

VIDEOMATE 6100

*Video Slide Projector
Instruction Manual*



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The World Leader in Image Quality

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Introduction to the VideoMate

VideoMate Slide-to-Video Systems

Today's sophisticated audiences expect high quality visual aids in the presentations they attend. Since a picture is "worth a thousand words," as they say, there is no better way to increase the effectiveness of a presentation than to pack it full of interesting visual images.

A Navitar VideoMate is an ideal presentation tool, because it enables you to easily integrate 35 mm slides into presentations by converting them into video images which can be projected through a video projector or viewed on a TV monitor. VideoMates produce high resolution images with outstanding contrast and vivid color rendition, so slides can be shown as large projected video images without losing clarity or legibility. VideoMates are ideal for use in boardrooms, auditoriums and training rooms, or for AV rental and video production.

Description of the VideoMate 6100

The VideoMate 6100 is based on a Kodak Ektagraphic slide projector. The unit includes a color balanced illumination system and a high resolution Navitar zoom lens.

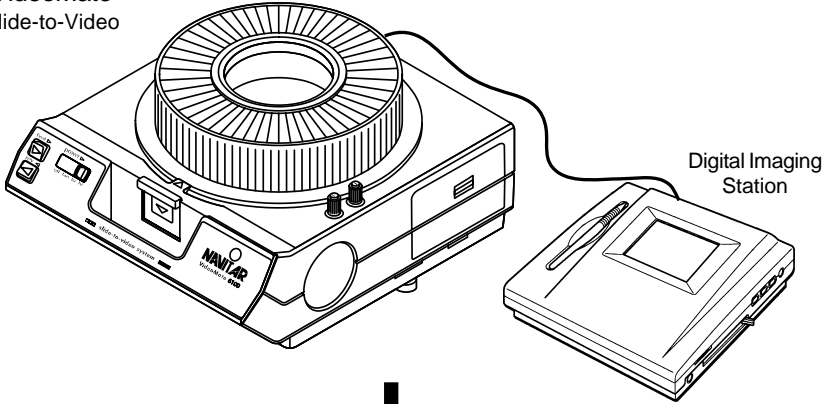
The system uses a true digital camera inside to output true digital information. Outputs include IEEE 1394 "Fire Wire," as well as XGA and S-Video.

The true digital performance provides incredible resolution and contrast. The VideoMate 6100 is compatible with new generation projectors, plasma displays and computers.

