

Liesegang

Bedienungsanleitung User Manual

dv475

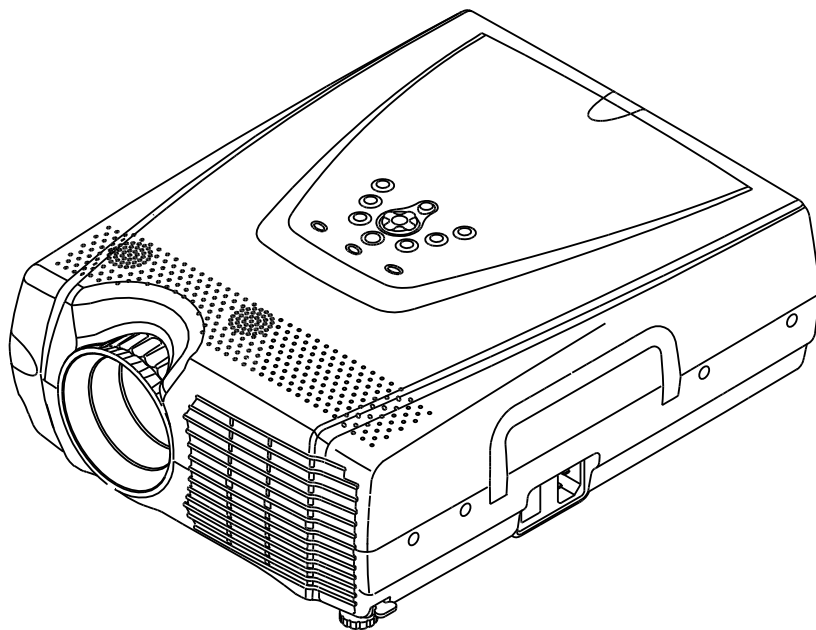


Table of contents

Before use	2
1. Scope of Delivery	7
1.1 Disposal of packing material	7
2. Parts Name of the Projector	8
3. Quick Setting Up	9
3.1 Setting up and connecting the projector	9
3.2 Projection distance and image size	9
4. Connections	10
4.1 Connecting a computer or a notebook pc	10
4.2 Connecting video equipments	10
5. Starting Up the Projector	12
5.1 First Steps	12
5.2 Adjustment	13
5.3 Standby mode	14
5.4 Projector power down	14
6. Using System Menus	15
6.1 On-Screen menu	15
6.2 List of functions	15
7. Infrared Remote Control	18
7.1 How to use the infrared remote control	18
7.2 General function keys	18
7.3 Mouse keys	18
7.4 Hot keys	18
7.5 Battery replacement	19
8. Cleaning and Replacing the Air Filter	19
9. Replacing Projection Lamp	20
10. Lamp counter	20
11. Troubleshooting Problems and Solutions	21
12. Resetting the Projector to Factory Default Settings	21
13. FCC Compliance Statement for United States Users	21
14. Service Hotline	22
15. Product Manufacturer	22
16. Glossary of Terms	23
17. Specifications	24
17.1 Optical	24
17.2 Electrical	24
17.3 Mechanical	24
18. Warranty terms	25

Before use – Please read the user manual

The following notes are intended to be a help for handling the product in accordance with its designated purpose.



Attention:

A person could be killed or injured if the wrong operation is done by ignoring this indication.



Do not install this unit in an unstable place.

Avoid placing it in an unstable place such as a weak base, an inclined floor, etc. This may cause the projector to drop or fall over, resulting in injury.



Do not remodel this unit.

Do not remodel this unit. It may cause a fire, an electric shock, etc.



Never use the projector in a humid environment.

Never use the projector in a humid environment, e.g. bathroom or close to cookers or humidifiers. This could cause a fire, an electric shock, etc.



Only connect to the specified mains voltage.

The projector must only be operated with the alternating current specified on the identification plate. Please immediately check whether the supplied mains connection cable coincides with wall outlets at the installation location.



Do not forget the protective conductors.

Only use extension leads or cables with a minimum cross-section of 1.5 mm² and protective conductors.



Do not apply any shock.

If you drop this unit or if the casing is broken, turn off the power switch, disconnect the power plug and contact your dealer. If you use it as it is, it may cause a fire, an electric shock, etc.



If any abnormality occurs.

If there is abnormal smell or smoke, if you use this unit as it is, this could cause a fire or an electric shock, etc. Immediately turn off the power switch and pull out the power plug. Contact your dealer to repair the unit. Do not repair it yourself, as it is very dangerous.

Do not use this unit as it is after trouble has occurred. Immediately turn off the power switch and pull out the power plug, then contact your dealer to have it repaired.

If water, etc., enters the unit, turn it off, pull out the power plug and contact your dealer to have it repaired.



Be careful with the power cord.

Do not scratch, damage or modify the power cord. Do not bend it forcibly. Also do not put a heavy object on it, do not heat it and do not pull it. If you do, the power cord may be damaged and it may cause fire, electric shock, etc.

If the power cord is damaged (exposed or disconnected wire, etc.), replace it. It may otherwise cause a fire, an electric shock, etc.

Make sure that no dirt adheres to the power plug and insert it until it stops. If dirt adheres or the connection is incomplete it may cause a fire, an electric shock, etc.



Do not look directly into the lens when the lamp is switched on.

Do not look directly into the lens when the lamp is switched on. Since a powerful lamp is used, it could damage your vision, etc.



Do not put a container, etc, with liquid on this unit.

Do not put a vase, flower pot, cosmetic container, medicine or water on this unit. If liquid spills and enters the unit, it may cause fire, electric shock, etc.



Never leave the projector switched on unsupervised.

Never leave the projector switched on unsupervised or let children play with it as unusual conditions may occur which can cause a fire, an electric shock, etc.



Caution !

Non-observance can lead to injury or damage.



**Caution
when carrying the unit.**

When the unit is to be moved, be sure to disconnect the power plug and check that all external connection cords are removed before moving it. If not, the cord may be damaged and it may cause a fire, an electric shock, etc.



**Do not place this unit
where it gets hot.**

Be careful if you place the unit outdoors, in a place exposed to direct sunlight or near a heating device, the casing and parts could be affected.



Cleaning the projector.

Handle the projector as you would do any other device with glass components. Avoid impact or dropping. Before cleaning the device disconnect the mains plug.

The casing can be cleaned with a soft, slightly moistened cloth and mild detergent. Avoid the ingress of moisture into the inside of the equipment. Never use solvents or abrasive cleaners. Do not leave cleaners inside the projector.



Handle the power cord carefully.

