



**endoscopy
support
services, inc.**



Operation Manual

*150 Watt Halogen Light Source for Endoscopy
Model #'s*

ESS-150, ESS-150A

ESS-220, ESS-220A

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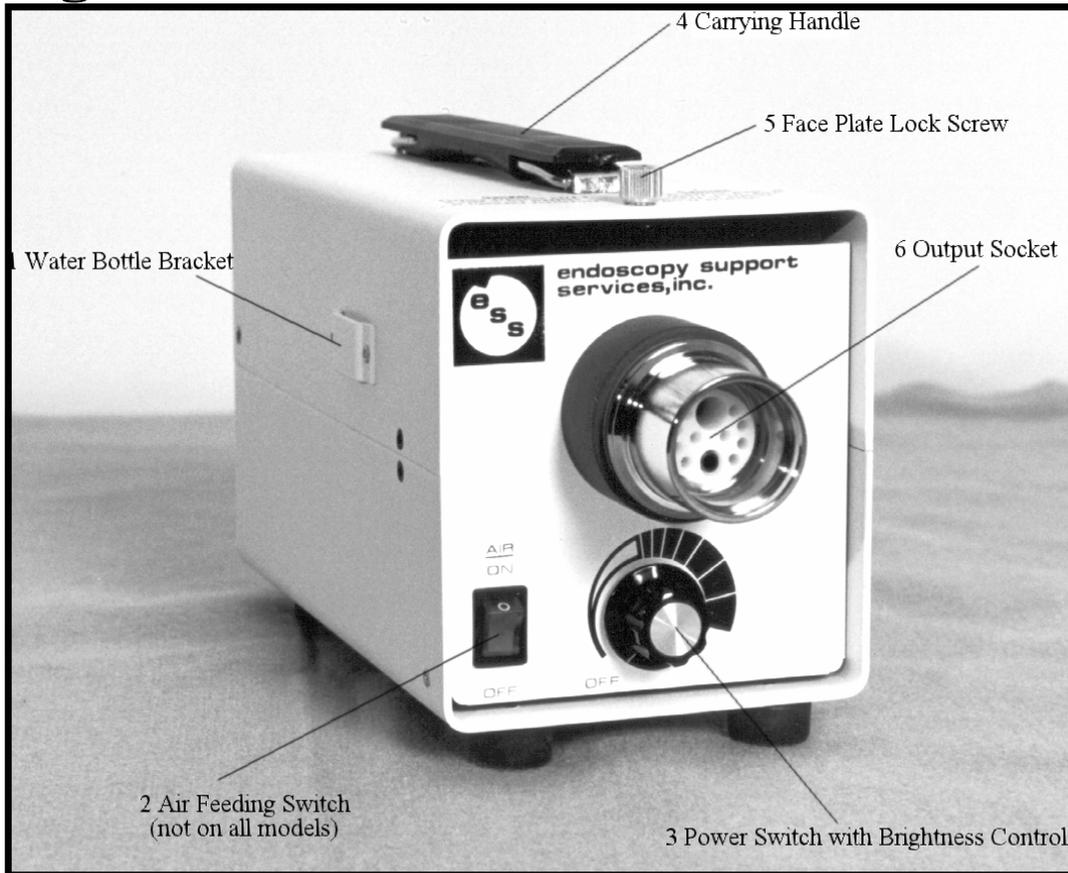
General Information

- ◆ This equipment should only be used under the supervision of a qualified doctor.
- ◆ This equipment is designed for use with light guide system endoscopes for the performance of their individual purposes.
- ◆ This equipment should not be used in the presence of flammable gas.
- ◆ Operation environment for this equipment is as follows:

| Model | ESS-150/150A | ESS-220/220A |
|----------------------|---------------------|---------------------|
| Voltage: | 115 VAC | 220 VAC |
| Input Frequency: | 50/60 Hz | 50/60 Hz |
| Ambient Temp.: | 10 ~ 40° C | 10 ~ 40° C |
| Relative Humidity: | 30 ~ 85% | 30 ~ 85% |
| Atmospheric Pressure | 700 ~ 1,060 mbar | 700 ~ 1,060 mbar |

