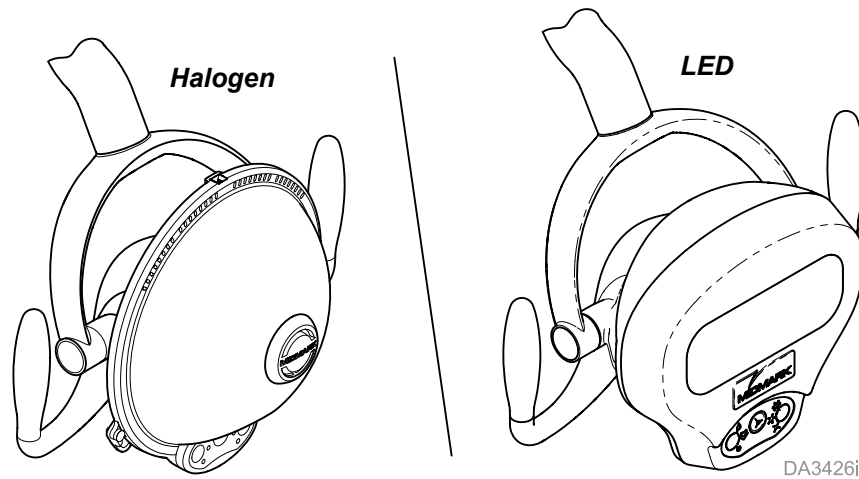


Midmark Dental Light

NOTE: This user guide applies to Halogen and LED-style lights.



Compliance Information & Symbols

- [Serial Number Location](#) 2
- [Intended Use](#) 3
- [Electromagnetic Interference](#) 3
- [Transportation / Storage / Operating Conditions](#) 3
- [Disposal of Equipment](#) 3
- [Authorized CE Representative](#) 3
- [Calling For Service](#) 3
- [Symbols](#) 4

Operation and Adjustments

- [Operate the Light](#) 5
- [Adjust the Intensity](#) 6
- [Composite Setting](#) 7
- [Light Focus Adjustment](#) 8
- [Pivot Joint Tension Adjustments](#) 9

Cleaning and Maintenance

- [Barriers](#) 10
- [Cleaning Procedures](#) 10
- [Cleaning the Dental Light](#) 11
- [Bulb and Parts Replacement](#) 12

