⚠ Disclaimer

Sponsors:

User's Manual

VP800 LB30

QUICK REFERENCE GUIDE: MENU SYSTEM

The menu can be accessed from either the control panel or the remote control. Items marked with a ** can be controlled with the remote without going into the menu system.

MAIN MENU

Note: Use up and down keys to highlight the menu item and press *ENTER* to select the item.

| Language |
| Contrast |
| Tracking |
| Frequency |
| Oversize |
| Text Style |
| VGA Text/Graphics |
| Audio |
| Source |
| Reverse |
| Exit |

SUB MENUS

English
中 文
Deutsch
Français
Espanol

This selects the language that the instructions will use.

Contrast
◄ |___0___| ►

Adjust contrast. When a video sig sent there are both contrast and control bars.

Tracking
◄ |__40__| ►

If you observe flicker or image adjust this. This adjusts SYNC projector and the graphics adapte

Frequency
◄ |__29__| ►

Acts as a horizontal size control b the clock frequency of the match that of the computer.

Oversize
| Yes | | No |

Expands a 640 x 480 image to tak of the VP800's 800 x 600 display.

Text Style
1 2 3 4 5 6 7 8

PC-VGA Modes 3, only: The VP100 uses LCD; while IBM VGA MS-Dos environme 720 x 400 pixels. Use this menu to adju be entirely visible on the screen.

VGA Text
| Text | | Graphic |

PC-VGA Modes 3, 13 only: Toggle betw graphic modes. These modes are a detected and no adjustment is needed.

Audio
Bass ■ ■ ■ □ □ □ □ □ +
Treble ■ ■ ■ □ □ □ □ □ +
Bal. L ■■■■■■■■■ R
Vol. ■ ■ ■ □ □ □ □ □ +

In addition to adjusting bass, treble, v left/right balance there are four sound m Stereo: Simulates a "3D space" feeling f source: Pseudo Stereo: Create a "stereo from a mono source Linear Stereo: N Forced Mono: Mixes the right and left ch

Source
Computer   Video   No S-Video

When feeding in only one signal, the p automatically select the source. If bot video are fed in at the same time, this me you to switch between them. **

Reverse
H. rev. press   ◄►
V. rev. press   ▲▼

Horizontal and vertical reverse is used image (upside down) for ceiling mount or left to right for rear projection applica

Lightware, Inc.
1-800-445-9396
503-641-7873
Fax: 503-643-9756
Web: www.lightware.com
9785 SW Sunshine Court
Suite 200
Beaverton, Oregon 97005

QUICK REFERENCE GUIDE: CONTROLS

Some keys perform multiple functions. The function the key performs depends on the operating mode you are in and will change automatically.

Power On/Standby*
Toggles between standby mode and lamp on mode. Standby mode is lamp off with the fan at idle speed.

Curtain and Color Tint
A dual use button. Curtain is for computer inputs only. Push once to cover your image and use the up-down buttons to reveal as you speak. Color/Tint is for video inputs only. Push once and adjust color and tint using up-down-left-right buttons.

Contrast/Brightness
Push once to bring up adjustment bar. Use arrow keys to adjust.

Volume Keys
Lower (-) or raise (+) volume level. Mute toggles audio on and off.

Menu*
Brings up the main menu. Use up-down buttons to highlight the menu item and *Enter Key* to select that item.

Reset*
Returns the product to its facto settings.

Freeze
Stops (freeze) the image on th Push again to un-freeze.

Zoom Out/Zoom In
Zoom in allows you to magnify the to 9 times. You can pan around with the arrow keys. Zoom out w the magnification.

Source
This button will toggle betwee the possible inputs i.e. compu and s-video.

Tracking
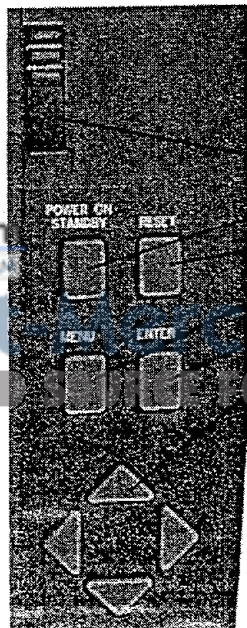Computer signal only. Use this adju eliminate flicker or image instabilit

Arrow Keys
Up-down-left-right: used in ma cations

Enter/Pointer*
A dual use button.
ENTER: When using the menu, key allows you to select highlight
POINTER: For computer sign; pressing once displays a pointe screen. Use arrow keys to move Press again to remove pointer.

Remote control unit labels:
POWER ON STANDBY · RESET · FREEZE
CURTAIN COL/TIN · ZOOM OUT · ZOOM IN
CON/BRI · TRACK · SOURCE
VOLUME · + · MUTE
MENU · ENTER POINTER
Remote Control Unit RC-8010i

*Panel on top of projector

- Keystone Adjust
- Power Standby
- Reset
- Menu
- Enter
- Arrow Keys

POWER ON STANDBY · RESET · MENU · ENTER

Distance/Image size guide: approximate distances between lens screen for desired image size.

Width of image		Height of image		Diagonal image size		Distance to le	
feet	meters	feet	meters	feet	meters	feet	meters
3	1	2.3	0.8	3.8	1.3	4.9	1.6
4	1.5	3	1.1	5	1.9	6.8	2.6
5	2.0	3.8	1.5	6.3	2.5	8.6	3.4
6	2.5	4.5	1.9	7.5	3.1	10.6	4.4
8	3.0	6	2.3	10	3.8	14.1	5.3
10	3.5	7.5	2.6	12.5	4.4	17.7	6.1

Positioning the projector square to the scen. Adjust focus and keystone

TABLE OF CONTENTS

INTRODUCTION.

The VP800 is a professional, low-cost, and compact LCD projection system. It displays the brightest and clearest images, with a breakthrough weight of 9.25 pounds.

With freeze, enlarge, curtain, and pointer functions, The VP800 is an exceptionally powerful presentation tool.

The VP800 is compatible with IBM, MAC, and Fujitsu personal computers as well as NTSC, PAL and SECAM video sources. In addition, the VP800 supports most SVGA computers at true 800 x 600 resolution. The projector offers separate audio channels for good sound quality from either the projector itself or from external speakers.

The VP800 has a unique 'pop-up' design projection lens. The lens can be folded down to save space and protect the lens. In use, the lens is high above the table surface, which helps prevent shadowing from items on the tabletop.

The VP800 is the best choice in data-video projection systems, considering its light weight and brightness. Thank you for choosing a Lightware product!

PRECAUTIONS.

To prevent accidents caused by improper handling or operation, please take note of the following precautions.

DO'S

1. Keep the product away from dirt and dust, and periodically wipe its surface with a soft, dry cloth. Stubborn marks may be removed using a soft cloth moistened with a mild detergent.

2. Turn off the product before cleaning its surface.

3. If the product will not be in use for a long period of time, disconnect the power plug from the AC outlet.

DONT'S

1. Do not attempt to service the product yourself. Opening the case may expose the handler to dangerous voltage or other hazards.

2. The product's LCD panel and lens have delicate surfaces that may be easily scratched. Do not use abrasive cleaners, waxes or solvents. The fresnel lens (inside the fold-up housing) should not be touched at all, and do not attempt to clean it.

3. Avoid using the product under the following conditions: Extremely hot, cold or humid environments; areas susceptible to dust; near an appliance generating a strong magnetic field; and in direct sunlight.

NOTICES.

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All brand or product names are trademarks or registered trademarks of their respective companies.

The personal computers and computer software referred to in this manual are not included with this unit.

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WARNING LABELS

Hot Lamp Warning

CAUTION
Wait 5 minutes after turning
off lamp before opening lamp
door

Hot Lamp Cover Warning

Burn Hazard
Hot Surfaces
Wait 5 Minutes

Explosion Hazard Warning

Explosion Hazard
High Pressure Lamp
Wait 5 Minutes

Fuse Type Warning

For continued protection
against risk of fire hazard,
replace only with same type
and rating of fuse.
Fuse: 6A/250V
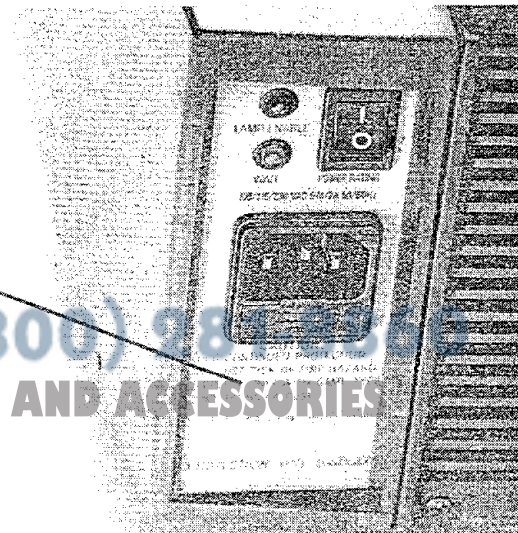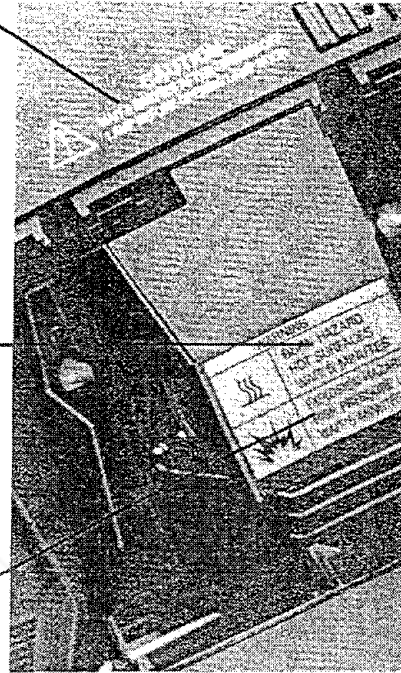
PRODUCT FEATURES.

- True SVGA
- One 6.5" active matrix color TFT LCD panel
- Compatible with IBM VGA, VESA, MAC, and FMTOWNS series
- Direct RGB input
- Displayable colors: 16.7M colors
- Built-in monitor loop-through
- High brightness: 270 ANSI Lumens
- Lightweight compact design, weighing 4.2kgs (9.25 lbs)
- User adjustable keystone correction, up to 20 degrees
- Enlarge/curtain/pointer/freeze/mute functions
- 'Pop-up' lens folds down for storage
- Internal speakers and stereo amplification

ACCESSORIES.

AC power cord

15-Pin VGA/SVGA signal cable

15-Pin MAC signal adapter (available upon request)

15-Pin MAC monitor adapter (available upon request)

