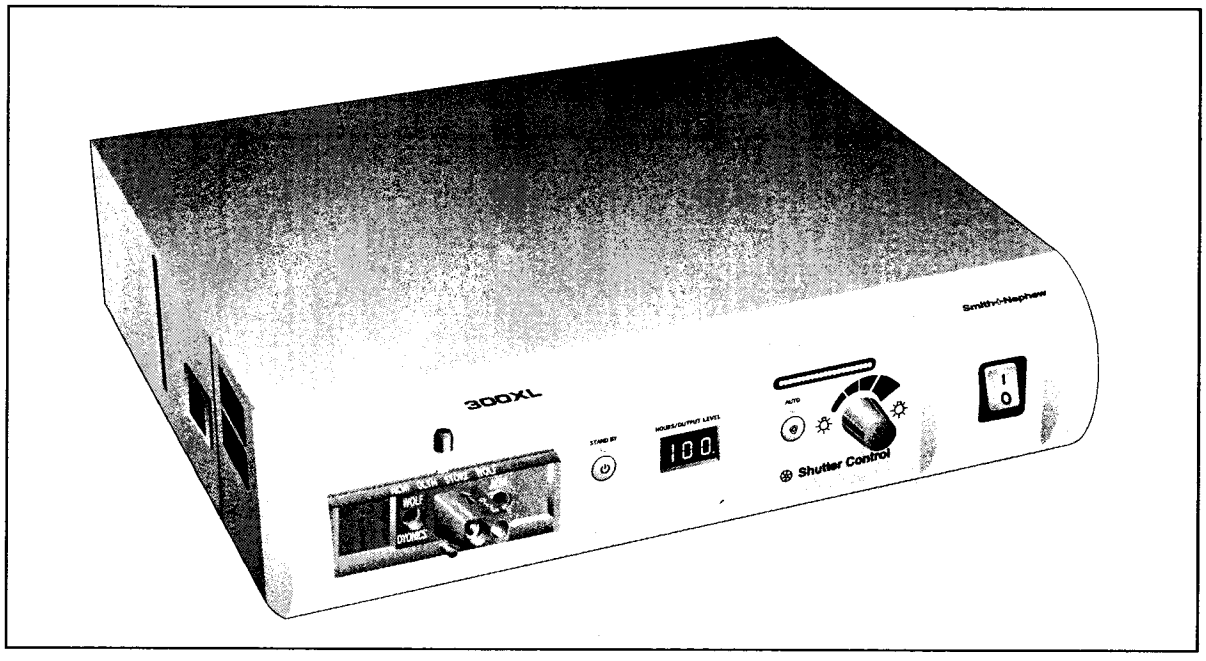
Smith+Nephew

Dyonics® 300XL Xenon Light Source

Operations/Service Manual



CE

DYONICS®

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SYMBOLS

Power On


Off for Part of Equipment


Electrical Shock Hazard


Type BF Equipment


Brighter


Darker


Fuse


Caution: See Instructions for Use


Shutter Control


Automatic (AUTO)


STAND BY


Video In


Date of Manufacture


Serial Number


UL Classification


UL Classification

CONTENTS

INTRODUCTION AND INDICATIONS

The high-performance Dyonics® 300XL Xenon Light Source is a state-of-the-art system built to provide years of reliable service. The 300XL is designed to operate with the Dyonics Digital Video camera systems for use in endoscopic procedures.

The Dyonics 300XL lamp provides intense, white light at over 5700° K color temperature and is suitable for virtually all endoscopic video requirements.

The Dyonics 300XL Xenon Light Source will operate with fiber optic and liquid light cables.

PLEASE BE SURE TO READ ALL THE INFORMATION IN THIS MANUAL CAREFULLY BEFORE USE.

INDICATIONS

Suitable for use in endoscopic surgical procedures.

CONTRAINDICATIONS

Not intended for use except as indicated above.

Not intended for use where endoscopic surgery is contraindicated.

This manual will familiarize you with the Dyonics 300XL Xenon Light Source, including the steps which should be taken for proper care and maintenance of the unit. Adherence to these steps will ensure many hours of reliable operation.

Prior to using the light source, it is essential that all components of the system be inspected for damage which can negatively impact the equipment performance. The inspection should include all equipment to be used in surgery, including scope, cables and accessories.

Remove the light source and accessories from the shipping container and inspect contents to ensure that all components are accounted for.

Contact your Smith & Nephew representative if damage is noted.

WARNINGS

Please read this manual before using the Dyonics® 300XL Xenon Light Source. The brief operating instructions in this guide will make the system easier to use, while the recommended maintenance procedures will ensure optimal performance for years of reliable use. As with any surgical instrument, there are important health and safety considerations. These are listed below and reiterated within the text.

⚠ WARNINGS

- **During operation, avoid prolonged contact of scope tip to patient tissue or flammable materials. Scope tip may reach high temperatures due to high-intensity light transmission.**
- **Possible explosion hazard if used in the presence of flammable anesthetics.**
- **When the light source is turned on, do not look directly at the Xenon arc lamp without protective goggles. The high-intensity, visual, infrared, and ultraviolet radiation of the Xenon lamp may cause burns to the skin, or permanent damage to eyes.**
- **The main enclosure of the Dyonics 300XL Xenon Light Source contains potentially dangerous high voltage. Access to the enclosure of the light source is achieved by removing the top cover. This cover should be removed only by personnel qualified to service electronic equipment.**
- **Hazardous high voltage and energy are present at the output and in the internal circuitry of this unit.**
- **In some cases, high voltage may persist after the power has been removed. Only personnel qualified to service electronic equipment should operate or troubleshoot an "uncased" power supply.**
- **The high internal pressure of the lamp may cause an explosion, regardless of whether the lamp is cold or hot. Never remove the lamp from the lamp module. When replacing the lamp, replace the entire lamp module. Always wear protective clothing and a face mask when handling the lamp module.**
- **Do not hold the shutter open without a light guide in place. Failure to observe this precaution may result in eye injury or burns to the skin, clothing or other material inadvertently placed in front of the light guide port.**
- **The use of accessory equipment not complying with the equivalent safety requirements of this equipment may lead to a reduced level of safety of the resulting system. Consideration relating to the choice shall include:**
  - **Use of the accessory in the patient vicinity.**
  - **Evidence that the safety certification of the accessory has been performed in accordance to the appropriate IEC 60601-1 and/or IEC 60601-1-1.**
- **If this unit is configured as part of a system, the entire system should be tested for compliance with IEC 60601-1-1.**
- **If the leakage current of the configured system exceeds the limits of IEC 60601-1, install an appropriately rated, UL 2601-1 approved isolation transformer and retest the system.**

