

PLEASE READ

This manual is provided as a free service by Projector.com.

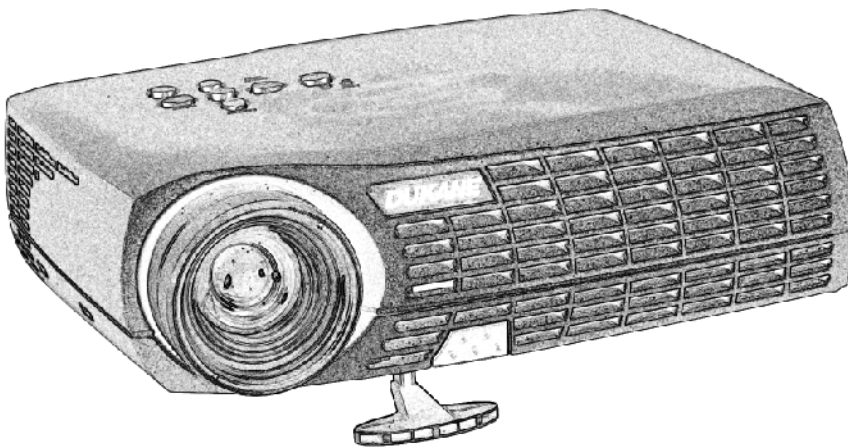
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Visit the site to read the latest projector news and reviews, read and comment on projector specifications, download user manuals and much more.

DUKANE
ImagePro 8746
Projector
USERS GUIDE



MODEL 28A8746

FCC Warning

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, 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.

Canada

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Safety Certifications

UL, CUL, TÜV, NOM, IRAM, GOST R

EN 55022 Warning

This is a Class A product. In a domestic environment it may cause radio interference, in which case the user may be required to take adequate measures.

Remote Control Warning

Laser radiation class II product; wavelength 670nm; maximum output 1mW.
Remote control complies with applicable requirements of 21 CFR 1040.10 and 1040.11. Remote control complies with applicable requirements of EN 60 825-1: 1994 +A11.

Trademarks

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SAFETY INSTRUCTIONS

Please read and follow all safety instructions provided BEFORE using your new projector. Failure to comply with safety instructions may result in fire, electrical shock, or personal injury and may damage or impair protection provided by equipment. Please save all safety instructions.

Safety Definitions:

- **Warning:** Statements identify conditions or practices that could result in personal injury.
- **Caution:** Statements identify conditions or practices that could result in damage to your equipment.

Safety Symbols:



Attention: For information about usage of a feature, please refer to the User's Guide.



Warning: Hot surface. Do not touch.



An arrow pointing to the lamp door on the projector.



Warning: Laser Radiation. Do not stare into the laser beam.



Warning: Turn the projector off, disconnect the power cord, and wait 60 minutes before opening the lamp housing.

Safety Terms:

- **Warning:** Don't look directly into the lens when the projector is turned on.



• **Warning:** To replace the lamp, turn the projector off and unplug the power cord. To avoid burns, wait 60 minutes before opening the lamp door. Follow all instructions provided in this User's Guide.



• **Warning:** Please use the power cord provided. Connect the power cord to a receptacle with a protective safety (earth) ground terminal.

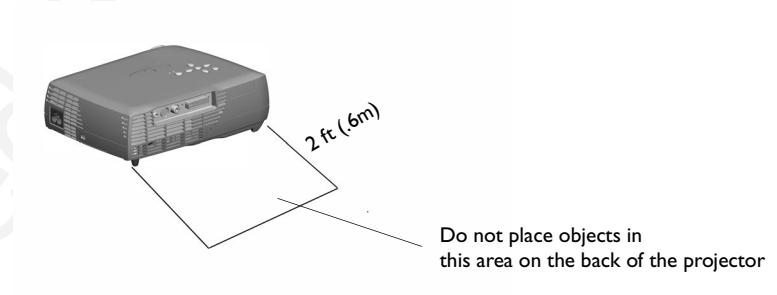


• **Warning:** Laser Radiation. Do not stare into the laser beam.

- **Warning:** Refer all service to qualified service personnel. Servicing your own projector will void the warranty. See below for the contact information.
- **Caution:** Don't block ventilation openings.
- **Caution:** Don't set liquids on the projector. Spilled liquids may damage your projector.
- **Caution:** Don't place the projector on a hot surface or in direct sunlight.

Important Operating Considerations

Do not place the projector on a tablecloth or other soft covering that may block the vents. In the unlikely event of the bulb rupturing, thoroughly clean the area on the back of the projector and discard any edible items placed in that area.



Customer Service

If you need assistance, call Dukane Customer Service directly at 1-800-676-2487

INTRODUCTION

The Dukane 28A8746 is a projector specifically designed for portability, connectivity, and collaboration. It is easy to connect, easy to use, easy to transport, and easy to maintain.

Image Resolution

The XGA resolution of the projected image is 1024x768. The projector is compatible with screen resolutions up to 1280x1024. If your computer's screen resolution is higher than 1280x1024, reset it to a lower resolution before you connect the projector.

Compatibility

The projector is compatible with a wide variety of computers and video devices, including:

- IBM-compatible computers, including laptops, up to 1280x1024 resolution.
- Apple® Macintosh® and PowerBook® computers up to 1280x1024 resolution.
- Most standard VCRs, DVD players, camcorders, digital cameras, and laser disc players.

Unpacking the Projector

The projector comes with the items shown in Figure 1. Check to make sure all are included. **Contact your dealer immediately if anything is missing.**

If you are experienced in setting up presentation systems, use the *Quick Start* card that was included in the shipping box. For complete details on connecting and operating the projector, refer to this User's Guide.



NOTE: The projector automatically expands 640x480 and 800x600 images to 1024x768.