Do not bring the power cord near a heating device. The cord's shield may melt and it may cause a fire, an electric shock, etc.

Do not insert / disconnect the power plug with wet hands. It may cause an electric shock.

Do not pull the power cord when the power plug is to be disconnected. The power cord may be damaged and it may cause a fire, an electric shock, etc. Be sure to seize the power plug.



**Do not step on this unit.
Do not put a heavy object on it.**

Do not step on this unit or put a heavy object on it. Pay attention when children are present. If you do, the unit may fall over or may be broken causing an injury.



**Never block
the ventilation slots.**

Never block the openings for the ventilation or place objects in the projector. Heat may accumulate inside the projector and it may catch fire.



Temperature between 5°C and 35°C.

Do not use the unit while the temperature is high or varies greatly. The unit must be used at between 5°C (41°F) and 35°C (95°F).



Set the caster stoppers.

When this unit is installed on a table with casters, set the caster stoppers. If the table moves, it may fall over, causing an injury.



If you do not use the unit for a long time.

If you do not use the unit for an extended period of time, be sure to pull out the power plug from the power outlet.



Replacing the lamp.

Switch off the projector and disconnect the mains plug before replacing the lamp. Let the device cool down, as the lamp and other components in the projector casing have heated up during operation, which can cause injury when touched.



Do not place this unit in a moist or dusty place.

Do not place this unit in a moist or dusty place. It may cause a fire, an electric shock, etc. Do not place this unit where it would be exposed to soot or steam, near a cooking stove or humidifier, etc. It may cause a fire, an electric shock, etc.



Volume.

Use a volume level that does not bother persons in the neighborhood. Especially, since the sound is likely to carry well at nighttime even at a low volume, be careful to choose a suitable level.



Clean the projector inside at least once a year!

Ask your dealer to clean the unit inside once a year. If the unit is left with too much dust inside it may cause fire.



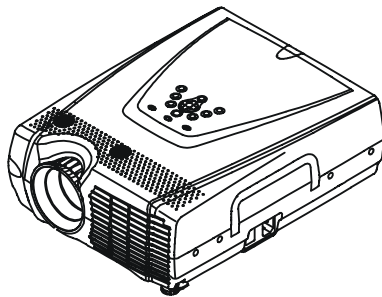
Use of batteries.

Do not use batteries not specified for this unit. Do not use new batteries mixed with old ones. This may cause a fire, injury due to burst of battery, liquid leakage.

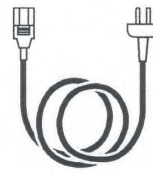
When inserting batteries in this unit, pay attention to the direction of the + and - polarities and insert the batteries correctly. If the polarities are confused, it may cause injury or damage near the unit due to burst batteries, liquid leakage, etc.

1. Scope of Delivery

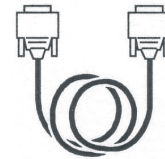
Your projector should come with the items shown below. Check to make sure that all the items are included. Contact your dealer if anything is missing.



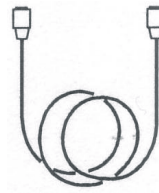
Projector



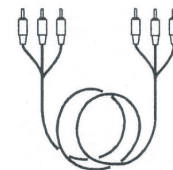
Power cord 1.8m / 6.0ft
(Europe type)



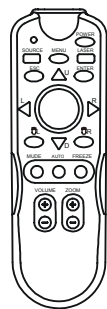
VGA cable
1.8m / 6.0ft



S-Video cable
1.8m / 6.0ft



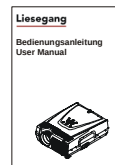
Component YCbCr/YPbPr cable
1.8m / 6.0ft



Remote control



AAA battery (2x)



User manual

Following accessories available:

Spare lamp kit
Air filter
USB mouse cable
Soft-Case
Ceiling mount kit

Order-No.: ZU 0201044010
Order-No.: EK 0201011150
Order-No.: ZU 0260700008
Order-No.: ZU 0201980010
Order-No.: ZU 0201750009

In case of extreme operating conditions:

In case of extreme operating conditions – examples: >8-hour-operation, severe vibrations, great temperature fluctuations, heavy nicotine or other aggressive smoke, heights exceeding 3000 m – please contact your dealer. We recommend that you conclude a maintenance contract.

Important note:

The projector features its own electronic multi-range power supply with automatic switching. It must only be operated with 100 V - 240 V AC with a frequency of 50 Hz to 60 Hz. The unit must only be connected to a properly installed network with protective conductor. Please check immediately whether the supplied mains cable is compatible with the mains sockets on-site. Please contact your supplier if a different power supply cable is required for use abroad.

1.1 Disposal of Packing Material

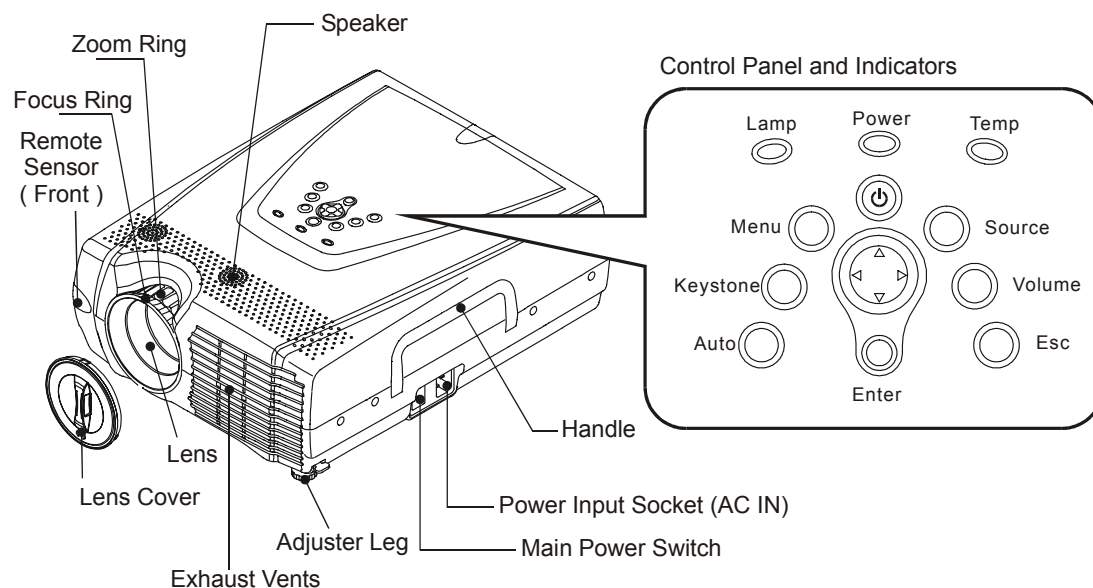
The transport packing consist only of materials which may be disposed.