Composite video signal cable

S-video signal cable

Audio signal cable

Wireless remote control with battery

Four EVD lamps

User's manual

Carrying case

Warranty card

Quick reference card
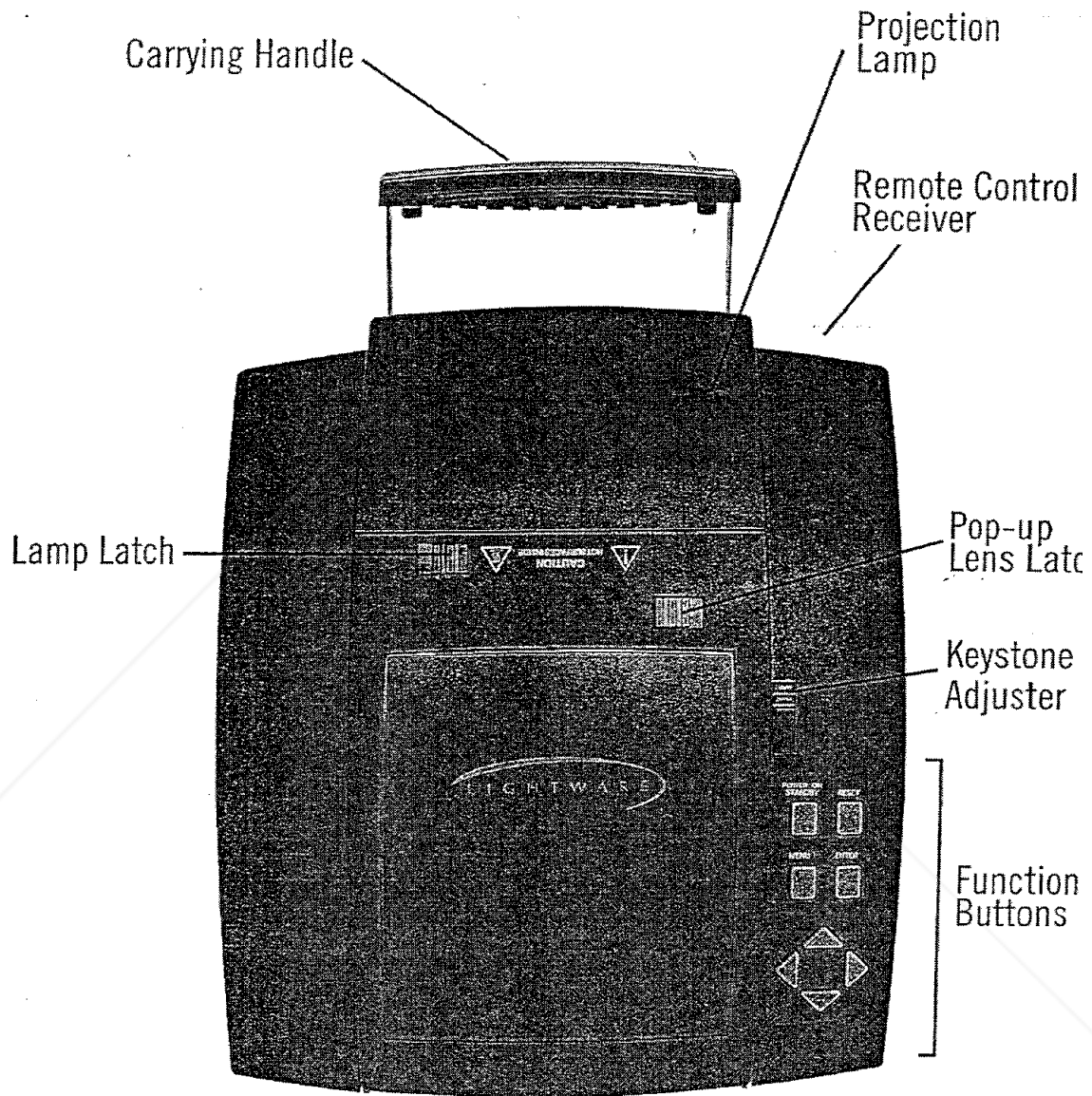
4

MAIN UNIT
TOP VIEW

Carrying Handle

Projection Lamp

Remote Control Receiver

Lamp Latch

Pop-up Lens Latch

Keystone Adjuster

Function Buttons

5

REAR VIEW
POWER SWITCH AND POWER CONNECTION
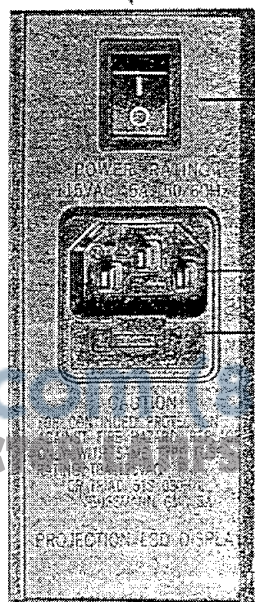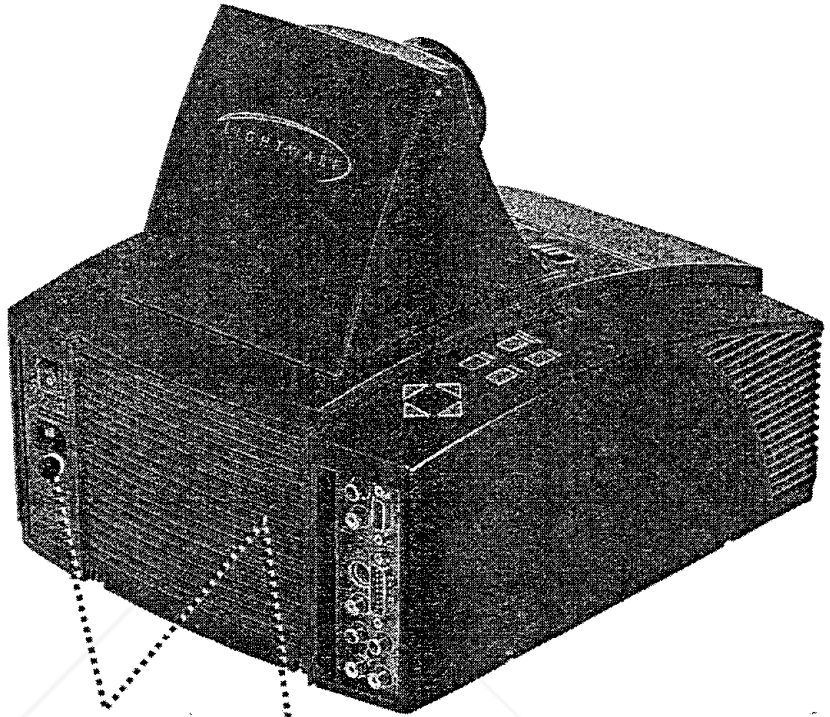
Power Switch

Power Input Connection

Fuse Holder with Spare

6

INPUT/OUTPUT CONNECTIONS
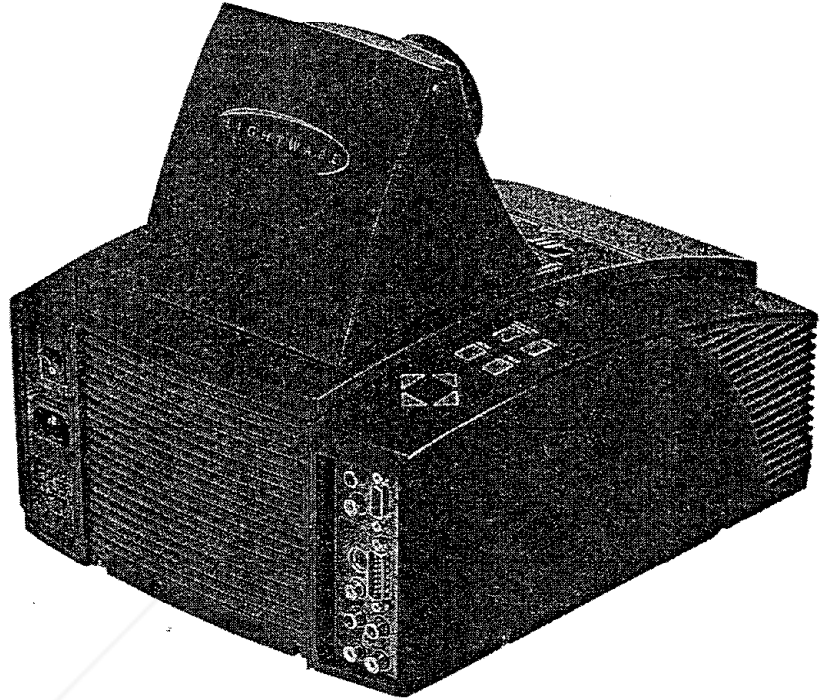
Left/Right Audio
Connection

RGB Monitor Loop-Through

S-Video Input
Connection

RGB Input Connection

RCA Video Input

Left/Right Audio
Input for Video
Connections

Left/Right Audio Input for
Computer Connections
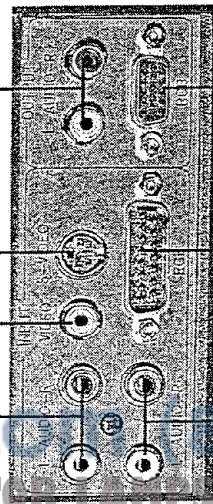
7

ABOUT THE REMOTE CONTROL UNIT.

The wireless remote control, similar to the ones used for TVs and VCRs, allows you to set up and adjust the image settings and also allows you to conduct interactive presentations.

The program buttons on the remote give you instant access to all functions.

Reset

Power On/
Standby

Freeze

Enlarge Function

Curtain/
Color Tint

Input Source

Contrast/
Brightness

Audio Controls

Tracking

4 Directional
Select Keys

On-Screen
Setup Menu

Enter/Pointer

POWER ON
STANDBY   RESET   FREEZE

CURTAIN   ZOOM   ZOOM
COL/TIN   OUT   IN

CON/BRI   TRACK   SOURCE

VOLUME

−   +   MUTE

MENU   ENTER
POINTER

Remote Control Unit
RC-80101
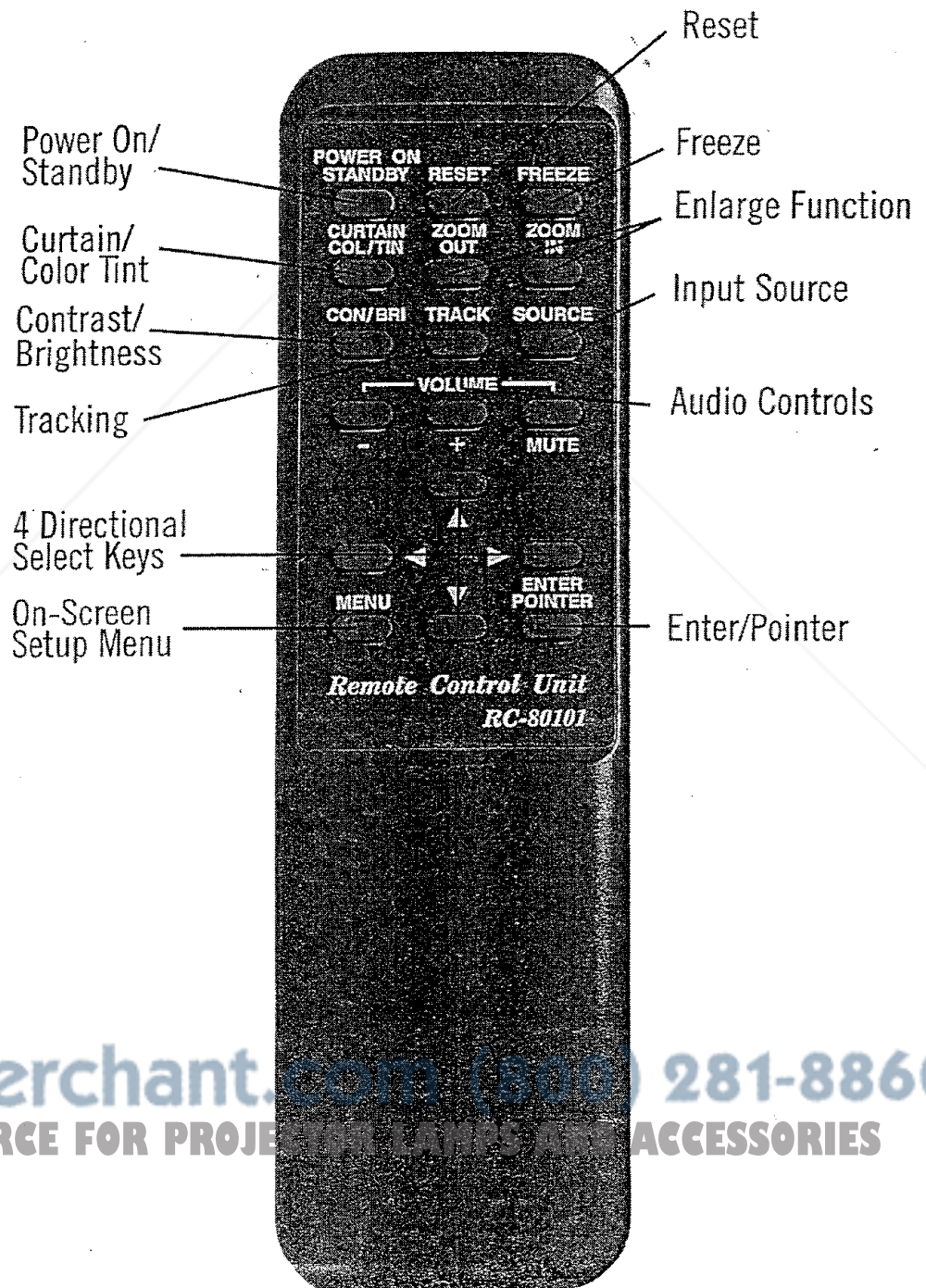
HOW TO SET-UP YOUR PROJECTOR.

This chapter explains the set-up procedures for your projector, including inform
pertaining to peripheral equipment. Follow the procedures below:

POP-UP THE LENS.

