Warranty

All of our products sold to and installed by dealers are guaranteed to be free from defects in workmanship and materials for one year from date of purchase. During that period, we will repair or replace any defective part at no charge. DCI Equipment WILL NOT be responsible for dealer or service company labor charges or shipping charges to the DCI Equipment factory.

This guarantee does not cover normal wear, stains, cuts or scratches of upholstery or surface finishes or parts sold to OEM customers.

Staining, discoloration or deterioration of the equipment caused by disinfectant solutions is not covered under the warranty.

DCI Equipment will pay the return freight charges from the factory to the dealer. This guarantee does not cover damage resulting from improper installation, misuse or accidents incurred in shipping and handling.

All claims against the freight carrier must be initiated at the time the damaged items are received. The claim is the responsibility of the customer.

We are constantly striving to improve our products. We reserve the right to make modifications without the need for prior notification and are not obliged to modify previously manufactured items.

It is the user’s responsibility to read and understand the contents of this manual. This manual contains important information relative to hazards to personnel and property if this equipment is not installed, used and/or maintained as instructed.
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GENERAL INFORMATION

Definition of Symbols

The following symbols may be used throughout this manual:

![CAUTION] Failure to carefully follow the described procedure may result in damage to the equipment.

![WARNING] Failure to carefully follow the described procedure may result in damage to the equipment and/or operator/patient injury.

Risk of electrical shock present. Ensure power is disconnected before attempting this procedure.

AC (Alternating Current)

Protective Earth (Ground)

Manufacturing date

Waste Electrical and Electronic Equipment

Type B Equipment
(Protected against electrical shock)

Dangerous Voltage

Electrical Testing Lab

Identification mark that indicates the product complies with the health & safety requirements as published by European Directives.

Product Disposal

Contact your local authorized dealer for proper disposal of the device to ensure compliance with your local environmental regulations.

Interference with Electromedical Devices

To guarantee the operational safety of electromedical devices, it is recommended that the operation of mobile radio telephones in the medical practice or hospital be prohibited.

Strong EMI sources such as electro surgery units or x-ray units may affect performance. If performance problems occur, move the light to another electrical circuit or physical location.

Incompatible Devices and/or Accessories

For reasons of product safety, only original manufacturer devices & accessories approved for this product, or accessories from third parties which have been released by the manufacturer may be used. It is the user’s risk when using non-released accessories.

Obtaining Technical Literature

The manufacturer will make available on request circuit diagrams, component parts lists, descriptions, calibration instructions or other information that will assist technical personnel to repair and replace serviceable items.

Product Identification

This dental light can be identified by its product label, located on product. This label states the light model and serial number, electrical specifications, manufacture date and safety classification. Note the SAMPLE labels shown below.

Authorized European Representative:
Medical Device and QA Services
76, Stockport Road
WA15 7SN
United Kingdom
e-mail: info@mdqa.co.uk

![WARNING] This product is intended for use by trained dental/medical professionals only.

Electrical Specifications

<table>
<thead>
<tr>
<th>Volts</th>
<th>Cycles</th>
<th>Amps</th>
</tr>
</thead>
<tbody>
<tr>
<td>115 VAC</td>
<td>60 HZ</td>
<td>3 A</td>
</tr>
<tr>
<td>230 VAC</td>
<td>50 HZ</td>
<td>1.5 A</td>
</tr>
</tbody>
</table>

All fuses are labeled at point of use. Replace fuses only with type and rating as indicated.

IEC Medical Device Classification

<table>
<thead>
<tr>
<th>Classification:</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type:</td>
<td>B</td>
</tr>
<tr>
<td>Operation Mode:</td>
<td>Continuous</td>
</tr>
<tr>
<td>Splash Protection:</td>
<td>IPX0</td>
</tr>
</tbody>
</table>
SAFETY NOTES
The pre-installation must be performed according to the requirements in our ‘Pre-installation Instructions’.

As manufacturers of electro-medical products we can assume responsibility for safety-related performance of the equipment only if maintenance, repair and modifications are carried out only by us or agencies we have authorized for this purpose, and if components affecting safe operation of the unit that may be needed are replaced with original parts.

We suggest that you request a certificate showing the nature and extent of the work performed, from those who carry out such work, and specify that the certificate show any changes in rated parameters or working ranges, as well as the date, the name of the firm and a signature.

