SHIVA SV-150R/200R/250R™



Unprecedented performance comes in this promising package -- the first die-cast aluminum scanner case made in Asia. SHIVA™ scan has the form to entice and the functions to captivate.

GENI

CAUTION!

Risk of electric shock
Read instructions before installing
or connecting to power

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CONTENTS

ABOUT SHIVA-150R/200R/250R™

Description ..... Page 1
Features ..... Page 1
Scanner Diagrams ..... Page 2
Warning ..... Page 3

SECTION 1 - SETTING UP

Inspection ..... Page 3
Lamp Installation ..... Page 4
Scanner Installation ..... Page 5
Focusing the Lens ..... Page 5

SECTION 2 - OPERATION

DMX512 Control ..... Page 6
Channel Control Positions ..... Page 6
Function Settings ..... Page 6
Service Dip Switches ..... Page 7
Maintenance ..... Page 8
Lamp Removal ..... Page 8
Trouble-shooting ..... Page 9
Product Specifications ..... Page 10

APPENDIX 1

DMX Address Chart ..... Page 11

APPENDIX 2

DMX Channel Control Diagram ..... Page 12

APPENDIX 3

Gobos ..... Page 13

APPENDIX 4

Gobo Dimensions ..... Page 14

ABOUT SHIVA-150R/200R/250R™

Description

Unprecedented performance comes in this promising package -- the first die-cast aluminum scanner case made in Asia. Shiva-150R/200R/250R™ scanner has the form to entice and the functions to captivate.

Excellent optics provide high lumen output. Six rotating replaceable gobos, nine pure dichroic colors + white, strobe and dimming provide variety for great light shows. Precision engineering and quality components make for smooth movement and exact X/Y placement. Shiva-150R/200R/250R™ scanner is value-engineered to beat all competition.

And with every model, Geni's user-oriented design lets you work at your convenience. User aids, including focus assistance, self-test function, X/Y direction control, and color/gobo change transition options, enhance programming convenience and pleasure.

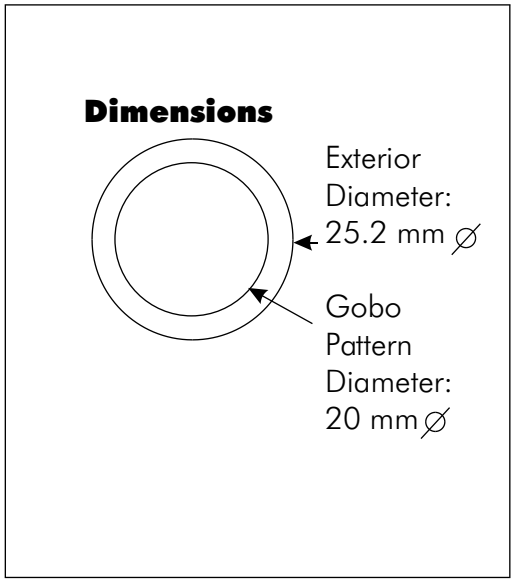
Shiva-150R/200R/250R™ is the scanner to win with.

Features

- Die-cast aluminum case for beauty and strength
- Excellent optics for high lumen output:
  - Large optical path
  - AR & IR coated lenses
- Effect variety to make great shows:
  - Six rotating replaceable gobos
  - Nine dichroic colors + white
  - Strobe and dimming
- Engineered to perform:
  - Innovative single-motor shutter, 1-7 frequency-per-second strobe
  - True mechanical linear dimming 0-100%
  - 170° pan, 90° tilt
  - Smooth micro-stepping
- Built to last:
  - 6 precision, quality stepper motors
  - Axial fans with long-life ball bearings
- Convenient to use:
  - Focus, self-test, X/Y direction options, and more

APPENDIX 4

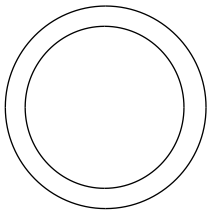
Gobo Dimensions



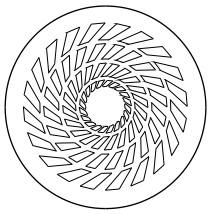
Note: Shiva-150R/200R/250R™ scanner gobos are suitable for these two scanners. They can also be used in Sharma-200™ color changers. Do not install gobos from Shiva-150R/200R/250R™ into non-rotating gobo scanners Shiva-150/200/250™ .