CAUTIONS

CAUTIONS

- **U.S. FEDERAL LAW RESTRICTS THIS DEVICE TO SALE BY OR ON THE ORDER OF A PHYSICIAN.**
- *Disconnect power cord before cleaning the unit.*
- *Power switch must be turned off, and power cord disconnected from power source, before attempting to replace lamp module.*
- *Replace only with appropriate Smith & Nephew lamp module specified for the light source, 300XL Xenon replacement module (REF 7207398). Use of any other lamp module will void the warranty.*
- *Lamp module may be very hot. Touch only the mounting handle on the lamp module; other parts may be extremely hot. Use protective eyewear when handling module.*
- *There are no user-replaceable parts inside the light source case. Refer unit to a qualified technician for replacement of the internal fuse.*
- *Replace the lamp module after 500 hours.*
- *Do not leave the operating light cord on a patient or the drapes. Failure to observe this precaution may result in burns to the patient and/or the surrounding drapes.*
- *This unit complies with IEC 60601-1-2. However, the user must be aware that this does not necessarily insure protection of the unit against interference from other devices.*
- *Do not place the multiple portable socket outlet on the floor.*
- *Do not operate at line voltages other than those stipulated on the back of the unit.*
- *Handle the unit with care. If the unit is dropped or damaged in any way, it must be returned immediately for service.*
- *Electrical safety testing should be performed by a biomedical engineer or other qualified person.*
- *This equipment is designed and tested to minimize interference with other electrical equipment. However, if interference occurs with other equipment it may be corrected by one or more of the following measures:*
  - *Reorient or relocate this equipment, the other equipment, or both.*
  - *Increase the separation between the pieces of equipment.*
  - *Connect the pieces of equipment into different outlets or circuits.*
  - *Consult a biomedical engineer.*
- *This equipment contains electronic printed circuit assemblies. At the end of the useful life of the equipment it should be disposed of in accordance with any applicable national or institutional related policy relating to obsolete electronic equipment.*
- *Ensure that the lamp module is not installed in the light source before removing or replacing the light source cover.*

