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PROJECTOR OWNER'S MANUAL

Microtek

MS4

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MS4 DLP Projector

User's Manual

MICROTEK

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Trademark Recognition

All product names used in this manual are the properties of their respective owners and are acknowledged.

Symbols Used

Warning symbols are used on the unit and in this manual to alert you of hazardous situations.

The following boxes are used in this manual to alert you to important information.

> ***Note:***
> *Provides additional information on the topic at hand.*

> ***Important:***
> *Provides additional information that should not be overlooked.*

> ***Caution:***
> *Alerts you to situations that may damage the unit.*

> ***Warning:***
> *Alerts you to situations that may damage the unit, create a hazardous environment, or cause personal injury.*

Throughout this manual, component parts and items in the OSD menus are denoted in bold font as in this example:
"Push the **Menu** button on the remote control to open the **Main** menu."

Main Features

- *Lightweight unit, easy to pack away and transport*
- *Compatible with all major video standards including NTSC, PAL, and SECAM*
- *A high brightness rating allows for presentations in daylight or in lit rooms*
- *Supports resolutions up to XGA at 16.7 million colors to deliver crisp, clear images*
- *Flexible setup allows for front rear and ceiling projection*
- *Line-of-vision projections remain square, with advanced keystone correction for angled projections*
- *Input source automatically detected*

Remote Control

The remote control has a laser for pointing out items on a screen.

DANGER: Do not point the laser in the eyes. Doing so can damage the eyes permanently.

General Safety Information

- Do not open the unit case. Aside from the projection lamp, there are no user-serviceable parts in the unit. For servicing, contact qualified service personnel.
- Follow all warnings and cautions in this manual and on the unit case.
- The projection lamp is extremely bright by design. To avoid damage to eyes, do not look into the lens when the lamp is on.
- Do not place the unit on an unstable surface, cart, or stand.
- Avoid using the system near water, in direct sunlight, or near a heating device.
- Do not place heavy objects such as books or bags on the unit.

Power Safety

- Only use the supplied power cord.
- Do not place anything on the power cord. Place the power cord where it will not be in the way of foot traffic.
- Remove the batteries from the remote control when storing or not in use for a prolonged period.

Replacing the Lamp

- Replacing the lamp can be hazardous if done incorrectly. Refer to "Replacing the Projection Lamp" on page 24 for clear and safe instructions for this procedure.
- Unplug the power cord.
- Allow the lamp sufficient time to cool.

Spent lamp management

- This product contains a Metal Halide Lamp, which contains Mercury. Dispose of it a required by local ordinances and regulations.
- The USA restrict or prohibit the disposal of some or all mercury containing lamps in the municipal waste stream. Please visit www.lamprecycle.org for more information on specific state disposal requirements and recycling facilities.

Cleaning the Projector

- Unplug the power cord before cleaning. Refer to "Cleaning the Projector" on page 27.
- Allow the lamp sufficient time to cool.

About this manual

This manual is intended for end users and describes how to install and operate the DLP projector. Wherever possible, relevant information –such as an illustration and its description—has been kept on one page. This printer-friendly format is both for your convenience and to help save paper and thereby protect the environment. It is suggested that you only print sections that are relevant to your needs.

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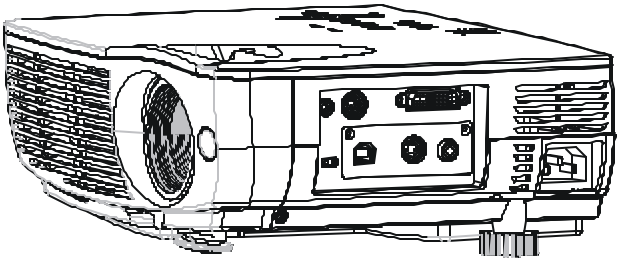
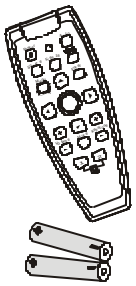
Packing Checklist

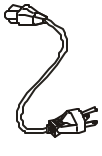
Carefully unpack the projector and check that the following items are included:



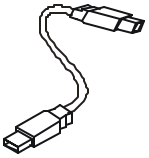
DLP PROJECTOR



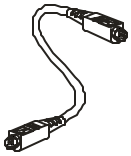
REMOTE CONTROL
(WITH TWO AAA BATTERIES)



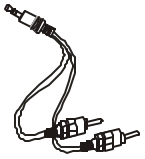
POWER CORD



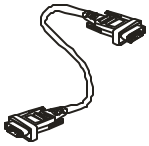
USB CABLE



S-VIDEO CABLE

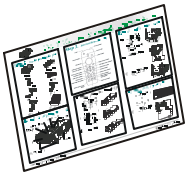


AUDIO CABLE
(MINI JACK-TO-RCA X 2)

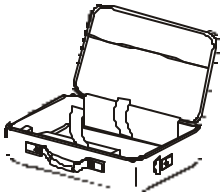


COMPUTER CABLE
(DVI-DB15)

CD-ROM (THIS USER'S MANUAL)



QUICK START GUIDE



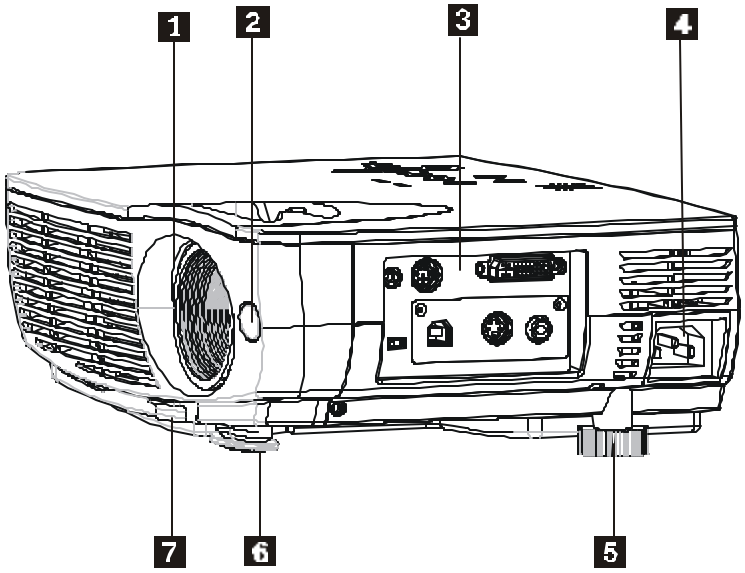
CARRYING CASE

Contact your dealer immediately if any items are missing, appear damaged, or if the unit does not work.

Caution:
Avoid using the projector in dusty environments.

