Introduction

Years of design and research by our engineering staff, coupled with extensive field testing by practicing veterinarians assures you a high quality, and dependable light system to give you many years of service.

These standard surgery lights are available in four delivery systems to meet your requirements:

• A single head surgery light available in ceiling mount.

• A dual-head surgery light available in a ceiling mount.

• A single head surgery light available in a convenient wall mount.

• A portable surgery light supported by a sturdy steel base.

Our standard surgery light utilizes a heat absorbing, color correcting glass filter surrounding a halogen bulb which produces bright, high intensity yet cool illumination. The result of this system is light that is similar to natural sunlight, which allows an accurate diagnosis of patient through proper identification of tissue color, while filtering out physical discomfort to both patient and physician during long surgical procedures.

These surgery lights have been designed for easy installation, no matter what type of ceiling structure or office layout. The information in this manual will take your electrician step by step through the procedures required to properly install your surgery light system.
Pre-Installation Check- Ceiling/Wall Mount

Installation requirements may vary dependent upon the building construction encountered. The mounting hardware supplied with each light system is designed for standard wood studs and ceiling joists. It is the installers’ responsibility to provide any alternative mounting hardware for other types of construction.

Tools Required:
• Electric Drill
• 3/16 drill bit
• Phillips screwdriver
• Level
• Standard electrical tools

Before installation, verify all specification requirements and the following:

2. Each mounting joist must support a minimum of 100 pounds.
   Note: make sure that the mounting joists are on 16” centers- ceiling mount.

3. Power supply line supplied are in compliance with all existing codes.

4. Power supply lines to be two wire with ground, single phase, 120V, 50/60 Hz, capable of supplying 1.5 amps for each light assembly- U.S./Canada. For Europe: 240V, 50/60 Hz, capable of supplying .8 amps for each light assembly.

5. Ceiling installation location will accommodate the ceiling junction box. The junction box dimensions are:

<table>
<thead>
<tr>
<th>Length:</th>
<th>14.25 inch (362mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width:</td>
<td>8.0 inch (204mm)</td>
</tr>
<tr>
<td>Depth:</td>
<td>5.5 inch (140mm)</td>
</tr>
</tbody>
</table>
Installation-Ceiling Mount (single or dual)

1. Remove the 2 acorn nuts and the 2 flat washers securing the decorative cover. Remove decorative cover.

2. Remove the 4 screws securing the mounting plate to the transformer junction box. The light mount and plate are to be set aside while the transformer junction box is mounted.

![Diagram of Installation-Ceiling Mount](image)

**Fig. 4 MOUNTING OF TRANSFORMER JUNCTION BOX**

3. Locate the ceiling joists (transformer junction box has holes provided for ceiling joist on 16 inch (406mm) centers).

4. Install the transformer junction box by pre-drilling 2 preliminary holes (use 3/16 drill bit) and secure using 2 wood screws

![Diagram of Installation-Ceiling Mount](image)

**Fig. 5 INSTALLATION OF JUNCTION BOX INTO CEILING**
Installation-Ceiling Mount (single or dual)

5. Route and secure mains power through 1 of 5 access holes.

6. Wire primary of transformer(s) for the input mains voltage supplied.
   **WARNING!- DO NOT ENERGIZE CIRCUIT AT THIS TIME!**
   *It is very important that, when installing a ceiling mounted surgery light, four of the 2-1/2" long wood screws pass through both the transformer junction box and column mounting plate. If the column mounting plate is not properly secured to the ceiling joists it may result in mounting system failure causing the light to fall from the ceiling.*

7. Position mounting plate with light mount near transformer junction box with the 4 screws removed in step 2.

8. Secure the mounting plate with light mount to the transformer junction box with the 4 screws removed in step 2.

9. Pre-drill (3/16 drill bit) the final mounting holes and secure with 4 wood screws.

10. Re-install the decorative cover using the acorn nut and washers that were removed in step 1.

11. Remove the protective covers(s) from the light mount arm attachment point(s). Note: a washer and snap ring are provided and stored on this protective cover to lock the arm onto the light mount. Do not discard these two parts.