CONTROLS AND FUNCTIONS

FRONT PANEL

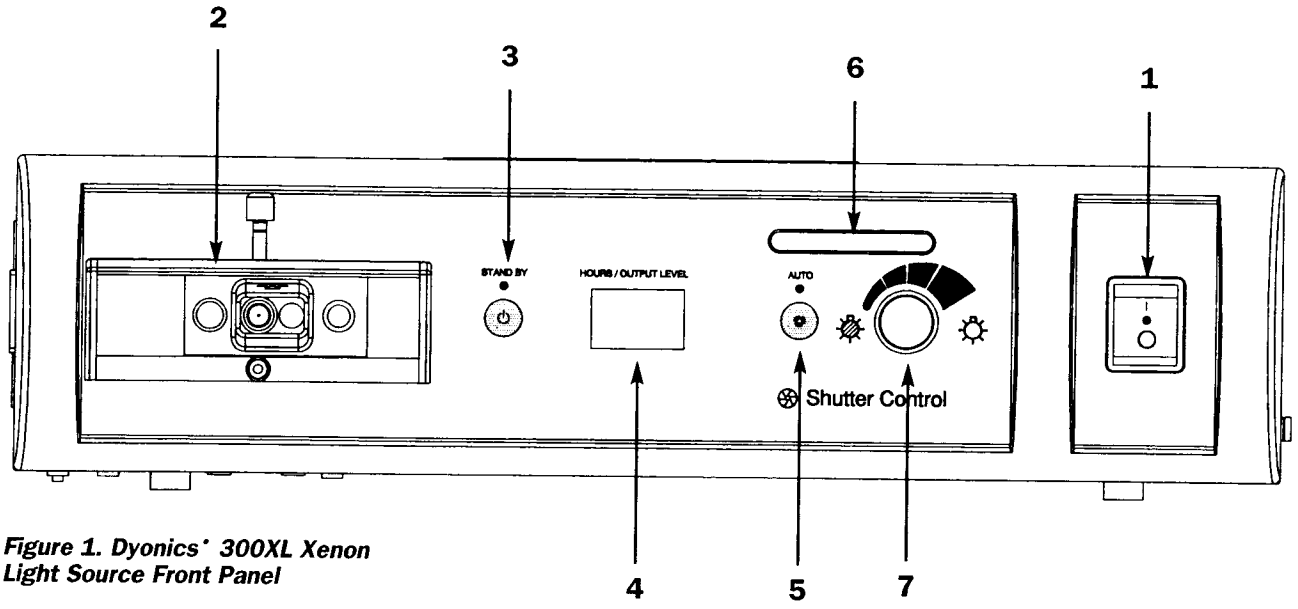

Figure 1. Dyonics® 300XL Xenon Light Source Front Panel

CONTROL	FUNCTION
1. Main Power On/Off Switch	Power for the light source is activated through the rocker switch on the front panel that applies line voltage to the unit. Pressing the switch "I" (ON) turns on the cooling fans and activates the arc lamp. Pressing "○" (OFF) turns power off to the unit.
2. Light Guide Port	This self-closing light port is designed to accept the Dyonics®, Wolf®, Olympus®, ACMI®, and Storz® Light Guide end-fittings.
3. STAND BY Mode Button	When the main power switch is activated the unit will automatically default to STAND BY in the Manual mode and the light intensity level will be at a minimum. This is an added safety feature. Press the STAND BY button and the light source will default to the Manual mode and the light intensity level will be at 50%. The STAND BY button may be activated at any time when in either the Manual or Automatic modes. The light level will be reduced to zero. To return to the original setting, press the STAND BY button again.
4. LED and Lamp Life Displays	***LED Display:*** A three-digit numerical display will illuminate and show the percentage of light intensity (0% to 100%). The number will correspond to the level dictated by the intensity control knob. This display will also show lamp life hours and error messages. ***Lamp Life Display:*** When the main power switch is activated the LED window will flash the amount of lamp hours that have expired, counting up from zero in one hour increments, for approximately 10 seconds. After that time, the display will revert to a steady light intensity display in percentage.
5. Manual and Automatic (AUTO) Mode Indicators	***Manual Mode*** allows the operator to determine the amount of light delivered into the viewing area by adjusting the light intensity controls to the desired levels. This mode is preferred when using a video camera with an automatic electronic shutter control (see "Selecting the Light Intensity"). When the main power switch is activated the light source will default to the STAND BY mode and by pushing the STAND BY button, the light source will default back to the Manual mode.

CONTROLS AND FUNCTIONS

FRONT PANEL (*continued*)

Automatic Mode allows the light source to increase or decrease the light output according to the light level control signal received from a video camera. The green LED next to the AUTO control button is illuminated when this mode is activated. The Automatic mode is required for use with cameras that do not have an automatic shutter control.

6. Light Intensity Meter — This LED bar graph meter provides a visual gauge of the selected light level when using the Manual mode, and a representation of the set point being used by the video camera when using the AUTO mode.

7. Light Intensity Control — The Light Intensity Control allows the user to control the amount of illumination the light source emits. To increase the light intensity turn the knob clockwise, to decrease the light intensity turn the knob counterclockwise.

REAR PANEL

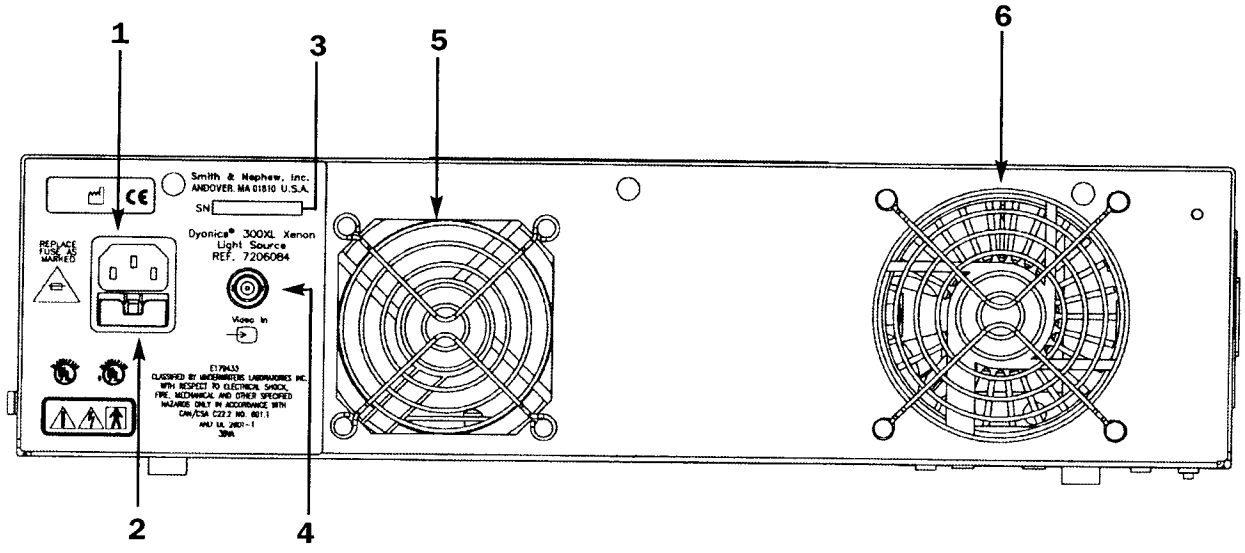

Figure 2. Dyonics® 300XL Xenon Light Source Rear Panel

CONTROL	FUNCTION
1. Power Cord Receptacle	Input power is supplied to the light source via an electrical power cord connected to this receptacle.
2. Fuse	10 amp, 250 volts, rated.
3. Serial Number	This factory-assigned number uniquely identifies the equipment and is required for use in warranty claims.
4. Video Input Connector	The video signal cable from the camera controller interfaces with the light source at the Video (BNC) Input Connector.
5. Fan	Allows for cooling of the unit.
6. Fan	Allows for cooling of the unit.