Views of Projector Parts

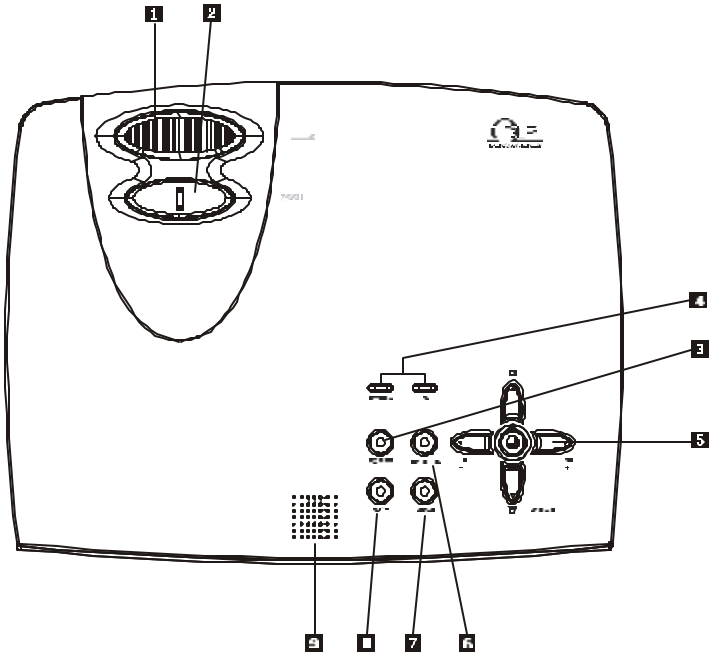
Front-right view



ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	Lens/focus	turn the lens to focus	*14*
2.	IR receiver	Receiver for IR signal from remote control	*9*
3.	Connectors	Connect input/output devices	*5*
4.	AC socket	Socket for power cord	*12*
5.	Side foot	Adjusts level of projector	*13*
6.	Height adjuster		
7.	Height adjuster button	Push to release height adjuster	

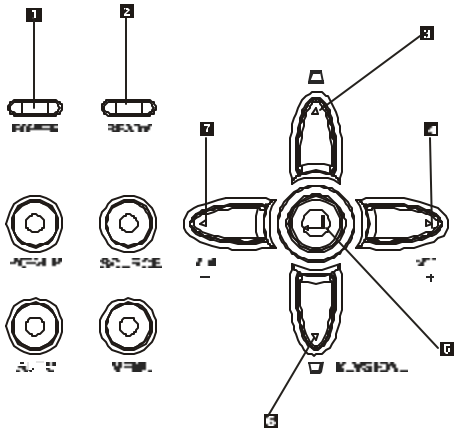
Important:
Grill openings on the projector allow for good air circulation, which keeps the projector lamp cool. Do not obstruct any of the grill openings.

Top view



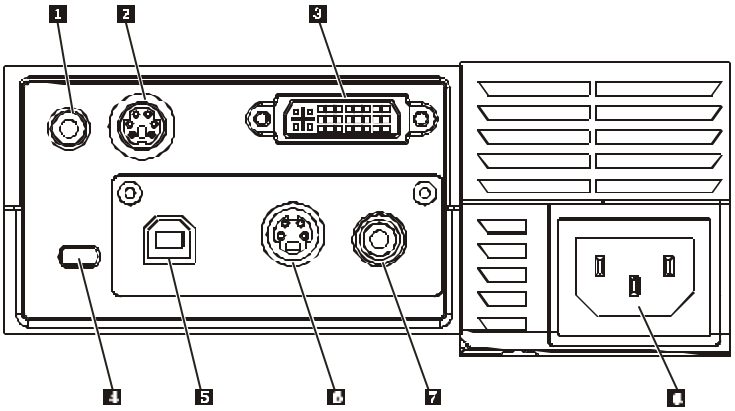
ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	Image-focus control		*14*
2.	Zoom	Enlarge or shrink the projected image	*14*
3.	Power	Turns the projector on or off	*12*
4.	*System status LEDs (next page)*		*4*
5.	*OSD navigation buttons (next page)*		
6.	Source	Detects the input device	*12*
7.	Menu	Opens the On-Scrœn Display (OSD)	*16*
8.	Auto	Optimizes image size, position, and resolution	
9.	Speaker	Built-in mono speaker	

Top view –OSD buttons and LEDs



ITEM	LABEL	DESCRIPTION		SEE PAGE:
1.	Power (LED)	Green	Unit is powered on and working correctly	
		Off	Unit is powered off	
		Flashing	Operational error code (refer to "LED Error Messages" on page 30)	
2.	Ready (LED)	Orange	Lamp ready –you can safely turn on or off the projector	
		Flashing	Lamp not ready –do not press the power button	
3.	Keystone/ Up cursor	Corrects image-trapezoid (wider top) effect Navigates and changes settings in the OSD		*16*
4.	Volume; /right cursor	Increases volume Navigates and changes settings in the OSD		
5.	Enter	Changes settings in the OSD		
6.	Keystone/ Down cursor	Corrects image-trapezoid (wider bottom) effect Navigates and changes settings in the OSD		
7.	Volume; left cursor	Decreases volume Navigates and changes settings in the OSD		

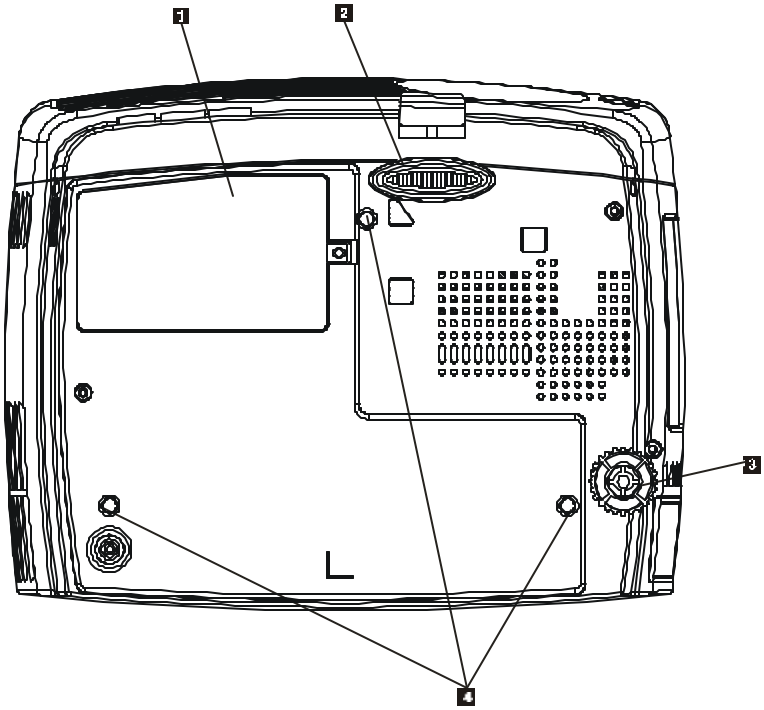
Connectors view



ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	Audio-in	Connect the audio cable (supplied) from the input device	***11***
2.	RS-232	Reserved service port for firmware upgrades	
3.	DVI-I	Connect the DVI cable (supplied) from a computer	***11***
4.	Kensington Lock	Secure to permanent object with a Kensington Lock system	***28***
5.	USB	Connect the USB cable (supplied) from a computer	***11***
6.	S-video	Connect the supplied S-video cable from a video device	
7.	Video	Connect a composite video cable from a video device	
8.	Power	Connect the supplied power cord	***12***

Note:
If your video equipment has both S-video and RCA jacks (composite video) connect to the S-video connector.
S-video provides a better quality signal.