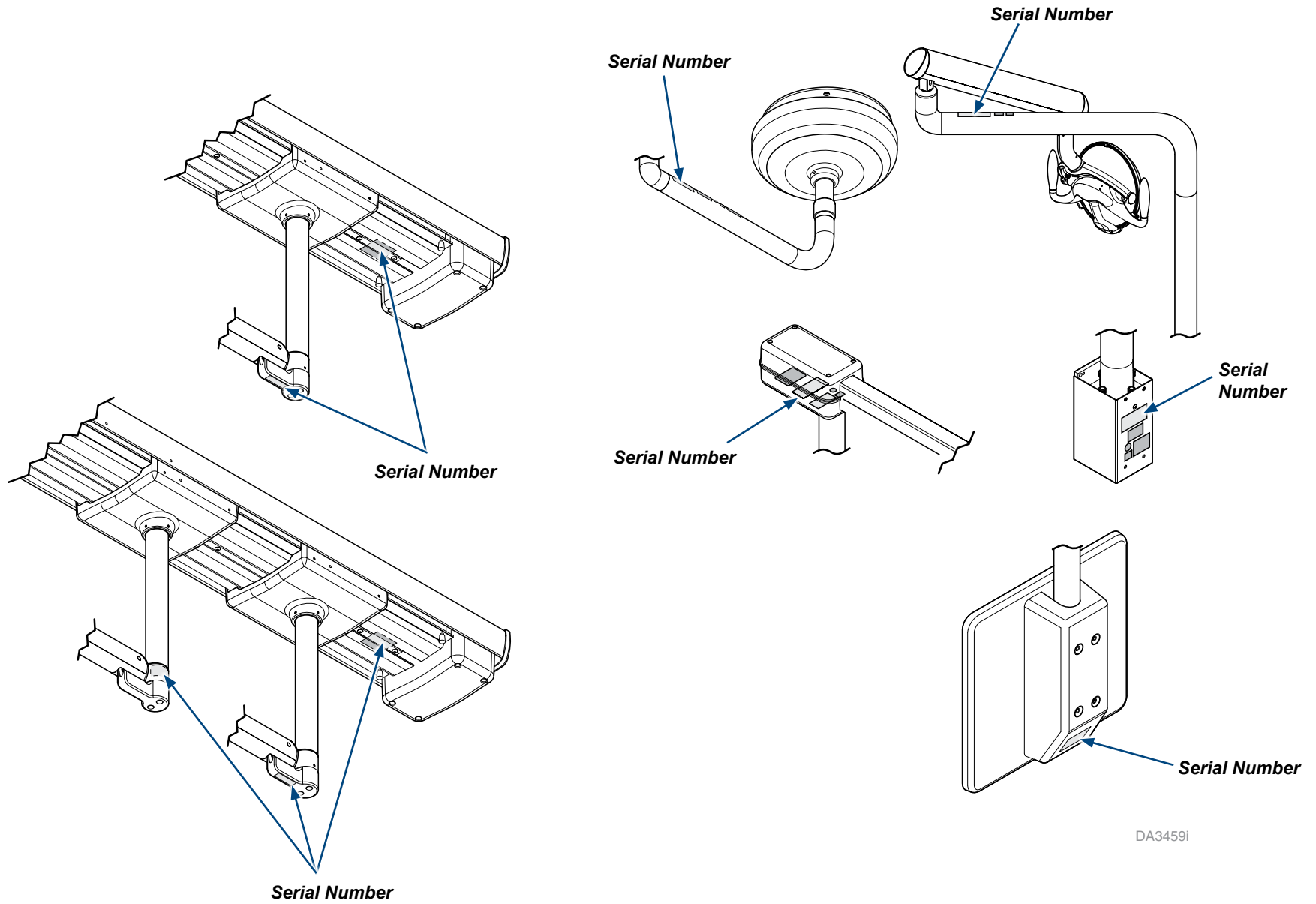
Specifications and Warranty

- [Light Specifications](#) 13 & 14
- [Warranty Information](#) 15

For installation information go to:
[Technical Library at Midmark.com](#)

Language of origin: English

Serial Number Location



DA3459i

Compliance Information

Intended Use

This product is intended to be used as a component in a dental environment to provide lighting during dental procedures.

Electromagnetic Interference

Midmark dental operatory components are designed and built to minimize electromagnetic interference with other devices. However, if interference is noticed between another device and this operatory, remove the interfering device from room and / or plug product into an isolated circuit.

Transportation / Storage / Operating Conditions

Transportation / Storage Temperature:.....23°F to 100°F (-5°C to 38°C)

Relative Humidity..... 10% to 90% (non-condensing)

Atmospheric Pressure 7.2 PSI to 15.3 PSI (50 kPa to 106 kPa)

Operating Temperature Range: 59°F to 95°F (15°C to 35°C)

Disposal of Equipment

At the end of this product's life, the unit, accessories and other consumable goods may be contaminated from normal use. Consult local codes and ordinances for proper disposal of this equipment and other consumable goods.

Authorized CE Representative

Countries in the EEC should direct all questions, incidents, and complaints to Midmark's Authorized CE representative listed below.

Midmark Europe SAS
22, Rue De St. Denis
53500 Ernee,
FRANCE
Phone: 33-2-430-517-76
Fax: 33-2-430-569-10

Calling For Service

Direct all service inquiries to your authorized Midmark dealer. When calling for service, you must provide the following information:

Model / serial number
Date of purchase
Symptom(s) of malfunction

Symbols

These symbols appear on your equipment and/or in the manuals.



WARNING

Indicates a potentially hazardous situation which could result in serious injury if not avoided.



Caution

Indicates a potentially hazardous situation which may result in minor or moderate injury if not avoided. It may also be used to alert against unsafe practices



Equipment Alert

Indicates a potentially hazardous situation which could result in equipment damage if not avoided.