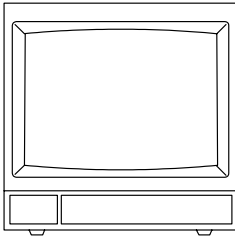
Introduction to the VideoMate

Output to Video Equipment

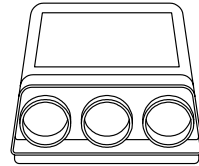
VideoMate
Slide-to-Video



Output to Video Equipment



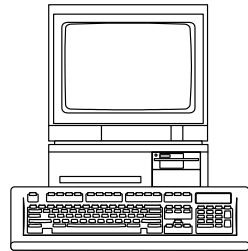
TV Monitor



Video Projector

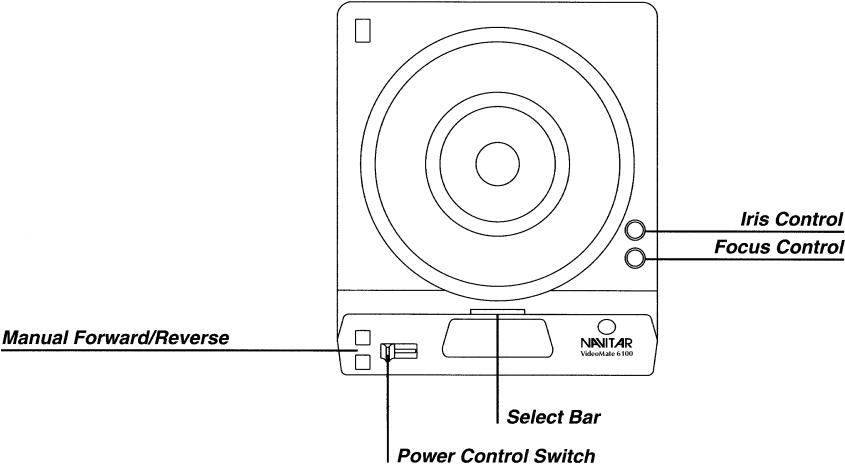


VCR

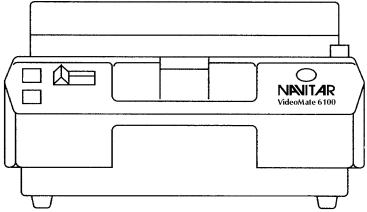


Computer

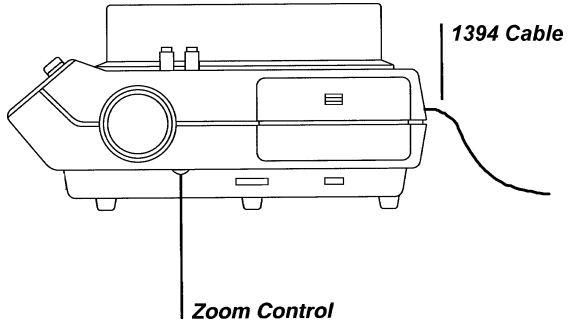
Top View



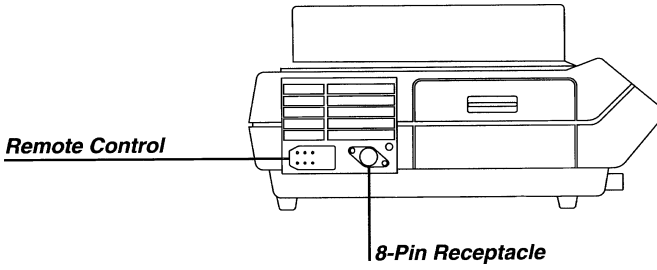
Side View



Front View



Rear View



Safety Precautions

To prevent damage to the equipment and operating personnel, please observe the following precautions:

Use the correct voltage source as specified on the label.

Make sure that the voltage source contains a satisfactory path to ground.

Do not operate the unit where liquids can come into contact with the electrical components.

Maintain a six inch air space around all sides of the equipment to allow for proper ventilation.

When changing the bulb:

1. Disconnect the electrical supply.
2. Allow the unit to cool.
3. Use only ESJ or ESH lamps or the equivalent (82 volt, 85 watt). Higher wattage lamps will cause severe internal damage to the camera and electronics.

There are no user serviceable components (other than changing the lamp). Opening the unit will expose dangerous voltage levels and sensitive electronic components. A qualified technician should perform all repairs.

To protect the unit from damaging condensation and thermal shock, certain procedures must be followed:

1. In cold weather, always put the unit in a moisture proof container or enclosure before transporting.
2. Either keep the unit warm during transportation, or allow sufficient time for it to warm up at the destination. Keep the unit in the original moisture proof package while it warms up. (The goal is to prevent warm, moist air from striking the cold electronic and optical components which will cause damaging condensation).

Warning



Never operate a cold projector to warm it up.

Quick Start

If you are familiar with both the operation of a 35 mm slide projector and your video display, you may follow an abbreviated start-up procedure.

Before starting, review the precautions on page 8.

To “Quick Start” the VideoMate 6100, proceed as follows:

1. Unwind the cord under the base of the unit and plug it into a suitable power supply.
2. Connect your VideoMate to the Digital Imaging Station and connect Digital Imaging Station to XGA Display Device.
3. Load the slide tray onto the projector.
4. Turn the TV monitor on and set the VideoMate power switch to HIGH.
5. Select a relatively “white” slide to represent the highest signal level the electronics must accommodate. Adjust the iris (I) and the TV monitor to produce a suitable image. The focus (F) should also be adjusted at this time.