Slide the lens latch. The top will open a small amount (similar to the hood of you
raise the pop-up lens and make sure its completely upright in the locked position

Lens Latch
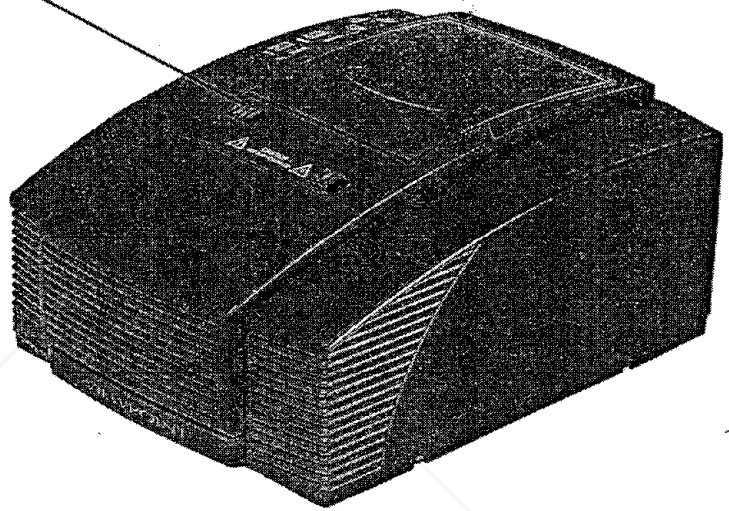
The Pop-up Lens Assembly
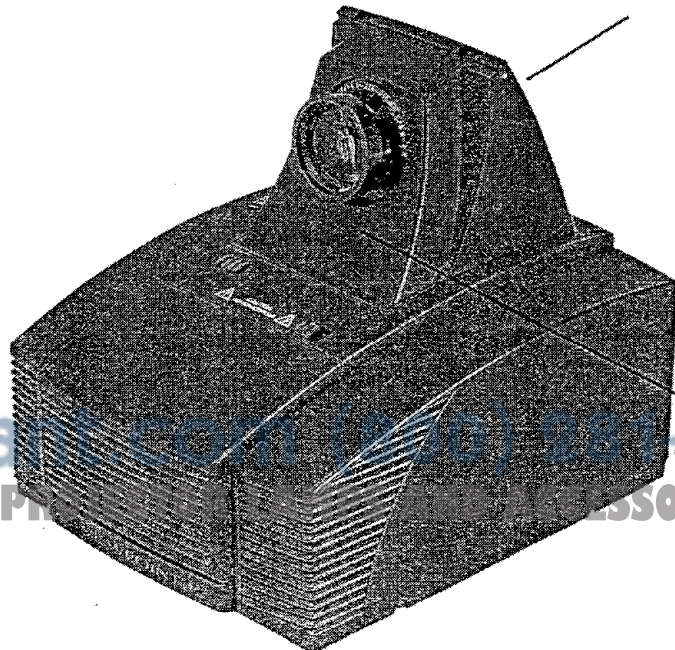
To close
pop-up
push ba
area bel
lens & f

9

CONNECT THE POWER SUPPLY.

Insert the power cord into the AC input socket of your projector and plug into an AC outlet.
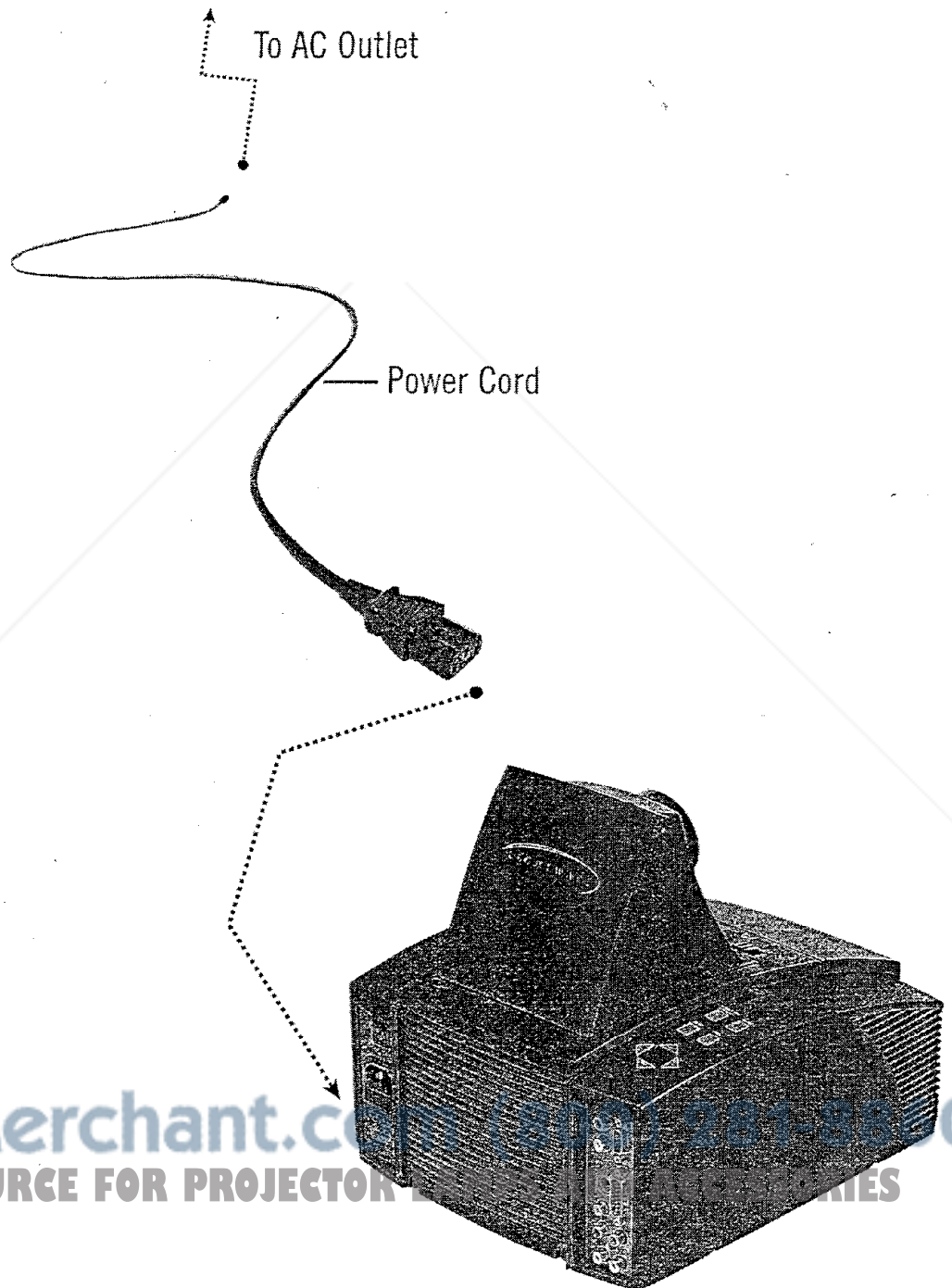
To AC Outlet

Power Cord

10

FOR IBM COMPATIBLE COMPUTER CONNECTION.

FOR IBM COMPATIBLE DESKTOP COMPUTERS:
Connect the supplied 15-pin VGA/SVGA signal cable to your projector (RGB input connection) and to the signal output of your computer.
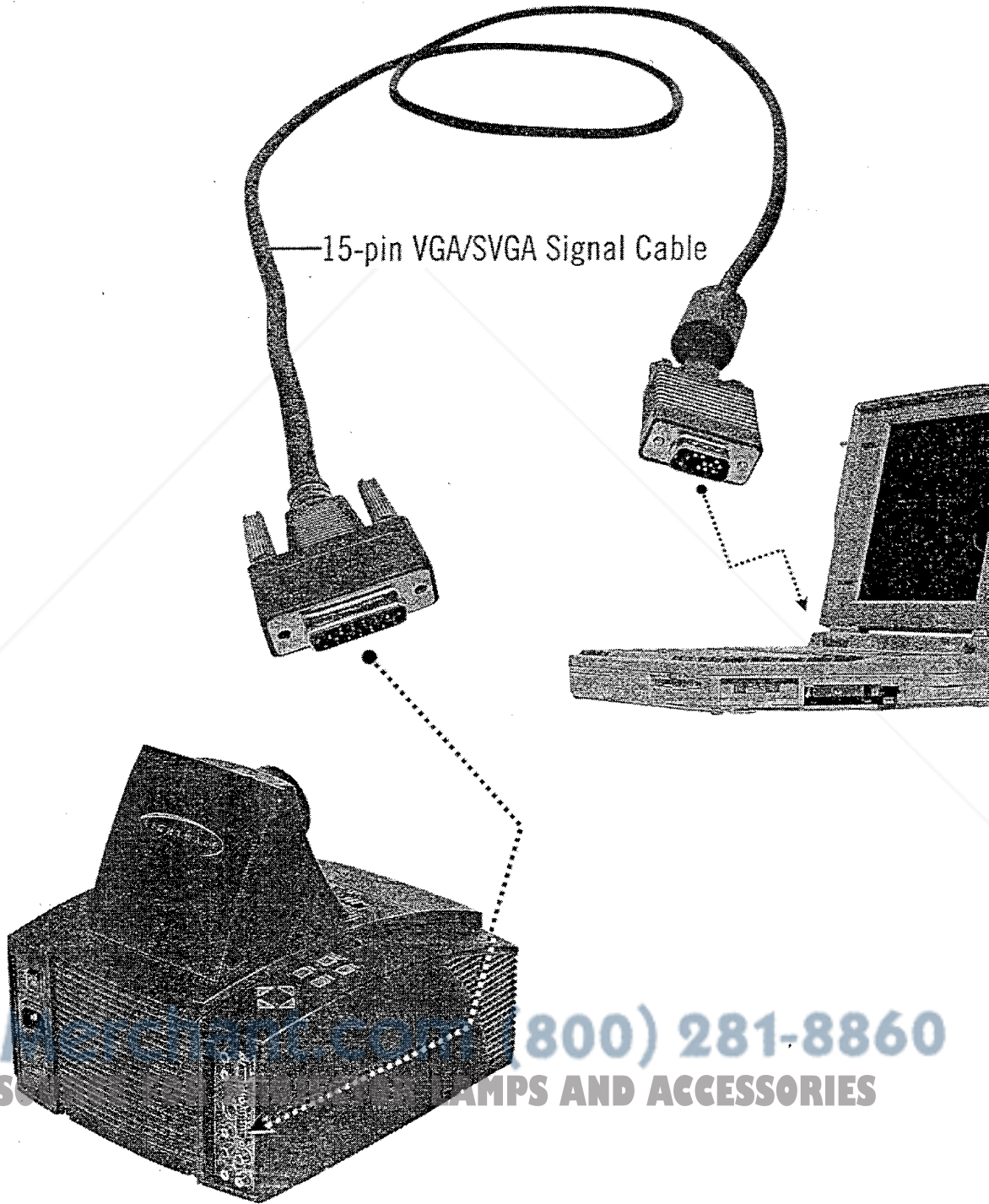
15-pin VGA/SVGA Signal Cable

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FOR IBM MONITOR CONNECTION.

The built-in monitor loop-through allows you to view your monitor and projected images simultaneously.

FOR IBM PC CONNECTION:

Connect the monitor signal cable to the RGB output connector on your projector.
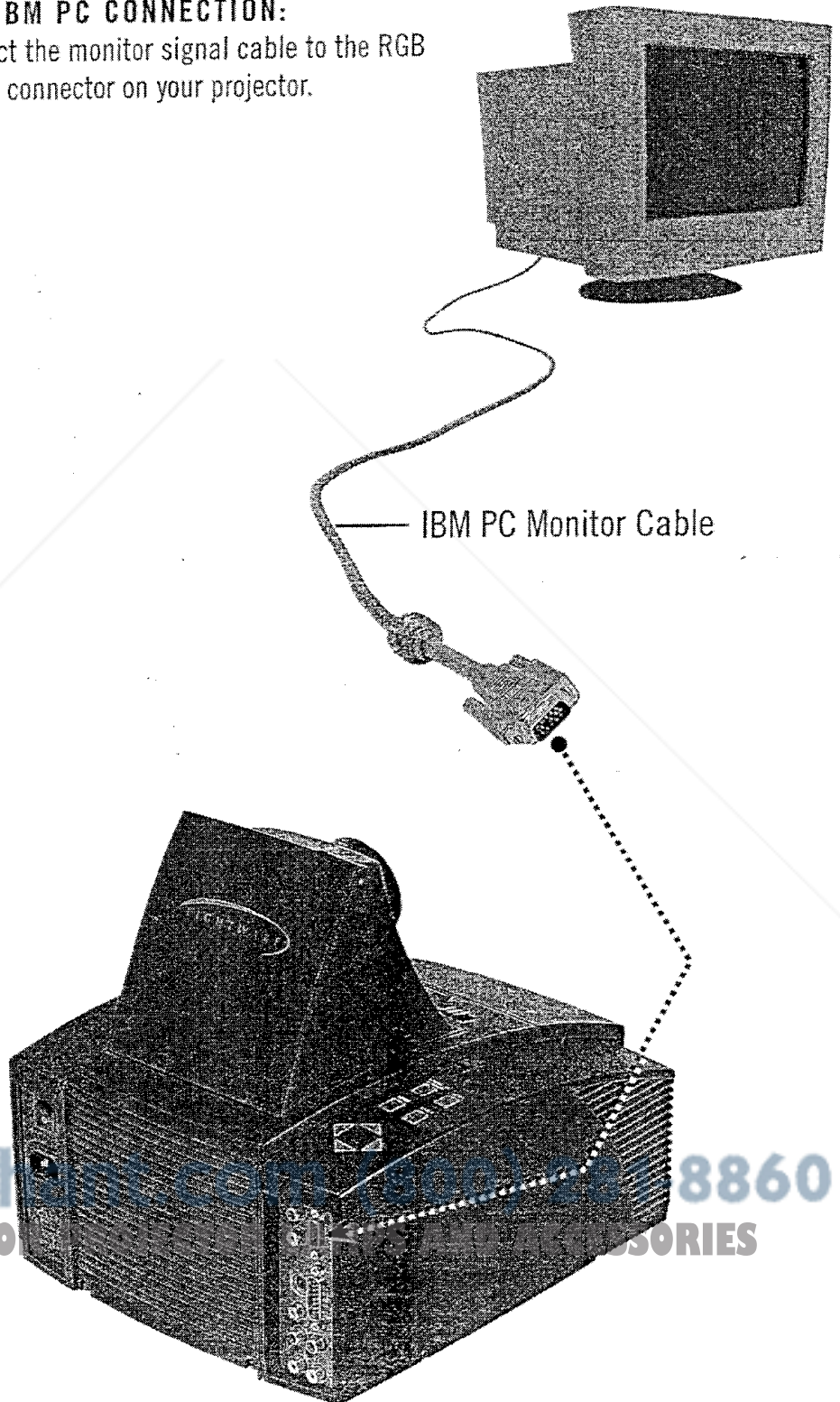
IBM PC Monitor Cable

12

FOR MAC COMPUTER CONNECTION.