CONTROLS AND FUNCTIONS

SIDE PANEL

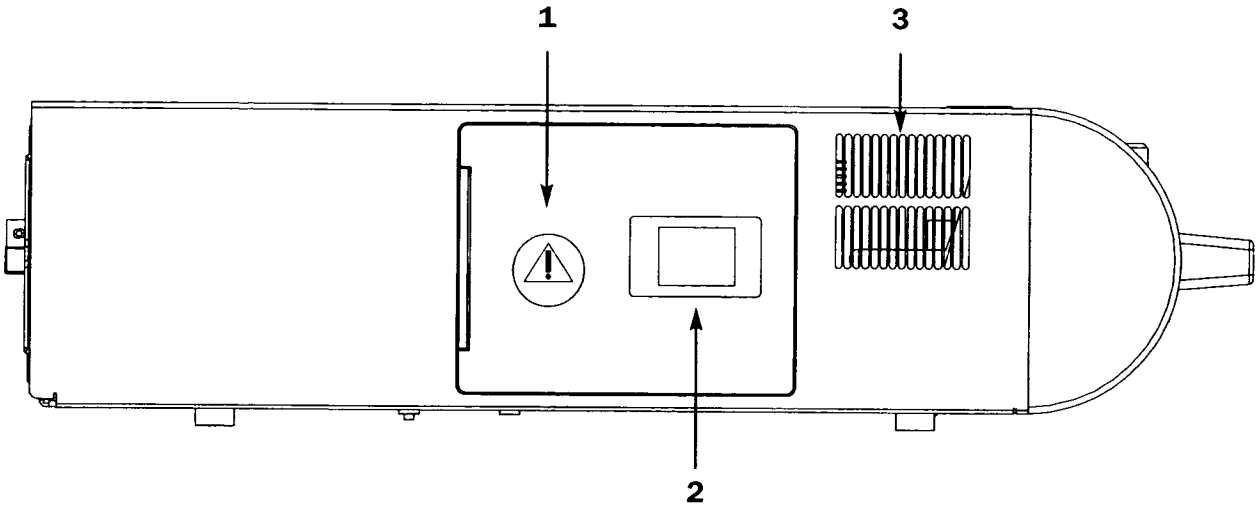

Figure 3. Dyonics® 300XL Xenon Light Source Side Panel

CONTROL	FUNCTION
1. Lamp Assembly Door	Encloses the lamp inside unit. The unit will not operate unless the door is closed.
2. Door Latch	Open the door by pushing the latch.
3. Vent	Cools the unit. Keep the vent clear or the unit may overheat.

CONTROLS AND FUNCTIONS

LAMP ASSEMBLY

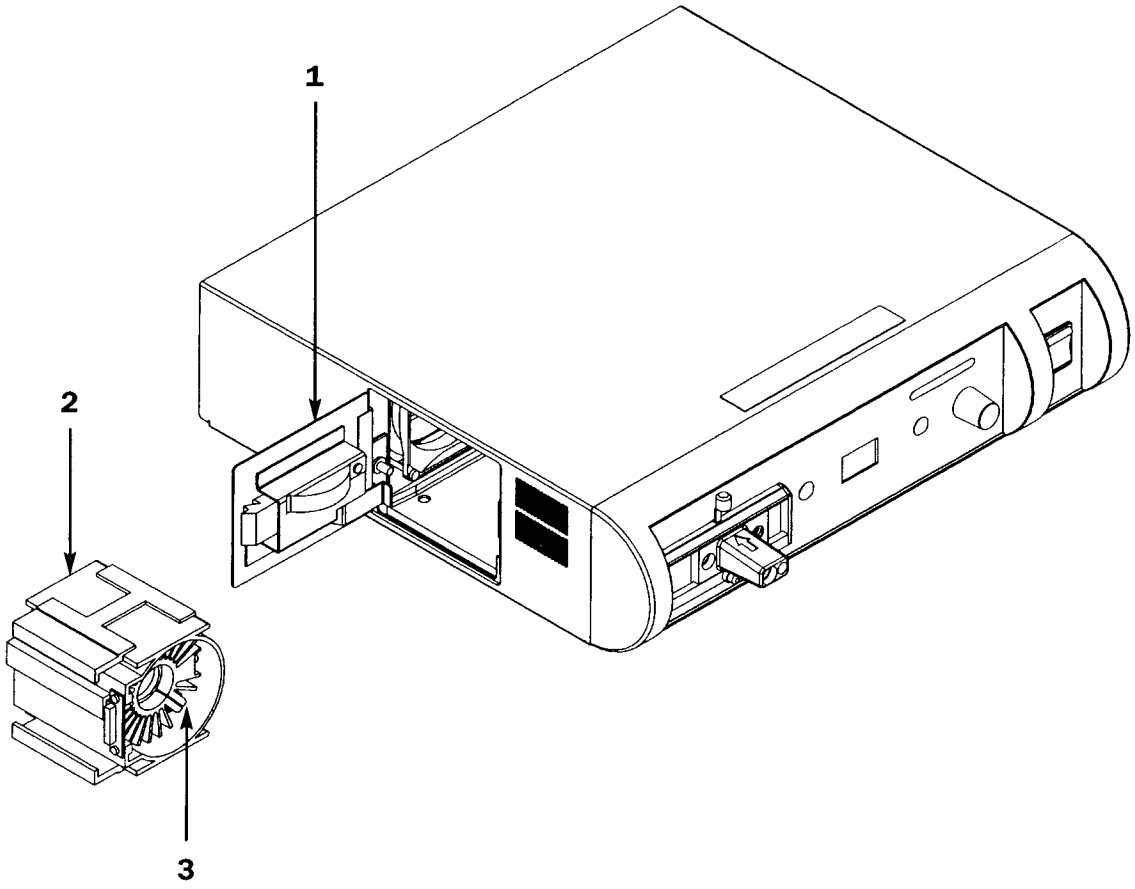

Figure 4. Dyonics® 300XL Xenon Light Source Lamp Assembly

CONTROL	FUNCTION
1. Lamp Module Door	Encloses the lamp inside the unit. The unit will not operate unless the door is closed.
2. Lamp Module	Encases the Xenon bulb and helps to disperse heat.
3. Xenon Bulb	Provides the light.

INSTALLATION AND OPERATION

CAUTIONS

- ***Do not place the multiple portable socket outlet on the floor.***
- ***Do not operate at line voltages other than those stipulated on the back of the unit.***
- ***Handle the unit with care. If the unit is dropped or damaged in any way, it must be returned immediately for service.***

TURNING THE UNIT ON

⚠ WARNINGS

- **Possible explosion hazard if used in the presence of flammable anesthetics.**
- **When the light source is turned on, do not look directly at the Xenon arc lamp without protective goggles. The high-intensity, visual, infrared, and ultraviolet radiation of the Xenon lamp may cause burns to the skin, or permanent damage to eyes.**
- **Hazardous high voltage and energy are present at the output and in the internal circuitry of this unit.**
- **In some cases, high voltage may persist after the power has been removed. Only personnel qualified to service electronic equipment should operate or troubleshoot an "uncased" power supply.**

Before plugging the power cord into a power outlet, be sure that the power corresponds to the data on the rear panel and that the third pin on the plug is properly grounded to the outlet.

The light source should be placed in a horizontal position, with the back panel clear of obstructions, allowing air to flow freely into the unit.