Remark:

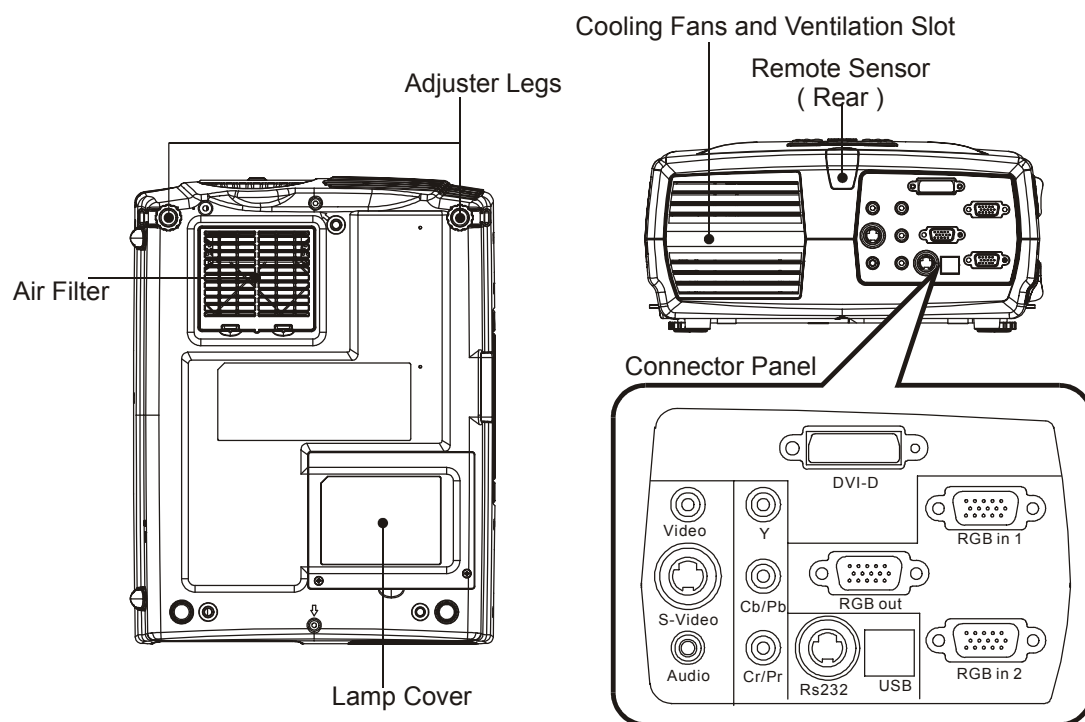
The transport packing offers perfect protection for the product and should be kept for further transport etc.

2 Parts Name of the Projector

Front, side and top



Bottom and rear side



3. Quick Setting Up

3.1 Setting up and connecting the projector

These instructions are intended to get you going fast.



To avoid damage to the equipment, all power to projector and input sources must be turned off during cable hook up.



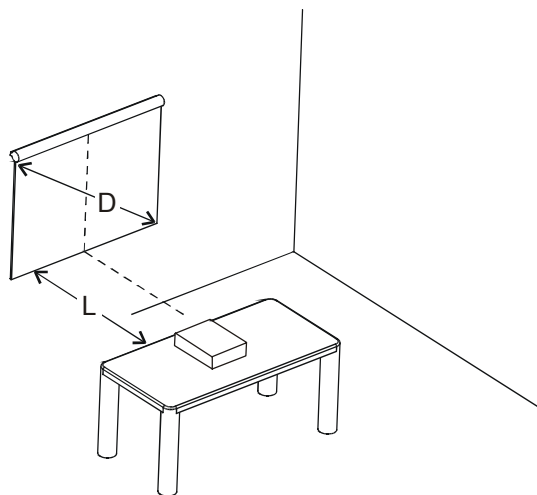
It is imperative that you ensure that the device is inclined in the direction of the projection at an angle not exceeding $+30^\circ$. In all other directions, the projector can be tilted at around $\pm 5^\circ$. Please keep these values in order **to avoid damage** to the device.

1. Place the projector on a rigid, non-slip surface.
2. Connect the power cord.
3. Connect the audio and computer/video input cables to the projector input terminals.
4. For mouse emulation, connect the mouse and, in case of PS/2 and USB, the appropriate adapter.
5. Power up the projector then the computer and the video sources.
6. Move the projector nearer or further away from the screen to obtain the best image size or adjust the image size with the Zoom buttons of the remote control.

3.2 Projection distance and image size

The distance from projector lens to the screen will determine the size of the projected image. The maximum image size is about 8 – 10m diagonally at a distance of 15 meter.

Please refer to the table below for the image size projected. For further information about image size calculator please have a look on our website: www.Liesegang.com.