Storage Conditions:
-55°C to +50°C
10% to 90% Relative Humidity

**WARNING:** Rotational stops are designed for a maximum force limit of 30 lbs. If rotational stops are broken immediately take the equipment out of use and have the equipment serviced. Operation of damaged equipment could result in injury to the operator and/or patient.

**WARNING:** Failure to install set screws & roll pin per Installation Instructions could result in injury or damage to equipment.

**WARNING:** Power cords and their associated parts cannot be substituted without increase risk of electric shock or fire. Use manufacturer-approved replacement parts only! Power cords must be installed by qualified personnel. Make sure all service loops, strain reliefs, and cord guards are in place and that line, neutral and ground wires are secured.

**WARNING:** Failure to disinfect the dental operating light before use and between patients could expose user/patient to cross contamination and bio-burden/bio-contamination.

**WARNING:** No modification of this equipment is allowed.

**CAUTION!** Use a licensed electrician for all wiring.

**WARNING:** To avoid risk of electric shock, this equipment must be connected only to supply mains with protective earth.

**WARNING:** To avoid risk of burn injuries do not touch the light reflector during operation.

**WARNING:** To avoid risk of injury, avoid contact with sharp edges on dental lights.

**WARNING:** This product must be disinfected before use.

**CAUTION:** Only authorized service technicians should attempt to service this equipment. Use of other than authorized technicians will void the warranty.

**WARNING:** The light is not to be used in rooms where an explosion hazard exists.
SUGGESTED MOUNTING METHODS

Typical Position of Ceiling Mount in Relation to Dental Chair

Figure 1.

Location
A typical location for mounting the ceiling light in relation to the dental chair for a right-handed operator is shown in the figure above. Mounting for a left-handed operator would be mounted on the opposite side of the chair.
SUGGESTED INSTALLATION ON WOOD FRAMED CEILING

New Construction

Figure 2.

Existing Construction

Figure 3.
**SUGGESTED INSTALLATION ON SUSPENDED CEILING**

**Figure 4 - Attaching Cover**

**Wood Structure for Suspended Ceiling**

**Figure 5**

*Be sure to brace in both directions*
METAL STRUCTURE FOR SUSPENDED CEILING

Electrical Requirements

120 Volt, 50-60 Hz., 1.5 Amps (100 Watts) service line consisting of two #14 or larger wires and a ground conductor. Ground can be via separate wire or metal conduit in accordance with local electrical codes.

We recommend that a wall switch be installed in the power supply to facilitate servicing and protect the light transformer in the event of power surges while the light is not in use (i.e., electrical storms).
CEILING LIGHT INSTALLATION INSTRUCTIONS

1. Refer to page 4 for proper location of the ceiling light in relation to the dental chair.

   Although traditional methods dictate mounting the light to the left side of the chair for a right-handed operator and vice-versa for left-handed operators, careful consideration should be given to mounting location, especially to prevent interference with x-ray units. Also consider which side of the chair the patient enters. The light will function and position the same regardless of which side of the chair it is mounted on.

   Evaluate the construction of the ceiling to determine the best mounting method to employ based on the construction of the ceiling (i.e., conventional or suspended ceiling). See included drawings for suggestions on the support method to use based on ceiling construction.

2. After the required support structure is in place, locate and remove from the shipping box the following items:
   A. Ceiling mounting plate
   B. Ceiling post
   C. Installation hardware kit

3. Attach the ceiling mounting plate to the support structure using the supplied lag screws or other appropriate hardware as dictated by the support method employed. Be certain that the hardware employed can withstand a force of 75 lbs. at each attachment point.

4. Route the power cord through the ceiling post and slip the post into the socket on the ceiling plate. Align the retainer bolt holes in the post with the holes in the post socket and install the retainer bolt. Tighten firmly. (See figure 7).

5. Level the post front to back. Move the level 90 degrees and repeat the above procedure with the remaining screws for leveling side to side. Recheck level in both directions; then fully tighten all leveling screws (a magnetic level works best).

6. Ensure that the power to the ceiling light circuit is off and make the necessary electrical connections. We recommend that a licensed electrician make the required power connections (See figure 7).

7. Place the mounting plate cover halfway up the ceiling post with the cover retaining collar below it. Lightly tighten the setscrew to temporarily hold the cover in position. CAUTION: Do not overtighten the set screw. It will mark the painted post.