Connect the supplied 15-pin signal cable to your projector. Connect the supplied Mac signal adapter to the 'VGA/SVGA signal cable' and then into the signal output of your Mac.
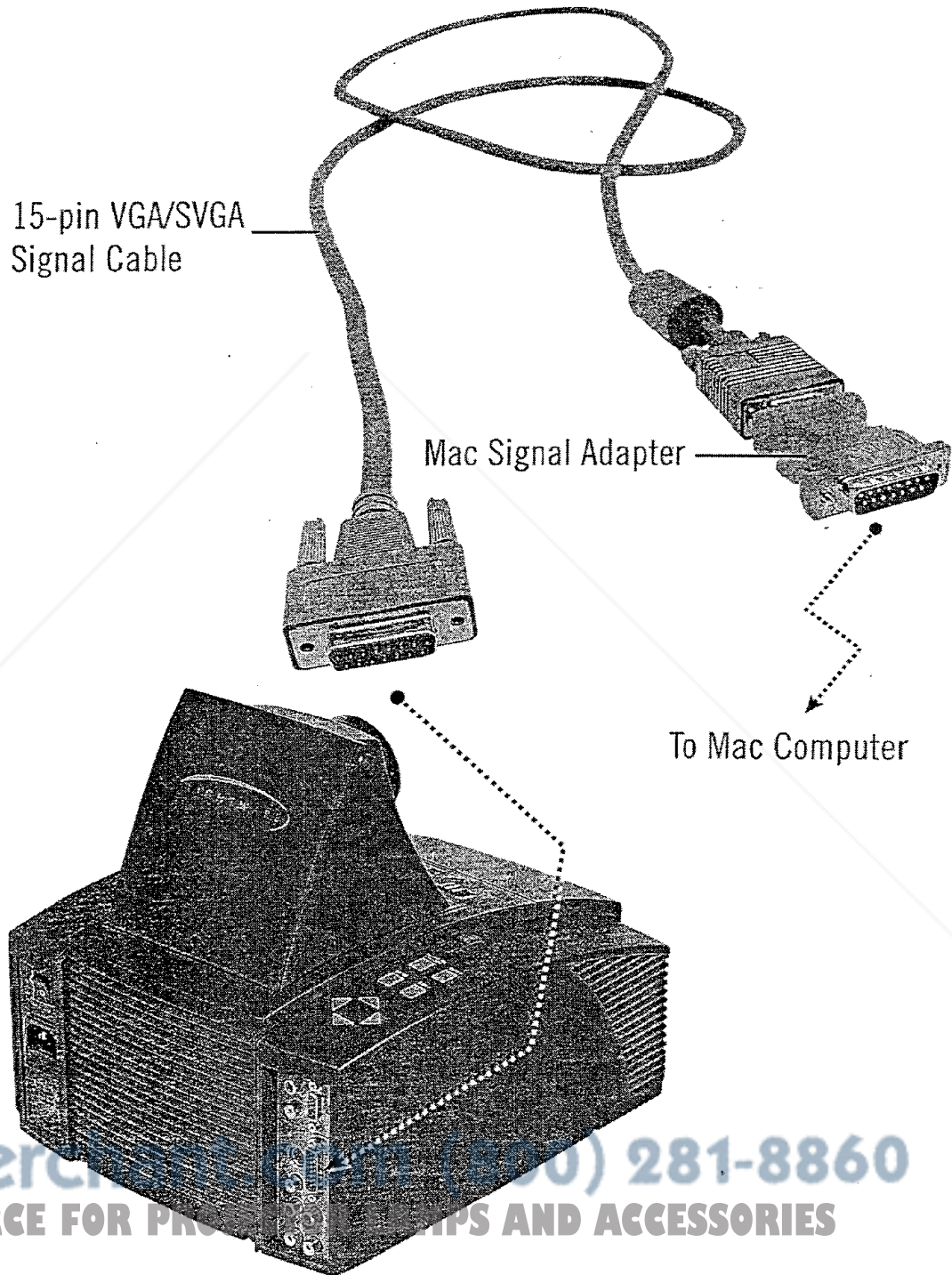
15-pin VGA/SVGA
Signal Cable

Mac Signal Adapter

To Mac Computer

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FOR MAC MONITOR CONNECTION.

Connect the supplied MAC monitor adapter onto the monitor signal
cable and into your projector's RGB output connection.
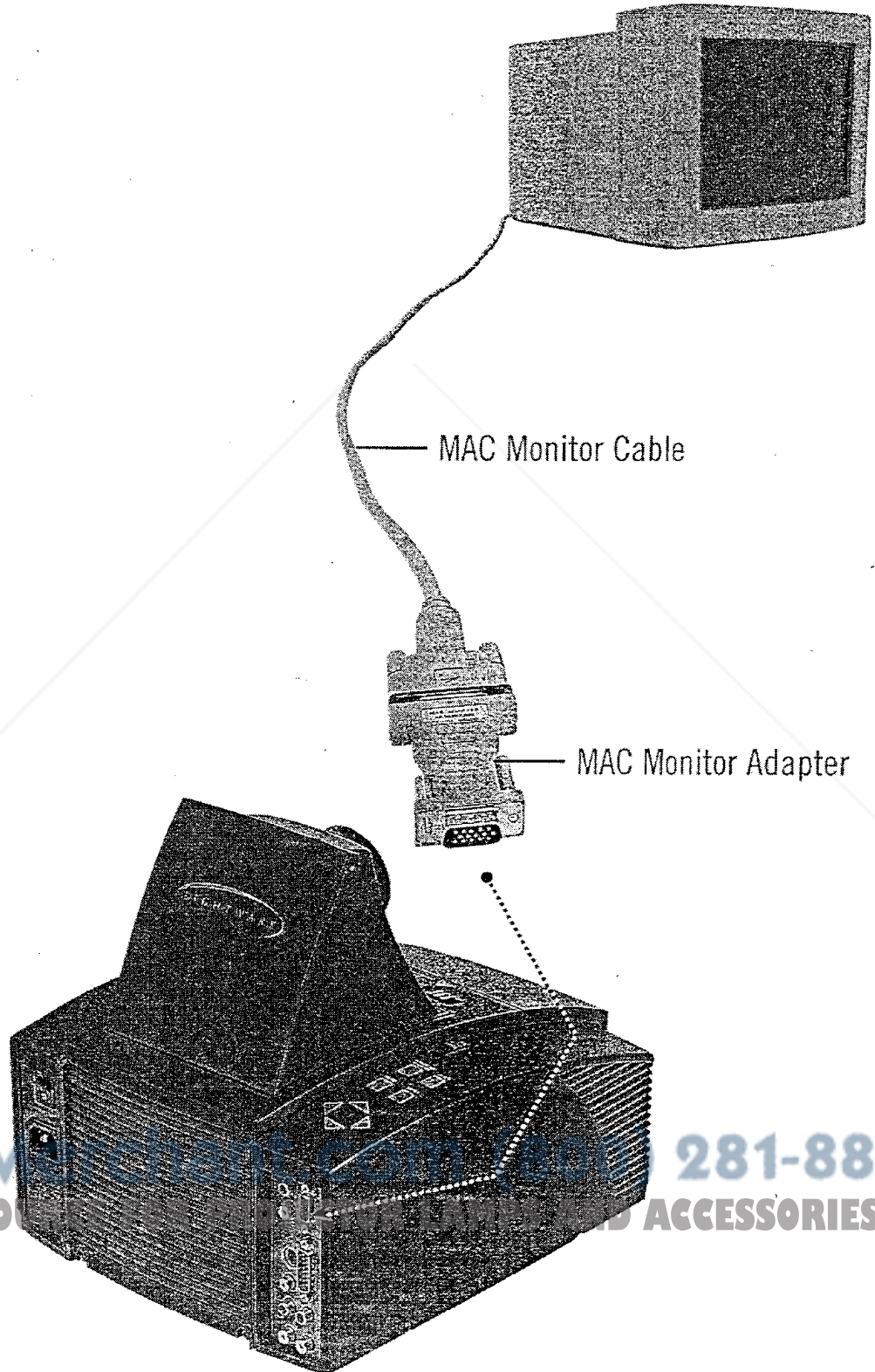
MAC Monitor Cable

MAC Monitor Adapter

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HOW TO CONNECT TO A VIDEO SOURCE.

S-VIDEO CONNECTION:

Connect the s-video cable to your projector's s-video input connector and into the s-video output port of the video source.
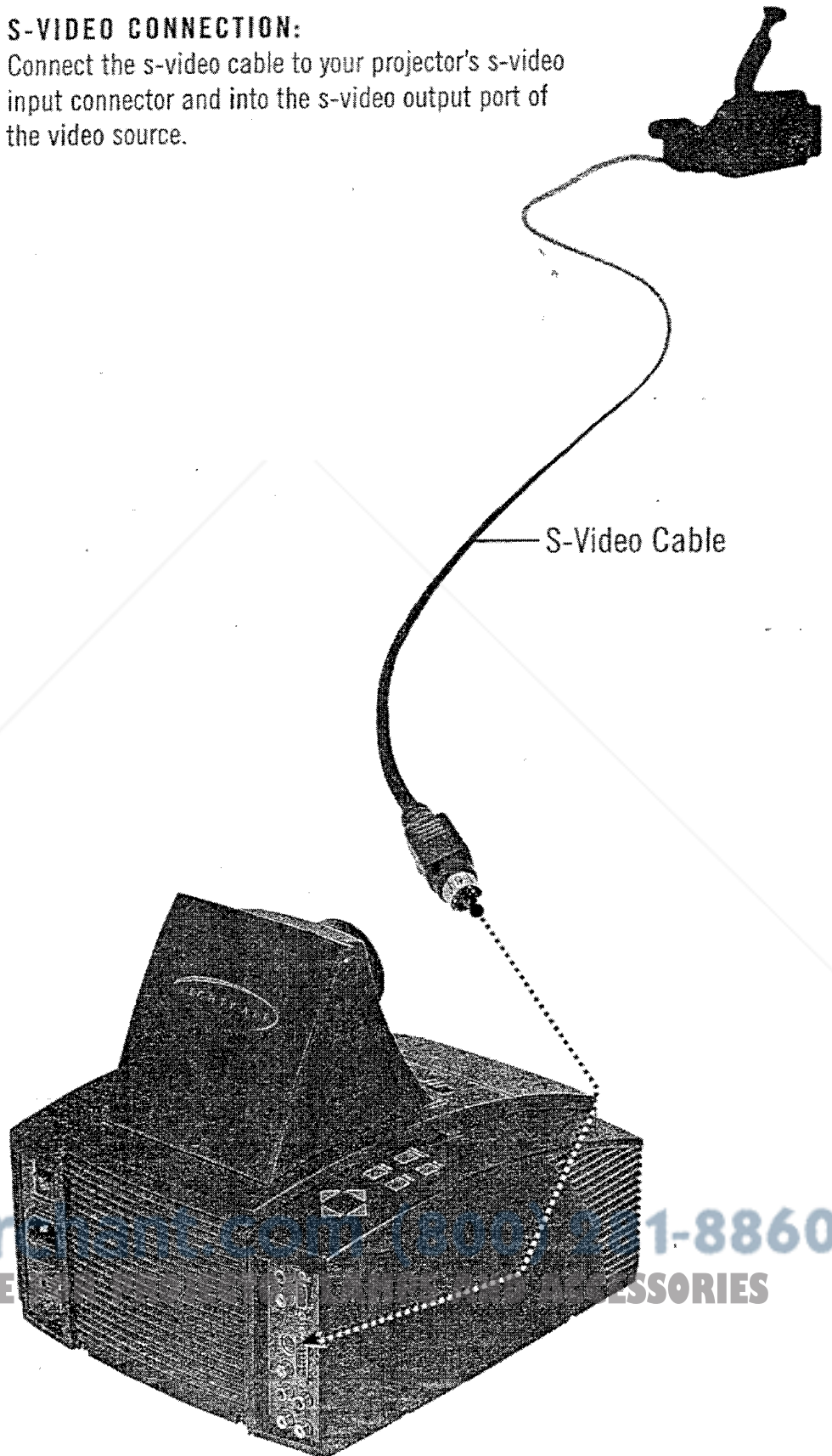
S-Video Cable