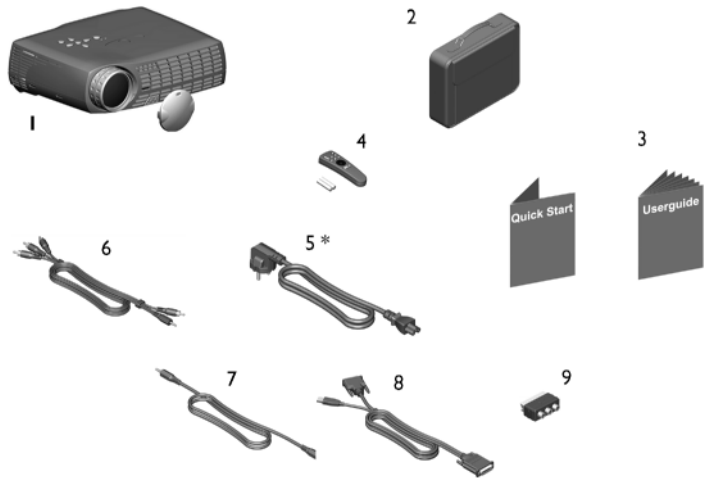


FIGURE 1

Shipping box contents

- | | |
|-----------------------------------|----------------------------|
| 1. Projector + lens cap | 6. Audio/Video (A/V) cable |
| 2. Projector case | 7. Audio cable |
| 3. User's Guide, Quick Start card | 8. Computer cable |
| 4. Remote control with batteries | 9. SCART adapter * |
| 5. Power cord * | |

* country-dependent

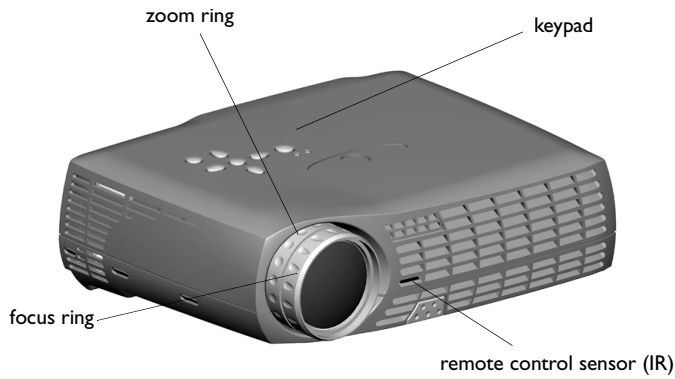


FIGURE 2

Front view of projector

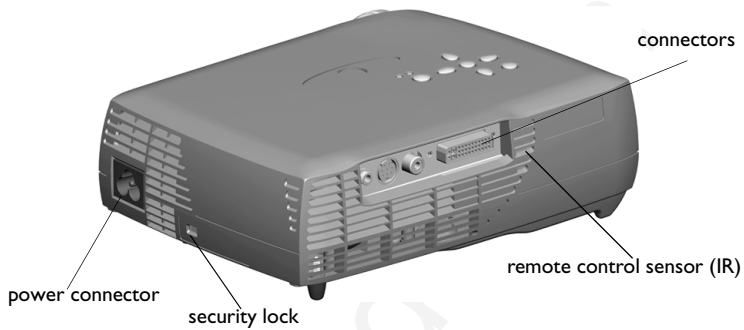


FIGURE 3

Rear view of projector

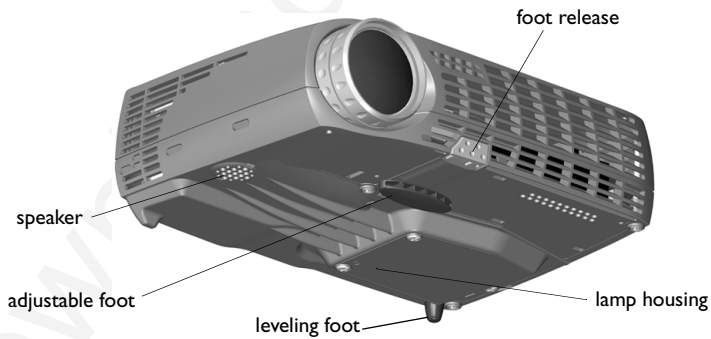


FIGURE 4

Bottom view of projector

Usage Guidelines

- Do not look directly into the projection lens when the projector is turned on. The bright light may harm your eyes.
- Do not block the grills on the projector. Restricting the air flow can cause it to overheat and turn off. If this happens, you must wait a minute before attempting to turn it back on.
- Handle the projector as you would any product with glass components. Be especially careful not to drop it.
- Avoid leaving the projector in direct sunlight or extreme cold for extended periods of time. If this happens, allow it to reach room temperature before use.

If You Need Assistance

The first place to look for help is in this manual. Be sure to check the guidelines in “Troubleshooting” on page 33. Or, check the Service and Support section of our website at <http://www.dukcorp.com/av>



NOTE: For general product information, please call 1-800-676-2485

If those sources don't answer your question, call your dealer. You can also call Dukane Customer Service directly at **1-800-676-2487**

Warranty

This product is backed by a limited 5 year warranty. The details of the warranty are printed at the back of this manual.

SETTING UP THE PROJECTOR

- 1 Place the projector on a flat surface.
 - The projector must be within 6 feet (1.8 m) of your power source and your computer.
 - If you want to project from behind a translucent screen, set up the projector behind your screen. See “Rear” on page 25 to reverse the image.
- 2 Position the projector the desired distance from the screen.
 - If the image is too big or too small, use the zoom ring to adjust the size or move the projector forward or backward. Figure 5 shows three projected image sizes. For more information about image size, see “Projected Image Size” on page 39.



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NOTE: The projector must be at least 4.9 feet (1.5 m) from the projection screen.

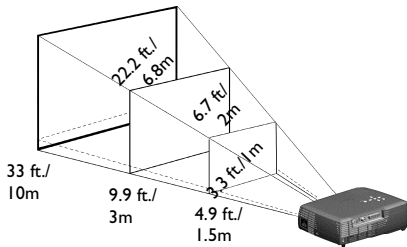


FIGURE 5

Projected image size

- 3 Make sure the projector and the computer are turned off.



NOTE: Before you continue, make sure the projector and all other equipment is turned off. If you're connecting a computer, make sure the distance between it and the projector is 6 feet or less.

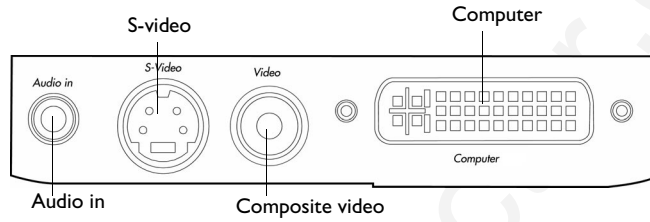


FIGURE 6
Connector panel



Connecting a Computer

The projector ships with an analog computer cable. If your computer has a digital output, you can order the optional digital computer cable. Using a digital source generates the highest quality and brightest image possible.