APPENDIX 3

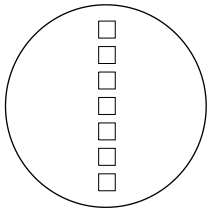
SHIVA-150R/200R/250R™ Scanner Gobos



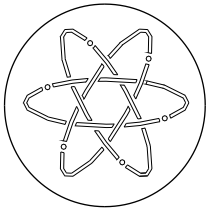
Gobo 1



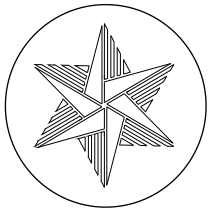
Gobo 2



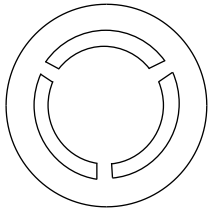
Gobo 3



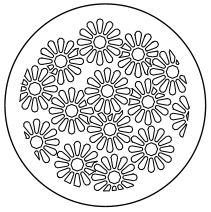
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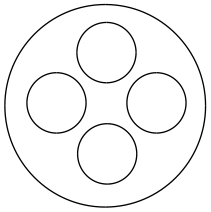
Gobo 5



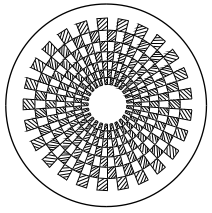
Gobo 6



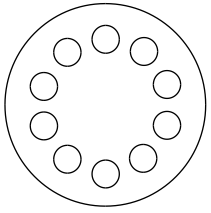
Gobo 7



Gobo 8



Gobo 9



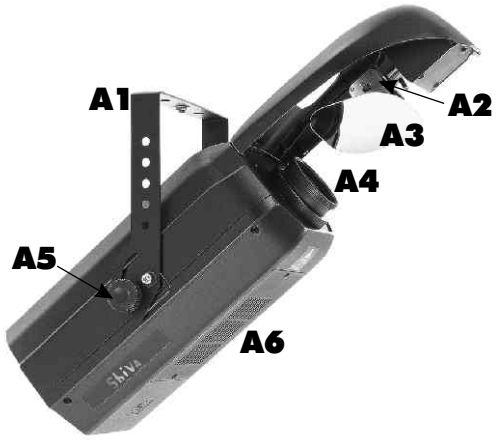
Gobo 10

Note: Gobos 1-6 are standard in SHIVA-150R/200R/250R™ scanners. Gobos 7-10 are also available.

SHIVA™ Scanner Diagrams

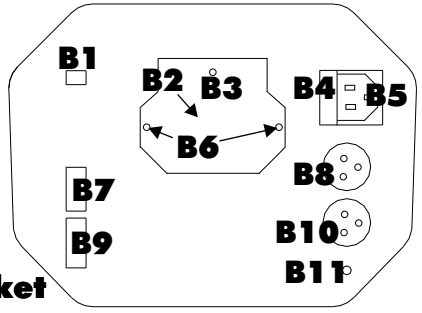
SHIVA™ Scanner

AI - Bracket
A2 - Stepper Motor
A3 - Mirror
A4 - Lens
A5 - Bracket Knob
A6 - Air Vents



SHIVA™ Scanner Back Panel

B1 - Service Dip Switches
B2 - Slide-out Lamp Holder
B3 - Middle Screw
B4 - Fuse Holder
B5 - IEC Power Socket
B6 - Lamp Holder Screws
B7 - Function Dip Switches
B8 - Canon DMX Signal Socket (Signal Out)
B9 - DMX Dip Switches
B10 - Canon DMX Signal Socket (Signal In)
B11 - Earth Ground



Warning!

Follow standard precautions for all electronic products.

- This appliance must be earthed (grounded). Disconnect from power before removing covers or servicing. Keep case closed while operating.
- Shiva-150R/200R/250R™ scanner contains no user serviceable parts. Refer servicing to qualified technicians only.
- Lamp and components become hot during operation. Allow time to cool before handling.
- Keep flammable material at least one meter away from unit. Do not operate in wet conditions or near liquids.
- Keep air vents clear to avoid overheating. Never insert objects into air vents.
- Lamp produces hazardous UV light. Do not look directly at lamp when lit. Do not expose skin to uncovered lamp.
- If objects fall on unit, disconnect mains power supply immediately. Have a qualified technician inspect for safety before operating.
- Never remove warning or informative labels from the unit.