Bottom view

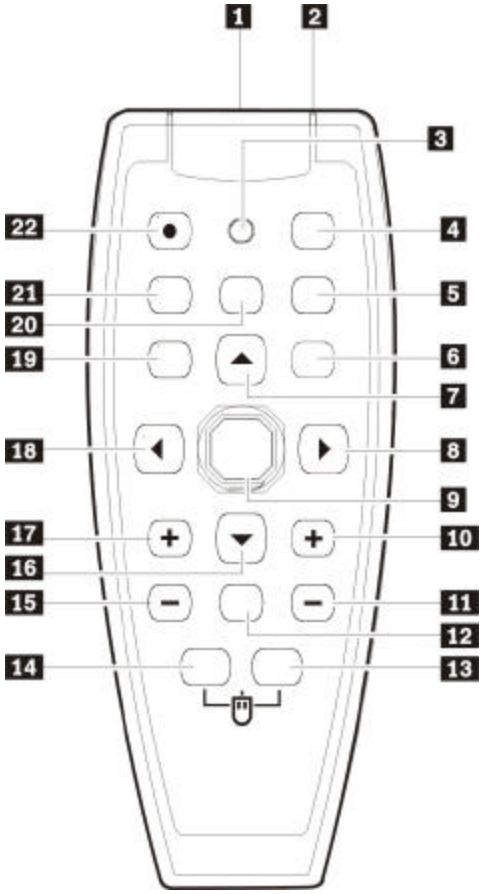


ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	Projection lamp cover	Remove when changing lamp	*24*
2.	Height adjuster	Adjust level of the projector	*13*
3.	Side foot		
4.	Ceiling support holes	Contact your dealer for information on mounting the projector on a ceiling.	

CAUTION:

With ceiling installation, use approved mounting hardware & M4 screw. Maximum screw depth (inside bolt): 4mm. Distance from ceiling/ wall: 50/50 cm, 20/20 inch for proper ventilation. For permanent installations, follow local codes.

Remote Control Parts



Important:
1. *Avoid using the projector with bright fluorescent lighting turned on. Certain high-frequency fluorescent lights can disrupt remote control operation.*

2. *Be sure nothing obstructs the path between the remote control and the projector. If the path between remote and projector is obstructed, you can bounce the remote signal off certain reflective surfaces such as projector screens.*

3. *The buttons and keys on the projector have the same functions as the corresponding buttons on the remote control. This user' s manual describes the functions based on the remote control.*

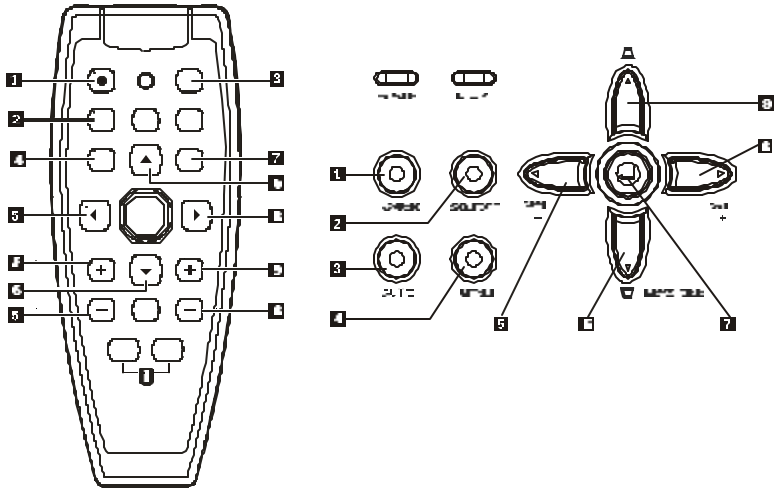
ITEM	LABEL	DESCRIPTION	SEE PAGE:
1.	Laser	Use as on-screen pointer. **DO NOT POINT IN EYES.**	
2.	IR transmitter	Transmits signals to projector	
3.	Status LED	Lights when the remote is used	
4.	Auto	Auto adjustment for phase, tracking, size, position	
5.	Blank	Makes the screen blank	*20*
6.	Enter	Changes settings in the OSD	*16*
7.	Up cursor	Navigates and changes settings in the OSD	
8.	Right cursor	Navigates and changes settings in the OSD **USB PageUp key when OSD off**	
9.	Cursor pad	Moves the on-screen cursor when connected to a PC	
10.	Keystone top	Corrects image-trapezoid (wider top) effect	*14*
11.	Keystone bottom	Corrects image-trapezoid (wider bottom) effect	
12.	Mute	Mutes the built-in speaker	
13.	Right mouse	Functions as right mouse button when connected to a PC	
14.	Left mouse	Functions as left mouse button when connected to a PC	
15.	Volume down	Adjusts volume	
16.	Down cursor	Navigates and changes settings in the OSD	*16*
17.	Volume up	Adjusts volume	
18.	Left cursor	Navigates and changes settings in the OSD USB **PageDn key when OSD off**	*16*
19.	Menu	Opens the On-Screen Display (OSD)	*16*
20.	Freeze	Freeze/unfreezes the on-screen picture	
21.	Source	Detects the input device	*12*
22.	Power	Turns the projector on or off	

Remote Control Operating Range

The remote control uses infrared transm ission to control the projector. It is not necessary to point the remote directly at the projector. Provided you are not holding the remote perpendicular to the sides or the rear of the projector, the remote will function well within a radius of about (10) meters (33 feet) and 30 degrees above or below the projector level. If the projector does not respond to the remote control, move a little closer.

Projector and Remote Control Buttons

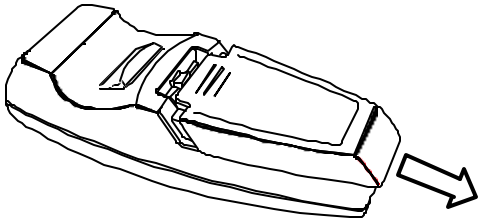
The projector can be operated using the remote control or the buttons on the top of the projector. All operations can be carried out with the remote control; however the buttons on the projector are limited in use. The following illustration shows the corresponding buttons on the remote control and on the projector.



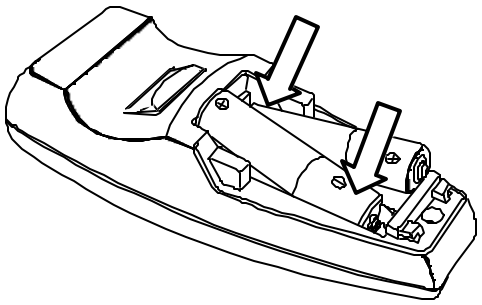
Some buttons on the projector have two functions. For example, item 5 on the projector functions both as the volume down button and also as the left cursor key in OSD menus.

Inserting the Remote Control Battery

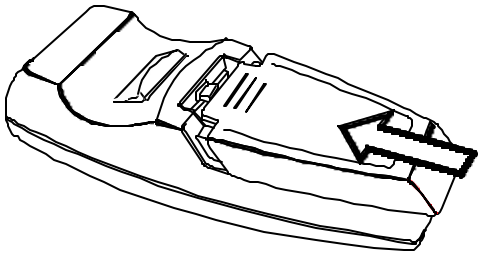
1. Remove the battery compartment cover by sliding the cover in the direction of the arrow.



2. Insert the supplied batteries taking note of the polarity (+/-) as shown here.



3. Replace the cover.



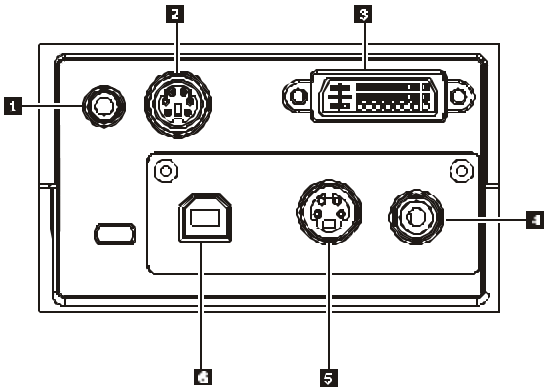
Caution:
1. *Only use AAA alkaline batteries.*

2. *Dispose of used batteries according to local ordinance regulations.*

3. *Remove the batteries when not using the projector for prolonged periods.*

Connecting Input Devices

A PC or notebook computer as well as video devices can be connected to the projector at the same time. Video devices include DVD, VCD, and VHS players, as well as movie camcorders and digital still cameras. Check the user manual of the connecting device to confirm it has the appropriate output connector.