- 1 Plug the black end of the computer cable into the “Computer” connector on the projector.
- 2 Plug the blue end of the computer cable into the video connector on your computer. If you are using a desktop computer, you need to disconnect your monitor cable from your computer.

NOTE: Many laptop computers do not automatically turn on their external video port when a secondary display device such as a projector is connected. Refer to your computer manual for the command that activates the external video port.

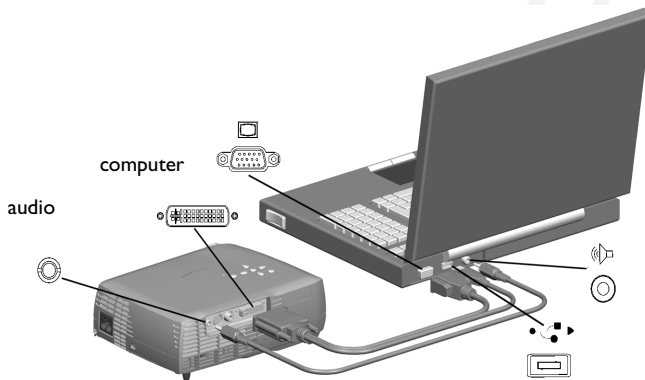


FIGURE 7

Connecting the projector to a computer

Do you want to play your computer's audio on the projector?

- 1 Plug either end of the audio cable into the audio connector on your computer.
- 2 Plug the other end of the audio cable into an “Audio in” connector on the projector.



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NOTE: *The USB mouse is supported for use with Windows 98 or higher only.*

Do you want to control the computer's mouse from the projector's remote?

- 1 Plug the USB end of the computer cable into the mouse connector on your computer.

You must have the appropriate USB drivers installed on your computer to use the USB feature. Windows 98 ships with the appropriate drivers. For more information, see "Powering up the Projector" on page 11.

Now you're ready to power up the projector and your computer. Skip to page 11.

Connecting a Video Player

If your video device (VCR, DVD player, video camera) uses a round, one-prong composite video connector, use the composite audio/video (A/V) cable.

- If your video device uses a round, four-prong S-video connector, use an S-video cable, ordered separately. S-video generates a higher quality image.
- 1 Plug the A/V cable's round yellow connector into the "video-out" connector on your video device (Figure 8). This connector may be labeled "To Monitor."
 - If you're using an S-video cable, connect the round black connector to the "S-video out" connector on the video device.
- 2 Plug the other yellow connector into the "Video" connector on the projector.
 - If you're using S-video, plug the other end of the cable into the "S-video" connector on the projector.

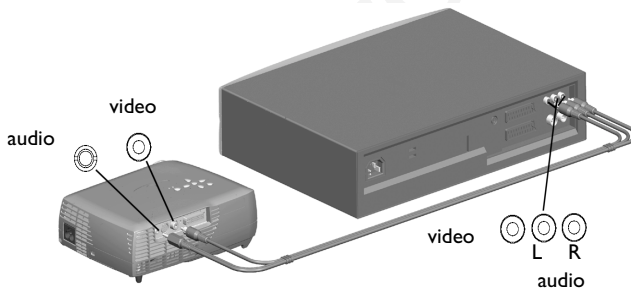


FIGURE 8

Connecting the projector to a VCR using the A/V cable

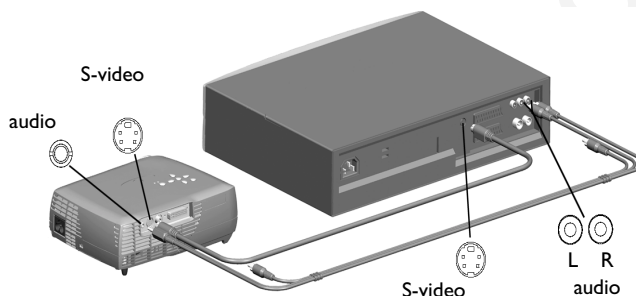


FIGURE 9

Connecting the projector to a VCR using the S-video cable and A/V cable



CAUTION: Your video player may also have a “Video Out” connector for a coaxial cable connection. **DO NOT** use this to connect to the projector.

- 3 Plug the A/V cable’s white connector into the left “audio out” connector on your video device. Plug the cable’s red connector into the right “audio out” connector on the video device.
- 4 Plug the blue end of the A/V cable into the “Audio in” connector on the projector.
 - When you are using the S-video cable along with the A/V cable, the A/V cable’s yellow connectors are not used.

The projector is compatible with these major broadcast video standards: NTSC, NTSC 4.43, PAL, PAL-M, PAL-N, PAL-60, and SECAM. It automatically adjusts to optimize its performance for the incoming video.

Powering up the Projector

- 1 Remove the lens cap.
- 2 Plug the power cord into the side of the projector, then plug it into your electrical outlet. A surge-protected power strip is recommended.
 - The LED turns orange (Figure 6 on page 6).
- 3 Press the **Power** button on the top of the projector.
 - The fans start to run, the LED on the top of the projector (Figure 6 on page 6) lights solid green if the projector is connected to a valid source, and the startup screen appears. It takes about one minute for the image to achieve full brightness.
- 4 If you connected to a video player, turn it on.
 - The video image should display on the projection screen. If it doesn't, press the **Source/Select** button on the keypad or the **Video** button on the remote (page 17) to display your video image.
- 5 If you connected to a computer, turn it on.

The first time you connect a particular computer to the projector, the computer recognizes the projector as “new hardware” and the Add New Hardware Wizard appears. Follow these instructions to use the Wizard to load the correct driver (which was installed with your Windows operating system).



NOTE: Always use the power cord that shipped with the projector.



NOTE: The first time you connect your computer to the projector, the computer may display a message stating that new hardware was found. The Add New Hardware Wizard may appear. Use the Wizard to load the correct driver (the computer considers the projector a Plug and Play Monitor).

Click Next. Make sure “Search for the best driver” is selected, then click Next.