Pressing the power switch to " I " (ON) will start the cooling fans, illuminate the switch button and activate the circuitry to start the Xenon arc lamp immediately.

Observe the LED display for the first 10 seconds after the power is turned on. This window will flash the lamp life expired in one hour increments. This will assist in the determination of lamp replacement. After 10 seconds a steady number will display showing the light output percentage.

Note: The Dyonics 300XL Xenon Light Source powers on to the STAND BY mode in the Manual mode. When the STAND BY mode is deactivated, the light output defaults to 50% intensity.

SELECTING THE LIGHT INTENSITY

The Dyonics 300XL Xenon Light Source is designed to operate with Dyonics Digital Video Camera systems. These endoscopic cameras utilize an electronic shutter which automatically controls the light adjustment from the light source.

For optimum performance, the light intensity of the 300XL Xenon Light Source should be set at the desired output position to allow the electronic shutter of the camera to automatically increase or decrease the required light level.

Optimum light intensity can be achieved by increasing or decreasing the automatic shutter level set-point on the camera. The video image should be clear and bright, without any "blooming" caused by excessive light.

When the endoscope is directed toward darker or lighter areas, or its distance from the tissue that is being observed is varied, the light level will automatically be increased or decreased to maintain the selected brightness of the picture. If the video image is too bright for the camera to operate correctly, then the light intensity on the light source should be decreased until a satisfactory light level is achieved.

STAND BY MODE

The Dyonics 300XL Xenon Light Source defaults to the STAND BY mode in the Manual mode upon initial power on of the unit. The STAND BY mode is a safety feature which allows for the light output to be reduced to a minimum level to prevent unintentional emission of light. STAND BY mode is indicated by an oscillating bar graph in the Light Intensity Meter and three dashes in the LED Display.

To begin the procedure press the STAND BY button and light will be emitted. The STAND BY mode can be employed at any time throughout the procedure.

Note: Light output settings in either the manual or automatic mode, will return to the light level set prior to the employment of the STAND BY mode.

INSTALLATION AND OPERATION

MANUAL MODE

When the main power switch is activated, the unit defaults to STAND BY in the Manual mode.

Manual Mode allows an operator to control the amount of light delivered into the viewing area by using the light intensity control knob to adjust the light intensity level. Manual mode is preferred when using a video camera with an automatic electronic shutter control.

To increase the light intensity to its highest output, as displayed by the light intensity meter, turn the light intensity control knob clockwise and allow the automatic electronic shutter on the video camera to control the light adjustments. Optimum light intensity can be achieved by increasing or decreasing the automatic shutter level set-point on the camera. The video image should be clear and bright, without "blooming" caused by excessive light.

AUTOMATIC MODE

Automatic Mode allows the light source to increase or decrease the light output according to the light level control signal received from the video camera. The green LED (next to the AUTO control button) is illuminated when this mode is activated.

Automatic mode is required for use with cameras that do not have an automatic electronic shutter control. Optimum light intensity can be achieved by using the light intensity control knob. Determine the set point for the light intensity by turning the light intensity knob until the corresponding bar graph is illuminated to the desired level. The light can be adjusted up or down from this point. The video image should be clear and bright without blooming caused by excessive light. If the picture is too dim or too bright, adjust the light intensity using the light intensity control knob.

ERROR MESSAGE

If there is a problem with the functioning of this light source, an "Error" (E#) message will appear in the Light Intensity Display Window. Refer to the Troubleshooting Section of this manual.

INSTALLATION AND OPERATION

⚠ WARNING: During operation, avoid prolonged contact of scope tip to patient tissue or flammable materials. Scope tip may reach high temperatures due to high-intensity light transmission.

INSERTING AND REMOVING LIGHT GUIDES

⚠ WARNING: Do not hold the shutter open without a light guide in place. Failure to observe this precaution may result in eye injury or burns to the skin, clothing or other material inadvertently placed in front of the light guide port.

First, check to be sure that the multi-port light guide adaptor is set for the appropriate light guide you intend to use (the arrow on the light guide adaptor points to the present setting). To change the setting, press the indexing button directly below the light port and slide the light port to the desired setting.

Press the shutter button and insert the light guide tip into the port (Figure 5). To remove a light guide, press the shutter button and then withdraw the light guide.

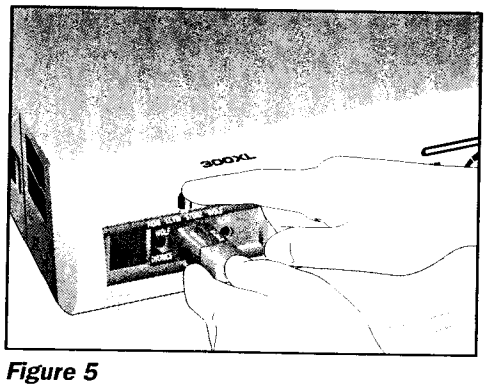

Figure 5

FIBER OPTIC LIGHT CABLE INSPECTION

Caution: Do not leave the operating light cord on a patient or the drapes. Failure to observe this precaution may result in burns to the patient and/or the surrounding drapes.

1. Cuts, abrasions, or tears in the cable's silicone sheath will reduce overall light transmission. Check the sheath for such damage.
2. While aiming one end of the cable toward a bright light, inspect the other end for damaged fibers, e.g., black dots or dark gray areas (Figure 6). A combination of broken fibers in the cable or endoscope will result in reduced light transmission. The combined percentage of dark spots viewed in the cable end should not exceed 20% of its total area.