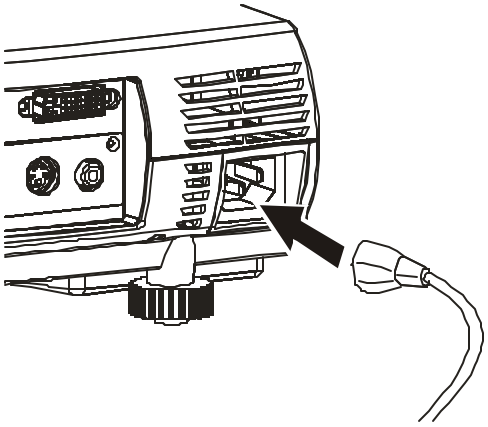


ITEM	LABEL	DESCRIPTION
1	Audio-in	Connect an audio cable (not supplied) from the computer's audio-out connector. Connect the supplied audio cable (mini jack-to-RCA x 2) from a video device.
2	RS-232	Reserved service port for firmware upgrades.
3	DVI-I	Connect the supplied DVI cable from a computer.
4	Video	Connect a composite video cable (not supplied) from a video device.
5	S-video	Connect the supplied S-video cable from a video device.
6	USB	Connect the supplied USB cable from a computer.

Warning:
As a safety precaution, disconnect all power to the projector and connecting devices before making connections.

Starting and Shutting down the Projector

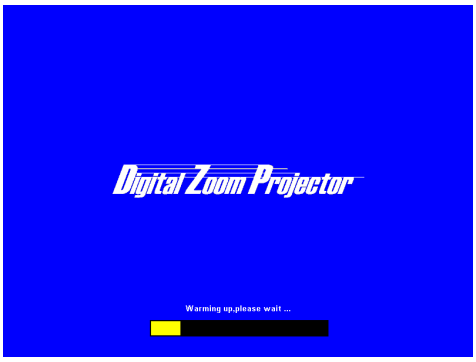
1. Connect the power cord to the projector. Connect the other end to a wall outlet.
The Power LED and Lamp-ready LED turn on.



2. Turn on the connected devices.

3. Ensure the Lamp-ready LED is on a steady (not flashing) orange and then press the **Power** button to turn on the projector.

The projector splash screen displays and connected devices are detected. If the connected device is an IBM PC, press [Fn] + [F7] on the computer keyboard to switch the display output to the projector. (Check the user manual of non-IBM PCs to determine the appropriate Fn hot keys to change display output.)



4. If more than one input device is connected, press the **Source** button repeatedly to switch among devices. (DVD and HDTV are supported through the DVI-I connector.)

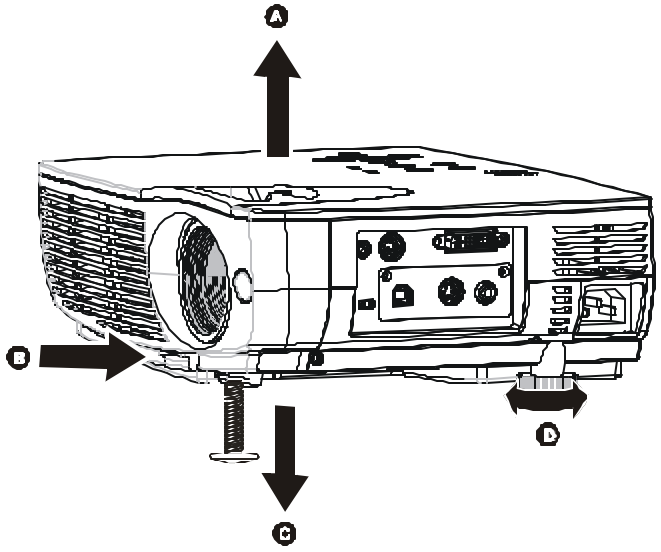
5. To turn off the projector, press the **Power** button. The projector prepares for shutdown and a "Wait a moment please..": message appears.

6. When the "Power Off?/Press Power again" message appears, press the **Power** button. The projector turns off.

Adjusting the Projector Level

Take note of the following when setting up the projector:

- *The projector table or stand should be level and sturdy.*
- *Position the projector so that it is perpendicular to the screen.*
- *Be sure cables are not in the way or can cause the projector to be knocked over.*



1. To raise the level of the projector, lift the projector **[A]** and press the height-adjuster button **[B]**.

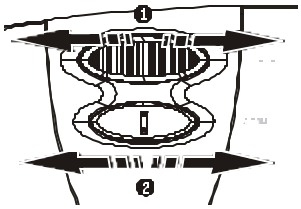
   The height-adjuster drops down **[C]**.

2. To make minor adjustments, rotate the side foot **[D].**

3. To lower the level of the projector, press the height-adjuster button and push down on the top of the projector.

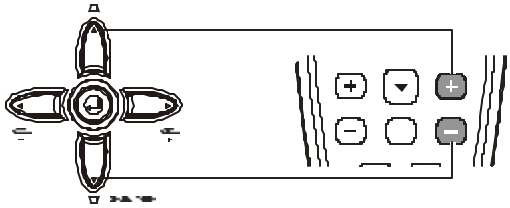
Adjust the Zoom, Focus and Keystone

1. Use the **Image -focus** control (on the projector only) to sharpen the projected image ❶.



2. Use the **Image -zoom** control (on the projector only) to resize the projected image and screen size ❷.

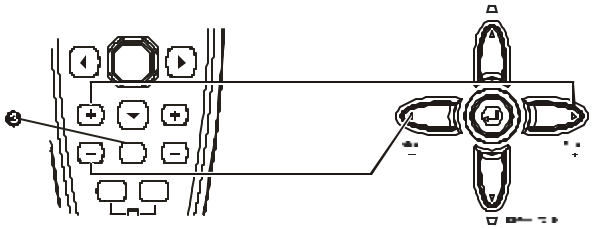
3. Use the **Keystone** buttons (on the projector or the remote control) to correct image-trapezoid (wider top or bottom) effect .



The keystone control appears on the display.

Adjusting the Volume

1. Press the **Volume +/-** buttons on the projector or the remote control. The volume control appears on the display.



2. Use the **Volume +/-** buttons to adjust the level.

3. Press the **Mute** button (on the remote control only) to turn off the volume.

4. Press any **Volume +/-** buttons on the projector or the remote control to turn off mute.

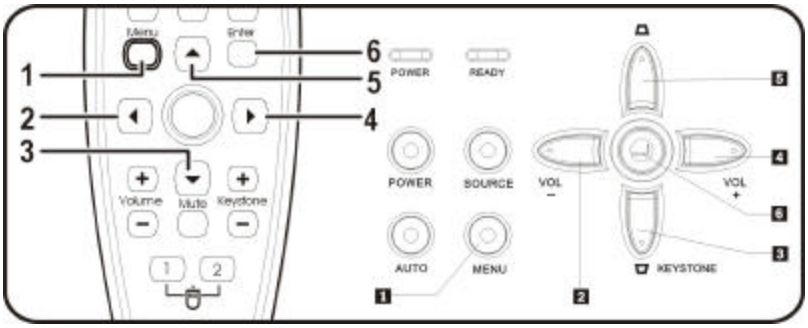
ON-SCREEN DISPLAY MENU SETTINGS

On-Screen Display Menu Controls

The projector has an On-Screen Display (OSD) that lets you make image adjustments and change various settings.