Figure 7
8. Place the locking tab retaining collar on the post just above the locking tab slot and lightly tighten the set screw (See cautionary note). Install the stop screw in the light adapter according to which side of the chair the light is mounted on. (See figure 8).

9. Grease the light adapter and the inside of the bottom of the ceiling post using supplied lubricant. Have an assistant hold the light assembly with the adapter near the bottom of the ceiling post. Plug the short male cord into the female coiled cord, being certain that this plug makes a tight connection so as not to become disconnected in the future.

10. Slide the light adapter into the bottom of the ceiling post until it bottoms. Look into the slot to be sure the stop screw is not within the confines of the slot. Now place the locking tab into the slot in the side of the ceiling post. (See figure 8). The locking tab fits flush into the ceiling post. Now loosen the set screw on the locking tab retaining collar and lower it over the slot. Align the collar with the bottom of the post and tighten the set screw firmly. The assistant supporting the light can now release it.

11. Check the light for freedom of movement and for any drift when positioned. Recheck the post and make any necessary leveling adjustments. Raise the ceiling plate cover to the top of the pole and tighten the set screw of the cover retaining collar to hold the cover in place.

12. Turn on the power switch and check the light for proper operation. The switch has three positions: up = high, middle = off, down = low. The light is factory preset at a 27" focal distance. This can be adjusted to suit the operator’s preference.

13. On some applications in offices with low ceilings, an over travel stop may be needed to prevent contact with the ceiling. This is supplied in the installation kit. (See figure 9).
ADJUSTING THE LIGHT-HEAD’S VERTICAL ROTATION

To correct a stiff or loose movement:

1. Remove the yoke end-caps on both sides of the yoke assembly by gripping the lip of the end-cap cover and pulling straight out.

2. Using the special tool provided, tighten or loosen the adjustment screws on both sides of the yoke as needed to achieve the desired friction.

Make the adjustments in small increments, checking the result after each. Match the adjustment on each side to achieve even friction.

Caution! While making adjustments, avoid pinching the wire that runs through the yoke assembly. A short circuit can cause serious damage to the light.
ADJUSTING THE LIGHT-HEAD’S HORIZONTAL ROTATION

1. Remove the plug located at the rear of the pivot housing.

2. Insert a 3/32” hex wrench into the tension screw. Tighten or loosen the tension screw in small increments, testing the movement as you go, until the desired tension is achieved.

3. Reinstall the plug.

Focusing the Light

The light’s focus should be checked whenever a bulb is replaced.

1. Point the light directly at a flat surface, such as a wall or a sheet of cardboard, positioning the bulb shield 27 inches away.

2. Turn the light on.

3. Using the knob at the back of the light, adjust the focus to obtain the sharpest light pattern.

Adjusting the Light-head’s Third Axis Rotation

1. Using a 5/64” hex wrench, remove the back cover of the pivot housing.

2. Using the special tool provided, tighten or loosen the pivot nut in small increments until the desired level is set.

3. Reinstall the cover.
Stabilizing the Light Arm

If the light arm drifts up or down, stabilize it by adjusting the spring tension:

1. Using a 5/64” hex wrench, loosen the screw at both ends of the flex arm and remove the top cover.
2. Using a 1/2” socket with an extension, turn the adjustment bolt clockwise to correct downward drift, or counter-clockwise to correct upward drift.
3. Reinstall the top cover.

Replacing the Bulb

For maximum reliability and optimum performance, use replacement bulb no. 70-30441.

**Warning!** Do not attempt to remove a bulb until it has been allowed to cool for at least two minutes.

The bulb is a two-prong push-in type. To replace a bulb:

1. Open the shield by pressing the release button and swinging the shield open.
2. After waiting for it to cool, grasp the old bulb by the base and pull straight outward. A gentle rocking motion will help work the bulb loose.
3. Grasp the new bulb by the base, align the pins with the matching holes, and press the bulb firmly into place.
4. Wipe the glass portion of the bulb clean with denatured alcohol.
5. Close the shield by depressing the shield release button and swinging it shut until the latch is engaged.
6. Check the light’s focus and adjust as required (see page 11).
Adjusting the Auto-Switch(Optional)

The Switch assembly is clipped onto the light arm tension rod. To change the position at which the light activates:

1. Remove the screws from both ends of the top cover and remove the cover.
2. Carefully slide the auto switch assembly towards or away from the activating switch to achieve the desired shut-off point.
3. Replace the top cover.