Uncheck any checked boxes, then click Next. Windows automatically locates the driver. If this driver has been removed, reload the driver using your Windows operating system CD.



When Windows finds the driver, you are ready to install it. Click Next.



Click Finish when installation is complete.

- 6 The computer image should display on the projection screen. If it doesn't, press the **Source/Select** button on the keypad or the **Computer** button on the remote to display your computer's image.
 - Make sure your laptop's external video port is activated; see your laptop's documentation for details.
 - If necessary, make adjustments to the image using the projector's on-screen menus. To open the menus, press the **Menu** button on the keypad or remote. For more information about the menus, see page 22.



NOTE: *With some computers, the order in which you power up the equipment is very important. Most computers should be turned on last, after all other peripherals have been turned on. Refer to your computer's documentation to determine the correct order.*

Turning Off the Projector

To turn off the projector, press the **Power** button. A dialog box appears, asking for confirmation. Press **Power** again to turn the lamp off. The fans continue to run and the LED blinks orange for about 90 seconds, then the projector shuts off. The LED then stays on solid orange until the power cord is removed from the projector.

If you want to turn the lamp back on, you must allow 90 seconds for the lamp to cool. The lamp won't light if it's too hot.

You can also use the Display Power Management System (DPMS) to automatically turn the projector off if no active source is found. See page 25 for details.



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NOTE: To maximize lamp life, allow the projector to run for at least five minutes before turning it off.

USING THE PROJECTOR

This section describes how to use and make adjustments to the projector. It also provides a reference to the keypad and remote buttons and the options available from the on-screen menus.

Basic Image Adjustment

- 1 Make sure you have powered up your equipment in the right order (page 11).
- 2 If the image doesn't display completely, rotate the zoom ring (below), adjust the height of the projector (page 16) or center the image by adjusting its horizontal or vertical position (page 24). Be sure the projector lens is at a 90 degree angle to the screen.
- 3 If the image is out of focus, rotate the focus ring (below).
- 4 If the colors don't look right, adjust the brightness, contrast, tint, or color (page 22).

Adjusting the Projector

To focus the image, rotate the focus ring (Figure 10) until the image is clear. To zoom the image, rotate the zoom ring. This adjusts the image size.

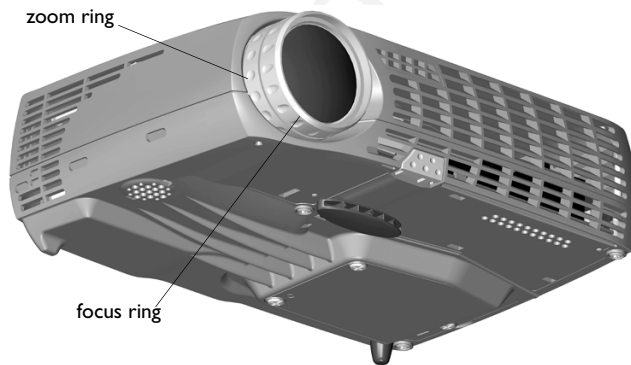


FIGURE 10

Focus ring and zoom ring



NOTE: To obtain the best overall focus quality, open the menu and focus on the text. This will ensure that the best overall image quality is achieved.

The projector is equipped with a self-locking, quick-release foot and a leveling foot.

To raise the projector:

- 1 Raise the projector to the height you want, then press and hold the foot release button. Release the button to lock the foot into position (Figure 11).
- 2 If necessary, manually rotate the leveling foot to adjust the angle of the projected image.

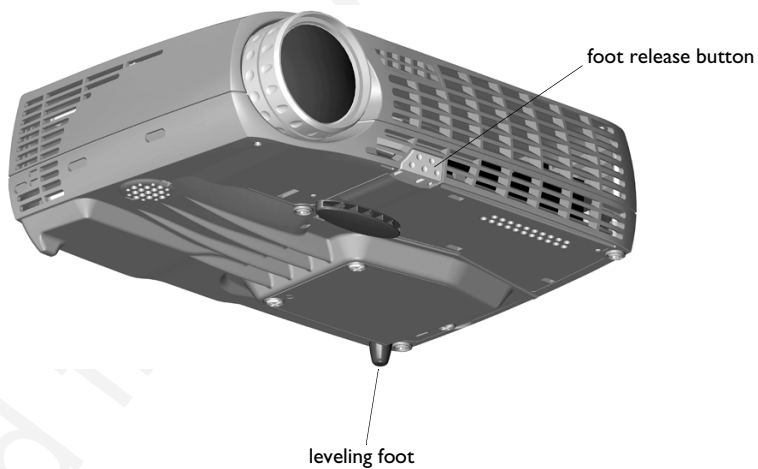


FIGURE 11

Adjusting the height of the projector

Using the Remote Control

To control the computer's mouse from the projector's remote, you must connect the USB cable on the projector's computer cable to the computer. See page 8 for more information.

To turn the remote on, move the switch on the side of the remote to the On position. The remote's LED lights red when buttons on the remote are pushed.

Point the remote control at the projection screen or at the front or rear of the projector (not at the computer). The range for optimum operation is about 40 feet. If you point the remote at the projection screen, the distance to the screen and back to the projector must be less than or equal to 40 feet. For best results, point the remote directly at the projector.

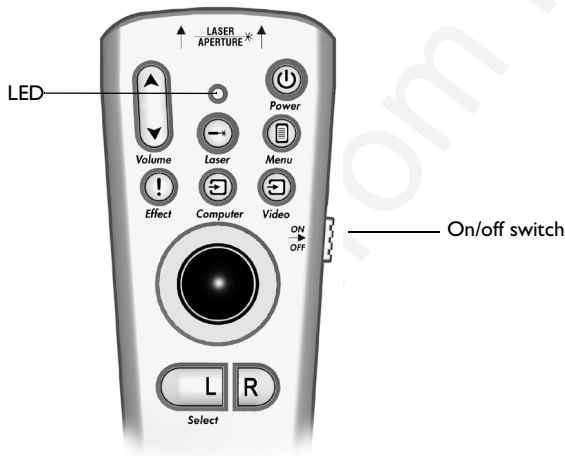


FIGURE 12

Remote control

Press anywhere on the edge of the track ball to move the cursor on the screen. You can move the cursor at any angle by moving the track ball in the corresponding direction. The R and L buttons simulate your computer's right and left mouse buttons.