NOTE: A very dark slide may require readjustment of the iris, but a setting can usually be reached that produces an acceptable display throughout a range of slides.

6. Adjust the zoom lens control to achieve the correct image size. This zoom lens can be zoomed in on slides for increased magnification, but cannot be zoomed out to view whole vertical slides.

Installation

Before starting, review the precautions on page 8.

To install the VideoMate 6100, proceed as follows:

1. Unwind the power cord under the base of the unit and plug it into a suitable power source.
2. Connect the cable to your peripheral equipment (TV monitor, video projector, etc.). The connection is a 4-PIN MiniDin for Y/C (S-Video) or a 15-PIN HD monitor cable for digital.
3. Load the slide tray and “power-up” all equipment
4. Switch the power switch to HIGH.
5. Adjust the iris (I) and TV monitor controls to produce satisfactory image. Select a darker slide to adjust the iris if necessary. The goal is to reach a compromise position.
6. Adjust the focus (F) to produce a clear image.

NOTE: Opening the iris will decrease depth of field. This means that the darker slides, you will open the iris more and will be able to judge focus more critically; but, it also means that any deformities in the slide will cause a visible “out-of-focus” condition.

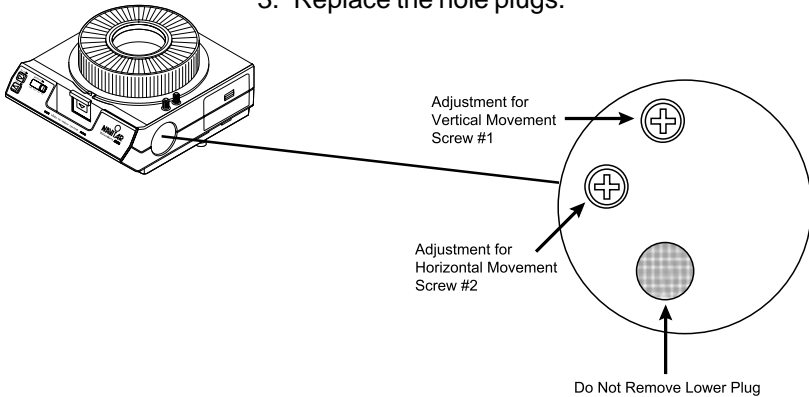
7. Adjust the zoom lens control located in the front. This zoom lens can be zoomed in on slides for increased magnification.
8. To shut the system down, hold the select bar down and rotate the slide tray to the zero index position. Set the power switch to OFF.
9. For instructions on setting up slide trays, changing lamps, etc., refer to the appropriate sections of this manual.

NOTE: Video connections should only be made to the source being utilized.

Adjustment of the Slide Position on the Monitor

Due to transportation, the image position might shift from the factory setting. To correct the shift:

1. Remove the two plugs as shown in the figure below.
2. Using a Phillips screw driver, rotate screw #1 to adjust the vertical position and screw #2 to adjust the horizontal position.
3. Replace the hole plugs.



Understanding Which Video Output is Best for You

Y/C (also known as S-video and S-VHS)

Improved resolution that is less grainy due to the elimination of dot crawl. Better for presentation of text and graphic slides, since words are more defined.

Digital (XGA)

True digital output produces more genuine color representation and even sharper text and graphic images. XGA resolution (1024 x 768) is compatible with computers, LCD projectors and plasma displays. Output available from the Digital Imaging Station box.

Digital IEEE 1394 (Fire Wire)

This digital output is available directly from the projector base. For connection to display devices that accept Fire Wire input, it is not necessary to use the Digital Imaging Station box.

Setting Up the Slide Tray

This system is designed to permit the use of already prepared presentations without requiring the reorientation of slides.