SECTION 1 - SETTING UP

Inspection

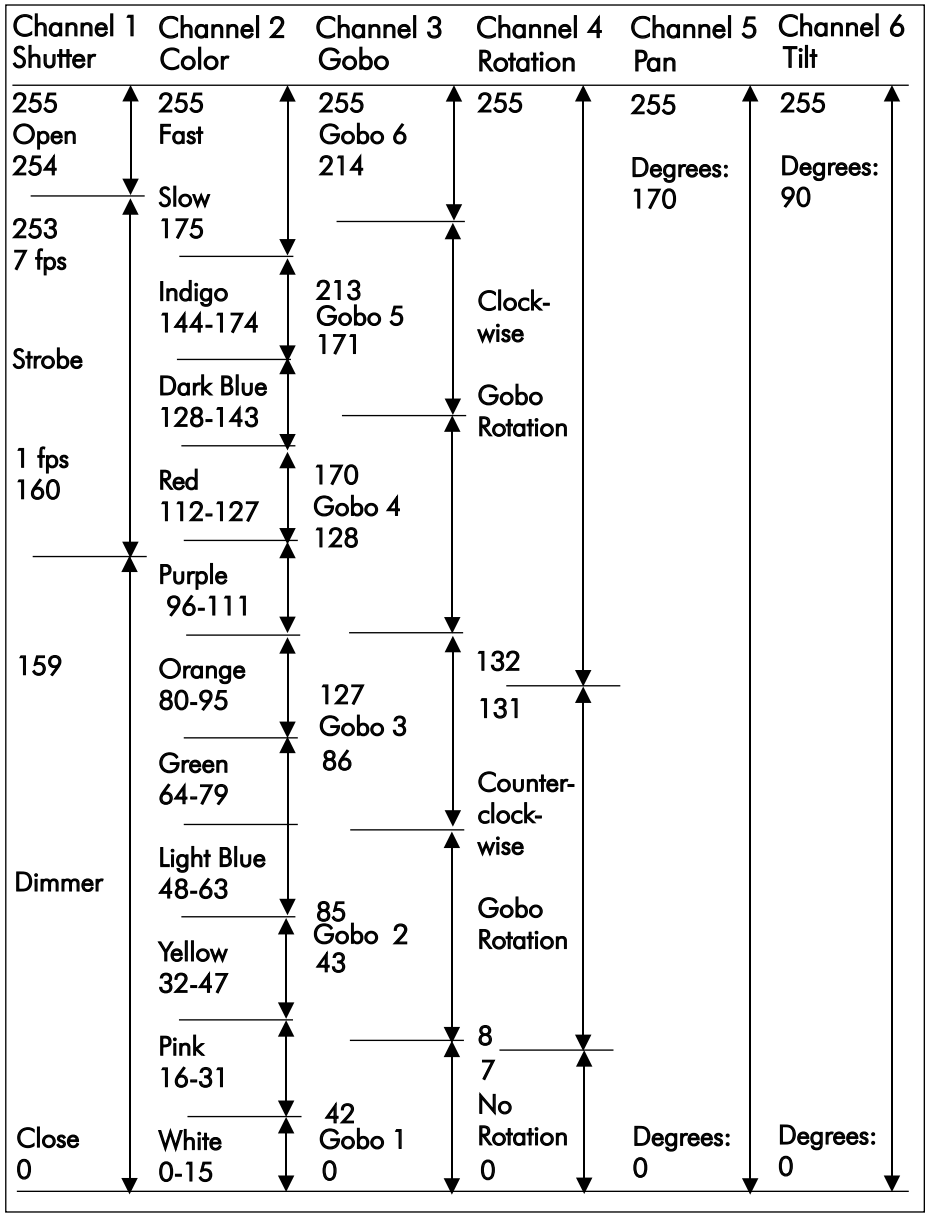
Every Shiva-150R/200R/250R™ scanner was thoroughly tested and shipped in perfect condition. Carefully unpack your Shiva-150R/200R/250R™ scanner and remove the bag with components from the carton. Inspect equipment for shipping damage. Contact your Geni dealer immediately if damage has occurred or if something is missing.

Packing list:

- Shiva-150R/200R/250R™ scanner
- IEC power cord
- Operating manual

APPENDIX 2

DMX Channel Control Diagram



APPENDIX 1

DMX Addressing Chart

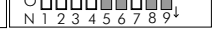
DMX512 Dip switches and values have the following relationship:

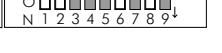
Dip Switch	1	2	3	4	5	6	7	8	9
DMX Value	1	2	4	8	16	32	64	128	256

This means, for instance, that the first DMX dip switch has a DMX value of 1, and the fifth DMX dip switch has a value of 16.