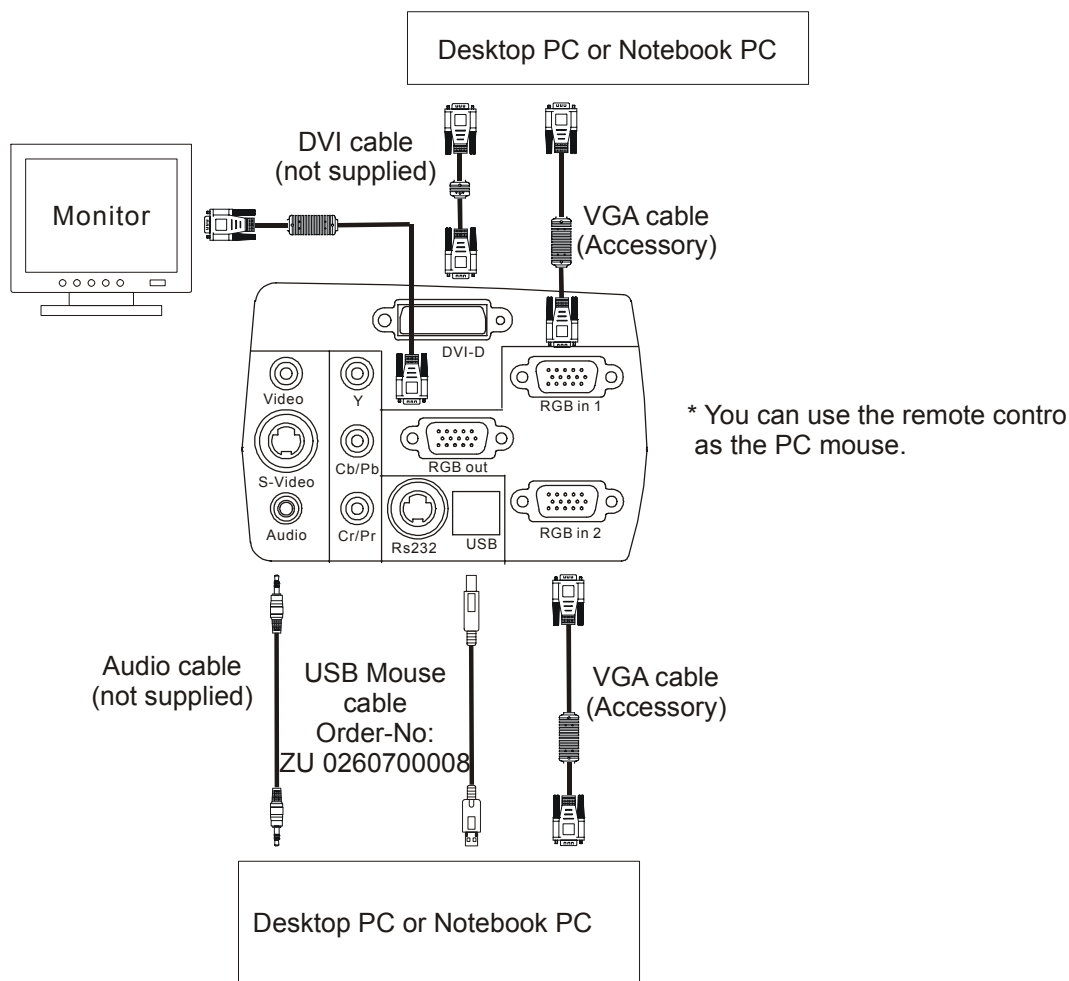


Projection Distance (L=m)	Image Size (d=Diagonal)	
	Wide (m)	Tele (m)
1	0,7	0,5
2	1,4	1,0
3	2,0	1,6
4	2,8	2,1
5	3,5	2,7
6	4,2	3,2
7	4,9	3,7
8	5,6	4,3
9	6,2	4,8
10	7,0	5,3
11	7,6	5,8
12	8,3	6,4
13	9,0	6,9
14	9,7	7,5
15	10,5	8,0

„Wide“ and „Tele“ means the maximum and minimum image size diagonally at the same distance by adjusting lens to zoom.

4 Connections

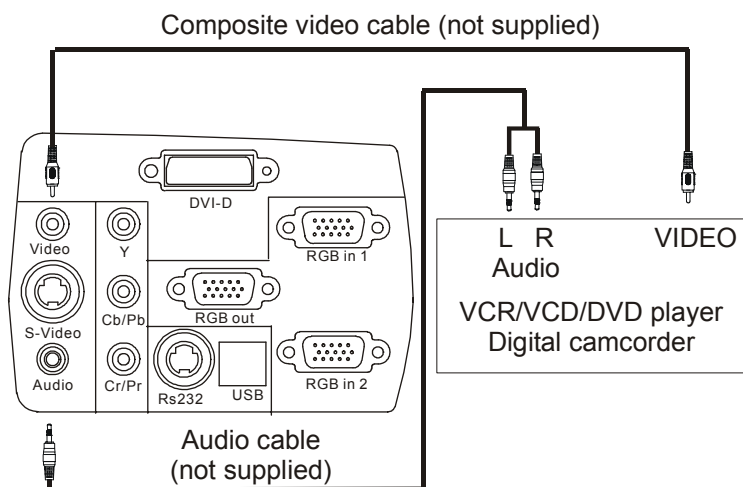
4.1 Connecting a computer or a notebook PC



4.2 Connecting video equipments

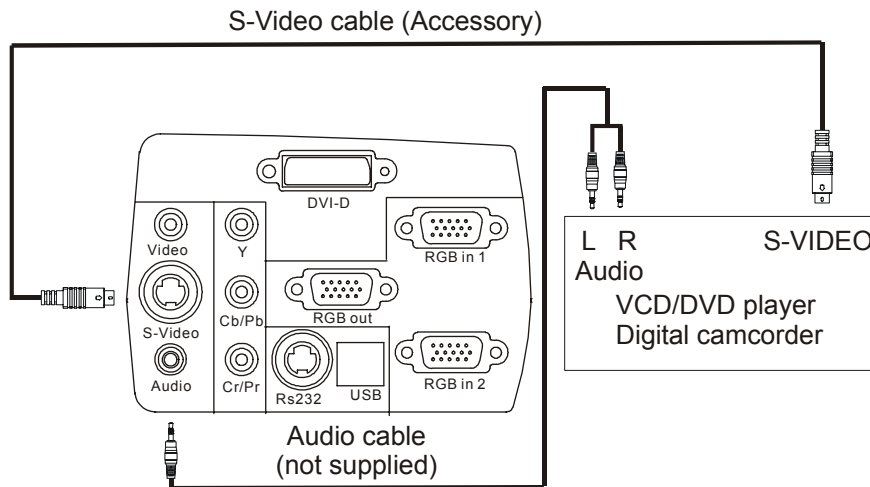
4.2.1 Composite video images

Connecting a VCR/VCD/DVD player, digital camcorder by using a composite video cable.



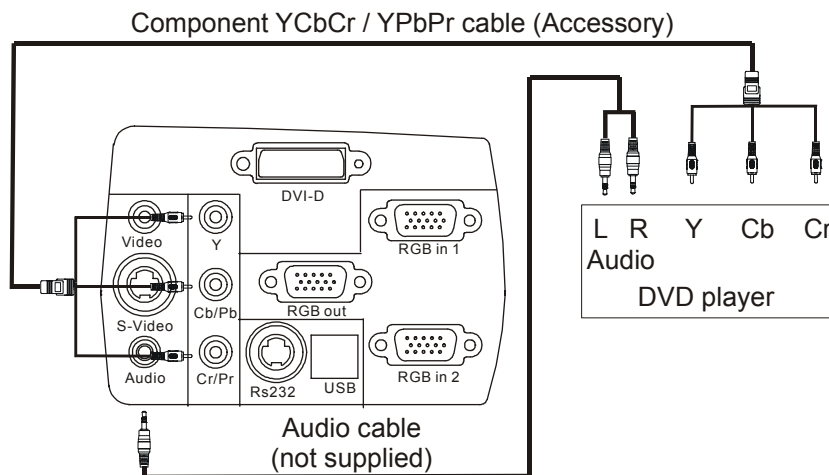
4.2.2 S-Video images

Connecting a VCD/DVD player, digital camcorder by using a S-Video cable.