CAUTION

LASER RADIATION – DO NOT
STARE INTO BEAM



WAVE LENGTH: 670nm
MAX OUTPUT: < 1mW

CLASS II LASER PRODUCT

To use the laser pointer, press and hold the **Laser** button. The laser goes off when the button is released.

If you are displaying presentations in Microsoft® PowerPoint®, you can use the remote's mouse buttons to navigate through your presentation while in Slide Show mode. To configure PowerPoint for this, choose Options from the PowerPoint Tools menu, click the View Tab, de-select the "Popup Menu on Right Mouse Click" option in the Slide Show section, then click OK. Then, when you're in PowerPoint's Slide Show mode, a left click advances to the next slide and a right click returns to the previous slide (other PowerPoint modes are not affected).

Using the Keypad and Remote Buttons

While the menus are displayed, the **Keystone** and **Volume** buttons on the keypad and the track ball on the remote act as menu navigation and adjustment buttons. See “Using the On-Screen Menus” on page 21 for details.

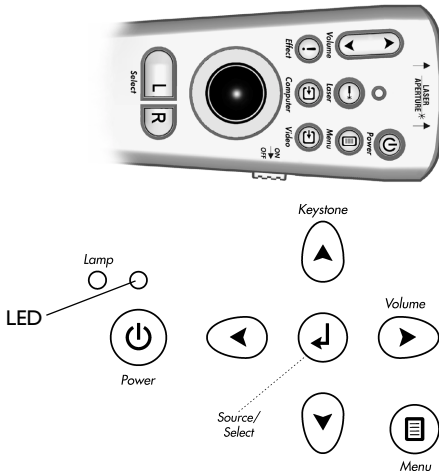


FIGURE 13

Keypad and remote buttons

Menu

Press the **Menu** button to open the on-screen menus. Press **Menu** again to close the menus. When you close the menus, the projector saves any changes you made. The menu automatically closes after 1 minute if no buttons are pressed. For more information about the on-screen menus, see page 21.

Computer and Video

When you have more than one source (computer and video) connected to the projector, select between them by pressing the **Source/Select** button on the keypad and the **Computer** or **Video** buttons on the remote. A “Source/Select” dialog box appears. Use the track ball or arrow keys to highlight the desired source, then press **Select**.

Power

Press this button to turn the projector on and off. See page 11 and page 14 for details.

Volume

Press the **Volume** buttons to adjust the volume.

Arrow buttons (keypad only) or track ball (remote only)

Use these to navigate through and make adjustments to the on-screen menus. See “Using the On-Screen Menus” on page 21 for details.

Keystone (keypad only)

Use this feature to adjust the image vertically and make a squarer image.

- 1 Press the **Keystone up** arrow to reduce the upper part of the image, and press the **Keystone down** arrow to reduce the lower part. You can adjust this from -15 degrees to +40 degrees. You can also adjust keystone from the Basic menu (see page 23 for details on the menu).

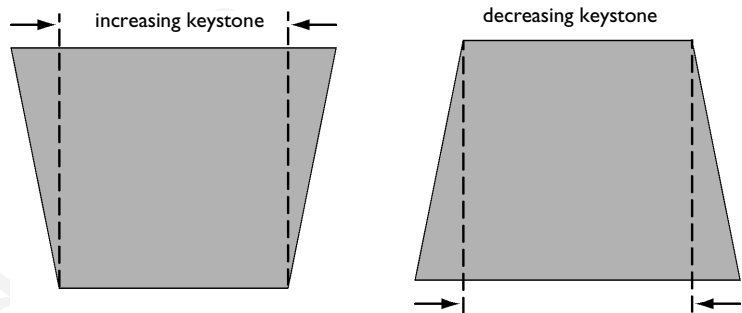


FIGURE 14

Adjusting the keystone

Effect (remote only)

Press this button to invoke the presentation effect. The default effect is magnify. You can select among PiP, magnify, freeze, mask, and mute. See page 26 for details.

To use the magnify effect, press **Effect**, then use the track ball to select the area of the image you want to magnify. If you press **Effect** again, you can use the track ball to pan the image, displaying different parts of it (only if the image is magnified). To return to magnify mode, press the **Select** (or L) button. To return to the original size, press the **Effect** button twice.

Laser (remote only)

Press the **Laser** button to turn the laser on. The laser turns off when the button is released.

Using the On-Screen Menus

The projector has menus that allow you to make image adjustments and change a variety of settings.

To open the on-screen menus, press the **Menu** button on the keypad or remote. This displays the **Basic** menu and changes the **Keystone** and **Volume** buttons on the keypad to menu navigation buttons. Press the down arrow button to move the cursor down and press the up arrow button to move the cursor up, or use the track ball on the remote. The selected menu is highlighted.



FIGURE 15

On-screen menu

To change a menu setting, use the up and down arrow buttons or the track ball to move the cursor up and down to the item you want to change (the selected item is highlighted), then press the **Select** button. Use the left and right arrows or the track ball to adjust the setting or to turn a setting on or off. Press **Select** when you are done.

To access a sub-menu, highlight it and press **Select**. To navigate back to the previous menu, highlight the arrow at the top of the menu and press **Select**.

Use the up and down arrows or the track ball to move to another setting. When you have completed your adjustments, press **Menu** to close the menus.



NOTE: Some menu items may be grayed out (dimmed) at certain times. This indicates the item is not applicable to your setup or the item is not enabled until another selection is made.

Basic Menu



FIGURE 16

Basic menu

Contrast

The contrast controls the degree of difference between the lightest and darkest parts of the picture. Adjusting the contrast changes the amount of black and white in the image.

- 1 Use the up and down arrows to highlight Contrast, press **Select**, use the left and right arrows to adjust the contrast from 0 to 100 in the slider bar, then press **Select** to accept your changes.

Brightness

Adjusting the brightness changes the intensity of the image.

- 1 Use the up and down arrows to highlight Brightness, press **Select**, use the left and right arrows to adjust the brightness from 0 to 100 in the slider bar, then press **Select** to accept your changes.

Color

The color setting adjusts a video image from black and white to fully saturated color.