For those setting up a new tray and/or presentation:

1. Arrange the slides in the order that they should appear in the presentation. Arrange them so that they are upright and reading correctly from left to right.
2. Rotate each slide to turn the image upside down (do not turn the slide over). Mark a sequential number in the upper right corner of each slide (this will be extremely useful if the slides ever become mixed). Use a felt tip marker, rather than labels that will be loosened by the heat.
3. Make sure that the bottom metal plate on the slide tray is indexed into the zero position (the plate will not rotate with respect to the top tray). Remove the top lock ring by rotating it counterclockwise.
4. Insert slide #1 into slot #1. The number written on the upper right corner of each slide should be at the top and facing the next higher numbered slot. Load all slides and replace and lock the top lock ring.

Installing the Slide Tray

1. Center the tray over the post on the projector.
2. Gently rotate the tray until the #0 slide slot is at the index mark and the tray will drop into position. If the tray does not drop into position, check to see that the lower metal plate is locked in the zero position (rotate until it locks).

Removing the Slide Tray

To remove the tray from the projector without loosening the slides:

1. Hold the selector bar down and rotate the tray back to the zero index position.
2. Lift the tray at the point opposite the index mark.

Slide Tray Jam

The tray may jam if a damaged slide is caught in the gate. To release the tray:

1. Turn the unit off.
2. Push the select bar down and the slide should come up.

If the tray is still jammed:

1. While holding the projector post release tab located at the center of the slide tray, grasp the tray on the side opposite the index mark and lift. When the tray is removed, the select bar will release the slide.
2. Invert the slide tray and rotate the bottom metal plate until it locks into the zero position. This will prevent the slides from falling out from the bottom of the slide tray.
3. Return the tray to an upright position and remove the lock ring. If the slide is undamaged, return it to its proper slot. Replace the lock ring and continue.

Lamps

The VideoMate will function with either of the 85 watt, 82 volt lamps listed below. One provides a higher color temperature, while the other exhibits a much longer life.

Warning



To prevent a severe “melt-down,” do not use 250-300 watt, 82 volt slide projector lamps, or the equipment will suffer a severe melt-down.

Lamp#	Voltage	Watts	Life	Color Temp.
ESH	82	85	250 hr.	2950 K
ESJ*	82	85	40 hr.	3350 K

*Standard lamp supplied with VideoMate.

Replacing the Lamp

The entire illumination system is contained in a unit called a lamp module. This module is a drawer type configuration, which may be removed from the projector to change the lamp.

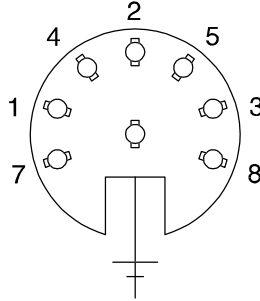
Unfortunately, it takes 5 to 10 minutes to change the lamp, because it must first be allowed to cool down. Therefore, if timing is critical, you should keep a spare lamp module on-hand in case a lamp burns out in the middle of a presentation. Replacing the module takes considerably less time than changing the lamp. Spare lamp modules can be purchased. Please call for price and availability (Navitar part #2-10299)

To change the lamp:

1. If the unit has been running, switch the power to FAN and wait 5 to 10 minutes for it to cool down.
2. Turn the power switch to OFF.
3. Press down on the door latch of the lamp module and pull it slowly outward until the module clears the projector.
4. Unclasp the wire bail which holds the lamp in place and push from underneath the lamp to slide the lamp out of the receptacle.
5. Reverse the procedure to insert the new lamp (make sure that the new lamp is properly seated).
6. Lock the new lamp into place with the wire bail.

8-Pin Receptacle

The 8-pin receptacle provides access to the circuitry of the projector and allows for additional external control and programming capability. Functions include forward and reverse slide change, sensing of the zero tray position when the shutter is closed and electrical grounding. 8-contact or "DIN-type" 3 and 5 contact plugs may be used. 22.5 volts of isolated power is available.



Warning



All circuits connected electrically to the projector through this receptacle must have a rating of no more than 30 V (rms) and must comply with Underwriters Laboratories, Inc. low voltage, limited-energy circuit requirements.