4.2.3 Component images: YCbCr / YPbPr

Connecting a DVD player by using a component YCbCr / YPbPr video cable. If your DVD player does not support Macrovision (video copy protection) – encoded function, please select YCbCr as your input source.



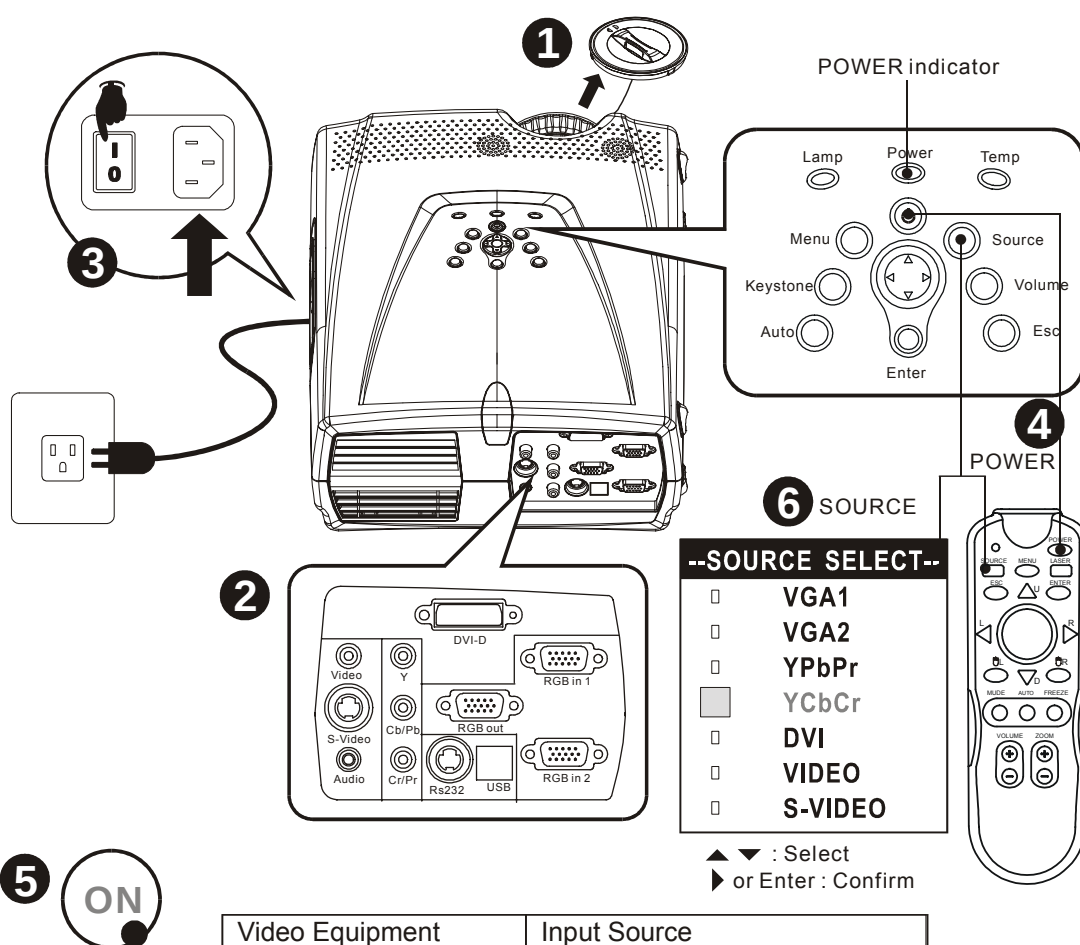
5 Starting Up the Projector

5.1 First steps

Read the important safeguards before operating the projector. During operation, keep the air vents clear of obstructions to allow proper cooling.

Note: Allow a projector that has been stored in a cold place to warm up to room temperature before applying power.

1. Remove the lens cover.
2. Connect a computer or video equipment to the projector.
3. Connect the power cord, and turn on the MAIN POWER switch.
The three indicators will flash once together, and the POWER indicator will light RED.
4. Press the POWER button.
The POWER indicator will flash GREEN for a while, and then light steadily.
5. Turn on the connected source.
6. Press the SOURCE button to select the input signal.

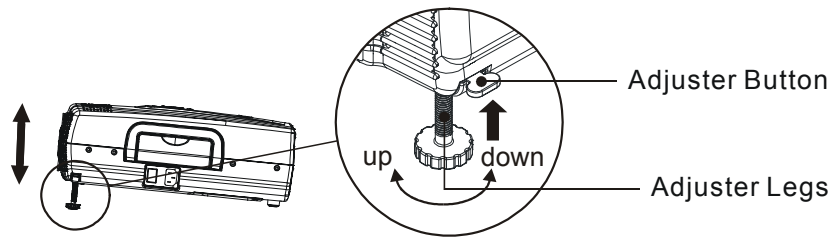


Video Equipment	Input Source
Computer	RGB-in 1, 2 (VGA 1, 2)
VCR/VCD/DVD Player Digital Camcorder	Video (Composite video images) S-Video (S-Video images)
DVD Player Set-top-box	YCbCr (Component images) YPbPr (Component images)

5.2 Adjustment

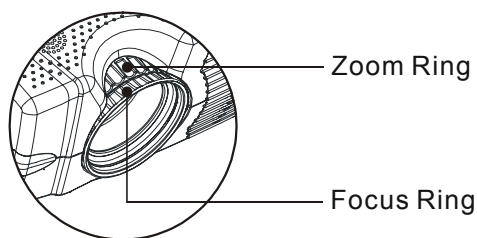
5.2.1 Projection angle

Lift the projector and press the adjuster buttons to adjust the projection angle. Then, release the buttons to lock the extended adjuster legs.



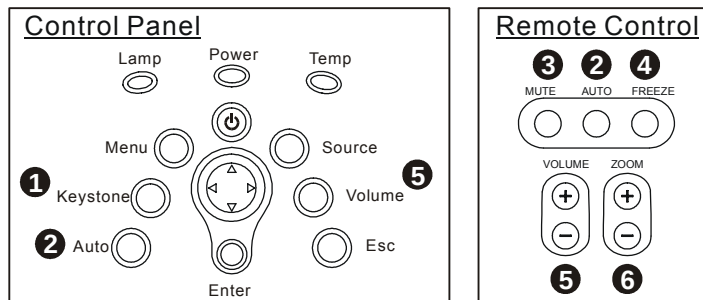
5.2.2 Image size and focus

Turn the focus/zoom ring to adjust the image focus and size.