Name and Function

Fig. 1



- 1 Water Bottle Bracket: Supports the Water Bottle.
- 2 Air Feeding Switch: Starts and stops the air flow.
- 3 Power Switch with Brightness Control: Turns power on and off & Controls intensity of light for observation.
- 4 Carrying Handle
- 5 Face Plate Lock Screw: Provides access to inside of unit for changing bulb
- 6 Output Socket: Accepts the light guide connector of scope to complete:
 - a) Illumination Light Path
 - b) Air Feeding Channel

Inspection of Functions

◆ Make sure flammable gas is not present

- 1) Be certain power switch is in off position. *(See pg.4 Fig. 1 #3)*
Plug unit into a grounded three prong electrical outlet.
 - 2) Make sure light and air pump functions operate when unit is on. Air pump will make a whirring noise when activated.
 - 3) Check brightness control by turning knob *(See pg.4 Fig. 1 #3)* to see if the light intensity changes accordingly.
 - 4) Check bottom of unit to see if cooling fan is moving when unit is on.
-

Preparation for Use

- 1) Connect Endoscope:
 - a) Connect Light Guide to Output Socket.
(See pg.4 Fig. 1 #6) Make sure it locks into place.
 - b) Make sure the distal end of scope emits light.
- 2) Adjust light intensity by rotating knob clockwise for brighter intensity.
- 3) Air / Water Feeding: attach the water bottle to the endoscope as outlined in the endoscope instruction manual.
Activate the air feeding switch and make sure the air or water is fed normally in response to the scope air/ water button operation*.

* When air/water feeding falls below normal, contact our service dept. at 1-800-FIX-ENDO

Operation

Rotate the brightness control knob clockwise out of the locked position to ignite the halogen lamp. *(See pg.4 Fig. 1 #3)*

Illumination of the viewing field can be controlled by the brightness control knob. The transmitted light becomes brighter when the knob is rotated clockwise. To reduce light intensity rotate the knob counter-clockwise. Turning the brightness control knob counter-clockwise back to the locked position will shut off the power.

Air / Water Feeding is controlled with the Air Feeding Switch *(See pg.4 Fig. 1 #2)* on the unit control panel. When placed in the on position the air pump will become active and the switch will illuminate. Once pump is active you can control air/water functions with the endoscope's appropriate valves.
(refer to the endoscope's instruction manual for more information)

To cease air water functions, return the Air Feeding Switch *(See pg.4 Fig. 1 #2)* to the off position.

Photography & Video

Since the ESS series of light sources do not contain circuitry to automatically control exposure for flash capabilities you must use an autoexposure Camera.

For more specific information please consult your camera's instruction manual or call customer service at 914-278-4614.

Lamp Replacement

Should the lamp burn out, a new EJA (150Watt 21Volt) halogen lamp can be easily replaced in the following manner:

1. Turn off & unplug the unit. *Allow unit to cool 5 min.*

2. Turn the Face plate lock screw counterclockwise releasing the front panel as seen in *Fig. 2*

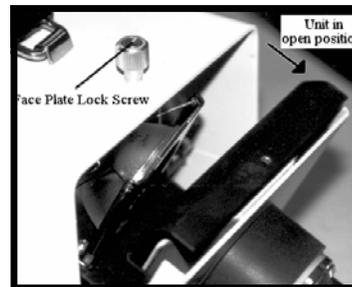


Fig. 2

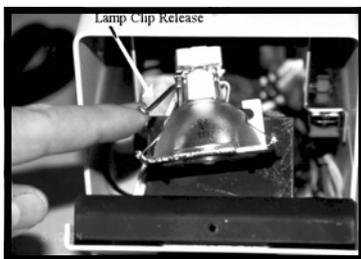


Fig. 3

3. Hold the cover firmly with one hand and push lamp clip toward back of unit as seen in *Fig. 3*

Continued on page 8

Lamp Replacement Continued

4. Remove bulb from ceramic holder and replace with new bulb as seen in *Fig. 4*.

Note: Be careful to avoid getting finger prints on the lamp bulb or the reflector.