- 1 Use the up and down arrows to highlight Color, press **Select**, use the left and right arrows to adjust the color from 0 to 100 in the slider bar, then press **Select** to accept your changes.



NOTE: *The color setting applies to video sources only.*

Keystone

This option helps to keep the image square as the angle of projection is changed. Use this feature to adjust the image vertically and make a squarer image. See page 20 for details on keystone adjustments.

- 1 Press the down button to highlight Keystone, then press **Select**. Use the left and right arrows to adjust the keystone setting from -63 to +64 in the slider bar. Press **Select** to accept your changes.

Setup

See the following pages for details on this menu.

Reset

This re-synchronizes the projector to the active computer or video source.

About

This read-only menu provides information about the source, such as resolution and horizontal and vertical frequencies.

Setup menu

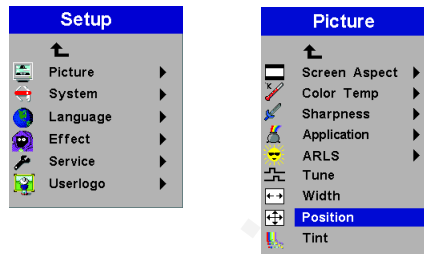


FIGURE 17

Setup and Picture menus

Picture menu

- **Aspect Ratio:** The default is 4:3. Click 16:9 if you are watching videos in widescreen format. Click Native to display the image in its native format. Highlight Aspect Ratio, press **Select**, use the up and down arrows to highlight your selection, press **Select**, then press the left arrow to return to the Picture menu.
- **Color Temp:** The default is Presentation. Choose Film if you are watching a film.
- **Sharpness:** Adjusts the sharpness of video images.
- **Application:** Sets the mode for the application of the projector. The options are Normal, Home Theatre, and Photography.
- **ARLS:** Automatic Room Light Sensing. The choices are Automatic, Dark, and Bright.
- **Tune:** Use the left and right arrows to adjust the horizontal phase and fine tuning of the image.
- **Width:** Use the left and right arrows to adjust the width of the image.
- **Position:** Use the left and right arrows to adjust the horizontal position of the image and use the up and down arrows to adjust the vertical position.
- **Tint:** Use the left and right arrows to adjust the tint of video images.



NOTE: *Sharpness and Tint are only available with a video source.*

System menu

Turn the features in the System menu on and off by highlighting them and pressing **Select**. A checkmark in the box indicates the feature is on; an empty box means the feature is off.



FIGURE 18

System menu

- **Rear:** This reverses the image so you can project from behind a translucent screen.
- **SourceSearch:** When this feature is on, the projector automatically searches for an active source. When it is off, you must press the **Computer** or **Video** buttons to switch among sources.
- **Hide OSD:** This hides the on-screen display (OSD) of the adjustment bars that appear when you adjust things using the keypad or remote, such as volume. It does not hide the menu's adjustment bars.
- **DPMS enable:** This turns the Display Power Management System (DPMS) on. When it is on, the projector turns the lamp off after 3 minutes of not detecting an active source. The projector will return to normal activity immediately if it detects an active source. After 5 additional minutes, the projector turns off. You must press the **Power** button to turn the projector back on. The LED blinks green when in DPMS mode.

Language menu

You can display the on-screen menus in German, English, Spanish, French, Italian, Norwegian, Portuguese, Japanese, Chinese, or Simplified Chinese. Highlight the desired language, then press **Select**. The menus redraw immediately.

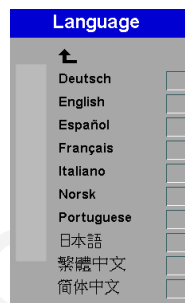


FIGURE 19

Language menu

Effect menu

This menu allows you to assign a different effect to the **Effect** button on the remote. The default effect is magnify. Highlight an effect and press **Select** to choose a different one.

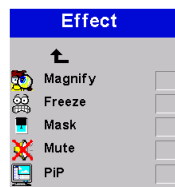


FIGURE 20

Effect menu

- **Magnify:** This allows you to enlarge and display different parts of the image. See page 20 for details on magnify.
- **Freeze:** This freezes the projected image.
- **Mask:** This masks the projected image with a black screen.
- **Mute:** This mutes the sound.
- **PIP:** This displays a small video source picture in the computer source picture. Without a video source it is a blank frame. The computer source cannot be displayed in the video source picture.

Service menu

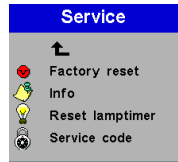


FIGURE 21

Service menu

- **Factory reset:** This resets all options (except rear, language, and lamp time) to the original factory settings. Highlight it, then press **Select**. A confirmation dialog box appears. Press **Select** to reset, or press the right arrow button to highlight No, then press **Select** if you don't want a reset.
- **Info:** This read-only window provides information on the projector's software, the number of hours the current lamp has been in use, and selected image settings. Press **Select** to close this window.
- **Reset lamptimer:** This resets the lamp hour timer to zero. After replacing the lamp (page 30), highlight Reset lamptimer, press **Select**, then press it again to confirm your selection. The timer in the Info window resets to zero.
- **Service Code:** This window can only be accessed by service personnel by entering a code.

User's logo menu

This menu allows you to display a blank blue or black screen instead of the default InFocus screen at startup and when no source is detected. It also allows you to capture and display a custom logo.

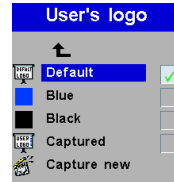


FIGURE 22

User's logo menu

- Highlight the desired color (black or blue), press **Select**, then press the left arrow to return to the previous menu.
- 1 To capture a custom logo, display the image you want to capture on your computer, highlight **Capture New**, then press **Select**.
 - 2 Use the remote's trackerball to position the capture rectangle around your logo, then press **Select (L)** on the remote.
 - 3 Use the trackerball to select the quality of the logo capture and press **Select (L)** on the remote.
 - While the capture is underway, the LED on the keypad turns red. When ready, the projector confirms the capture and the LED changes to green.

The next time you start the projector, the custom logo you captured displays.



NOTE: The higher quality capture you select, the more memory will be used in the capture process. To use less memory, select good or medium as the capture quality.