5.2.3 Other functions

The hot keys on the control panel or remote control.



① Keystone – Keystone adjustment

Press the KEYSTONE button and ▲▼◀▶ to correct the keystone distortion.

② Auto – Automatic screen adjustment

When the AUTO button is pressed, the image will be adjusted automatically in accordance with the signal being input.

③ Mute – Muting the sound temporarily

Press the button again to restore the sound.

④ Freeze – Freezing animated images

A still image is displayed. Press the button again to restore the image.

⑤ Volume – Adjusting the volume of the projector's speaker

Press VOLUME +/- (remote control) or ◀▶ (control panel) to adjust volume.

⑥ Zoom – Enlarging the projected image

Use ZOOM +/- to change the enlargement ratio.

5.3 Standby mode

When the projector is not being used, place it into standby mode.

1. Press the Power button : keep button depressed for about two seconds.

Message: "Power OFF? Please press<power> key again!" appears on screen.

Press the Standby button  again.

2. The lamp will switch off and the Standby button  will illuminate red.

Note: The fan motor will continue to run for a few minutes until the projector cools down and then the fan will turn off.

3. Press again the Standby button  to illuminate the lamp and project an image on the screen.

5.4 Projector power down

1. Press the Power button : keep button depressed for about two seconds.

Message: "Power OFF? Please press<power> key again!" appears on screen.

Press the POWER button twice to turn off the power.

The power turns off when you press the button once more.

The lamp will turn off and the cooling fan will start running.

The POWER indicator will flash GREEN for 60 sec.

2. Wait until the POWER indicator lights RED steadily (until the cooling fan stops).
Be careful not to cut power to the projector while the cooling fan is still running.
3. Turn off the MAIN POWER switch.

WARNING

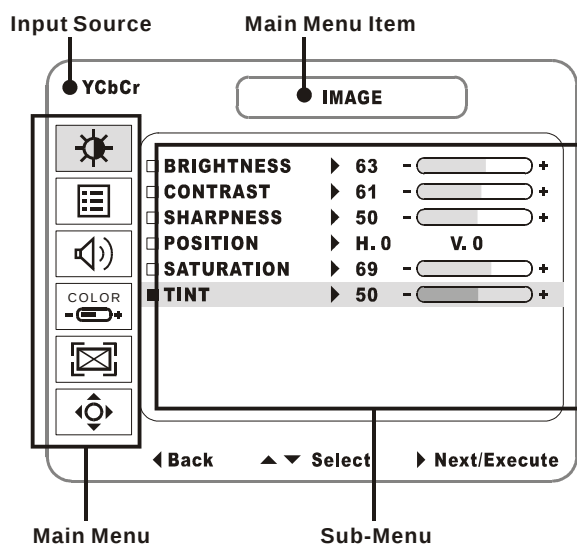
If the projector is turned off abnormally and restart immediately, the POWER indicator will flash GREEN for 60 sec (for cool-down). When the POWER indicator lights RED steadily, press the POWER button to restart the unit.

6 Using System Menus

6.1 On-Screen menu

You can use the ON-SCREEN MENU to make various adjustments and settings.

1. Press the MENU button to display the On-screen Menu ▲▼◀▶
2. Use ▲▼ to select a main menu item, and then press ▶ to enter the selected sub-menu.
3. Use ▲▼ to select a sub-menu item, and then press ▶ to enter an individual adjustment screen or the next menu level.
4. Use ◀▶ to adjust the setting, and ▲▼ to select an item.
5. Press MENU to return to the previous screen.
Press ▶ or ENTER to accept the setting.
Press ◀ to return to the previous menu level.
6. To close the menu, press ESC.



6.2 List of functions

6.2.1 Image

IMAGE

Sub-menu	Function
BRIGHTNESS	Adjust the image brightness.
CONTRAST	Adjust the difference between light and shade in the image.
SHARPNESS	Adjust the image sharpness.
POSITION	Move the image display position vertically and horizontally.
SATURATION	Adjust the color intensity for the image.
TINT	Adjust the image tint.
PHASE	Adjust clock phase if any banding noise.

6.2.2 Setting

SETTING

Sub-menu	Function
FREEZE	Freeze animated image.
SOURCE	Select the input source.
PIP MODE	Display the images in the Picture-in-Picture mode. * PIP SIZE: Open or close the sub-screen and select its size. * PIP SOURCE: Select the input source of the sub-screen. * PIP POSITION: Select the position of the sub-screen.
LANGUAGE	Set the language for OSD.

6.2.3 Audio

AUDIO

Sub-menu	Function
VOLUME	Adjust the volume.
MUTE	Mute the sound temporarily.

6.2.4 Advanced

ADVANCED

Sub-menu	Function
COLOR MODE	Select a gamma color-curve mode to get better image quality.
COLOR TEMP.	If the color temperature is lower, colors appear reddish and color tone appears softer. If the color temperature is higher, colors appear bluish and color tone appears sharper.
RGB GAIN	Adjust the image contrast for each RGB color.
RGB LEVEL	Adjust the image brightness for each RGB color.
PATTERN INPUT	Use the patterns to check the projection effect.

6.2.5 Installation



INSTALLATION

Sub-menu	Function
IMAGE ASPECT	Set the aspect ratio for projected images.
KEystone	Correct the vertical or horizontal keystone distortion.
ORIENTATION	Make the projected images reverse vertically or horizontally according to the installation mode of the projector.
USER'S LOGO	Enable or disable the user's logo function.
LOGO CAPTURE	* LOGO BACKGROUND: Change the fill color behind the logo. * LOGO SCALING: Adjust the scale of the logo screen. * LOGO POSITION: Adjust the position of the logo within its area. * LOGO DELETE: Delete the capture logo. * START LOGO CAPTURE: Start the logo capture process.
SHOW LOGO	Show the logo chosen by user.

6.2.6 Management



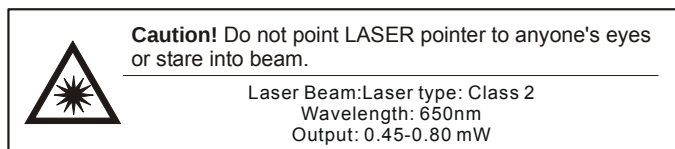
MANAGEMENT

Sub-menu	Function
OSD SETTING	* POSITION: Adjust the position of OSD. * TIMEOUT: Set the staying time of OSD. * MODE: Select the background of OSD to be opaque or translucent.
LAMP COUNTER	Display the cumulative lamp operating time.
INFORMATION	Display the input resolution and scanning frequency.
SLEEPING	Set the time to power off automatically.
BACKGROUND	Set the background color when no video signal is being input.
RESET LAMP	Reset the cumulative lamp operating time.
RESET ALL	Reset all items to their default settings.