8-Pin Contact Data

1 and 3 (Zero Position Switch)

Connects to an internal single-pole, single-throw, normally open switch. Contacts are closed when the projector slide tray is at any position other than zero. These leads connect only to the switch terminals. Do not exceed a switching load of 1 A at 30 V ac.

4 and 5 (Shutter Switch)

Connects to an internal single-pole, single-throw, normally closed switch. Contacts are open when a slide is in the projector gate and the shutter is open. These leads connect only to the switch terminals. Do not exceed a switching load of 1 A at 30 V ac.

7 and 8 (Low Voltage Supply)

For operating external equipment. The current is supplied by a secondary winding on the main motor, isolated from the line-voltage power, and is available whenever the main projector motor is running. Supply is 25.5 V, 500 mA (1/2 A) maximum. Contact number 8 is common (return) for the remote-control circuit. Contact number 7 is the "hot" lead and is fused with a slow-blowing fuse. Replacement requires disassembly of the projector by a qualified technician

6 and 8 (Forward Tray Cycle)

Connects to the forward tray-advance circuitry in the projector. These contacts are connected internally to the remote-accessory receptacle and an electrical connection made at either receptacle will result in a forward cycle.

2 and 8 (Reverse Tray Cycle)

Connects to the reverse tray-advance circuitry in the projector. These contacts are connected internally to the remote-accessory receptacle and an electrical connection made at either receptacle will result in a reverse cycle.

Shell (Plug Ground)

If a plug with a conducting shell is used, it is connected to the projector frame (chassis) through the special application receptacle and to earth ground through the projector's power cable.

Camera Controls

The VideoMate 6100 is pre-programmed at the manufacturer. Plug and Play is the best setting for viewing, however, the Digital Imaging Station offers many other useful functions.

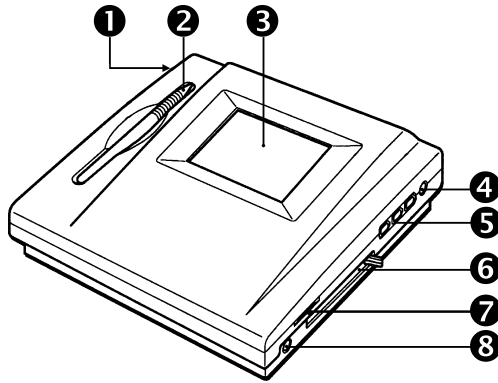
For a complete description of camera functions, see the enclosed Digital Imaging Station CD-ROM.



A Copy of the Digital Imaging System CD-ROM is included with the purchase of the VideoMate 6100 unit.

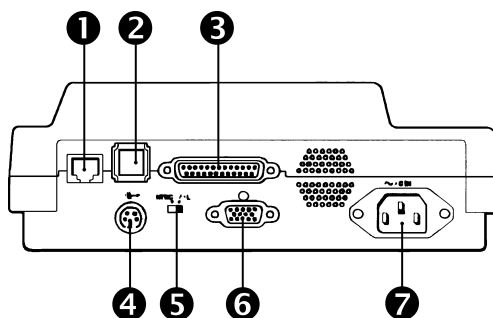
If you did not receive the CD-ROM with the unit, please contact Navitar at 585-359-4000 or 800-828-6778 to request a copy.

Location and Function of Parts



1. **Power Switch**
Turns the unit on/off.
2. **Stylus Pen**
Lightly tap the LCD touch screen with this pen to operate the unit. Controls have been preset at the factory for ease of use.
3. **LCD Touch Screen**
Displays the menu of the application software or the Windows CE.
4. **Trigger Input Connector**
Connect the optional RM-91 trigger switch or FS-20 foot switch to input external trigger signals.
5. **Camera 1/2/3 Input Connectors (6-pin)**
Conform to the IEEE 1394 format.
6. **PC Card Slot**
Insert a memory stick into the optional PC card adaptor (PCMCIA Type II) and the PC card adaptor into this slot. To eject the PC card adaptor, press the release button to the right of the slot.
7. **Brightness Control**
Adjusts the brightness of the LCD touch screen.
8. **Keyboard Connector**
Connect the PS/2 keyboard.