MAINTENANCE & TROUBLESHOOTING

This section describes how to:

- clean the lens
- clean the lamp filter screens
- replace the projection lamp
- replace the batteries in the remote
- use the security lock feature
- troubleshoot the projector

Cleaning the Lens

Follow these steps to clean the projection lens:

- 1 Apply a non-abrasive camera lens cleaner to a soft, dry cloth.
 - Avoid using an excessive amount of cleaner, and don't apply the cleaner directly to the lens. Abrasive cleaners, solvents or other harsh chemicals might scratch the lens.
- 2 Lightly wipe the cleaning cloth over the lens in a circular motion.
- 3 If you don't intend to use the projector immediately, replace the lens cap.

Cleaning the Lamp Filter Screens

In dirty or dusty environments, the dust filter screens on and around the lamp module can become clogged, causing high temperatures inside the lamp module. These high temperatures can cause premature lamp failure. Routine maintenance to remove dust and dirt from the screens lowers the lamp operating temperature and prolongs lamp life. To maximize lamp life you may want to clean the screen every 250 hours.

- 1 Remove the lamp module. Refer to "Replacing the Projection Lamp" on page 30 for instructions.
- 2 Examine the dust filter screens on the lamp module and in the lamp housing area. If necessary, use a vacuum cleaner set on low power to clean the screens. Be careful not to disturb any internal components when cleaning the screens.
- 3 Replace the lamp module.



WARNING: To avoid burns, allow the projector to cool for at least 60 minutes before you replace the lamp. Never extract the lamp housing while the projector is operating.



WARNING: Be extremely careful when removing the lamp housing. In the unlikely event that the bulb ruptures, small glass fragments may be generated. The lamp module is designed to contain these fragments, but use caution when removing the lamp module.

Replacing the Projection Lamp

The lamp hour timer in the Service Info menu counts the number of hours the lamp has been in use. When the timer reaches 2900 hours, the Lamp LED lights red, indicating that it is time to change the lamp. You can order new lamp housings from your Dukane dealer.

Follow these steps to replace the projection lamp:

- 1 Turn off the projector and unplug the power cord.
- 2 Wait 60 minutes to allow the projector to cool thoroughly.
- 3 Turn the projector upside down and loosen the captive screw on the lamp door. The lamp door is part of the lamp housing.



FIGURE 23

Removing the screws on the lamp door

- 4 Insert the screwdriver in the tab on the lamp door and pry the door up.



FIGURE 24

Inserting the screwdriver into the lamp housing tab

- 5 Carefully remove the lamp housing. Dispose of the lamp in an environmentally proper manner.



FIGURE 25

Removing the lamp housing

- 6 Install the new lamp housing. Be careful to attach the connector on the lamp housing to the connector inside the projector. These connectors are located near the leveling foot.
- 7 Tighten all three screws.
- 8 Plug in the power cord, then press the **Power** button to turn the projector back on.
- 9 To reset the lamp hour timer, navigate to the Setup/Service menu and choose Reset lamptimer. See page 27 for details on the Service menu.



WARNING: Do not drop the lamp module or touch the glass bulb! The glass may shatter and cause injury.

Replacing the Batteries in the Remote Control

The life of the batteries depends on how often and how long you use the remote. Symptoms of low battery charge include erratic responses when using the remote and a reduced range of operation.

- 1 Turn the remote face down in your hand.
- 2 Slide the door off the end of the remote.
- 3 Remove the old batteries and dispose of them in an environmentally proper manner.
- 4 Install two new AAA alkaline batteries. Make sure you install each in the correct direction.



FIGURE 26

Replacing the batteries in the remote

- 5 Re-install the door.

Using the Security Lock

The projector has a security connector for use with a PC Guardian Cable Lock System (Figure 27).



FIGURE 27

The security lock

Troubleshooting

LEDs

The Lamp LED on top of the projector (Figure 13 on page 19) will alert you to certain problems.

- A solid red Lamp LED means it is time to change the lamp. See page 30.
- A blinking red Lamp LED means the projector is overheating. Turn off the projector and allow it to cool.

The other LED on top of the projector indicates the normal operating state of the projector.

- A solid green LED means the projector is on.
- A blinking green LED means the projector does not recognize an active source or is in DPMS mode. See page 25.
- A blinking orange LED means the projector is going into DPMS mode; a solid orange LED means the projector is in standby or DPMS mode. See page 25 for details.

Problem: The projector is not running

- Make sure that the power cord is properly connected to a functional AC electrical outlet. Make sure that the power cord is also properly connected to the projector.
- If the projector is plugged into a power strip, make sure the power strip is turned on.
- Make sure the projector is turned on. Verify that the LED is solid green.

Problem: Projector is running, but nothing appears on projection screen

- Make sure you have removed the lens cap on the projection lens at the front of the projector.
- Make sure Mask is not active in the Effect menu. See page 26.
- Check the projector's lamp housing to ensure that it is securely connected to the bottom case. See "Replacing the Projection Lamp" on page 30.

Problem: Only the start-up screen displays

- Verify that the cables are connected correctly. See page 7 for connection procedures.
- Make sure that the cables do not have any bent pins.
- Verify that the proper input source is connected. See “Computer and Video” on page 19.
- Try resetting the projector. See page 23.
- You might need to turn everything off and power up the equipment again in the proper order. Refer to your computer’s documentation to determine the correct order.
- Make sure your laptop’s external video port is turned on. See your computer’s manual for details.
- Make sure your computer’s video board is installed and configured correctly.
- Make sure your computer has a compatible video board. The projector isn’t CGA or EGA compatible.

If you’re using Windows 98:

- 1 Open “My Computer” icon, the Control Panel folder and then the Display icon.
- 2 Click the Settings tab.
- 3 Verify that the Desktop area is set to 1280x1024 or less.

Problem: Color or text not being projected

- You might need to adjust the brightness up or down until the text is visible. Refer to “Brightness” on page 22 for more information.

Problem: The screen resolution is not right

- Make sure the computer’s video card is set for a resolution of no greater than 1280x1024.

Problem: Image isn’t centered on the screen

- Move the projector to reposition the image.
- Reposition the image using the menu. Refer to page 24.
- Be sure the projector lens is at a 90 degree angle to the screen.

Problem: Image is too wide or narrow for screen

- Adjust the zoom or projector placement.
- Adjust the width of the image. See page 24.