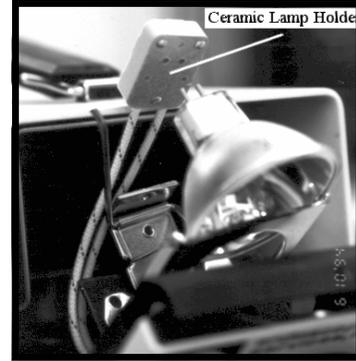


Fig. 4

5. Reset lamp in groove formed by the lamp clip until fully seated.

6. Close the front face plate and tighten Face Plate Lock Screw (*See pg.7 Fig. 2*)

Note: Should the unit appear to fail to operate following lamp replacement, check to insure that the face plate cover has been properly repositioned and fully secured. If the face plate cover is not properly aligned or fastened securely, the safety interlock mechanism will become activated and automatically shut off all power.

If you need any assistance please call our Service Department at 914-278-4614.

Circuit Breaker

The circuit breaker is located on the on the rear panel of the light source unit. It is a black switch labeled “3 AMP”. The circuit breaker protects the unit from power surges. If the unit does not have any power when plugged in it may be that the circuit breaker needs to be reset.

Resetting the circuit breaker is performed by depressing the breaker switch into the locked position. If the breaker continues to blow out you may check it in the following manner:

- a) Make sure the unit is plugged into a grounded three prong outlet.
- b) Reset the circuit breaker switch and turn on the unit. If it blows again try using a different outlet.

Note: Should the unit appear to fail to operate after resetting the circuit breaker, check to insure that the face plate cover is properly positioned and fully secured. If the face plate cover is not properly aligned or fastened securely, the safety interlock mechanism will become activated and automatically shut off all power.

If you are sure that the circuit breaker will not reset and the face plate is closed as described above, the circuit breaker may need to be replaced. Please call our service department at 914-278-4614

Troubleshooting

- ◆ Unit has no light but air pump functions: See lamp replacement procedures pages 7 & 8.
- ◆ Unit has no power: See procedures outlined on page 9 for resetting the circuit breaker.
- ◆ Air pump does not function: If the lamp comes on and the air pump does not function make sure the Air Feeding Switch (*see pg. 4 Fig. 1 #2*) is in the “on” position. If the switch is “on” and the pump still does not function, call our service department.
- ◆ Air pump functions but the air or water is not coming through the scope: Make sure the scope is securely fastened into the Output Socket (*see pg.4 Fig. 1 #6*). If it still does not function correctly refer to the endoscope’s manual on connecting the water bottle to the endoscope or call our service department.
- ◆ Light is not bright enough: Adjust the Brightness Control Knob (*see pg.2 Fig. 1 #3*) as described on page 6, second paragraph. If it is still too dark it may be the endoscope Light Guides. Call our service department for more details on determining conditions of the scope’s Light Guides.
- ◆ Unit has power but cooling fan is inoperable: The cooling fan may need replacement or rewiring. Please call our service department.

Service Department
1-800-349-3636 or 914-278-4614

Specifications

| | |
|---------------------------|--|
| Lamp Type | EJA |
| Input Voltage | 115 VAC |
| Input Frequency | 50/60 Hz |
| Output Lamp Voltage | 21 VAC |
| Lamp Color Temperature | EJA: 3350°K |
| Output Lamp Wattage | 150 Watt |
| Fuse | 3 Amp Circuit Breaker |
| Size | 9 3/8”(L) x 4 3/4”(W) x 6 1/4”(H) |
| Weight | ESS-150 & ESS-220 7.5 lbs ESS-150A & ESS-220A 9 lbs |

Endoscopy Support Services, Inc.

Warranty

Endoscopy Support Services, Inc. warrants that Light Sources Purchased from E.S.S., Inc. will be free from defects in materials and workmanship for the period of one year.

In the discharge of this warranty, the sole obligation of E.S.S., Inc. is to repair or replace this piece of equipment without charge to the original purchaser for labor or parts.

E.S.S., Inc. is not liable for any damages to this equipment resulting from misuse, negligence, improper cleaning or storage.

The warranty for this equipment will be null and void in the event that the equipment has been altered, repaired, or tampered with by any person or persons not expressly authorized to do so by Endoscopy Support Services, Inc. Upon receipt of this product for repair, E.S.S., Inc. will make final decision as to warranty Status.

Regardless of warranty status, all shipping charges to and from E.S.S., Inc. are the responsibility of the customer.