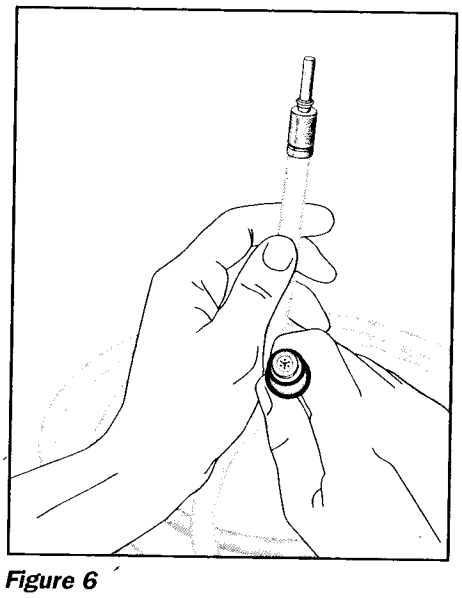

Figure 6

3. Perform a visual fiber bundle diameter comparison. For optimal light transmission, the diameter of the fiber bundles in the endoscope's fiber optic light post should match the fiber bundle diameter of the light cable. This will prevent unnecessary heat buildup at the scope/light guide connection.

RECOMMENDED SYSTEM CONFIGURATION

IEC 60601-1-1 COMPLIANT SYSTEM CONFIGURATION

Figure 7 indicates a system configuration that complies with IEC 60601-1-1 requirements.

⚠ WARNING: If this unit is configured as part of a system, the entire system should be tested for compliance with IEC 60601-1-1.

- **If the leakage current of the configured system exceeds the limits of IEC 60601-1, install an appropriately rated, UL 2601-1 approved isolation transformer and retest the system.**
- **The use of accessory equipment not complying with the equivalent safety requirements of this equipment may lead to a reduced level of safety of the resulting system. Consideration relating to the choice shall include:**
  - **Use of the accessory in the patient vicinity.**
  - **Evidence that the safety certification of the accessory has been performed in accordance to the appropriate IEC 60601-1 and/or IEC 60601-1-1.**

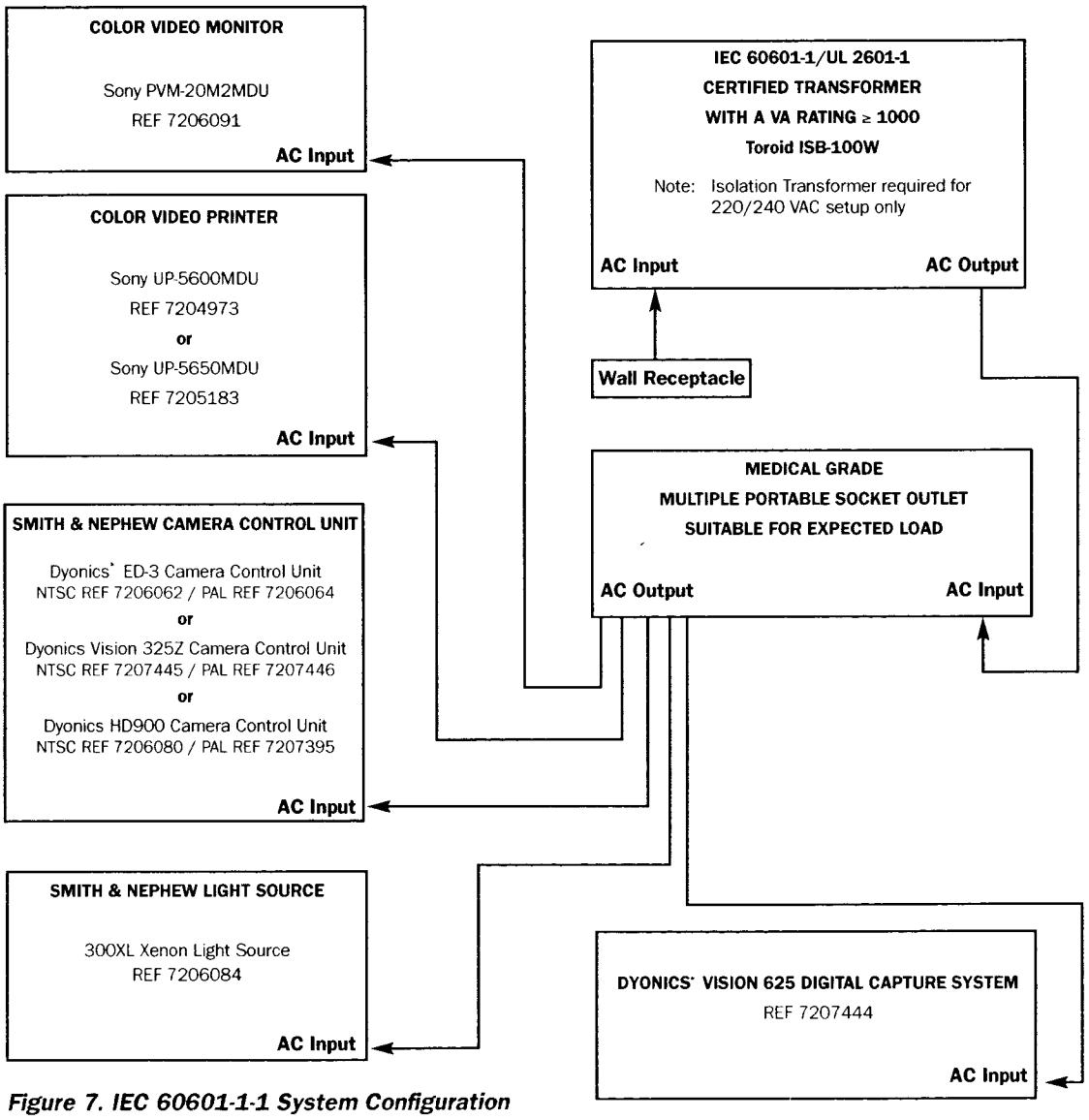

Figure 7. IEC 60601-1-1 System Configuration

TROUBLESHOOTING

If the procedures below do not resolve the problem, the unit should be referred to qualified personnel for service.