Since each Shiva-150R/200R/250R™ has 6 channels, starting addresses would be set as follows: First scanner starting address = 1; Second scanner starting address = 7, etc.

Use a ball-point pen or toothpick to set dip switch addresses appropriately. See the guide DMX512 Basics for more information. For convenience, Shiva-150R/200R/250R™ starting addresses for 28 units and corresponding DMX dip switch settings are listed below.

SHIVA	Address	Dip Switches
Unit 1	1	
Unit 2	7	
Unit 3	13	
Unit 4	19	
Unit 5	25	
Unit 6	31	
Unit 7	37	
Unit 8	43	
Unit 9	49	
Unit 10	55	
Unit 11	61	
Unit 12	67	
Unit 13	73	
Unit 14	79	

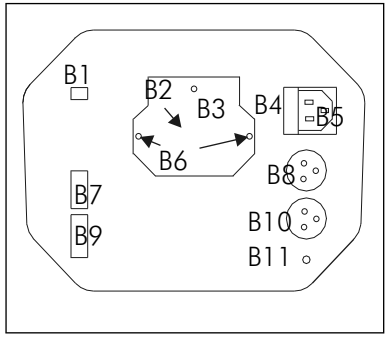
SHIVA	Address	Dip Switches
Unit 15	85	
Unit 16	91	
Unit 17	97	
Unit 18	103	
Unit 19	109	
Unit 20	115	
Unit 21	121	
Unit 22	127	
Unit 23	133	
Unit 24	139	
Unit 25	145	
Unit 26	151	
Unit 27	157	
Unit 28	163	

For the sake of brevity, this manual refers to "Shiva-150R/200R/250R™ " scanner. Actually, "Shiva-150R/200R/250R™ " refers to the three scanners with similar functions: Shiva-200R™ scanner uses HSD-200 lamp which has a 2000-hour lamp life. Shiva-250R™ scanner uses EHJ 64655 G6.35 24V/250W (50-hour) or EHJ 64657 G6.35 24V/250W (300-hour) lamp. Shiva-150R™ uses PHILIPS CDM-SA/T 150W/942 . Always use the correct lamp for your unit.

Lamp Installation

Caution! Lamp and metal components get hot during operation. Always disconnect power and allow unit to cool before opening the unit cover.

1. Loosen two screws (B6) on the slide-out lamp holder (B2). Don't loosen the middle screw (B3). Pull the lamp holder (B2) out as far as possible, about 10 cm.
2. Remove lamp from packaging. Read lamp instructions. Do not touch lamp bulb with bare hands, as this could damage the lamp. Grasp the lamp stem and wear lint-free gloves.



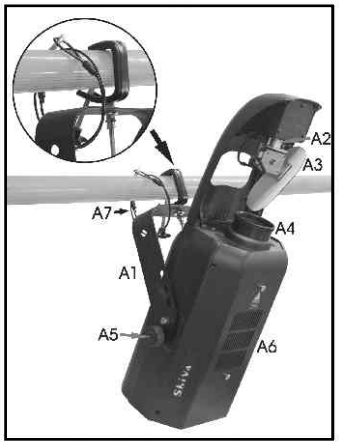
3a. For Shiva-150R™ scanner: Note that the CDM-SA/T 150W/942 lamp stem has two pegs, one thicker than the other. Match the pegs with the holes in the lamp socket. Insert the pegs into the lamp socket.

3b. For Shiva-200R™ scanner: Use HSD-200 lamp ,Same as above procedure.

3c. For Shiva-250R™ scanner: Use either EHJ 64655 G6.35 24V/250W (50-hour) or EHJ 64657 G6.35 24V/250W (300-hour) lamp. Both of these lamps have two pegs of the same size. Insert pegs into the lamp Socket.