Navigating the OSD

You can use the remote control or the buttons on the top of the projector to navigate and make changes to the OSD. The following illustration shows the corresponding buttons on the remote control and on the projector.



Note:
Depending on the video source not all items in the OSD are available, items that can not be changed are ***grayed out****.*

Setting the OSD Language

You may want to reference the OSD on your projector while reading this section. Set the OSD language to your preference before continuing. (The default language is English.)

1. Press the **Menu** button. The **Main** menu appears.

2. Press the cursor ◀▶ button until **Language** is highlighted.

3. Press the cursor ▲▼ button until the language you want is highlighted.
4. Press the cursor ◀▶ or **Enter** button to select the language.
5. Press the **Menu** button twice to close the OSD.

Main Menu

Press the **Menu** button to open the **OSD** menu. Press the cursor ◀▶ button to move to the **Main** menu. Press the cursor ▲▼ button to move up and down in the **Main** menu.

ITEM	DESCRIPTION	DEFAULT
Brightness	Press the cursor ◀▶ button to adjust the brightness. (Range: 0—100)	50
Contrast	Press the cursor ◀▶ button to adjust the contrast. (Range: 0 —100)	50
Sharpness	Press the cursor ◀▶ button to adjust the display sharpness (Range: 1-5)	3
Color Temperature	Press the cursor ◀▶ button to adjust the video tint/hue. (Range: Cool/Normal/Warm)	Normal
Color Saturation	Press the cursor ◀▶ button to adjust the video saturation. (Range: 0—100)	50
Color Tint	Press the cursor ◀▶ button to adjust the video tint/hue. (Range: 0—100)	50
Gamma	Press the cursor ◀▶ button to adjust the gamma correction of the display. **Input** **Gamma** **Brightness** PC 2.2 High MAC 1.8 High Video 2.4 Low Chart 2.2 Low B&W 2.4 High	PC
Color Space	Press the cursor ◀▶ button to adjust the color space. (Range: Auto – RGB – YPbPr - YCbCr)	Auto
Reset	Resets all Quality items settings to default values	-

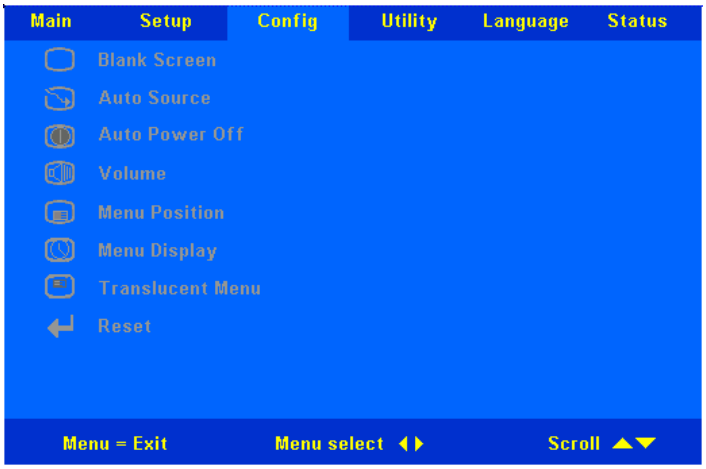
Setup Menu

Press the **Menu** button to open the **OSD** menu. Press the cursor ◀▶ button to move to the **Setup** menu. Press the cursor ▲▼ button to move up and down in the **Setup** menu.

ITEM	DESCRIPTION	DEFAULT
Horizontal Position	Press the cursor ◀▶ button to move the image left or right. (Range: 0—100)	50
Vertical P o-sition	Press the cursor ◀▶ button to move the image up or down. (Range: 0—100)	50
Keystone	Press the cursor ◀▶ button to correct distortion of the projected image. (Range: -20 —+20)	0
Aspect Ratio	Press the cursor ◀▶ button to toggle betwee n the 4:3 standard format and 16:.9 High Definition TV (HDTV) format.	4:3
Reset	Resets Keystone and Aspect Ratio to default values	

Config Menu

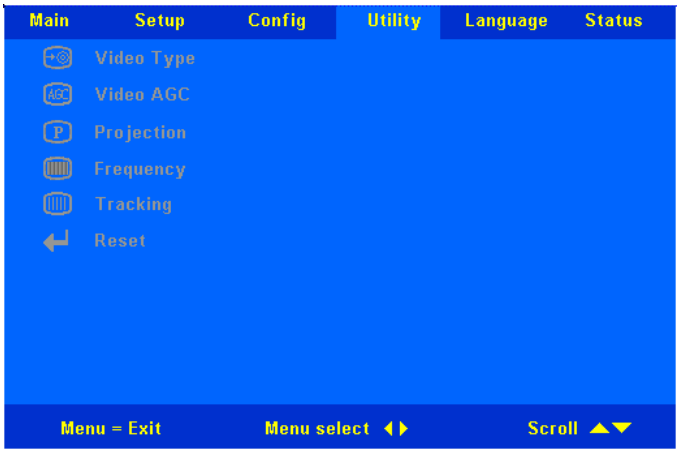
Press the **Menu** button to open the **Main** menu. Press the cursor ◀▶ button to move to the **Config** menu. Press the cursor ▲▼ button to move up and down in the **Config** menu.



ITEM	DESCRIPTION	DEFAULT
Blank Screen	Press the cursor ◀▶ button to select a background color for blank screen (Range: Black – Red – Green – Blue – White)	Blue
Auto Source	Press the cursor ◀▶ button to enable or disable automatic source detection (Range: On – Off)	On
Auto Power Off	Press the cursor ◀▶ button to enable or disable automatic shut-down of lamp after 10 min. of inactivity (Range: On – Off)	On
Volume	Press the cursor ◀▶ button to adjust the audio volume level (Range: 0 - 8)	4
Menu Position	Press the cursor ◀▶ button to position the OSD on screen (Range: Left – Right – Center – Down – Up)	Center
Menu Display	Press the cursor ◀▶ button to determine timeout delay of OSD (Range: 10 - 20 sec.)	15
Translucent Menu	Press the cursor ◀▶ button to set menu screen translucency (Range: On – Off)	Off
Reset	Resets all Options screen items to default values	

Utility Menu

Press the **Menu** button to open the **Main** menu. Press the cursor ◀▶ button to move to the **Utility** menu. Press the cursor ▲▼ button to move up and down in the **Utility** menu.



ITEM	DESCRIPTION	DEFAULT
Video Type	Press the cursor ◀▶ button to select the Video standard (Range: Auto – NTSC – PAL – SECAM)	Auto
Video AGC	Press the cursor ◀▶ button to enable or disable automatic gain control for video source. (Range: On – Off)	On
Projection	Press the cursor ◀▶ button to choose from four projection methods: Desktop mount, front of screen Desktop mount, rear of screen Ceiling mount, front of screen Ceiling mount, rear of screen	Desktop front
Frequency	Press the cursor ◀▶ button to adjust the A/D sampling clock. (Range: 0° - 180°)	Auto detected
Tracking	Press the cursor ◀▶ button to adjust the A/D sampling number. (Range: 1 - 100)	Auto detected
Reset	Resets Video Type, Video AGC, and Projection to default values	

Language Menu

Press the **Menu** button to open the **Main** menu. Press the cursor ◀▶ button to move to the **Language** menu. Press the cursor ▲▼ button to move up and down in the **Language** menu.