15

COMPOSITE VIDEO CONNECTIONS:

Connect your projector's composite video input to your video source with the supplied composite video cable.
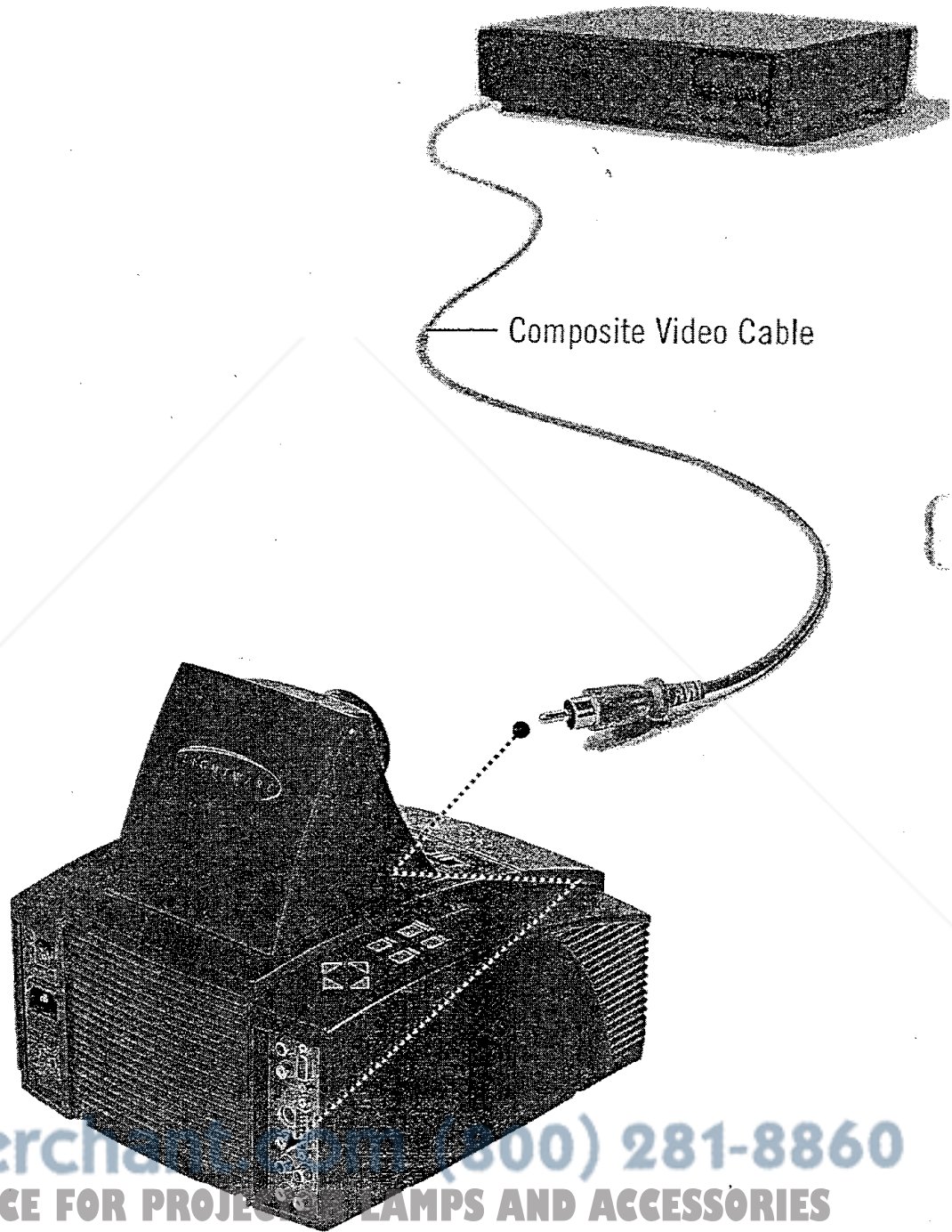
Composite Video Cable

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HOW TO CONNECT AN AUDIO SOURCE.

AUDIO INPUT CONNECTION:

Connect your projector's audio input connectors to the audio source
(your computer or VCR) with the supplied audio signal (stereo) cable.

Audio Signal Cable
White=Left Audio
Red=Right Audio
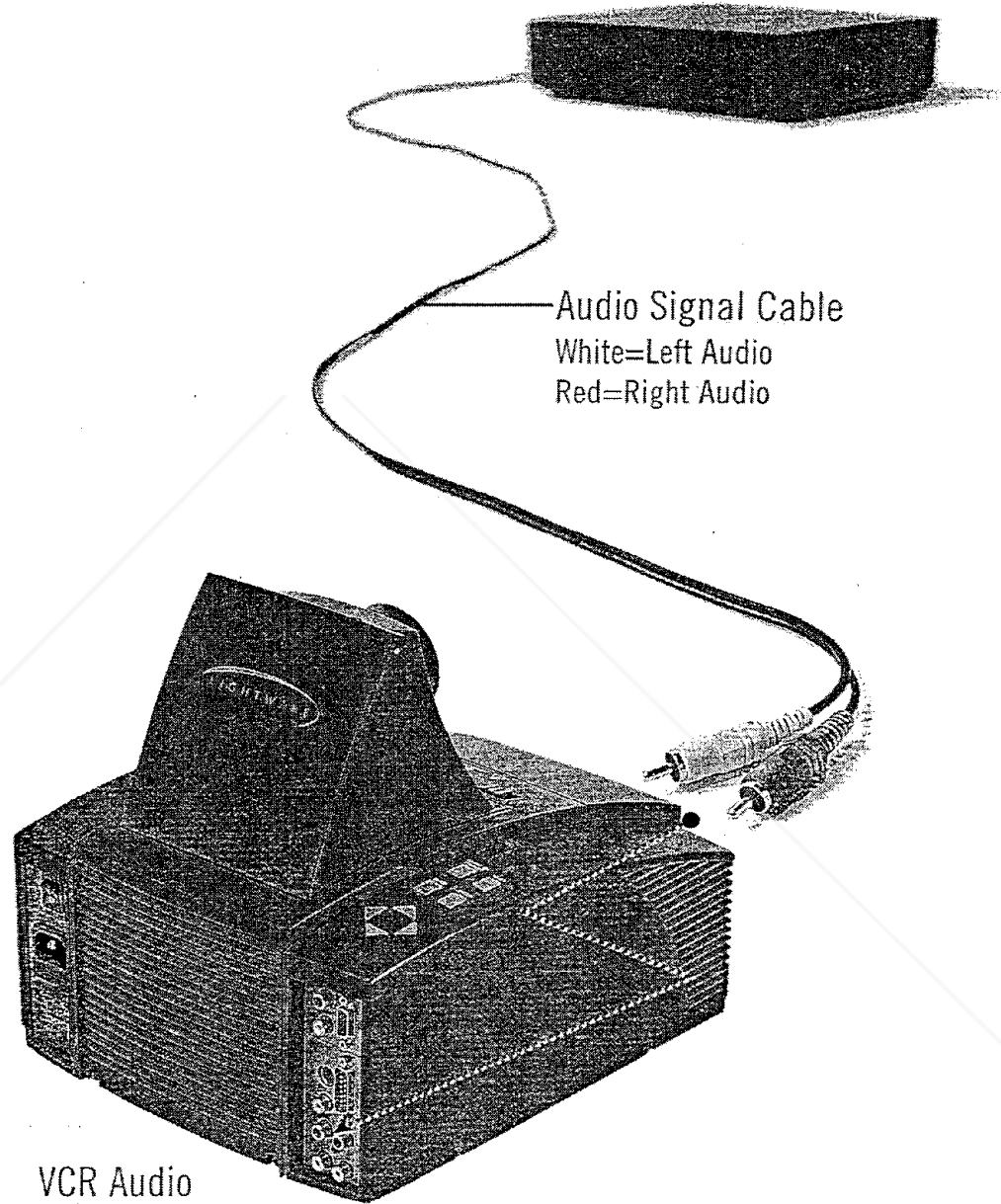
VCR Audio
Input Connections
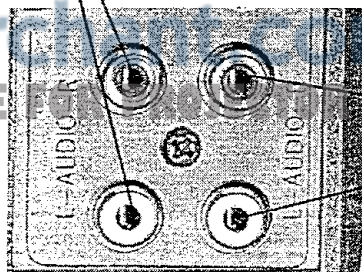
Computer Sound Card
Input Connections

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AUDIO OUTPUT CONNECTION:
When using external speakers, connect them to your projector's audio output connectors.
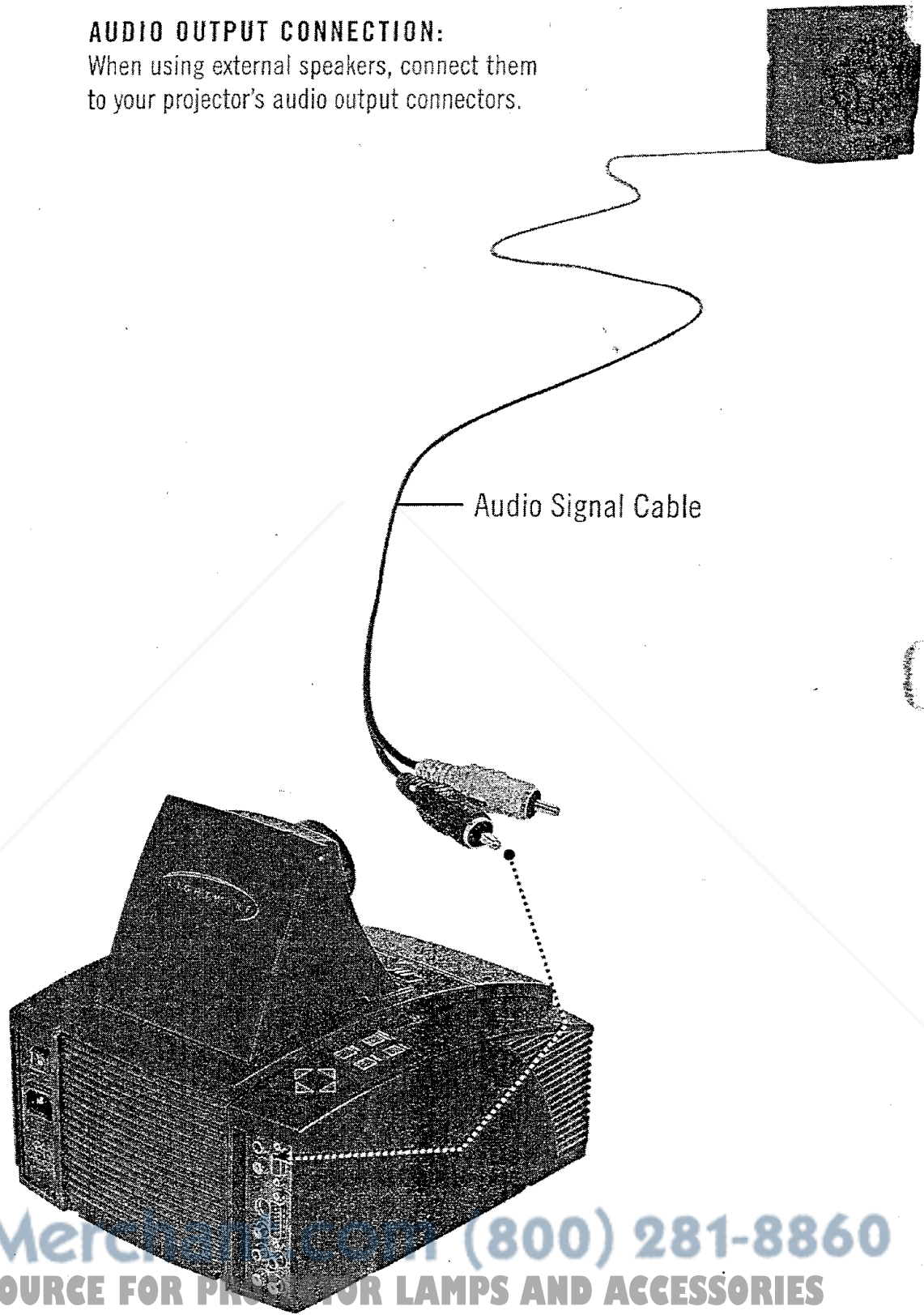
Audio Signal Cable

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HOW TO USE YOUR PROJECTOR.

Before you begin, take time to familiarize yourself with the all the controls. They give the product its capabilities. This chapter will explain all control functions.

The following table shows which functions are available from the keypad on the product itself and which functions are available from the remote control unit.