Turning the Light On and Off

The Model 1231 has a three-position switch: up is “high”, down is “low”, and middle is “off”.

This light unit includes an auto switch that automatically turns on the light when it is lowered for use and off when it is lifted clear of the patient.

The three position switch must be in either the “High” or “Low” position for the auto-switch to turn on the light.
CLEANING THE LIGHT

The equipment can be cleaned with a solution of mild detergent and warm water. A variety of surface disinfectants are available for use in dental treatment rooms. Some of these can cause discoloration of painted, plated or anodized surfaces with repeated use. This can be minimized by careful adherence to the disinfectant manufacturer’s instructions and by frequent washing with soap and water.

If you use an iodophor, it is especially important that you follow up with an iodophor neutralizer.

**IMPORTANT:** Do not use powdered cleansers, scouring pads or abrasive scrubbers on any of the painted, plastic or metal surfaces of this light. To remove dried-on material, use a soft bristled brush and a solution of mild detergent.

**WARNINGS, DISINFECTING & STERILIZATION - LIGHTS**

Infection control in the dental office continues to be a high priority for our customers and end users. OSHA, the ADA and the CDC are also involved in this complex issue. The Manufacturer will not attempt to specify the required intervals for disinfection nor can it recommend the overall best surface disinfectant. Please refer to the:

**Infection Control**

Recommendations published by the American Dental Association for further information. The question is often asked, “What should I use to disinfect my dental unit, chair and light?” This question is more complex than it seems because of the wide variety of products on the market as well as formulations of the products changing to meet the needs of increased asepsis.

**Barrier Technique**

The Manufacturer strongly advocates the barrier technique be used whenever possible to preserve the finish and appearance of the equipment. Wherever possible disposable barriers should be used and changed between patients. The barrier technique will ensure maximum long term durability of the surfaces and finishes of the equipment.

**Chemical Disinfection**

Regardless of the chemical disinfectant used, it is imperative that the equipment be thoroughly washed with mild soap and warm water at least once per day. This wash down will minimize the harmful effects of chemical disinfectant residues being allowed to accumulate on the equipment. When using chemical disinfectants, always pay strict attention to the manufacturer’s disinfectant directions. When using concentrated disinfectants, measure the concentrate carefully and mix according to package directions. Disinfectant solutions that are relatively harmless to surfaces at their recommended strengths can be corrosive at higher than recommended dilution ratios.

**Unacceptable Disinfectants**

These disinfectants will harm the surface finishes of dental equipment and are not recommended. Use of these products will void your warranty.

<table>
<thead>
<tr>
<th>Chemical Composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong Phenols/Phenol Alcohol combinations</td>
</tr>
<tr>
<td>Sodium Hypochlorite/Household Bleach</td>
</tr>
<tr>
<td>Sodium Bromide</td>
</tr>
<tr>
<td>Strong Alcohol</td>
</tr>
<tr>
<td>Household Cleaners (Dental Equipment Only)</td>
</tr>
<tr>
<td>Citric Acids</td>
</tr>
<tr>
<td>Iodophors**</td>
</tr>
<tr>
<td>Ammonium Chloride</td>
</tr>
<tr>
<td>Accelerated Hydrogen Peroxide (0.5%)</td>
</tr>
</tbody>
</table>

**Conditionally Acceptable Disinfectants**

These disinfectants have been found to be the least harmful to the equipment surfaces by our test methods.

<table>
<thead>
<tr>
<th>Chemical Composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phththaldehyde</td>
</tr>
<tr>
<td>Quaternary Ammonium</td>
</tr>
<tr>
<td>Glutaraldehyde</td>
</tr>
</tbody>
</table>

**CAUTION**

Only disinfect by wiping, no spray disinfection. Please be aware that the manufacturer expressly rejects any claims for warranty or damages when using other cleaning and disinfections solutions.

*The Manufacturer makes no representation as to the disinfectant efficacy of these products. We make no warranty expressed or implied that these disinfectants will not damage the surface finishes. Damage and discoloration of the surface finishes are not covered under the warranty.