4. Make sure the lamp is in straight. Push the lamp mechanism (B2) straight back into place and fasten screws (B6) on the lamp holder (B2). If you feel strong resistence when pushing the lamp

Scanner Installation



1. Use a 35-kg rated or stronger clamp to secure the scanner bracket (A1) onto a firm truss. Tilt unit as desired and tighten scanner bracket knobs (A5). Allow at least onem eter on all sides for proper cooling. Keep unit away from liquids and flammable items. Lastly, pass safety rope (A7) through bracket of the unit, hitch the safety rope round the truss and buckle it up.
2. Link DMX512 signal cables to the DMX sockets B8 and B10 on the back plate of the scanner. "Daisy chain" the scanners as illustrated in the guide *DMX Basics*. Always use high quality, twisted pair 120 ohm shiel ded, 22 or 24 AWG, braided shield microphone cables and three-pin canon XLR connectors.
3. Set scanner DMX addresses by flipping the appropriate DMX dip switches. For more information, see *Appendix 1*, the *DMX512 Address Chart* and the guide *DMX512 Basics*.
4. Avoid signal interference by flipping Function dip switch #8 to the "on" position on the last scanner in a series of DMX units.
5. Check that your power supply and the specified scanner voltage are the same. Plug mains power cord into the IEC socket (B5) on the back of unit. Plug the mains power cord into properly grounded power supply.
6. The lamp will light (but may be covered by the shutter). You might hear the color and gobo wheels reset and pause. New scanners sometimes smoke and emit an odor briefly as paint and dust are burnt away.
7. external flexible cable or cord of this luminaire is damaged, it shall be replaced by a special cord or cord exclusively available from the manufacturer or his service agent.

Focusing the Lens

1. Set Function dip switch #7 to the "on" position.
2. The scanner shutter will open, pan and tilt will align to center, and a small white spot will appear for easy focusing.
3. Rotate lens to obtain a sharp focus.

Product Specifications

Model: SHIVA-150R™ scanner
Dimensions: 670x300x180mm
Lamp: PHILIPS CDM-SA/T 150W/942
Voltage: 120V~60Hz
Weight: 15.4 kgs
Power consumption: 300VA
Fuse: T5A/250V 20mm
Signal: USITT DMX512
Signal connection: 3-pin XLR
Signal termination: built-in (manual)
Addressing: Standard DMX512 9-pin binary
Channels: 6

Model: SHIVA-200R™ scanner
Dimensions: 670x300x180mm
Lamp: HSD-200 or MSD-200
Voltage: 230V~50Hz
Weight: 15 kgs
Power consumption: 300VA
Fuse: T5A/250V 20mm
Signal: USITT DMX512
Signal connection: 3-pin XLR
Signal termination: built-in (manual)
Addressing: Standard DMX512 9-pin binary
Channels: 6

Model: SHIVA-200R™ scanner
Dimensions: 670x300x180mm
Lamp: HSD-200 or MSD-200
Voltage: 120V~60Hz
Weight: 13 kgs
Power consumption: 500VA
Fuse: 7A/250V 20mm
Signal: USITT DMX512
Signal connection: 3-pin XLR
Signal termination: built-in (manual)
Addressing: Standard DMX512 9-pin binary
Channels: 6

Model: SHIVA-250R™ scanner
Dimensions: 670x300x180mm
Lamp: 24V/250W EHJ 64655 G6.35
or 24V/250W EHJ 64657 G6.35
Voltage: 230V~50Hz; 120V~50/60Hz
Weight: 15 kgs
Power consumption: 300VA
Fuse: T5A/250V 20mm
Signal: USITT DMX512
Signal connection: 3-pin XLR
Signal termination: built-in (manual)
Addressing: Standard DMX512 9-pin binary
Channels: 6

Trouble-shooting

The following trouble-shooting guide is provided to help product users solve minor problems. Always refer servicing to a qualified technician.

Problem: Lamp is not lit and fan is not turning. (Fan can be seen through the back panel.)
Solution:

1. Check electric mains for proper power connection. Check that the power supply matches product power supply specifications.
2. Check the fuse. First, disconnect mains power supply. Use a flat-head screwdriver to pry open the fuse holder casing (B4) near the IEC socket (B5). If the fuse is discolored, rather than clear, replace it. A replacement fuse is provided in the fuse holder (B4). Always use appropriate type of fuse. (See *Product Specifications*.)

Problem: Lamp light is not visible but fan is turning.
Solution:

1. Adjust your DMX controller sliders to open the scanner shutter channel, channel 1. Refer to *Appendix 2* and controller instruction manual if necessary.
2. Check DMX512 dip switch settings. Make sure the unit is addressed properly. Make sure that Function dip switches 1-5 and 7 are off.
3. Disconnect DMX512 cable. Turn on Function dip switch #4, activating the self-test function. If scanner operates properly, the DMX signal cable or connector is likely at fault. Replace the DMX cable.
4. Disconnect power. Let unit cool. Check lamp. If lamp is cracked or discolored, rather than clear, replace it. See *Lamp Installation* and *Lamp Removal* sections for details.
5. If lamp is not discolored or cracked, reinsert it. Close the lamp holder, tightening two screws (B6) securely. Connect power.
6. If lamp doesn't light, refer servicing to a qualified technician.