A. FUNCTION KEY TABLE

Function	Main Unit	Remote
Keystone Correction	●	—
Power On/Standby	●	●
Menu	●	●
Reset	●	●
Enter	●	●
4 Directional Select Keys	●	●
Pointer	—	●
Contrast/Brightness	●	●
Curtain	—	●
Track	●	●
Source	●	●
Zoom In	—	●
Zoom Out	—	●
Freeze	—	●
Volume	●	●
Mute	—	●

HOW TO TURN ON YOUR PROJECTOR.

Flip the power switch located on the left rear side of the projector to the '1' position. Wait 5 seconds for the fan to come up to speed, then push the POWER ON/STANDBY button that is located on the top control panel and/or the remote.

Power Switch
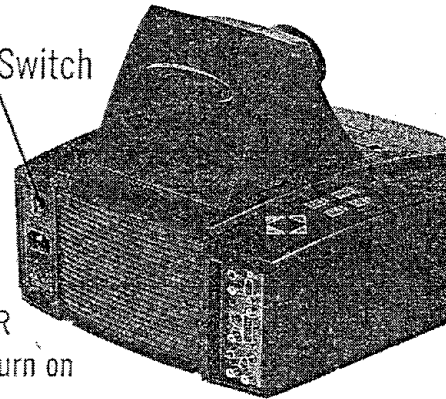
Please take note that if you hold down the POWER ON/STANDBY button too long, the projector may turn on and then very quickly turn off.

Adjust the focus by turning the lens.

KEYSTONE CORRECTION.

Adjust the keystone by sliding the keystone adjuster backward or forward to correct a projected image similar to the one shown here. The keystone adjuster is shown in the figure on page 4.

20
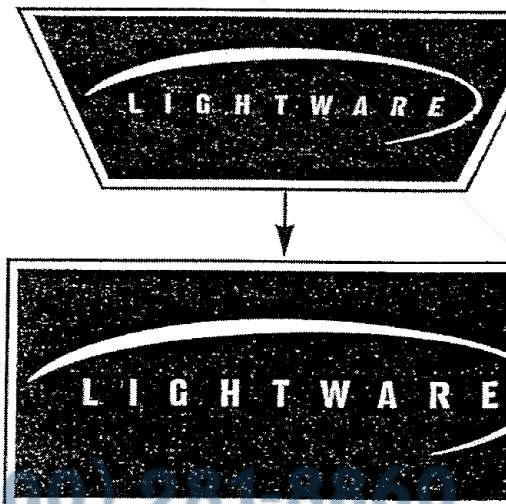
POWER ON/STANDBY BUTTON.

This button is for power up and stand-by (power down). It allows you to quickly and instantly turn off the lamp. The fan goes to idle speed for 'cool-down' when placed in the standby position.

DIRECTIONAL SELECT BUTTONS:

These four buttons allow you to use the toggle functions, make adjustments, and center the projected image.
With the on-screen setup menu:
a. Use UP or DOWN button to select items.
b. Use RIGHT or LEFT buttons to make adjustments.
In order to center the projected image, use the directional keys to move the image in the desired direction (make certain the menu is de-activated).

RESET:

This function will return the projector to its default settings. When RESET is pressed, a dialog box will appear:

Do you want to reset all values?

Yes   Cancel

Use the LEFT or DOWN buttons to switch between Yes and Cancel.
Press ENTER to confirm your selection.

MENU.

1. HOW TO OPEN:

Press the MENU button to view the on-screen menu. **Please note that the menu is context sensitive. The menu for a particular video or data mode only appears when that mode is detected by the projector.**

COMPUTERS:

VGA Mode 3 will be:

Language
Contrast
Tracking
Frequency
Oversize
Text Style
VGA Text/Graph
Audio
Source
Reverse
Exit

COMPUTERS:

VGA mode 10, mode 12, VESA / MAC / PC-98 / FMTOWNS will be:

Language
Contrast
Tracking
Frequency
Audio
Source
Reverse
Exit

21

VGA ON VP800:

Language
Contrast
Tracking
Frequency
Oversize
Audio
Source
Reverse
Exit

Oversize	
Yes	No

VIDEO:
NTSC, PAL and
SECAM will be:

Language
Contrast/Brit
Color/Tint
Audio
Source
Reverse
Exit

2. HOW TO USE THE MENU:

Use UP and DOWN keys to select items and press ENTER to confirm your selection. Use LEFT or RIGHT buttons to make adjustments of the selected item. We will explain each function in the following sections.

3. HOW TO CLOSE THE MENU:

Press the MENU button again, or select EXIT from on-screen menu, then press ENTER. (If no action is taken within 5 seconds, the menu will automatically disappear.)

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ENTER/POINTER.

ENTER FUNCTION:

ENTER is used for confirming your selection and it also allows you to start the POINTER function.

POINTER FUNCTION: (COMPUTER ONLY)

After you press POINTER, you will see a hand-shaped icon at the upper left corner of the screen. Use the directional select buttons to move it.

Press POINTER again to exit the function.

Pointer

☞
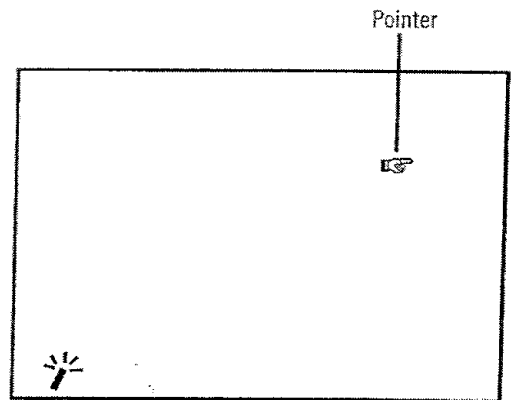
CNTR/BRITE. (CONTRAST/ BRIGHTNESS)

This allows you to adjust the contrast and brightness of the display.

When using a computer source, only Contrast is effected; while in video mode, both Contrast and Brightness adjustments are available.

Use LEFT or RIGHT buttons to make adjustments.

For example:
Computer source will be:

| Contrast |
| ◀ ▭▭▭ 0 ▭▭▭ ▶ |

Video source will be:

Contrast/Brit	
Cont	◀ ▭ 0 ▭ ▶
Brightness	◀ ▭ 29 ▭ ▶

23
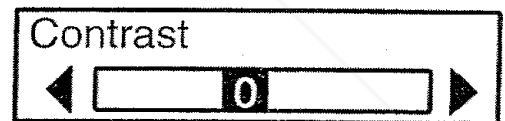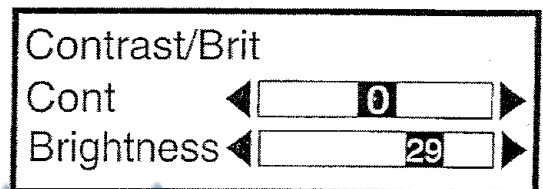
SOURCE.

Source select is used when more than one signal is input into the projector. With only one signal into the projector, the projector will automatically display that signal.

1. Press the SOURCE on the remote control to toggle between video and computer inputs, or...

2. Press MENU to enter the on-screen menu and then select the required SOURCE item.

Source		
Computer	No Video	No S.V.

ZOOM. / PAN.

The zooming function allows you to magnify the projected image.

1. Press ZOOM IN on the remote control. You will see an icon at the lower left corner of the screen which means this function has been activated.

2. With zooming activated, you can press the four directional select buttons to PAN within the image window to the exact area you wish to view.

3. Press ZOOM OUT to reduce the magnification or ENTER to return to its original (normal) size. The image can be magnified from 1 to 9 times as large as its original size.

FREEZE.

1. Press FREEZE to stop the update of the LCD (or 'freeze' the picture). An icon appears at the bottom of the screen to remind you that this function has been activated.
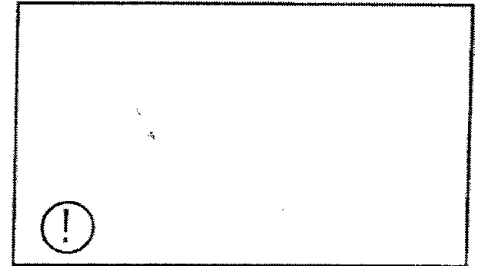
2. Press FREEZE again to resume normal display operation.

If desired, you can employ the FREEZE and ZOOM IN/ZOOM OUT functions simultaneously.

VOLUME. (+, −, & MUTE)

1. Select AUDIO from the menu, and then select VOLUME from the AUDIO SUBMENU and adjust the volume with LEFT and RIGHT keys, or...

Vol.	■ ■ ■ □ □ □ □ □ □

2. Press + or − to control the volume.

3. Press the MUTE button to shut off the sound altogether. Press MUTE again to resume it.

4. If no action is taken within a few seconds, the VOLUME control on-screen display will disappear.

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THE FOLLOWING FUNCTIONS EXIST ONLY ON THE ON-SCREEN MENU.

LANGUAGE.

Lets you select the language used in the on-screen menus.

```
Language
English
中 文
Deutsch
Français
Español
```

FREQUENCY.

The FREQUENCY adjustment acts as a 'horizontal size' control, changing the digitizer clock frequency of your projector to match the frequency of your computer. Frequency is required to be adjusted for non-standard video signals and those which differ from typical VGA or Mac values.
Press the LEFT or RIGHT buttons to adjust the functions after the menu is accessed and FREQUENCY is selected.

```
Frequency
◄  [            26 ]  ►
```
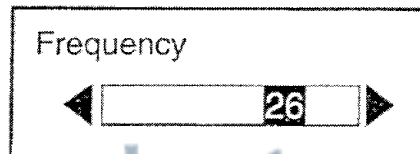
For easy adjustment of FREQUENCY, locate a checker-board pattern (such as is used in some graphic patterns for shading). There will be a 'moire effect' visible within the checkerboard area unless the frequency is adjusted correctly.

VGA TEXT. (VGA MODE 3 AND MODE 13 ONLY)

Press the LEFT or RIGHT buttons to toggle between TEXT and GRAPHIC modes (since these modes are automatically detected, no adjustment is needed).

```
VGA Text

  Text          Graphic
[        ]      [      ]
```
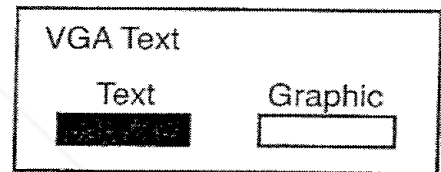
TEXT STYLE. (FOR VGA MODE 3 ONLY)

IBM/VGA text (mode 3), typically used to present text in the MS-DOS environment, displays 720X400 pixels. In order to accommodate this matrix into the LCD display for the VP800, some reconfiguring of the matrix has to be done. Pressing the LEFT or RIGHT buttons will select the pixel configuration that best suits the text on your screen.

```
Text Style
0  1  2  3  4  5  6  7  8
[][][][][][][][][]
```

25
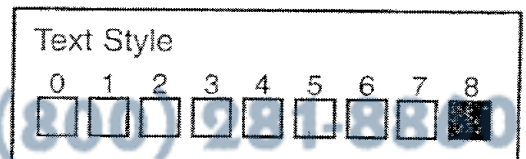
REVERSE.

Choose REVERSE from the on-screen menu, which will flip the projected image horizontally (left to right), and/or vertically (top to bottom).

1. For rear projection situation (as shown below) employ the H. REVERSE.

2. For upside-down situations (ceiling mounted operation), choose the V. REVERSE to flip the image vertically (top to bottom).

```
Reverse
H. rev press    ◀ ▶
V. rev press    ▲ ▼
```
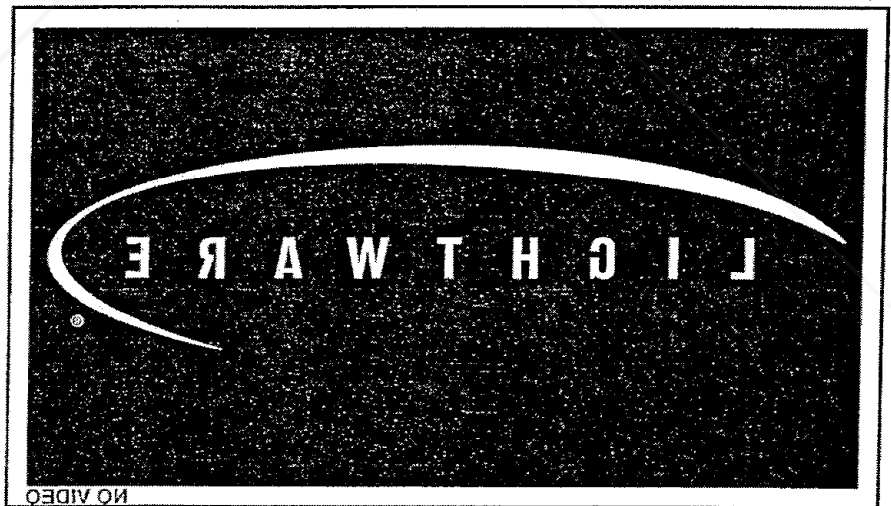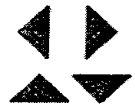
26

AUDIO.