**Iodophor-based disinfectants will cause yellow staining on many surfaces.**
Cleaning Your DCI Equipment Light

Cleaning Reflector and Cover

NOTE: Use only denatured alcohol to clean the glass reflector. Use only mild soap and water to clean the plastic reflector cover.

Do not use any solvents, abrasives, abrasive cloths or cleaners, as they may damage the coated surface of the reflector.

Be sure the electrical supply is turned off and the light is cool before attempting any cleaning or polishing. Remove the bulb shield, cover and bulb for full access to the reflector. (See “Bulb Replacement” for bulb removal).

Use a clean, soft** facial tissue dampened with denatured alcohol and gently wipe the surface of the reflector and the bulb. The plastic reflector cover may be gently washed with soap and water and dried using a soft towel.

Cleaning Painted Surfaces

The painted surfaces of your light can be cleaned by simply wiping with a damp cloth. No other protective coating is required to preserve the permanent luster of the painted surface.

CAUTION: Placing aluminum foil over the lamp handles for barrier asepsis will cause permanent discoloration of the handles. We recommend covers specifically manufactured for this purpose. Discoloration of the handles caused by the above is not covered under warranty.

**We recommend Puffs facial tissues.

NOTE: The plastic reflector cover must always be in place when light is used because it will catch bulb particles in the rare event a bulb should break; also, it will keep abrasive material away from the coated surface of the reflector.
Technical Specifications for the Dental Light

Technical Description — Light
The dental light is used for illuminating the oral cavity during the performance of dental procedures. The position and direction of the light can be adjusted as needed by the dentist. The light source is a halogen bulb designed to operate on low voltage. It has two intensity settings. The low voltage is supplied through a transformer which is located at the top of the light pole or in the junction box.

Patent Pending for DCI Equipment Light Head

Replacement Parts for Dental Lights
The following represents a condensed list of replacement parts that may be consumed during normal use. See your dealer for a more comprehensive list of components.

<table>
<thead>
<tr>
<th>PART #</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>70-22186</td>
<td>REFLECTOR, GLASS</td>
</tr>
<tr>
<td>70-20289</td>
<td>LIGHT SHIELD</td>
</tr>
<tr>
<td>70-30441</td>
<td>REPLACEMENT BULB</td>
</tr>
<tr>
<td>70-014R304</td>
<td>FUSE, 4 AMP, 3 AG (115V)</td>
</tr>
<tr>
<td>70-014R303</td>
<td>FUSE, 2 AMP, 3 AG (230V)</td>
</tr>
</tbody>
</table>

Safety Markings
The following warning label may be located on or near the light’s transformer enclosure:

Device Classification
The dental light is classified as Class 1 device under rule FDA CFR 21, Class I device under Health Canada guidelines, and a Class I device under rule 11 of the MDD 93/42/EEC of Annex IX.

IEC Medical Device Classification
Classification: 1
Type: B
Operation Mode: Intermittent
Splash Protection: IPX4

Electrical Specifications

<table>
<thead>
<tr>
<th>Volts</th>
<th>Cycles</th>
<th>Amps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental light: 115 VAC</td>
<td>60 HZ</td>
<td>1.09 A ~</td>
</tr>
<tr>
<td>230 VAC</td>
<td>50 HZ</td>
<td>0.6 A ~</td>
</tr>
</tbody>
</table>

Replacement fuses for unit light (located in panel near transformer):
115V: 4 AMP, 3 AG (P/N 70-014R304)
230V: 2 AMP, 3 AG (P/N 70-014R303)

Light Specifications

Halogen Lamp: 24 Volts, 100 Watts
Input Voltage: 110V/220 V, 60/50 Hz
Output Voltage: High 23V, Low 21V
Color Temperature: 4500 Degrees Kelvin
Light Intensity (Lux): High 25,000, Low 18,500
Focal Distance: 27 in.
Illumination Area: 3 in. x 8 in. at Focal Distance
Approx. Weight: 9.09 kg. (20 lbs.)
Dimensions & Range of Motion - 1231 Ceiling Light

Ø13.1”

15”
to
51”*

5.8”

28.25”

65°

23.5”

26”

33.25”

*DIMENSION VARIES DEPENDING UPON CEILING HEIGHT.
Dimensions & Range of Motion - 1231 Ceiling Light