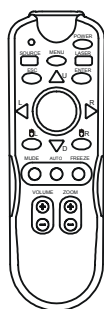
7 Infrared Remote Control

7.1 How to use the infrared remote control

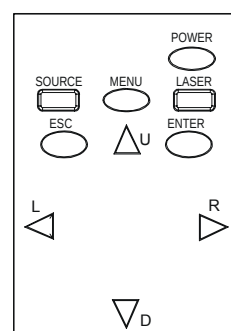
Aim the remote control toward the projection screen or at the sensor. Press desired remote button to send a signal to the projector.



7.2 General function keys



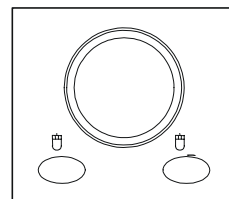
- POWER: turning on the unit and starting operation.
- SOURCE: selecting the input source manually such as VGA (connecting computer), Video, S-Video, DVI, YCbCr, or HDTV (YPbPr).
- MENU: On-Screen Display menu (OSD) and adjust the picture elements. Using "ENTER" button to enter OSD components or using "ESC" to cancel OSD.
- LASER: pressing the button to use the remote control as a laser pointer.



7.3 Mouse keys

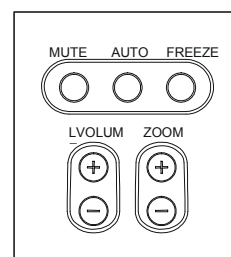
User can use the remote control as a wireless PC mouse while connecting the projector to a computer.

- L The same as "Left button" of PC mouse.
- R The same as "Right button" of PC mouse.
- : moving the mouse "up", "down", "left" and "right"



7.4 Hot keys

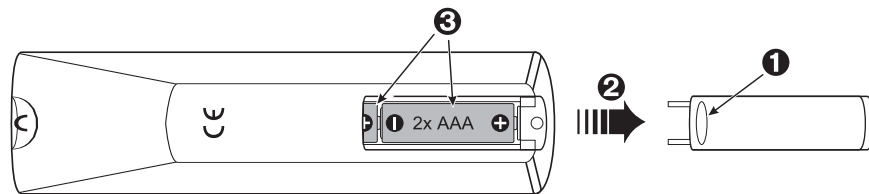
- MUTE: no audio effect. Press the same button to relieve the function.
- AUTO: adjusting the image automatically in accordance with the input signal.
- FREEZE: freezing the picture. Press the same button to relieve the function.
- VOLUME: using +, - to adjust volume.
- ZOOM: using +, - to zoom the projected image.



7.5 Battery replacement

The remote control uses two AAA batteries. The battery cover is located on the back of the remote control.

1. Press the locking button (1) to release door.
2. Move the door (2) to remove it and set it to the side.
3. Remove old batteries.
4. Install new batteries (3). Make sure the polarity (+/-) on each battery matches the decal.
5. Replace battery compartment door.



8 Cleaning and Replacing the Air Filter

The air filter must be cleaned about every 300 hours. If dust accumulates too much and becomes difficult to remove by using vacuum cleaner, please replace the air filter to keep the ventilation of LCD panel module in good condition. The projector attaches one spare air filter for replacement. If more is required, please contact the agent for purchasing or consultation.

User can clean or replace the air filter by following the steps below. Filter Cover—

1. Power off the projector and disconnect the power cable.
2. Turn the unit bottom up and open the filter cover.
3. Remove the air filter, and use a vacuum cleaner to clean away the dust, or replace a new one directly.
4. Attach the air filter and install the filter cover.



Note:

Periodically check air filter for excess dust or dirt. Replace or clean as needed!

9 Replacing Projection Lamp

The metal halide lamp of the projector has a limited lifetime of approximately 1500 hours. If the projected image appears darker you should change the lamp and the air filter.

Important Note:

This lamp contains mercury. Consult your local hazardous waste regulations and dispose of this lamp in a proper manner.

Caution !

Always switch off the unit and unplug the projector when changing the lamp. There are high voltage parts inside the cabinet that may **cause a electric shock**.

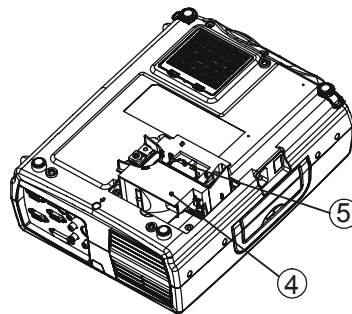
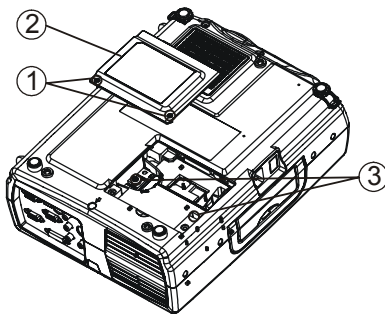


Caution !

Allow the projector to cool down for 60 minutes. Lamp and adjacent parts become extremely hot and can cause **burns to your finger**



1. Press the **Power button** on the operator touch panel or remote control. Wait for the fan to cycle off.
2. Unplug the projector power cord.
3. Set the projector on a sturdy surface with the bottom of the projector facing you.
4. Loosen the three screws (1) **of the lamp door** (2) with a screw driver. Remove the **lamp door** (2).
5. Loosen the two screws (3) **of the lamp cartridge** (5) with a screw driver.
6. Gasp **metal shackle** (5) and carefully pull the **lamp cartridge** (4) out of the projector.
7. Carefully insert the new **lamp cartridge** (4) and secure with screws (3). Lock **metal shackle** (5) behind secure tab.
8. Close the **lamp door** (2) and secure with screws (1).
9. Return the unit to normal position and restart the unit. User can reset the lamp counter (RESET LAMP) in the management menu of OSD manually.



10 Lamp Counter

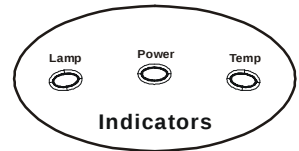


The elapsed operating time of the lamp is displayed on the management sub-menu. From the Main menu, select management to display the lamp life.