1. To control audio functions, choose AUDIO from the menu to see the sub-menu displayed as the figure below:

```
┌─────────────────────────────────────┐
│ Audio                               │
│                                     │
│  Bass   – ■ ■ ■ □ □ □ □ □ –          │
│                                     │
│  Treble – ■ ■ ■ ■ □ □ □ □ –          │
│                                     │
│  Bal.   L ▓▓▓▓▓▓▓▓▓▓▓▓▓ R           │
│                                     │
│  Vol.   – ■ ■ ■ □ □ □ □ □ –          │
│                                     │
│  Mode  Spatial Stereo               │
└─────────────────────────────────────┘
```
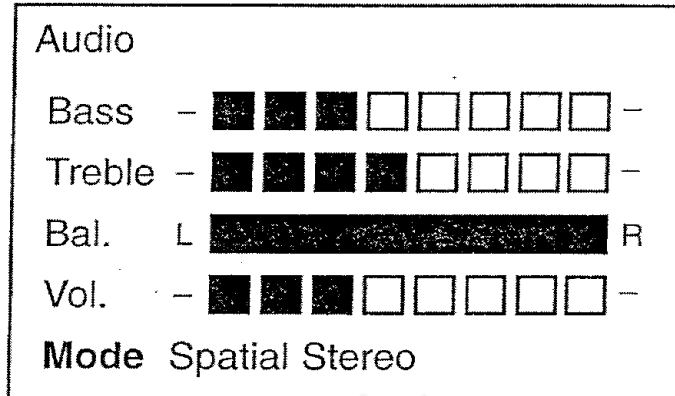
2. Description of functions in this submenu:

Bass: Bass adjustment
Treble: Treble adjustment
Bal.:   Balance adjustment
Vol.:   Volume adjustment
Mode: Sound mode selection (Four modes to choose from, choices listed below)

—Spatial Stereo: To simulate the "3D space" feeling from a stereo source.

—Pseudo Stereo: To create a "like stereo" effect from a mono source.

—Linear Stereo: Normal stereo without any extra processing.

—Forced Mono: To mix the content of R and L channels.

After a few seconds of no action, the AUDIO submenu will automatically disappear.

ELEVATOR FOOT.

Push down lever on the elevator foot lever to release the spring activated foot. Hold the elevator foot in the desired position and release the lever.

Lever ———

Spring Activated Foot ———

27
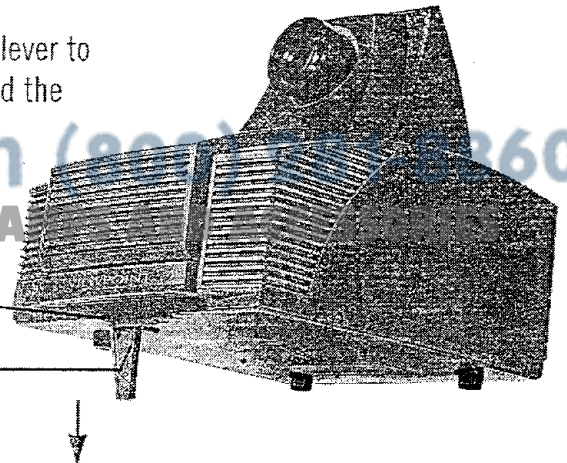
HOW TO CHANGE TO A NEW PROJECTION LAMP.

1. If the lamp fails during a presentation, please wait about one minute before opening the lamp door, in order to change the lamp. (This will allow the unit to cool down.)
2. You will notice that there are two lamps installed inside the product: one is in use; the other is a spare. Make sure you have a spare lamp ready when you prepare for your presentation.
3. If the internal temperature gets too high, the thermal switch will automatically shut off the lamp supply. When internal temperatures return to normal, the lamp will turn on again.

FIRST, YOU NEED TO OPEN THE LAMP SET.
Slide the lamp latch over and open the lamp door.

Lamp Door

Lamp Latch
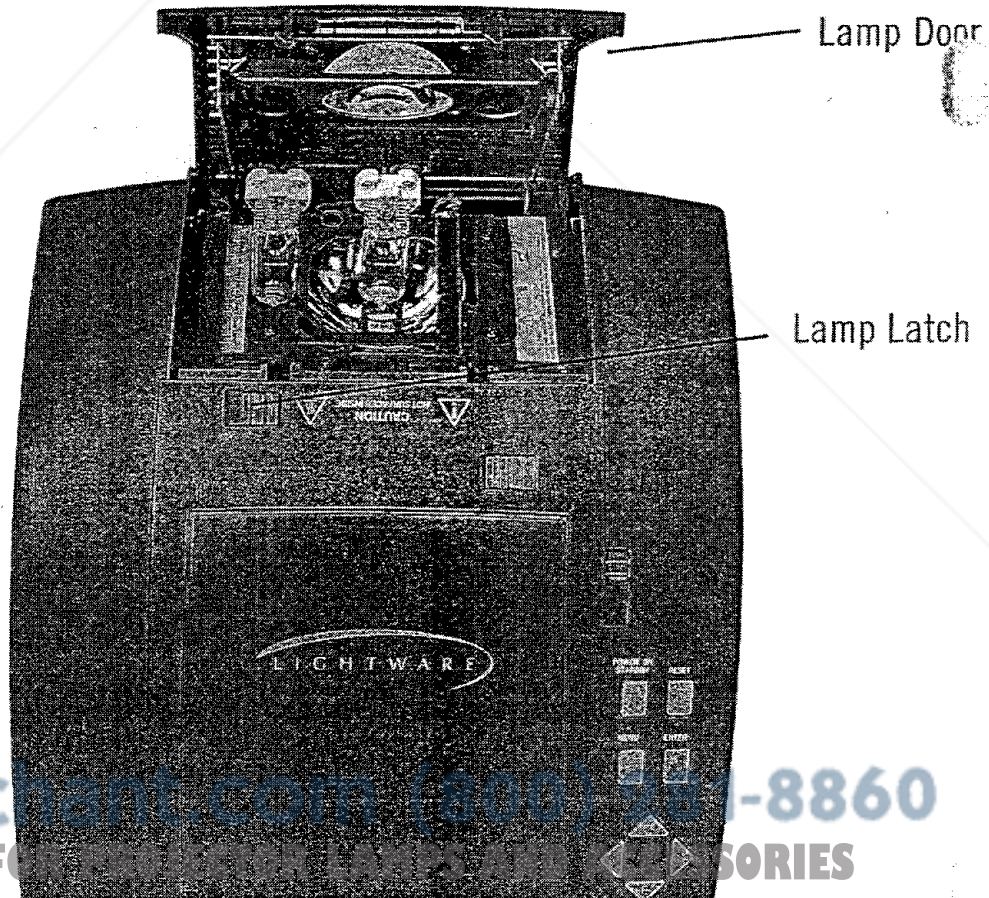
SECOND, MOVE THE HANDLE ON THE LAMP CHANGER LATERALLY.

There is a single pin at the top center of the lamp "slider" changer. This pin functions as a handle to assist in your moving the spare lamp into place. If the projector is still hot, the single pin will remain cool for your safety. Lamps are quickly and easily changed even during a presentation.

Latch Clip   Single Pin

Lamp Changer

Projection Bulbs
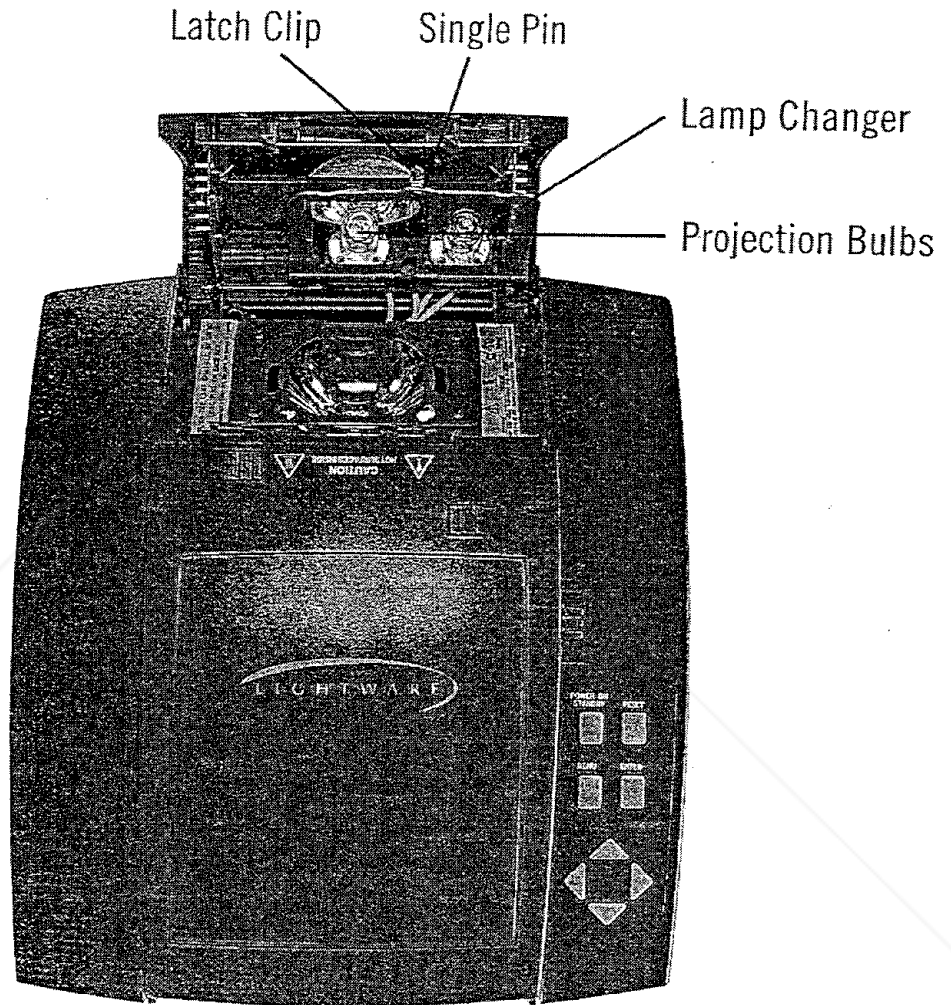
LAST, CLOSE THE LAMP DOOR.

After the change is complete, close the lamp door carefully. Make certain that the lamp changer is completely shifted to one side (not in-between positions) Do not force the door (if it doesn't close smoothly, the lamp changer is not in position).

FINALLY, RESUME YOUR PRESENTATION.

HOW TO INSTALL A NEW PROJECTION LAMP.

FIRST, ALLOW THE BULB TO COOL DOWN.

ALWAYS allow the projector and the bulb to cool down completely before attempting to remove used lamps. If the projector is in use, turn to standby mode and wait 5 - 10 minutes for the projector to cool down.

Projection Bulbs
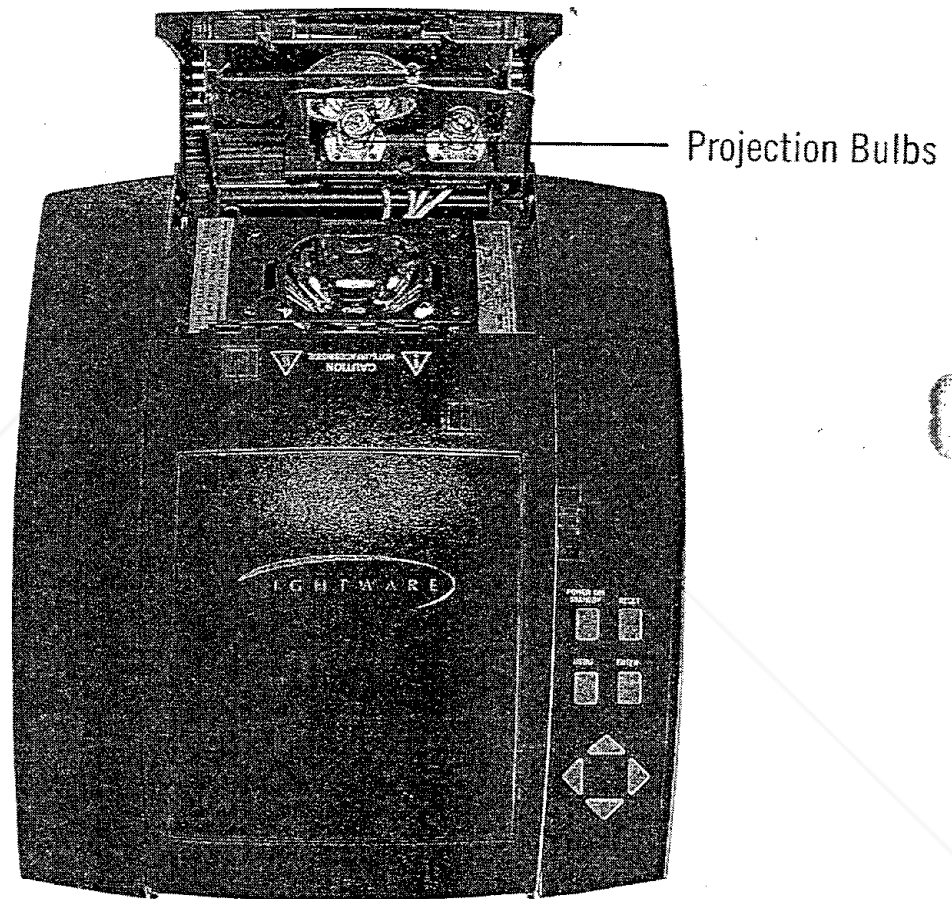
SECOND, REMOVE THE OLD LAMP AND REPLACE IT.