Location and Function of Parts on Rear Panel

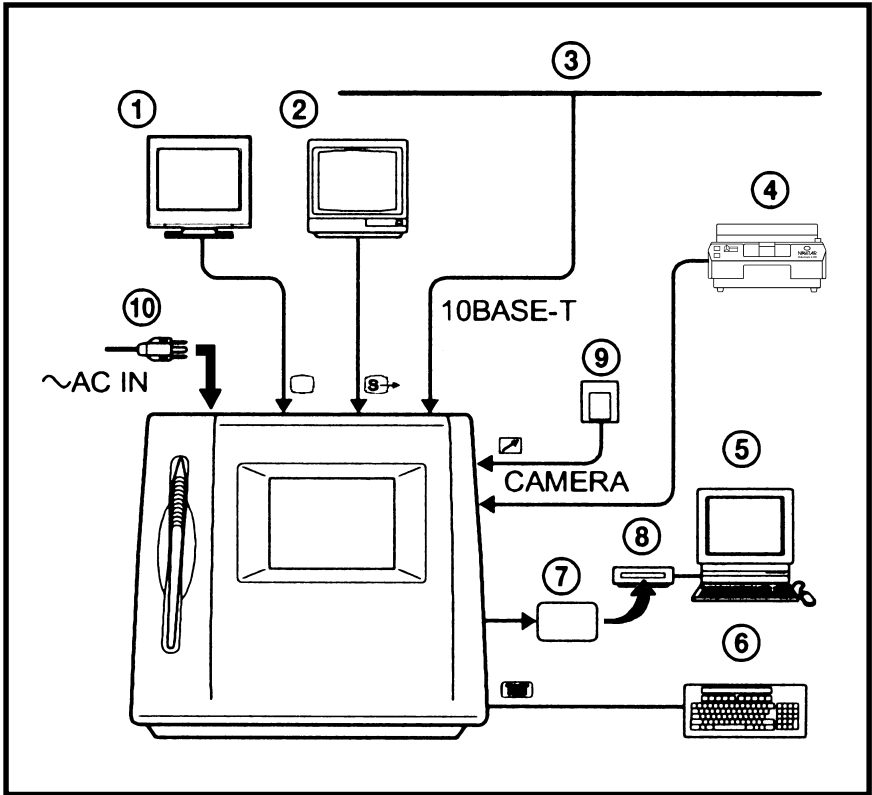


1. **Network Port (10 BASE-T)**
Use the ETHERNET cable to connect to LAN.
2. **USB Port**
Provided for use in the future if required.
3. **Printer Port**
Provided for use in the future if required.
4. **S-Video Output Connector**
Connect to the S-Video input connector of a TV monitor.
5. **NTSC/PAL Selector**
Set according to the color system of the connected TV monitor. After changing the position, turn off the power and turn it on again.
6. **XGA Output Connector**
Connect to the RGB input connector of the multiscan PC monitor. (XGA or VGA output)
7. **AC In Connector**
Connect a power cord which meets the safety regulations of the country where you are using the unit.
(Power requirements: 100 to 240 V AC 50/60 Hz.
Current consumption: 0.65 to 0.35 A)

Connection Example

The following diagram shows an example of the system configuration using the DFSW-77.