288°

290°
Dimensions & Range of Motion - DCI Equipment Light Head

Service Location - 1231 Ceiling Light
Service Location - DCI Equipment Light Head

Bulb Replacement

On/Off Toggle Switch
Electrical Schematics

1231 Ceiling Light Electrical Schematic - 115V
Electrical Schematics

1231 Ceiling Light Electrical Schematic - 230V
ELECTROMAGNETIC COMPATIBILITY

MEDICAL ELECTRICAL EQUIPMENT ELECTROMAGNETIC COMPATIBILITY
(Instructions for use)

ELECTROMAGNETIC COMPATIBILITY
Electrical medical devices are subject to special EMC safety measurements and as a result the equipment must be installed according to the installation instruction manual.

PORTABLE ELECTRONIC DEVICES
Portable and mobile high frequency electronic communications equipment may interfere with electronic medical devices.

STATIC SENSITIVE DEVICES
Where labeled this equipment contains static sensitive devices that require special precautions when handling. At a minimum a grounded wrist strap that is connected to ground stud should be worn to reduce the possibility of damage to the light.

MEDICAL ELECTRICAL EQUIPMENT ELECTROMAGNETIC COMPATIBILITY
(TECHNICAL DESCRIPTION)

ELECTROMAGNETIC COMPATIBILITY testing has been done for this product.

ACCESSORY USE
Using accessory devices not specified by the manufacturer for use with their equipment may result in an increase of electromagnetic emissions and/or a decrease in electromagnetic immunity of the system. Do not use any accessories not authorized or approved by the manufacturer.

INTERFERENCE FROM OTHER EQUIPMENT
If other equipment is used adjacent to or stacked with this equipment the system must be observed to verify normal operation.
ELECTROMAGNETIC COMPATIBILITY

Guidance and manufacturer's declaration-electromagnetic immunity

This product is intended for use in the electromagnetic environment specified below. The customer or the user of this product should ensure that it is used in such an environment.

<table>
<thead>
<tr>
<th>IMMUNITY TEST</th>
<th>IEC60601 TEST LEVEL</th>
<th>COMPLIANCE LEVEL</th>
<th>ELECTROMAGNETIC ENVIRONMENT GUIDANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELECTROSTATIC DISCHARGE (ESD) IEC 61000-4-2</td>
<td>+/−6 kV contact</td>
<td>+/−6 kV contact</td>
<td>Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material the relative humidity should be at least 30%. Where labeled, a ground strap (connected to ground lug) should be worn to reduce the possibility of damaged to the unit when servicing.</td>
</tr>
<tr>
<td></td>
<td>+/−8 kV air</td>
<td>+/−8 kV air</td>
<td></td>
</tr>
<tr>
<td>ELECTRICAL FAST TRANSIENT/BURST</td>
<td>+/−2 kV for power supply lines</td>
<td>+/−2 kV for power supply lines</td>
<td>Mains power quality should be that of typical commercial or hospital environment.</td>
</tr>
<tr>
<td>IEC 61000-4-4</td>
<td>+/−1 kV for input/output lines</td>
<td>Not applicable, No I/O lines</td>
<td></td>
</tr>
<tr>
<td>SURGE IEC 61000-4-5</td>
<td>+/−1 kV differential mode</td>
<td>+/−1 kV differential mode</td>
<td>Mains power quality should be that of typical commercial or hospital environment.</td>
</tr>
<tr>
<td></td>
<td>+/−2 kV common mode</td>
<td>+/−2 kV common mode</td>
<td></td>
</tr>
<tr>
<td>VOLTAGE DIPS, SHORT INTERRUPTIONS AND VOLTAGE VARIATIONS ON POWER SUPPLY INPUT LINES IEC 61000-4-11</td>
<td>&lt;5% $U_T$ (&gt;95% dip in $U_T$) for 0.5 cycle</td>
<td>&lt;5% $U_T$ (&gt;95% dip in $U_T$) for 0.5 cycle</td>
<td>Mains power quality should be that of typical commercial or hospital environment. If the user requires continued operation during power mains interruptions, it is recommended that the product be powered by an uninterrupted power supply or battery.</td>
</tr>
<tr>
<td></td>
<td>40% UT (60% dip in UT) for 5 cycles</td>
<td>40% UT (60% dip in UT) for 5 cycles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>70% UT (30% dip in UT) for 25 cycles</td>
<td>70% UT (30% dip in UT) for 25 cycles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;5% UT (&gt;95% dip in UT) for 5 seconds</td>
<td>&lt;5% UT (&gt;95% dip in UT) for 5 seconds</td>
<td></td>
</tr>
<tr>
<td>POWER FREQUENCY (50/60 HZ) MAGNETIC FIELD IEC 61000-4-8</td>
<td>3 A/m</td>
<td>3 A/m</td>
<td>Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.</td>
</tr>
</tbody>
</table>