FINALLY, CLOSE THE LAMP DOOR.

After you have removed the bulb, close the lamp door carefully. Make certain that the lamp changer is completely shifted to one side (not in-between positions) Do not force the door (if it doesn't close smoothly, the lamp changer is not in position).

TROUBLESHOOTING.

Warning: Except to change the projection lamp, do not attempt to open the projector cabinet to service it yourself. There are potentially dangerous voltages and other hazards. If you encounter problems with the projector, please refer to the section below. If you cannot solve the problem, please contact your supplier or contact Lightware Techincal Support at 800-445-9396.

PROBLEM: Using a laptop computer, only the Lightware logo is projected.
SOLUTION: Check that the VGA output port on the computer has been activated. The Lightware logo will only appear if there is no signal present on either the VGA or video inputs.
Most laptop manufacturers have a method for activating the external monitor (VGA) port. Activating the VGA port is usually accomplished using the function (FN) key on the laptop keyboard in conjunction with one of the regular function keys, e.g. hold down the FN key while pressing F12. Some laptops require a reboot to allow the computer to check for an attached external monitor and then activate the external port.
Macintosh computers turn on the external port by opening the **Mac Control Panel** and selecting **Video Mirroring**.

PROBLEM: Part of the projected image on the VP800 seems to be cut off or missing or the VP800 shows nothing or displays random colors with barely discernible graphics.
SOLUTION: Be sure the computer resolution is the same as that required by the projector, i.e. 800X600. For most laptops, as long as the laptop LCD is on, the video driver available at the external monitor port is always set for the maximum resolution capability of the laptop LCD regardless of the desktop display resolution. Therefore when the VP800 is connected to an XGA (1024X768) laptop, the desktop display must be set to 800X600 and the laptop set to external display only (see above).
To change display resolution in Windows 95, open settings---control panel---display---settings. In the settings window go to the desktop area and drag the pointer over to the 640X480 end of the slider bar. Click on Apply.

The screen will either resize immediately or prompt you to reboot. If it resizes immediately it will ask if you want to keep this setting. Click on Yes. In Windows 3.x open the Main window and click on Windows Setup. Select Options -Change System Settings. Select a 640X480 driver that is compatible with your video card or the generic VGA driver then restart windows.

PROBLEM: When viewing text on the projected display some of the characters seem darker or thicker than others.
SOLUTION: This symptom indicates that the frequency of the projector does not match the frequency of the computer. To correct this, press the Menu button on the remote control or the keypad on the projector. Select Frequency from the menu. Using the left and right arrows on the remote control or on the projector keypad, adjust the frequency up or down till all of the text characters are the same.

PROBLEM: The projected display has vertical lines or shaded areas in the background.
SOLUTION: This symptom indicates that the frequency of the projector does not match the frequency of the computer. To correct this, press the Menu button on the remote control or the keypad on the projector. Select Frequency from the menu. Using the left and right arrows on the remote control or on the projector keypad, adjust the frequency up or down till the vertical lines or shaded areas spread apart and disappear.

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PROBLEM: Video Jitter

Video jitter can have several names e.g. frying, jumping, noise etc. The following are possible causes and solutions.

Misadjusted Frequency: Some "jitter" problems can be solved by adjusting the frequency on the projector.
Press the Menu button on the remote control or the keypad on the projector. Select Frequency from the menu.
Using the left and right arrows on the remote control or on the projector keypad, adjust the frequency till the jitter stops.

Misadjusted Tracking: Some "jitter" problems can be solved by adjusting the tracking on the projector.
Press the Menu button on the remote control or the keypad on the projector. Select Tracking from the menu.
Using the left and right arrows on the remote control or on the projector keypad, adjust the tracking till the jitter stops.

PROBLEM: Noisy display in video mode.
SOLUTION: Check for poor ground on the video cable.

PROBLEM: Display is lacking red, blue or green color.
SOLUTION: Check VGA cable for bent or broken pins.

PROBLEM: The bottom of the projected display is straight but the top is crooked.
SOLUTION: Align the projector so that it is perpendicular to the screen.

PROBLEM: Projector lamp sounds like it wants to turn on but doesn't.
SOLUTION: Holding the Standby button down too long will cause the lamp to misfire. Press and release the Standby button quickly.

PROBLEM: The projected display is narrow at the top or at the bottom.
SOLUTION: Adjust the Keystone correction adjustment on the top right side of the projector near the keypad.

PROBLEM: Remote control is intermittent or inoperative.
SOLUTION: Make sure the IR window on the front of the projector is not blocked. Check the batteries.

PROBLEM: The buttons on the remote control are sticking.
SOLUTION: Make sure the protective plastic film has been removed from the keypad.

PROBLEM: The projected image is rolling vertically or horizontally.
SOLUTION: Check for bent or broken pins on the VGA cable.

PROBLEM: Poor Color using a MAC computer.
SOLUTION: The default mode for gamma correction in the MAC is corrected gamma. This will sometimes cause problems with the color displayed on the projector. To correct this enter the Control Panel and select Monitors a dialogue box with squares will appear that represent monitors. Click on the Option button and choose uncorrected gamma.

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SPECIFICATIONS.

Computer Compatibility	IBM VGA compatibles, VESA 72Hz and 75Hz, Apple Mac family (640x480) (LC,LCII, LCIII, II, IIx, IIcx, IIci, IIsi, IIvx, Iivi, Quadra, Centris, and Powerbook, Power MAC.) NEC PC9801 Series (640x400) NEC PC9821 Series (640x480) Fujitsu FM Towns Series(640x400, 640x480) VESA Standard SVGA Modes
Video Compatibility	Standards: NTSC, PAL (B, D, G, H, I) SECAM (B, D, G, K, K1, L) Connectors: Composite and s-video
Audio	Built-in stereo audio system with two internal speakers 3 Watt x 2 amplifier for internal speaker
Number of Colors	16.7 million colors
Display Type	Active matrix color TFT LCD panel
Display Format	800x3 (RGB) x 600
Response Time	tr = 30ms; tf = 50 ms
Contrast Ratio	150:1 (typical)
Brightness	270 ANSI Lumens (typical)
Screen Size	40 inches at 1.5 meters distance 55 inches at 2 meters distance 95 inches at 3.5 meters distance
Keystone	Correctable, up to 20 degrees
Horizontal Freq.	24.366-37.900KHz
Vertical Freq.	55.378-75.000Hz
Cooling	Internal fans and ventilation slots
Electrical Supply	Input: AC 110V/220V, 50 to 60Hz; Output: 12V DC/+5V DC/-5V DC
Power Consumption	550 Watts for normal operation 35 Watts for standby mode
Temperature	Operating (Ambient) : 5°C to 40°C Storage (Ambient) :-20°C to +60°C
Dimensions	12.5 x 10.2 x 6.4 inches (317 x 259 x 162 mm)
Weight	9.25 lb. (4.25Kg)

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TIMING TABLE.

Your projector has been designed to be compatible with the widest possible variety of computers. The timing of each video adapter will be different, therefore it may be necessary for you to make fine adjustments to the settings in order to optimize visual performance.

No.	VGA Mode	Resolution	f-Vsync (Hz)	f-Hsync (KHz)	f-D clk (MHz)
1	Mode 12	640x480	59.94	31.469	25.175
2	Mode 10	640x350	70.00	31.469	25.175
3	Mode 3	720x400	70.00	31.469	28.322
4	Mode 13	320x200	70.00	31.469	25.175
5	VESA	640x480	72.00	37.900	31.500
6	VESA	640x480	75.00	37.500	31.500

No.	MAC	Resolution	f-Vsync (Hz)	f-Hsync (KHz)	f-D clk (MHz)
1	Group 1	640x350	66.68	35.000	30.240
2	Group 2	640x350	60.00	34.971	31.334

No.	FM TOWNS	Resolution	f-Vsync (Hz)	f-Hsync (KHz)	f-D clk (MHz)
1	--------	640x400	56.40	24.830	21.053
2	--------	640x480	59.94	31.469	25.175

Mac Group1:   LC III, IIci, IIsi, II, IIx, IIfx, IIcx, Quadra, Centris, PowerBooks.
Mac Group2:   LC, LC II, IIvi, IIvx, PowerMAC.

VP800 and VP100 with compression.

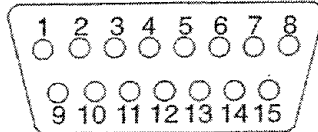| No.	VGA Mode	Resolution	f-Vsync (Hz)	f-Hsync (KHz)	f-D clk (MHz)
1	VESA	800x600	56.25	35.16	36.00
2	VESA	800x600	60.32	37.88	40.00
3	VESA	800x600	72.19	48.08	50.00
4	VESA	800x600	75.00	46.88	49.50

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PIN ASSIGNMENTS.

COMPUTER INPUT CONNECTOR

1	Analog Red Return
2	Analog Red
3	Hsync/Csync
4	Digital Ground
5	Analog Green
6	Analog Green Return
7	Test 1
8	Test 2
9	Analog Blue
10	Not Connected
11	Digital Ground
12	Vsync
13	Analog Blue Return
14	Digital Ground
15	Not Connected

EXTERNAL MONITOR OUTPUT CONNECTOR
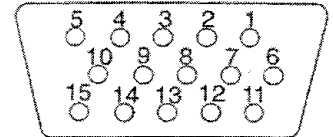
1	Analog Red
2	Analog Green
3	Analog Blue
4	Not connected
5	Digital Ground
6	Analog Red Return
7	Analog Green Return
8	Analog Blue Return
9	Not Connected
10	Digital Ground
11	Not Connected
12	Not Connected
13	Hsync/Csync
14	Vsync
15	Not Connected

S-VIDEO INPUT CONNECTOR
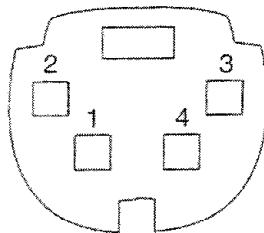
1	Y
2	Ground
3	Ground
4	C

COMPOSITE VIDEO INPUT CONNECTOR
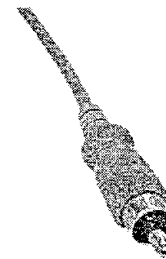
AUDIO CONNECTORS

White-Left Channel

Red-Right Channel

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LIMITED WARRANTY.

Lightware, Inc. ("Lightware") warrants that each VP800 ("Product") projector purchased from Lightware, Inc. is free from defects in materials and workmanship under normal use during the warranty period. Said warranty shall commence on the day of purchase by the End-User and continue for a period of (1) year.

To exercise the End-User's rights under this warranty, the Product must be returned at the End-Users expense, to Lightware, Inc. or to any authorized Lightware, Inc. service centers. The returned Product must be accompanied by (i) the End-User's sales receipt or invoice that shows the date of sale, product type and dealer's name; and, when returned to Lightware, Inc., (ii) a return authorization number, issued by Lightware, Inc. that is clearly displayed on the outside of the shipping carton. The Warranty extends only to the original End-User purchase and is not transferable.

EXCLUSIVE REMEDY
During the Warranty Period, Lightware, Inc. will, at no additional charge, repair or replace defective parts or, at the option of Lightware, Inc., replace the entire unit. Lightware, Inc. shall have no other obligation, and repair or replacement shall be the End-Users; exclusive remedy for any defect in the Product.

WARRANTY LIMITATION AND EXCLUSION
This Limited warranty does not extend to any Product that has been damaged due to accident, unauthorized modifications, tampering, abuse, misuse, alterations, unusual physical and electrical stress, or to any Product that has been serviced by other than Lightware, Inc. or its authorized agents or which has been used in any manner other than from ordinary use in the application for which it was intended.

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LIMITATION OF LIABILITY
It is understood and agreed that Lightware, Inc.'s liability whether in contract, in tort, under any warranty, in negligence or otherwise shall not exceed the return of the amount of the purchase price paid by the End-User and under no circumstances shall Lightware, Inc. be liable for special, indirect or consequential damages. No action, regardless of form, arising out of the agreement to purchase the Product may be brought by the End-User more than one year after the cause of the action has accrued.

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