1. Multiscan PC Monitor
2. TV Monitor
3. Network (LAN)
4. VideoMate 6100 or Camera
5. Computer
6. Keyboard
7. PC Card
8. PC Card Reader
9. RM-91 Trigger Switch or FS-20 Foot Switch
10. Power Cord



SYMPTOM	CAUSE/REMEDY
There is no image on-screen.	<p>Is all of the equipment "powered-up?" Check all of the electrical outlets and equipment power switches.</p> <p>Are the cables or connectors bad?</p> <p>Is the lamp blown? Look in the film gate for a "light on condition."</p> <p>Is the gate shutter stuck in the closed position? Push down on the select bar to release it.</p> <p>Turn the power switch to OFF, wait one minute and then try to restart.</p>
You are unable to recover the image after a brief interruption of power.	<p>Is the lamp blown? The thermal shock of turning the unit on may have caused the lamp to blow.</p> <p>Is the gate shutter stuck in the closed position? Push down on the select bar to release it.</p>
The image is too dark or too light.	<p>Is the illumination level adequate? Set the iris (I) as required.</p> <p>Is the monitor adjusted correctly?</p>
The image is too dark.	<p>Are the cables for Composite video and Y/C both connected? Only the source being utilized should be connected.</p>
The image is not sharp.	<p>Is the focus adjusted properly?</p> <p>Is the illumination level too high? Set the iris (I) as required.</p> <p>Is the monitor adjusted correctly?</p> <p>Are you using the correct grade of cables? They should be "grounded shield video" grade, 75OHM.</p>

Camera

Pick-up Device	1/2" Progressive Scan CCD
Pixel Count	1034 (H) x 779 (V) @ 800,000 EPE
Signal System	IEEE 1394 Digital (1024 x 768)
Horizontal Resolution	XGA (1024 x 768)
Sensitivity	Adjustable via software
Genlock	No genlock
S/N Ratio	N/A
Digital Interface	IEEE 1394-1995
Transfer Rate	400Mbps / 200Mbps
Frame Rate	15 or 7.5 fps
Power Requirements	DC 8-30V from IEEE 1394 cable
Power Consumption	3.3W (DC 12V)

Projector

Model Number	1-14388
Power Consumption	191 watts, 1.7 amps
Power	120 volt, 60Hz
Projector Lamp	82 volt, 85 watt GE ESJ
Slide Projector	Modified Kodak Ektagraphics III E+
Lens	18-35mm
Iris/Focus Controls	Manual
Slide Tray Capacity	Kodak 80 or 140 slide tray
Controls/Manual	On/off, forward/reverse, zoom in/out, focus and iris
Remote Operation	Projector forward/reverse and all camera functions controllable via computer, standard 5-pin wired or wireless, or external dissolve 7-pin
Camera Connectors	IEEE 1394 (Firewire) XGA MiniDin for Y/C (S-Video)
Dimensions	Length 11.11" / 282 mm Width 12.93" / 328 mm Height 4.69" / 119 mm Weight 15 lbs. / 6.82 kg.
Video Cables (optional)	8-11113, 12 foot S-Video cable

1 Year Parts / 1 Year Labor

This product is warranted to be free from defects material and workmanship for a period of five years from the date of invoice to the original purchaser.

If during the warranty period the product is found to be defective, it will be repaired or replaced at the facilities of Navitar. However, Navitar reserves the right to refund the purchase price if the replacement or repair is not commercially practical or timely. Parts not manufactured by Navitar carry only the warranty of their manufacturer. Lamps and fuses carry no warranty.

This warranty does not cover damage caused in transit; damage caused by misuse, neglect or carelessness; or damage resulting from either improper servicing or modification by someone other than Navitar. Further, this warranty does not cover any routine maintenance work that is reasonably expected to be performed by the purchaser.

No responsibility is assumed for unsatisfactory operating performance due to environmental conditions such as humidity, dust, corrosive chemicals, deposition of oil or other foreign matter, spillage or other conditions beyond the control of Navitar.

For service, repair or return procedures under this warranty, contact your distributor, your local Navitar field officer or Navitar direct at (585) 359-4000 or (800) 828-6778 in the United States.

Except as stated herein, Navitar makes no other warranties, expressed or implied by law, whether of merchantability, fitness for a particular purpose or otherwise. Further, Navitar shall not, under any circumstances, be liable for incidental, consequential or other damages.

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