SYMPTOM	POSSIBLE CAUSE	REMEDY
The lamp and power switch light fail to come on when the power switch is pressed.	The unit is not connected to power.	Plug into a power outlet of suitable rating. Ensure that both ends of the power cord are properly connected.
	The lamp door is not fully closed.	Fully close the lamp door.
The lamp comes on but the power switch does not illuminate when the power switch is pressed.	Defective power switch light.	Refer to qualified personnel for light service. (The unit may be operated safely without the power switch light.)
The power switch light comes on but Xenon lamp fails to ignite when the power switch is pressed.	Defective lamp.	Replace the lamp module. The unit will automatically shut down after 15 seconds if the bulb does not ignite. Call your Smith & Nephew Representative or Customer Service Center.
Error message (E#).	Light source overheating.	Turn the off unit. Find the source of the airflow blockage and remove it. Turn unit back on. If unit does not power up, call your Smith & Nephew Representative or Customer Service Center.
The light output is low but the lamp has less than 500 hours operation.	The manual shutter is in the closed position.	Turn the intensity knob clockwise to increase the light intensity.
	STAND BY function activated.	Press the STAND BY button to bring unit to set brightness level.
	The light cable is not in the multiport light adaptor.	Reseat the light cable. Check to see if multiport light adaptor is in correct position.
	Defective lamp.	Replace the lamp module.
Picture too dark.	Manual shutter at closed position.	Turn intensity knob clockwise to increase light intensity.
	STAND BY feature activated.	Press STAND BY button to bring unit to set brightness level.
	Light cable not in multiport light adaptor correctly.	Reseat light cable. Check to see if multiport light adaptor is in correct position.
	Defective lamp.	Replace the lamp module.
	Damaged scope.	Check endoscope and if damaged call Smith & Nephew Customer Service for a replacement unit.
	Damaged light cable.	Replace light cable.
LED display indicates " === " when unit is in the AUTOMATIC mode.	The cable is missing or not connected from the Camera Control Unit to the VIDEO IN connector on the back of the light source.	Reconnect cable.

MAINTENANCE

GENERAL

The Dyonics 300XL Xenon Light Source was thoroughly tested and calibrated before shipment from the factory. If difficulties are encountered that cannot be resolved using these instructions, please contact Customer Service and provide a full description of the problem, along with the serial number of the unit.

PREVENTIVE MAINTENANCE

No scheduled maintenance program is required to ensure the proper performance of the Dyonics 300XL Xenon Light Source. Adherence to hospital guidelines for care and handling of electronic equipment will help to maximize the life and utility of the light source. Service and repairs should be performed only by a qualified technician.

Caution: Disconnect power cord before cleaning the light source.

The exterior of the light source should be cleaned often enough to prevent the accumulation of dust and dirt, especially around the air intake and outlet openings. Use a soft, dry brush and a vacuum or low-pressure blower. Painted areas of the panel and cabinet should be cleaned with a soft, damp cloth and a mild detergent.

RECOMMENDED ANNUAL PERFORMANCE CHECKS

Smith & Nephew recommends that Dielectric Strength, Earth Leakage Current, and Protective Earth Testing be performed annually to assure continued compliance with applicable safety requirements. These tests should be conducted in accordance with specifications UL2601-1/ IEC 60601-1.

Caution: Electrical safety testing should be performed by a biomedical engineer or other qualified person.

ELECTRICAL INTERFERENCE

Caution: This unit complies with IEC 60601-1-2. However, the user must be aware that this does not necessarily insure protection of the unit against interference from other devices.

Caution: This equipment is designed and tested to minimize interference with other electrical equipment. However, if interference occurs with other equipment it may be corrected by one or more of the following measures:

- **Reorient or relocate this equipment, the other equipment, or both.**
- **Increase the separation between the pieces of equipment.**
- **Connect the pieces of equipment into different outlets or circuits.**
- **Consult a biomedical engineer.**

ENVIRONMENTAL PROTECTION

Caution: This equipment contains electronic printed circuit assemblies. At the end of the useful life of the equipment it should be disposed of in accordance with any applicable national or institutional related policy relating to obsolete electronic equipment.

STERILIZATION AND DISINFECTION

The Dyonics 300XL Xenon Light Source operates outside of the sterile field and does not require sterilization. Sterilization and/or disinfection procedures will damage the product and void the warranty.

Exterior surfaces of the light source may be disinfected by using a cleaning/disinfecting detergent.

Please refer to the instructions from the light guide manufacturer for proper sterilization parameters for the light guide.

MAINTENANCE

REPLACEMENT OF HIGH-INTENSITY LAMP

The Dyonics 300XL Light Source incorporates a long-life lamp warranted for up to 500 hours of operation. Through the front panel display, the operator is shown hours of life expired each time the light source is powered on. When the unit is powered on, the LED display will flash a number. This flashing number depicts the amount of hours the lamp has been in operation beginning from zero. The lamp is warranted for 500 hours of operation.

Caution: Replace only with appropriate Smith & Nephew lamp module specified for the light source, 300XL Xenon replacement module (REF 7207398). Use of any other lamp module will void the warranty.

Caution: Lamp module may be very hot. Touch only the mounting handle on the lamp module; other parts may be extremely hot. Use protective eyewear when handling module.

Caution: There are no user-replaceable parts inside the light source case. Refer unit to a qualified technician for replacement of the internal fuse.

Replace lamp module after 500 hours.

TO REPLACE THE LAMP

Caution: Power switch must be turned off, and power cord disconnected from power source, before attempting to replace lamp module.

1. Turn the power off by pressing the power switch button to the " ○ " (OFF) position.
2. Open the side lamp door.
3. Grasp the mounting handle of the lamp assembly and slide the lamp module out of the light source. Lamp module should be disposed of carefully.
4. Align the new lamp module with the mounting slides inside the light source, then gently push the module in as far as it will go.
5. Close the side lamp door.
6. Press the power switch button to "I" (ON) to begin operation.
7. Reset the hour meter.

TO RESET THE HOUR METER

1. After the bulb is replaced turn unit ON.
2. Within the first 10 seconds of power up, the lamp hour life is displayed. Within that time, the STAND BY button must be pushed for five seconds. The lamp hours will be reset and the display will flash "0" for five more seconds.

⚠ WARNING: The high internal pressure of the lamp may cause an explosion, regardless of whether the lamp is cold or hot. Never remove the lamp from the lamp module. When replacing the lamp, replace the entire lamp module. Always wear protective clothing and a face mask when handling the lamp module.

