Replace the panel cover and screw it onto the projector. Make sure all screws are tightened properly.
10. Dispose of the lamp properly. Please see the section "Product Recycling and Disposal for USA" on page 37 for information about the Xerox worldwide equipment takeback and reuse/recycle program.

Troubleshooting

If you try the troubleshooting procedures described in this section and the problem persists, you may have a malfunctioning projector. Refer to the technical support card that you received with your projector or contact the retailer where you purchased your projector. Also visit our web site at www.xeroxprojectors.com for additional technical information.

Problem: No image appears on the screen.

Check for one of these possible problems:

- **Are the cables loose or not plugged in securely?** Inspect the cable connections. Make sure the cables are plugged in securely.
- **Are any of the pins on the cables bent or broken?** Inspect the pins on the cable plugs to make sure none of the pins are bent or broken.
- **Is the projection lamp securely installed?** Check that the projection lamp is securely installed, especially if you just changed it. See the section “Changing the Lamp” on page 28 for details about the lamp installation.
- **Is the power on?** Check that the projector’s power switch is turned on and that the power cord is plugged in securely to a working power outlet. If you are using a power strip, make sure it is turned on and plugged in.
- **Is the lens cap still on?** Make sure you have removed the lens cap from the lens at the front of the projector.
- **Are the Brightness and Contrast set incorrectly?** Adjust the Brightness and Contrast until a picture appears. See “Image Menu” on page 20.

Problem: The screen of your Notebook or PowerBook computer is not displaying your presentation

If you are using a Notebook PC:

Some Notebook PCs deactivate their own screens when a second display device is attached. Please see the user’s manual that you received with your Notebook PC to reactivate its screen.

If you are using an Apple PowerBook:

1. From the Apple menu, choose **Control Panels/PowerBook Display**.
2. Turn on **Video Mirroring**.
3. Click the **Close** box.

Problem: The image is flickering or otherwise unstable

Try one of these possible solutions:

- Change the **Phase** setting on the OSD Display menu. See “Display Menu” on page 23.
- Change the number of colors that your computer displays on its monitor. See the documentation that you received with your computer for the steps to change the number of colors its monitor can display.

Problem: Image has vertical flickering stripes.

Try one of these possible solutions:

- Change the **Tracking** setting on the OSD Display menu. See “Display Menu” on page 23.
- Reset the display mode of your computer’s graphic card to make it compatible with the projector. See “Preset Signals” on page 34 for the settings.

Problem: Image is out of focus.

Try one of these possible solutions:

- Adjust the focus ring on the projector. Turn the focus ring until the image comes into focus.
- Make sure the distance between the projector and the screen is between 1.2m and 10.0m. See “Adjusting Projection Image Size” on page 15 for details.

Problem: When the projector is connected to a DVD player, playing a film with a 16:9 aspect ratio makes the image look stretched out.

Try one of these possible solutions:

- Reset your DVD player to display at a 4:3 aspect ratio. See the DVD player user’s guide for the steps to adjust its aspect ratio.
- Using the OSD Menus, go to the Image Menu and select a new Aspect Ratio. Change it to 4:3.

Problem: The colors of the projected image look different than the colors of the image on the computer screen.

Use the OSD Image and Video menus to adjust the colors.

Problem: Image is reversed or inverted.

Use the OSD Advanced Menu to change the Rear or Ceiling option to display the image properly.

Problem: No sound.

Make sure the audio cables and other cables are connected properly.

Problem: Remote control does not work.

Check for one of these possible problems:

- **Are you too far from the projector?** The remote control has a range of about 10ft (3m) and needs to be within 20° of the sensor. Move closer to the projector and try again.
- **Is anything blocking the infrared sensors on the projector?** Make sure the infrared sensors are not covered or blocked from receiving signals from the remote control.
- **Are the batteries in the remote control dead?** Replace the batteries in the remote control.

Problem: Lamp burns out or makes a popping sound.

When the lamp reaches its end of life, it may burn out and may make a loud popping sound. If this happens, do not attempt to turn on the projector until the lamp module has been replaced. See “Changing the Lamp” on page 28 to replace the lamp.