1. Press the **Menu- button** on the operator touch panel or remote control.
2. Select the menu „**Management**“ using the **Disc Pad** or remote control.
3. The menu point “lamp counter” will displays the actual lamp life.

11 Troubleshooting Problems and Solutions

You can check the status of the projector using the indicators on the projector's control panel. Refer to the table below for the cause of problems.



● : Lighting ● : Flashing

Status	Cause & Remedy
Power ● RED	Standby condition
Power ● GREEN	Warm-up (40 sec) or Cool-down (60 sec)
Power ● GREEN	Projection
Lamp ● RED	The lamp cover or the air filter cover is detached. Attach the cover securely.
Lamp ● RED	The lamp operates abnormally. Contact the qualified service personnel.
Temp ● RED	The fan is broken. Contact the qualified service personnel.
Temp ● RED	The internal temperature is unusually high. Wait until the projector cools down, and turn on the power again.

12 Resetting the Projector to Factory Default Settings

The factory default settings of the projector can be restored.

- 1 Press the **Menu- button** on the operator touch panel or remote control.
- 2 Select the menu „**Management**“  using the **Disc Pad** or remote control.
- 3 Select Reset all ► press <right>

13 FCC Compliance Statement For United States Users

This Equipment has been tested and found to comply with the limits for a class A 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, any 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.

Warning:

A shielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord be used.

Use only shielded signal cables to connect I/O devices to this equipment.

14 Service Hotline

For information about Liesegang products and if you have problems with operation of Liesegang products please do not hesitate to call Liesegang at +49 1805 390145 (12 EURO Cent/min).

In case of technical problems please feel free to call Liesegang at +49 1805 390144 (12 EURO Cent/min)

Fax-Hotline +49 211 39 01 227

Further information about Liesegang:
www.Liesegang.com

15 Product Manufacturer

Liesegang Unternehmensgruppe
Volmerswerther Str. 21
D-40221 Düsseldorf

16 Glossary of Terms

Hz, KHz, MHz (Hertz, Kilohertz, Megahertz)

Hertz is a unit of measurement used to express the frequency, in cycles per second, of an electrical signal or event. (Megahertz = 1 million cycles per second)

Lumens

A measure of light output on a screen or other surface. One lumen is the light of one candle power on each square foot of a surface of a sphere at a radius of one foot from the light source.

Metal halide lamp

A modified mercury arc lamp that is extremely bright. It is filled with a gas with elements known as halogens. The properties of this fill gas allows the lamp to burn longer and brighter than ordinary lamps.

NTSC (National Television Systems Committee)

Standard for television signals and other video equipment signals. The standard uses interlaced scans and 525 horizontal lines per frame, at a rate of 30 frames per second.

PAL (Phase Alternate Line)

The format for colour television signals used in Germany, England and many other countries. PAL is an interlaced format with 25 frames per second and 625 lines per screen.

Pixel (word coined from Picture Element)

This is one image dot, a definite position on a display that consists of a single dot or a group of three dots (red, green, blue).

Resolution

The number of pixels available in a display device for creating images. Expressed as a number of columns by number of rows (e.g. SVGA resolution, 800 x600).

S-VHS (S-Video, Super VHS)

A video signal which separates the luminance (Y) and chrominance (C) signals. Also known as Y/C video.

SECAM (Séquentiel Couleur a Mémoire)

A colour television standard developed in France and also used in certain other countries.

XGA

A standard PC computer analogue interface: resolution of 1024 x 768.

17 Specifications

17.1 Optical

Native Resolution	: XGA (1024 x 768)
Resolution Supported	: VGA - SXGA
Display Technology	: 0.9" Poly-silicon LCD
Brightness Uniformity	: >90%
Lamp Power	: 250W
Lens Type/Focussing	: Manual focus and zoom
F	: 1.7 ~ 2.0
Image Size	: 25" to 300"
Projection Range	: 1m~15m

17.2 Electrical

Input Source	: VGA Analog, VGA Digital, Video, HDTV(1080i, 720p)
Input Terminals	: D-SUB 15-pin x 2 DVI-D x 1 Composite Video: RCA x 1 S-Video: mini DIN 4-pin x 1 Y Pr/Cr Pb/Cb RCA x 3 Audio: Stereo mini-jack x 1
Output Terminals	: D-Sub 15-pin x 1
Computer Compatibility	: PC, Mac PC
Video Compatibility	: NTSC, PAL, SECAM
Aspect Ratio	: 4 : 3 / 16 : 9
Remote Control	: IR with mouse and Laser point
Audio	: 1W built-in speaker
Power Consumption	: 320W
Power Requirements	: 100-240 VAC, 50-60 Hz
Keystone Correction	: Vertical +/-40° and Horizontal +/- 12°
Other features	: Digital zoom, Freeze Capability, PIP, 3:2 and 2:2 Pull Down, Logo Capture

17.3 Mechanical

Installation	: Rear/Desktop/Ceiling
Weight	: 4.5 kg (9.9 lbs)
Dimensions	: 27.0 x 35.0 x 12.0 cm (10.6 x 13.8 x 4.7 inch)
Approvals	: CUL, CE, FCC, UL

18 Warranty Terms

What to do in case of a defect?

1. **Take the product** to your dealer or carefully pack it and send it to us unfranked (address below). Please make sure that you enclose a copy of your receipt and briefly describe the defect. Don't forget to add your telephone number, fax number, and email address.
2. **If our check reveals** a genuine fault (i.e. not a case of improper handling or wear and tear), we will remove the defect. If you have requested the delivery of a faultless product, we will meet this claim, unless the cost for removal of the defect are less than 75% of the purchase price paid by you and the removal of the defect has no substantial disadvantages for you.
3. **Wearing parts like e.g. lamps and LCD are not subject to the warranty**
4. **If our check reveals** that there is no entitlement on your part to a removal of the defect, we will advise you accordingly together with a quotation for a repair. Should you not accept the estimated cost for repair within one month we have to charge you for the cost and return shipment.
5. **Should the fault** reoccur after it has been removed, we will deliver to you a faultless product, unless you insist once again on the removal of the defect. If the second rectification of the defect also fails, you will be entitled to withdraw from the contract of sale.
6. **The above arrangements** will not affect your statutory claims against your dealer. The above obligations shall be assumed by us in addition to the obligations of your dealer. Where your claim is met directly by us, this shall at the same time be deemed to be the performance of the liabilities of your dealer towards you.

The above obligation is assumed by:

Liesegang Unternehmensgruppe
Volmerswerther Str. 21
D- 40221 Düsseldorf

Düsseldorf, 27 March 2003