12. Remove arm slip ring cover and gently pull out male slip ring (with cover).
Installation-Ceiling Mount (single or dual)

13. Install arm(s) to light mount and secure with washer and snap ring.

Fig. 7 INSTALLATION OF ARM TO LIGHT MOUNT
Installation-Ceiling Mount (single or dual)

14. Re-install arm slip ring and secure the cover to the arm.  
**BE CAREFUL** - do not bend or distort the slip ring.

15. Install light head to arm.  
**WARNING!** The spring lock (6) secures the spring and must not be removed until the head is attached. Remove the screw (7) on the locking sleeve (5), push back the plastic tab on the locking sleeve (5) with a flat screwdriver blade and push the locking sleeve (5) up. Extract the metal clip (2). Push the head slip ring attachment (3) into the arm receptacle (1) so that the groove (3) becomes visible in the slit (4). Replace the metal clip (2) and push locking sleeve (5) downward to Re-install screw (7). **Remove spring lock (6).**

**Fig. 8 INSTALLATION OF LIGHT HEAD TO ARM**

16. Energize mains and verify operation.
## Technical Information

### Component Weights

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head assembly</td>
<td>9.6 lb (4.355 Kgm)</td>
</tr>
<tr>
<td>Arm, Ceiling or wall mount</td>
<td>13.0 lb (5.9 Kgm)</td>
</tr>
<tr>
<td>Arm, mobile</td>
<td>8.4 lb (3.8 Kgm)</td>
</tr>
<tr>
<td>Mount assembly, ceiling single</td>
<td>28.0 lb (12.7 Kgm)</td>
</tr>
<tr>
<td>Mount assembly, ceiling dual</td>
<td>43.0 lb (19.5 Kgm)</td>
</tr>
<tr>
<td>Mount assembly, wall single</td>
<td>17.0 lb (7.7 Kgm)</td>
</tr>
<tr>
<td>Mount assembly, base mobile</td>
<td>108.0 lb (49.0 Kgm)</td>
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</table>

### Assembly Weights

<table>
<thead>
<tr>
<th>System</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>Dual head ceiling system</td>
<td>85.4 lb (38.8 Kgm)</td>
</tr>
<tr>
<td>Single head ceiling system</td>
<td>49.2 lb (22.3 Kgm)</td>
</tr>
<tr>
<td>Wall mount system</td>
<td>38.2 lb (17.3 Kgm)</td>
</tr>
<tr>
<td>Mobile system</td>
<td>124.6 lb (56.6 Kgm)</td>
</tr>
</tbody>
</table>

### Electrical

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input voltage/current</td>
<td>120VAC 50/60Hz, 1.5A per head</td>
</tr>
<tr>
<td></td>
<td>240VAC 50/60Hz, 8A per head</td>
</tr>
<tr>
<td>Luminous intensity</td>
<td>4000 foot candles per head at 36&quot; (914mm)</td>
</tr>
<tr>
<td>Light pattern</td>
<td>8 inches (203mm) diameter</td>
</tr>
</tbody>
</table>

### Motion-Extension

<table>
<thead>
<tr>
<th>Feature</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head vertical motion</td>
<td>47 inches (1194 mm.)</td>
</tr>
<tr>
<td>Head horizontal motion</td>
<td>360°</td>
</tr>
<tr>
<td>Single head extended from mounting axis</td>
<td>70 inches (1778 mm.)</td>
</tr>
<tr>
<td>Dual head extended length (head to head)</td>
<td>144 inches (3658 mm.)</td>
</tr>
<tr>
<td>Dual head extended length (head to head)</td>
<td>38.5 inches (978 mm.)</td>
</tr>
</tbody>
</table>
Technical Information

Fig. 13 CEILING MOUNT- SINGLE LIGHT
Fig. 14 CEILING MOUNT- DUAL LIGHT

REF. ONLY (HEAD LOWEST POSITION)
34.5" (876mm) 8 FT CEILING
46.5" (1181mm) 9 FT CEILING
58.5" (1486mm) 10 FT CEILING
**Wiring Diagram**

**WIRING DETAIL, CEILING/WALL MOUNT—General Transformer Connection**

![Wiring Diagram Image]

**NOTES:**
1. Diagram shown for one head assembly. Two-head systems are identical separate circuits.
2. Single and dual ceiling mounts use three (3) slip rings. Wolf mount and mobile unit use two (2) slip rings.
3. Rigid arms and heads incorporate mole coaxial slip rings.
4. Flex section of arms incorporate mole coaxial slip rings.
5. Color code/abbreviations:
   - L=LINE
   - G=GROUND
   - B=BLUE
   - BR=BROWN
   - BK=BLACK
   - N=NEUTRAL
   - GN=GREEN
   - R=RED
   - Y=YELLOW
   - W=WHITE

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**MOBILE LIGHT WIRING**

(reference only) Factory Pre-wired