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

Lamp Type
300 Watt Xenon Short Arc

Color Temperature
5700° K – 6000° K

Lamp Life
500 hours

Input Power Requirements
100-230 VAC, 50/60 Hz, 600 VA

Fuse
10A 250V

Power Supply Cord is a Disconnect Device

Class I Device — Ordinary Environment

Leakage Current to Ground
Less than 100 microamperes

Light Guide Receptacle
Designed to accept Dyonics®/Wolf®, Olympus®, ACMI®, and Storz®, light guide end-fittings.

Dimensions

Cabinet:	Height:	4.5 inches (11.43 cm)
	Length:	16 inches (40.64 cm)
	Width:	17 inches (43.18 cm)

Weight
14 pounds

Ambient Operating Temperature
40° F to 100° F (5° C to 38° C)

Transport and Storage Temperature
-13° F to 158° F (-25° C to 70° C)

ORDERING INFORMATION

SYSTEM COMPONENTS

REF	*DESCRIPTION*
7206084	300XL Xenon Light Source, 300 Watt
7207398	300 Watt replacement lamp module for 300XL Xenon Light Source

ACCESSORY ITEMS

REF	*DESCRIPTION*
3004*	Gemini Universal Light Cable, 2 mm, 8 ft.
2985	Gemini Universal Light Cable, 4 mm, 8 ft.
2140	Gemini Universal Light Cable, 5 mm, 8 ft.
7205177	Gemini Fiber Optic Light Cable, 5 mm, 12 ft.
7205178	Gemini Fiber Optic Light Cable, 5 mm, 10 ft.
7205179	Gemini Fiber Optic Light Cable, 4 mm, 12 ft.
7205180	Gemini Fiber Optic Light Cable, 4 mm, 10 ft.
7208329	Gemini Fiberoptic Light Cable, 6 mm, 10 ft. permanent mount Dyonics*/Wolf* connectors
7207399	System, 300XL Xenon Light Source, German
7207400	System, 300XL Xenon Light Source, Spanish
7207401	System, 300XL Xenon Light Source, French
7207402	System, 300XL Xenon Light Source, Italian
7207403	System, 300XL Xenon Light Source, Swedish
7207404	System, 300XL Xenon Light Source, Dutch
7207405	System, 300XL Xenon Light Source, English (U.K. cord)
7207406	System, 300XL Xenon Light Source, English (Continental cord)
7207407	System, 300XL Xenon Light Source, English (U.S. cord)

**Includes Dyonics/Wolf adaptors for use with 2.7 mm, 1.9 mm, and 1.7 mm endoscopes.*

SERVICE

TEST PROCEDURES

AUTO CIRCUIT TEST

With power on, switch Xenon unit to AUTO mode.

Input a live video signal through the "VIDEO IN" connector on back of unit.

Vary the live video input from maximum to minimum and observe shutter response to ensure smooth movement, from fully closed to fully open. Next, vary the live video input from minimum to maximum and observe the shutter response to ensure smooth action, from fully open to fully closed.

Note: Necessary video input may also be produced by alternately flooding the camera head with light and then covering the head so that light is prevented from entering it.

RECOMMENDED ANNUAL PERFORMANCE CHECKS

Smith & Nephew recommends that Dielectric Strength, Earth Leakage Current, and Protective Earth Testing be performed annually to assure continued compliance with applicable safety requirements. These tests should be conducted in accordance with specifications UL2601-1/ IEC 60601-1.

Caution: Electrical safety testing should be performed by a biomedical engineer or other qualified person.

UNIT COVER REMOVAL

Caution: Ensure that the lamp module is not installed in the light source before removing or replacing the light source cover.

1. Open the lamp access door. Remove the lamp module by grasping the handle and pulling the module out and slightly toward the back of the light source.
2. Remove the three cover screws at the top, back of the light source. Remove the cover screw on the side opposite the lamp door.
3. With the lamp door fully open, lift up at the back of the cover and pull toward the back of the unit.

UNIT COVER REPLACEMENT

Caution: Ensure that the lamp module is not installed in the light source before replacing or removing the light source cover.

1. Keep the lamp access door fully opened. Position the cover over the light source case with the back of the cover higher than the front.
2. Engage the lip, inside the front of the cover, with the tab along the front of the unit. Push the cover toward the front of the unit and push down ensuring that the case side tabs are aligned with the lip along the sides of the cover.
3. Replace the three cover screws at the top, back of the unit. Install the lamp module and close the lamp access door.

WARRANTY

The Dyonics® 300XL Xenon Light Source is warranted to be free from defects in material and workmanship for one year from date of original invoice. The Xenon lamp assembly is warranted to be free from defects in material and workmanship for 500 hours of operation. Modifications or repairs done by persons not specifically authorized by Smith & Nephew will void this warranty. In no event shall Smith & Nephew be liable for any anticipated or lost profits, consequential damages or loss of time incurred as a result of the purchase, repair or use of this equipment. Please contact Smith & Nephew Customer Service for warranties on refurbished and service/exchange products.

NO OTHER WARRANTY, EXPRESSED OR IMPLIED, IS GIVEN.

SERVICE

To offer the best service possible, Smith & Nephew offers a 24-Hour Replacement Program for its products. The Service Replacement Program provides you with a product that has been refurbished and incorporates the latest product improvements. Return shipment of this unit to Smith & Nephew should only be done using the correct shipping container and appropriate instructions. If the original container is not available, contact Smith & Nephew. Modifications or repairs done by persons not specifically authorized by Smith & Nephew will void the warranty. Please contact your local Smith & Nephew representative for information.

European CE Mark Representative:
Smith & Nephew, Inc., York Science Park, Heslington, York, YO10 5DF, United Kingdom.

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Smith & Nephew, Inc., Endoscopy Division
Andover, MA 01810 U.S.A.
Telephone: 978-749-1000 • Fax: 978-749-1108
U.S. Customer Service: 1-800-343-5717
International Customer Service: +1-978-749-1140

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