Problem: Image is out of focus

- Turn the projection lens to focus the image.
- Make sure the projection screen is at least 4.9 feet (1.5 m) from the projector, and that the projector is at a 90 degree angle to the screen.
- Check the projection lens to see if it needs cleaning.

Problem: Projector does not respond to remote control

- Check to see if the batteries in the remote control are viable.
- Check to see if the batteries are inserted properly.

Problem: No sound

- Check the audio input connections.
- Adjust the projector's or audio source's volume.
- Verify that the projector's internal speaker is not set to mute. See "Effect menu" on page 26.

Problem: Image and menus are reversed left to right

- Rear projection mode is probably turned on. Turn Rear off in the System menu. The image should immediately return to forward projection. See page 25.

Problem: Projected image is distorted

- Try resetting the projector. See page 23.
- Adjust the tuning of the image. See page 24.

Problem: Projected colors don't match the computer or video player's colors

- Just as there are differences in the displays of different monitors, there are often differences between the computer image and the projected image. Adjust the brightness, color and/or contrast in the Main menu. See page 24.

Problem: Lamp seems to be getting dimmer

- The lamp begins to lose brightness when it has been in use for a long time. Replace the lamp as described in "Replacing the Projection Lamp" on page 30.

Problem: Lamp shuts off

- A minor power surge may cause the lamp to shut off. Turn off the projector, wait at least a minute, then turn it back on.
- Make sure the vents on the projector are not blocked.

Before calling your dealer or Dukane Technical Support for assistance, please have the following information available:

- the model name of the projector
- the projector's serial number (located on the bottom label)
- the resolution of your computer.

Call Dukane Technical Support at 1-800-676-2487

APPENDIX

Specifications

The projector must be operated and stored within the temperature and humidity ranges specified.

Temperature

Operating	41 to 95° F (5 to 35° C) at sea level
Non-operating	-4 to 140° F (-20 to 60° C)

Humidity

Operating	20% to 80% relative humidity, non-condensing
Non-operating	10% to 90% relative humidity, non-condensing

Dimensions

2.48 x 6.06 x 7.83 inches (63 x 154 x 199 mm)

Weight

2.4 lbs. (1.08 kg) unpacked

Optics

Focus Range	4.9 - 32.8 feet (1.5 - 10 m) Full optical performance 6.6-19.7 feet (2.0m - 6.0m)
-------------	---

Lamp

Type	120-watt UHP lamp
------	-------------------

Input Power Requirements

100-240V~2.5A 50-60 Hz

Accessories

Standard Accessories (ship with the projector)

Quick Start card

User's Guide

Projector Case

Shipping Box (with packaging)

Computer Cable 6 ft (1.8 m)

Audio/Video Cable 6 ft (1.8 m)

Audio Cable 6 ft (1.8 m)

Power Cord *

Remote

Projection Lamp Module (included in projector)

Lens Cap

SCART Adapter *

Safety Instruction

* Country-dependant

Projected Image Size

Use the table to help you determine projected image sizes.



Table 1:

Image Size, Width and Height for Lens at Maximum Image Size

Distance to Screen (feet/m)	Diagonal (inches/m)	Width (inches/m)	Height (inches/m)
4.9/1.5	40/1	32/8	24/6
7.4/2.3	60/1.5	48/1.2	36/9
9.9/3.0	80/2	64/1.6	48/1.2
12.3/3.8	100/2.5	80/2	60/1.5
18.5/5.6	150/3.8	120/3	90/2.3
32.8/10.0	266/6.8	213/5.4	160/4.1

Note: Visit our website at www.dukcorp.com/av for a Projector Distance Calculator

Table 2:

Image Size, Width and Height for Lens at Minimum Image Size

Distance to Screen (feet/m)	Diagonal (inches/m)	Width (inches/m)	Height (inches/m)
4.9/1.5	31/8	25/6.4	19/4.8
7.4/2.3	47/1.2	38/1	28/7
9.9/3.0	63/1.6	50/1.3	38/8
12.3/3.8	79/2	63/1.6	47/1.2
18.5/5.6	118/3	94/2.4	71/1.4
32.8/10.0	209/5.3	167/4.2	125/3.3

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LEGAL INFORMATION

FIVE-YEAR LIMITED WARRANTY

This Dukane LCD projector is warranted to the original purchaser for a period of five (5) years from the original purchase date - in normal use and service - against defects in material and workmanship. DUKANE CORPORATION EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

During the warranty period, Dukane Corporation will repair or replace (at the manufacturer's option) any such defective parts (except for the lamp, which is subject to whatever warranties the manufacturer may provide) without charge to the purchaser for parts or labor when the product is returned, prepaid and insured, with proof-of-purchase date. This remedy is void if the product has been damaged by accident, unreasonable use, neglect, improper service or other causes not arising out of defects in material or workmanship.

Dukane Corporation disclaims all liability for incidental or consequential damage of any kind, including all damages arising out of any interruptions in operation of the product and all damages to software.

No person, firm, or representative is authorized to assume any obligation or to make any warranty on behalf of the Dukane Corporation other than as stated above.

**THIS LIMITED WARRANTY IS VALID FOR U.S.A AND CANADA.
FOR OTHER LOCATIONS, LOCAL WARRANTIES APPLY.**

SERVICE & REPAIR

For service and parts, contact the Dukane AV Service Department at 1 (800) 676-2487 within the USA or 1 (630) 762-4040 worldwide. If you would like to send a facsimile (FAX), dial 1 (630) 584-5156 worldwide.

When requesting warranty service, please have the sales receipt available along with the model name and serial number.

If it becomes necessary to return the projector, use the original packing material and box (if retained) or pack securely. Dukane Corporation will not be liable for any pick-up or delivery charges or any expenses incurred for service calls or service supplied by anyone other than the Dukane AV Service Department.

Dukane Corporation
Audio Visual Products Division
2900 Dukane Drive
St. Charles, IL 60174-3395
E-mail: avsales@dukane.com

Phone: (630) 762-4040
Orders: (800) 676-2485
Information: (800) 676-2486
Fax: (630) 584-5156
Parts & Service: (800) 676-2487
Fax: (630) 584-0984

Audio Visual Products

DUKANE

Part # 401-604-00

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