Xerox DP 820 Projector Specifications

Projection System	Single panel 0.55" DLP™ projector
Native Resolution	48,000 dot x 1 (800 x 600 x 1)
Image Brightness	1600 ANSI lumens (typical)
Uniformity	80% (typical)
Lens	Manual Zoom (1.2X)
Focal Length	20.2 - 24.2mm
Contrast Ratio	1500:1 (Full on/off) (typical)
Aspect Ratio	1:1, 16:9, 4:3
Screen Size	30 - 200 inches
Lamp	200W
Projection Type	Front, Rear Ceiling
Video Input	PAL, NTSC, SECAM
Input Source	Computer, HDTV, S-Video, Video
Scanning Frequency	
Horizontal Frequency	31 - 79 KHz
Vertical Frequency	50 - 85 Hz
Pixel Rate	108 MHz
Digital Keystone Correction	Vertical: +/- 15 degrees
Analog RGB (input signal)	D-Sub connector
HDTV Display	720p (60 Hz), 720p (50 Hz), 1080i (60 Hz), 1080i (50 Hz)
Integrated Speaker	2W x 1
Audio Noise	34 dB
Remote Control	Multifunctional
OSD Language	Multi-language
Operational Ambient	Temperature: 5° ~ 35° C (41° ~ 95° F)
Certification	UL, CE, FCC Class B, VCCI, C-Tick, CCC
Power Supply	AC 100 - 240V, 50 - 60Hz
Power Consumption	250W
Dimensions (W x D x H)	254 x 202 x 98 mm
Weight	2.0 kg (4.5 pounds)

Note: Design and Specifications are subject to change without notice.

Preset Signals

The following tables describe the projector's preset signals.

	Preset Signal	fH (kHz)	fV (Hz)	Sync	Size
640 x 480	VGA MODE 3	31.469	59.940	H(-), V(-)	800
	VGA VESA 72 Hz	37.861	72.809	H(-), V(-)	832
	VGA VESA 75 Hz	37.500	75.500	H(-), V(-)	840
	VGA VESA 85 Hz	43.269	85.008	H(-), V(-)	832
800 x 600	SVGA VESA 56 Hz	35.156	56.250	H(+), V(+)	1024
	SVGA VESA 60 Hz	37.879	60.317	H(+), V(+)	1056
	SVGA VESA 72 Hz	48.077	72.188	H(+), V(+)	1040
	SVGA VESA 75 Hz	46.875	75.000	H(+), V(+)	1056
	SVGA VESA 85 Hz	53.674	85.061	H(+), V(+)	1048
1024 x 768	XGA VESA 60 Hz	48.363	60.004	H(+), V(-)	1344
	XGA VESA 70 Hz	56.476	70.069	H(+), V(-)	1328
	XGA VESA 75 Hz	60.023	75.029	H(+), V(+)	1312
	XGA VESA 85 Hz	68.677	84.997	H(+), V(+)	1376
1152 x 864	SXGA VESA 70 Hz	63.995	70.016	H(+), V(+)	1472
	SXGA VESA 75 Hz	67.500	75.000	H(+), V(+)	1600
	SXGA VESA 85 Hz	77.487	85.057	H(+), V(+)	1568
1280 x 960	SXGA VESA 60 Hz	60.000	60.000	H(+), V(+)	1800
	SXGA VESA 75 Hz	75.000	75.000	H(+), V(+)	1680
1280 x 1024	SXGA VESA 60 Hz	63.981	60.020	H(+), V(+)	1688

HDTV Preset Signals

Preset Signals	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
480i	15.8 kHz	60 Hz
480P	31.5 kHz	60 Hz
576i	15.6 kHz	50 Hz
576P	31.3 kHz	50 Hz
720P	45.0 kHz	60 Hz
720P	37.5 kHz	50 Hz
1080i	33.8 kHz	60 Hz
1080i	28.1 kHz	50 Hz

Appendix A Notices

Federal Communications Commission (FCC) for USA

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

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

This equipment has been certified to comply with the limits for a class B computing device, pursuant to FCC Rules. In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

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

Product Recycling and Disposal for USA

Xerox operates a worldwide equipment takeback and reuse/recycle program. Contact your Xerox sales representative (1-800-ASK-XEROX) to determine whether this Xerox product is part of the program.

If your product is not part of the Xerox program and you are managing its disposal, please note that the product contains lead and mercury whose disposal may be regulated due to environmental considerations. For recycling and disposal information, contact your local authorities.