$U_T$ is the AC. mains voltage prior to application of the test level.
## ELECTROMAGNETIC COMPATIBILITY

### Guidance and manufacturer's declaration-electromagnetic immunity

This product is intended for use in the electromagnetic environment specified below. The customer or the user of this product should assure that it is used in such an environment.

<table>
<thead>
<tr>
<th>Immunity Test</th>
<th>IEC60601 Test Level</th>
<th>Compliance Level</th>
<th>ELECTROMAGNETIC ENVIRONMENT GUIDANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conducted RF</td>
<td>3 Vrms 150 kHz to 80 MHz</td>
<td>3 Vrms</td>
<td>Where ( P ) is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and ( d ) is the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</td>
</tr>
<tr>
<td>IEC 61000-4-6</td>
<td>3 V/m 80 kHz to 2.5 MHz</td>
<td>3 V/m</td>
<td>Where ( P ) is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and ( d ) is the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</td>
</tr>
</tbody>
</table>

Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, (a) should be less than the compliance level in each frequency range. (b) Interference may occur in the vicinity of equipment marked with the following symbol:

### NOTE 1:
At 80 MHz to 800 MHz, the higher frequency range applies.

### NOTE 2:
These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures objects and people.

- a) Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the product is used exceeds the applicable RF compliance level above, the product should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the product.

- b) Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3/Vm.
**ELECTROMAGNETIC COMPATIBILITY**

**Guidance and manufacturer’s declaration-electromagnetic emissions**

This product is intended for use in the electromagnetic environment specified below. The customer or the user should assure that it is used in such an environment.

<table>
<thead>
<tr>
<th>Emissions Test</th>
<th>Compliance</th>
<th>Electromagnetic Environment guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF emissions</td>
<td>Group 1</td>
<td>This product uses RF energy only for its internal function. Therefore, the emissions are very low and are not likely to cause any interference in nearby electronic equipment.</td>
</tr>
<tr>
<td>CISPR-11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RF emissions</td>
<td>Class B</td>
<td>This product is suitable for use in all establishments, other than domestic establishments and those directly connected to the public low voltage power supply network that supplies buildings used for domestic purposes.</td>
</tr>
<tr>
<td>CISPR-11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harmonic Emissions</td>
<td>Class A</td>
<td></td>
</tr>
<tr>
<td>IEC 61000-3-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage Fluctuations / flicker</td>
<td>Complies</td>
<td></td>
</tr>
<tr>
<td>Emissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IEC 61000-3-3</td>
<td></td>
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**Guidance and manufacturer’s declaration-electromagnetic emissions**

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</tr>
<tr>
<td>IEC 61000-3-3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHECKLIST

Verify the following after installation or servicing of the light:

☐ All manuals are present.

☐ All labels are present and legible.

☐ No mechanical damage on new installations.

☐ The arm is balanced and the friction adjustment is adjusted so that the light has no noticeable drift in the upper and lower positions.

☐ If ceiling mount or track mount, check the column at the tripod, trolley and arm adapter that the roll pin is installed to prevent the column from unscrewing. Check all set screws.

☐ The light can be moved and positioned freely without any drifting.

☐ The light is connected to the appropriate power source.

☐ Dispose of all light parts and internal components per applicable codes, regulations and directives.

☐ The dimmer switch works on all available settings (low, medium, and/or high).
Purchase Information

Write in the model and serial numbers below for all applicable equipment such as the chair, unit light and unit control head.

MODEL: ________________________  DATE PURCHASED: ________________
SERIAL NUMBER: ________________  DATE INSTALLED: ________________

MODEL: ________________________  DEALER NAME AND ADDRESS:
SERIAL NUMBER: ________________  ____________________________

Notes / Service History

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