SECTION 2 - OPERATION

DMX512 Control

Proper DMX512 addresses must be set on each scanner. Appendix 1 is a Chart of standard addressing for the six-channel Shiva-150R/200R/250R™ scanner. Refer to the guide DMX512 Basics for more information.

Channel Control Positions

When using a DMX controller, channels correlate with scanner functions. So when you move a slider on the color channel, for example, the colors will change. Shiva-150R/200R/250R™ scanner effect channels follow:

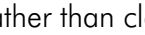
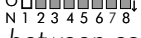
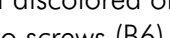
Channel 1 Shutter: Strobe and Dimming	Channel 2 Colors	Channel 3 Gobos	Channel 4 Gobo Rotation	Channel 5 Pan	Channel 6 Tilt

Please refer to *Appendix 2*, the *DMX Channel Control Diagram*, for a more detailed explanation of effect positions.

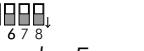
Function Settings

Function settings are designed to make installation and programming convenient and fast. Simply activate a Function dip switch to get the option you want.

Function Dip Switch Diagram

#1 Off  *Transitions between colors and gobos are visible.*	*#1 On*  *Transitions between colors or gobos are covered by the shutter.*
#2 Off  *Color wheel stops at any position; Single colors or adjacent two-color combinations are possible.*	 *Color wheel stops only at full color positions. Only single colors are possible.*
#3 Off *Exterior control mode. For use with any DMX controller.*	*#3 On*  *Built-in slow motion program is activated.*

Function Dip Switch Diagram (Cont.)

#4 Off  *Exterior control mode. For use with any DMX controller.*	*#4 On*  *Self-test function; scanner runs through a pre-set pattern of actions.*
#5 Off  *X-axis (pan) movements progress from left to right.*	*#5 On*  *X-axis (pan) movements progress from right to left.*
#6 Off  *Y-axis (tilt) movements progress from low to high.*	*#6 On*  *Y-axis (tilt) movements progress from high to low.*
#7 Off  *Exterior control mode. For use with any DMX controller.*	*#7 On*  *Focus assistance is activated; a gobo appears for easy focusing.*
#8 Off  *Exterior control mode. For use with any DMX controller.*	*#8 On*  *DMX512 signal termination; activate this function dip switch on the last in a series of DMX units to maintain a clear signal.*

Service Dip Switches

Service dip switches are aids to technicians working on Shiva-150R/200R™ scanner. They have two functions, both of which are explained below.

Service Dip Switch Diagram

#1	On		Motor power supply is "off" while lamp is lit.
#2	On		Motor power supply is "on" while lamp is not lit.

For general use, do not activate Service dip switches.

Note that Shiva-250R™ scanner does not have service dip switches.

Maintenance

Warning: Disconnect power and let unit cool before handling. Never open unit cover when in use. Keep away from water and other liquids.

Lamps have special characteristics that should be observed to prolong their use. Wait about ten minutes after disconnecting electric power to Shiva-150R/200R™ scanner before supplying power again. The CDM-SA/T 150W/942 and HSD-200 lamp will not relight immediately after being turned off. Wait about one minute after disconnecting power to Shiva-250R™ scanner before supplying power again. Even though halogen lamps, like EHJ 64657 G6.35 24V/250W, restart quickly after being extinguished, wait one minute to protect scanner electronics.

To maintain maximum brightness, clean the unit regularly with a damp cloth or glass cleaner.

1. Wipe lens clean regularly.
2. Keep internal optical path free from dust or cobwebs.
3. Clean internal parts once a year with a brush and strong vacuum

Lamp Removal

To remove lamps, follow the directions below. Always allow unit to cool before changing lamps or opening the unit cover.

1. Loosen two screws (B6) on the slide-out lamp holder (B2). Do not loosen the middle screw (B3). Pull the lamp holder (B2) out as far as possible, about 10 cm.

2. With one hand on the lamp socket and the other on the stem of the lamp bulb, pull the lamp stem away from the socket.

3. Dispose lamps properly. Keep used lamps away from children and animals.