ITEM	DESCRIPTION	DEFAULT
English	Press the cursor ▲▼ button to move up and down in the menu. Press the cursor ◀▶ or ↵ button to select the language.	English
French		
German		
Italian		
Spanish		
Swedish		
Chinese Simplified		
Chinese Traditional		
Japanese		
Korean		

Status Menu

Press the **Menu** button to open the **Main** menu. Press the cursor ◀▶ button to move to the **Status** menu. Press the cursor ▲▼ button to move up and down in the **Status** menu.

ITEM	DESCRIPTION	DEFAULT
Video Information	Displays the resolution and refresh rate of the connected video device.	These items are display only.
Active Source	Displays the active source.	
Software Version	Information about the firmware version.	
Lamp Hours	Number of hours lamp has been in Normal use and number of hours lamp has been in Eco use.	
Lamp Mode	Toggles between Normal and ECO lamp modes. ECO mode uses less power but decreases the lamp brightness.	Normal
Lamp Hour Reset	After replacing the lamp, this item should be reset. Refer to “Replacing the Projection Lamp” on page 24.	—

Replacing the Projection Lamp

The projection lamp should be replaced when it burns out. It should only be replaced with a certified replacement part, which you can order from your local dealer.

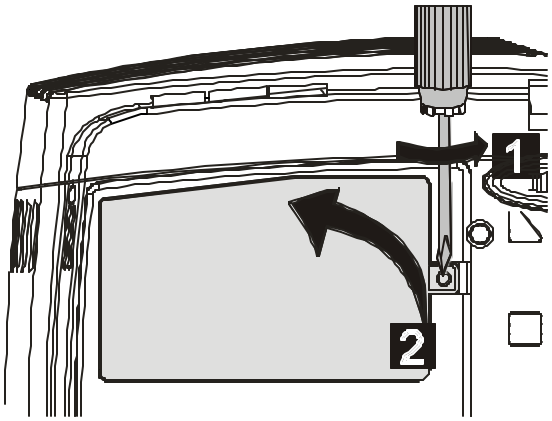
Important:
1. *The lamp contains a certain amount of mercury and should be disposed of according to local ordinance regulations.*

2. *Avoid touching the glass surface of the new lamp: Doing so may shorten its operation life.*

Warning:
Be sure to turn off and unplug the projector at least an hour before replacing the lamp. Failure to do so could result in a severe burn.

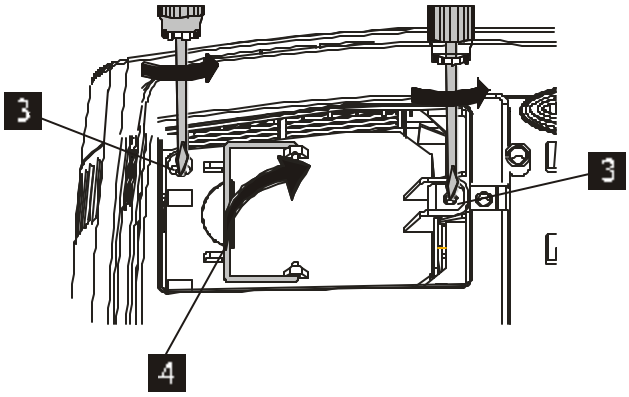
1. Remove the screw on the lamp compartment cover.

2. Remove the lamp compartment cover.



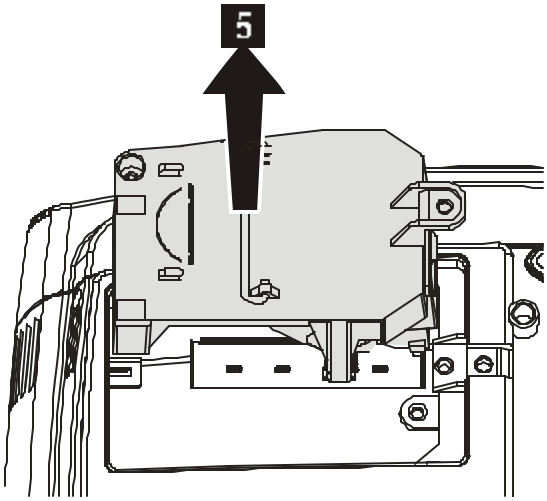
3. Remove the two screws from the lamp module.

4. Lift the module handle up.



5. Pull firmly on the module handle to remove the lamp module.

6. Reverse steps 1 to 5 to install the new lamp module.



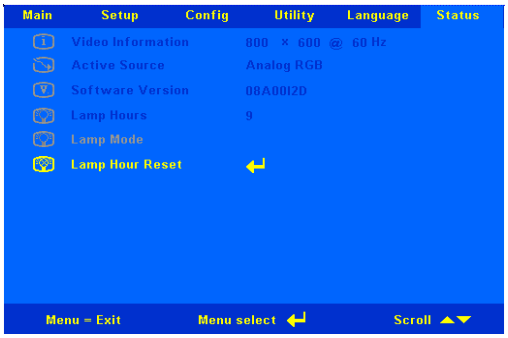
Resetting the Lamp

After replacing the lamp, you should reset the lamp hour counter to zero. Refer to the following:

1. Press the **Menu** button to open the Main menu.

2. Press the cursor ◀▶ button to move to the **Status** menu.

3. Press the cursor ▲▼ button to move down to **Lamp Hour Reset**.



4. Press the ↵ button.

A message screen appears.

5. Press the cursor buttons in this order: ▼; ▲; ◀; ▶.
The **Status** menu appears again showing the **Lamp Hours** reset to zero.

Cleaning the Projector

Cleaning the projector to remove dust and grime will help ensure tro uble-free operation.

Warning:
1. *Be sure to turn off and unplug the projector at least an hour before cleaning. Failure to do so could result in a severe burn.*

2. *Use only a dampened cloth when cleaning. Do not allow water to enter the ventilation openings on the projector.*

3. *If a little water gets into the projector interior while cleaning, leave unplugged in a well-ventilated room for several hours before using.*

4. *If a lot of water gets into the projector interior when cleaning, have the projector serviced.*

Cleaning the Lens

You can purchase optic lens cleaner from most camera stores. Refer to the following to clean the projector lens.

1. Apply a little optic lens cleaner to a clean soft cloth. (Do not apply the cleaner directly to the lens.)
2. Lightly wipe the lens in a circular motion.

Caution:
1. *Do not use abrasive cleaners or solvents.*

2. *To prevent discoloration or fading, avoid getting cleaner on the projector case.*

Cleaning the Case

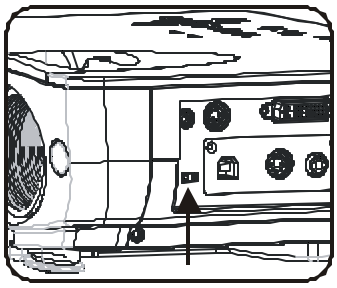
Refer to the following to clean the projector case.

1. Wipe off dust with a clean dampened cloth.
2. Moisten the cloth with warm water and mild detergent (such as used to wash dishes), and wipe the case.
3. Rinse all detergent from the cloth and wipe the projector again.

Caution:
To prevent discoloration or fading of the case, do not use abrasive alcohol-based cleaners.

Using the Kensington Lock

If you are concerned about security, attach the projector to a permanent object with the Kensington slot and a security cable.



Note:
Contact your vendor for details on purchasing a suitable Kensington security cable.

The security lock corresponds to Kensingtion's MicroSaver Security System. If you have any comment, contact:Kensington, 2853 Campus Drive, San Mateo, CA94403, U.S.A. Tel :800-535-4242, http:www.Kensington.com.

Common problems and solutions

These guidelines provide tips to deal with problems you may encounter while using the projector. If the problem remains unsolved, contact your dealer for assistance.

Often after time spent troubleshooting, the problem is traced to something as simple as a loose connection. Check the following before proceeding to the problem-specific solutions.

- *Use some other electrical device to confirm that the electrical outlet is working.*
- *Ensure the projector is turned on.*
- *Ensure all connections are securely attached.*
- *Ensure the attached device is turned on.*
- *Ensure a connected PC is not in suspend mode.*
- *Ensure a connected notebook computer is configured for an external display. (This is usually done by pressing an Fn-key combination on the notebook.)*

Tips for Troubleshooting

In each problem-specific section, try the steps in the order suggested. This may help you to solve the problem more quickly.

Try to pin point the problem and thus avoid replacing non-defective parts.
For example, if you replace batteries and the problem remains, put the original batteries back and go to the next step.

Keep a record of the steps you take when troubleshooting: The information may be useful when calling for technical support or for passing on to service personnel.

LED Error Messages

LED	STATUS/ NUMBER OF FLASHES	DESCRIPTION
Lamp-ready	Flashing	Lamp not ready – do not press the power button
	1	Power fan error
	2	Lamp fan error
	3	Blower error
Power	3	System overheating
	4	System interface error
	5	Lamp error
	6	Fan error (refer to Lamp ready status to determine which fan)
	7	Lamp cover open
	8	DLP driver error

Image Problems

Problem: No image appears on the screen

1. Verify the settings on your notebook or desktop PC.
2. Turn off all equipment and power up again in the correct order.

Problem: The image is blurred

1. Adjust the **Focus** on the projector.
2. Press the **Auto** button on the remote control or projector.
3. Ensure the projector-to-screen distance is within the 10-meter (33-feet) specified range.
4. Check that the projector lens is clean.

Problem: The image is wider at the top or bottom (trapezoid effect)

1. Position the projector so it is as perpendicular to the screen as possible.
2. Use the Keystone button on the remote control or projector to correct the problem.

Problem: The image is reversed or upside down

1. Check the **Projection** setting on the **Setup** menu of the OSD.

Problem: The image is streaked

1. Set the **Frequency** and **Tracking** settings on the **Setup** menu of the OSD to the default settings.
2. To ensure the problem is not caused by a connected PC's video card, connect to another computer.

Problem: The image is flat with no contrast

1. Adjust the **Contrast** setting on the **Main** menu of the OSD.

Problem: The color of the projected image does not match the source image.

1. Adjust the **Color Temp.** and **Gamma** settings on the **ColorMgr** menu of the OSD.

Lamp Problems

Problem: There is no light from the projector

1. Check that the power cable is securely connected.
2. Ensure the power source is good by testing with another electrical device.
3. Restart the projector in the correct order and check that the Power LED is green.
4. If you have replaced the lamp recently, try resetting the lamp connections.
5. Replace the lamp module.
6. Put the old lamp back in the projector and have the projector serviced.

Problem: The lamp goes off

1. Power surges can cause the lamp to turn off. Press the power button twice to turn off the projector. When the Lamp Ready LED is on, press the power button.
2. Replace the lamp module.
3. Put the old lamp back in the projector and have the projector serviced.

Remote Control Problems

Problem: The projector does not respond to the remote control

1. Direct the remote control towards remote sensor on the projector.
2. Ensure the path between remote and sensor is not obstructed.
3. Turn off any fluorescent lights in the room.
4. Check the battery polarity.
5. Replace the batteries.
6. Turn off other Infrared-enabled devices in the vicinity.
7. Have the remote control serviced.

Audio Problems

Problem: There is no sound

1. Adjust the volume on the remote control.
2. Adjust the volume of the audio source.
3. Check the audio cable connection.
4. Test the source audio output with other speakers.
5. Have the projector serviced.

Problem: The sound is distorted

1. Check the audio cable connection.
2. Test the source audio output with other speakers.
3. Have the projector serviced.

Having the Projector Serviced

If you are unable to solve the problem, you should have the projector serviced. Pack the projector in the original carton. Include a description of the problem and a checklist of the steps you took when

trying to fix the problem. The information may be useful to the service personnel. Return the projector to the place you purchased it.

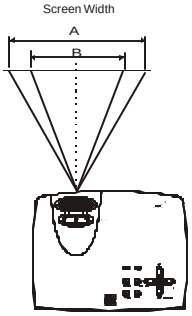
Specifications

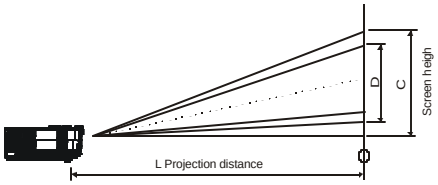
Display type	TI DMD 0.55-inch x 1, 12 degrees, DDR DLP
Resolution	SVGA 800 x 600 Native
Color	16.7 Million (24-bits/Pixel)
Bandwidth	Up to XGA 1024x768 @60 Hz
Weight	2.0 kg (4.5 lbs.)
Projection distance	1.5 to 7 meter
Projection screen size	37 inches to 202.8 inches
Brightness uniformity	80%
Projection lens	Manual zoom and focus
Zoom ratio	1.16:1
Vertical keystone correction	+/- 15
Projection methods	Desktop front/rear; ceiling front/rear
Data compatibility	IBM PC or compatibles (VGA, SVGA), Mac
HDTV	480i, 480p, 720p, 1080i
Video compatibility	NTSC/NTSC 4.43, PAL (B/G/H/I/M/N 60), SECAM
H-Sync	15,31 - 70 kHz
V-Sync	50 - 85 Hz
Safety certification	FCC Class B, UL, CUL, CE, CB, TUV-GS, CCC
Operation temperature	10° ~ 35°
Dimensions	28.0 x 20.5 x 9.7 cm (11.0 x 8.0 x 3.8 inches)
Power consumption	< 280 watts (normal operation) <220 watts (ECO made)
Stand By	< 20 watts
Lamp	200W
Audio speaker	1W mono speaker
Remote keys	Power, Auto, Menu, Source, Keystone

Input/output connectors

PC	DVI-I
	USB
Video	Composite video (RCAx1)
	S-Video (Mini-DIN)
Audio	Mini-jack
Service/upgrades	RS-232
Security	Kensington slot

Projection Distance V.S. Projection Size





1.5m	1.10m	0.88m	0.66m	0.94m	0.75m	0.56m
4.92'	43.3"	34.6"	26.0"	37.0"	29.5"	22.0"
2.0m	1.47m	1.17m	0.88m	1.25m	1.0m	0.75m
6.56'	57.8"	46"	34.6"	49.2"	39.37"	29.53"
2.4m	1.76m	1.4m	1.1m	1.5m	1.2m	0.9m
7.87'	69.3"	55.1"	43.3"	59.1"	47.24"	35.4"
2.8m	2.06m	1.64m	1.23m	1.75m	1.4m	1.05m
9.18'	81.1"	64.6"	48.4"	68.9"	55.1"	41.3"
3.2.m	2.35m	1.87m	1.41m	2.0m	1.6m	1.2m
10.5'	92.5"	73.6"	55.5"	78.7"	63.0"	47.2"
3.6m	2.65m	2.11m	1.58m	2.25m	1.80m	1.35m
11.81'	104.3"	83.1"	62.2"	88.6"	70.9"	53.1"
4.0m	2.94m	2.34m	1.76m	2.5m	2.0m	1.5m
13.12'	115.7"	92.1"	69.3"	98.4"	78.7"	59.1"
4.4m	3.23m	2.57m	1.94m	2.75m	2.2m	1.65m
14.4'	127.2"	101.2"	76.4"	108.3"	86.6"	65.0"
4.8m	3.53m	2.81m	2.11m	3.00m	2.40m	1.80m
15.74'	139.0"	110.6"	83.1"	118.1"	94.5"	70.9"
5.2m	3.82m	3.04m	2.29m	3.25m	2.60m	1.95m
17.06'	150.4"	119.7"	90.2"	128.0"	102.4"	76.8"
5.6m	4.12m	3.28m	2.46m	3.50m	2.80m	2.10m
18.37'	162.2"	129.1"	96.9"	137.8"	110.2"	82.7"
7.0m	5.15m	4.10m	3.08m	4.38m	3.50m	2.63m
22.97'	202.8"	161.4"	121.3"	172.4"	137.8"	103.5"

Timing Charts

The projector can display several resolutions. The following table outlines the resolutions that can be displayed by the projector.

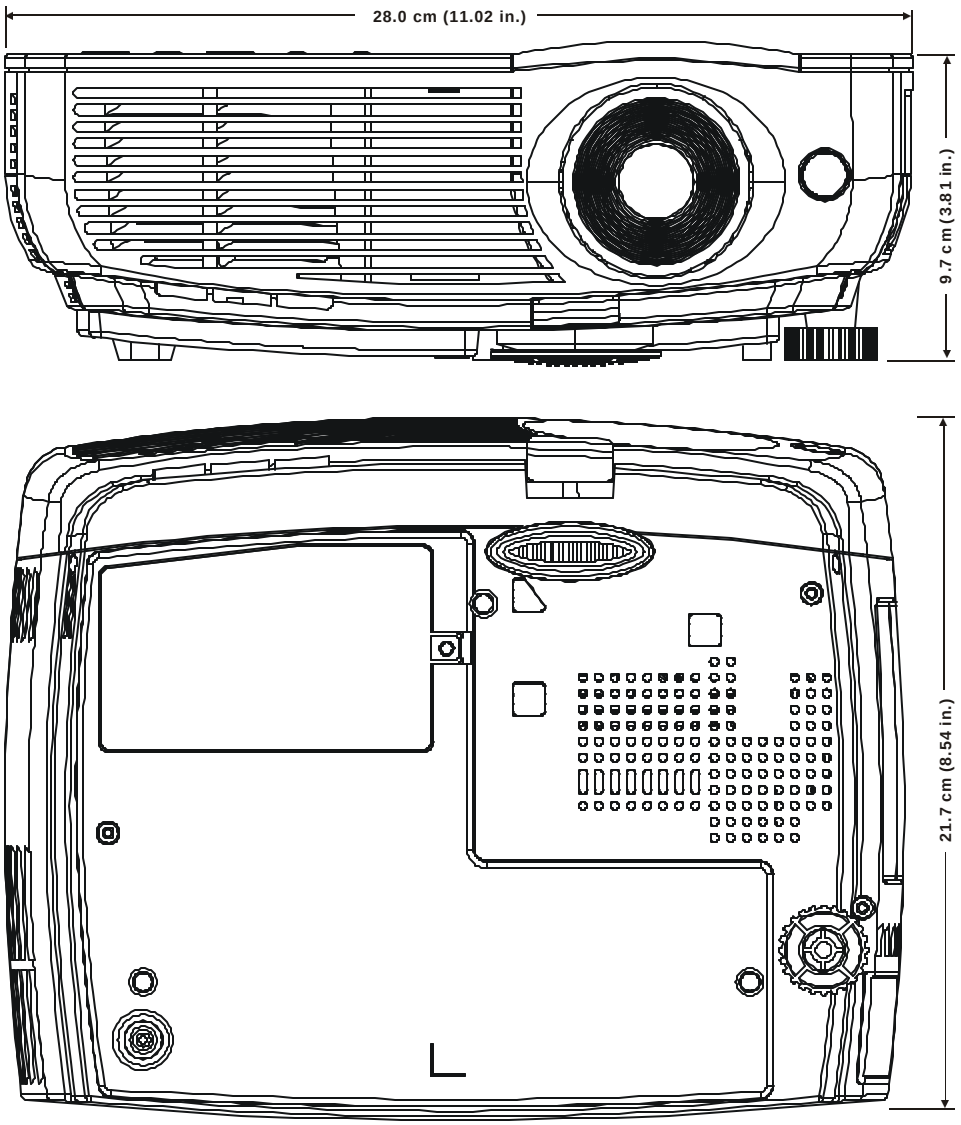
Table 2: ANALOG Computer Timings (Resolution and Refresh Rate【fV】)

Resolution	FH (kHz)	FV (Hz)	Signal mode
640 x 480	31.47	59.94	Expanded VGA
640 x 480	37.86	72.81	Expanded VGA
640 x 480	37.50	75.00	Expanded VGA
640 x 480	43.27	85.01	Expanded VGA
800 x 600	35.10	56.00	Native SVGA
800 x 600	37.88	60.32	Native SVGA
800 x 600	48.08	72.19	Native SVGA
800 x 600	46.88	75.00	Native SVGA
800 x 600	53.67	85.06	Native SVGA
1024 x 768	48.36	60.00	Compressed XGA
1024 x 768	56.48	70.07	Compressed XGA
1024 x 768	60.02	75.03	Compressed XGA
1024 x 768	68.67	84.99	Compressed XGA

Table 3: DIGITAL Computer Timings (Resolution and Refresh Rate【fV】)

Resolution	FH (kHz)	FV (Hz)	Signal mode
640 x 480	31.47	59.94	Expanded VGA
640 x 480	37.86	72.81	Expanded VGA
640 x 480	37.50	75.00	Expanded VGA
640 x 480	43.27	85.01	Expanded VGA
800 x 600	35.10	56.00	Native SVGA
800 x 600	37.88	60.32	Native SVGA
800 x 600	48.08	72.19	Native SVGA
800 x 600	46.88	75.00	Native SVGA
800 x 600	53.67	85.06	Native SVGA
1024 x 768	48.36	60.00	Compressed XGA
1024 x 768	56.48	70.07	Compressed XGA
1024 x 768	60.02	75.03	Compressed XGA
1024 x 768	68.67	84.99	Compressed XGA

Dimensions



FCC Warning

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by the parties responsible for compliance could void the user' s authority to operate the equipment.

Canada

This class B digital apparatus complies with Canadian ICES-003.

Safety Certifications

UL, CUL, CB, TUV-GS, CCC

EN 55022 Warning

This is a Class B product. In a domestic environment, it may cause radio interference, in which case the user may be required to take adequate measures. The typical use is in a conference room, meeting room, or auditorium.