Consult Manuals



**Type B,
Applied Part**



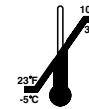
Fragile



**Proper Shipping
Orientation**



Relative Humidity



**Transportation &
Storage
Temperature**



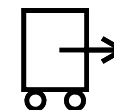
**Atmospheric
pressure**



Keep Dry



**Maximum stacking
height (Refer to “n”
number on package.)**



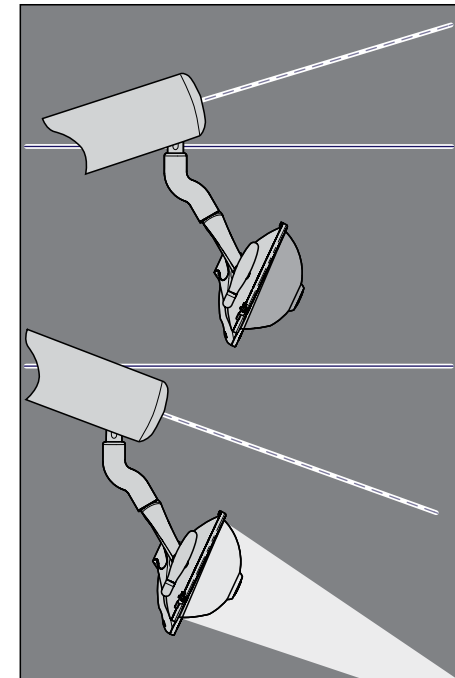
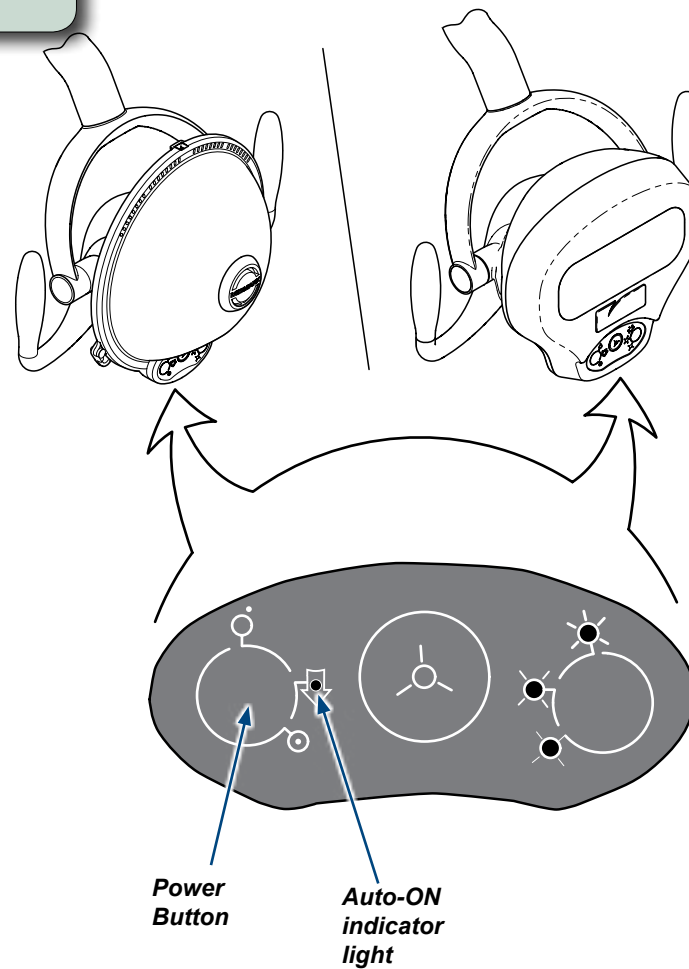
**Transportation
Orientation**

Operate the Light

Press the Power Button on the touch pad to advance thru the operation modes *AUTO-On* / *Manual ON* / *OFF*.

To use the Auto-On function...

- A) Press the Power button until the Auto-On indicator light illuminates.
- B) Pull the lighthouse down (below horizontal) to turn the light ON.
- C) Move the light up (above horizontal) to turn the light OFF.



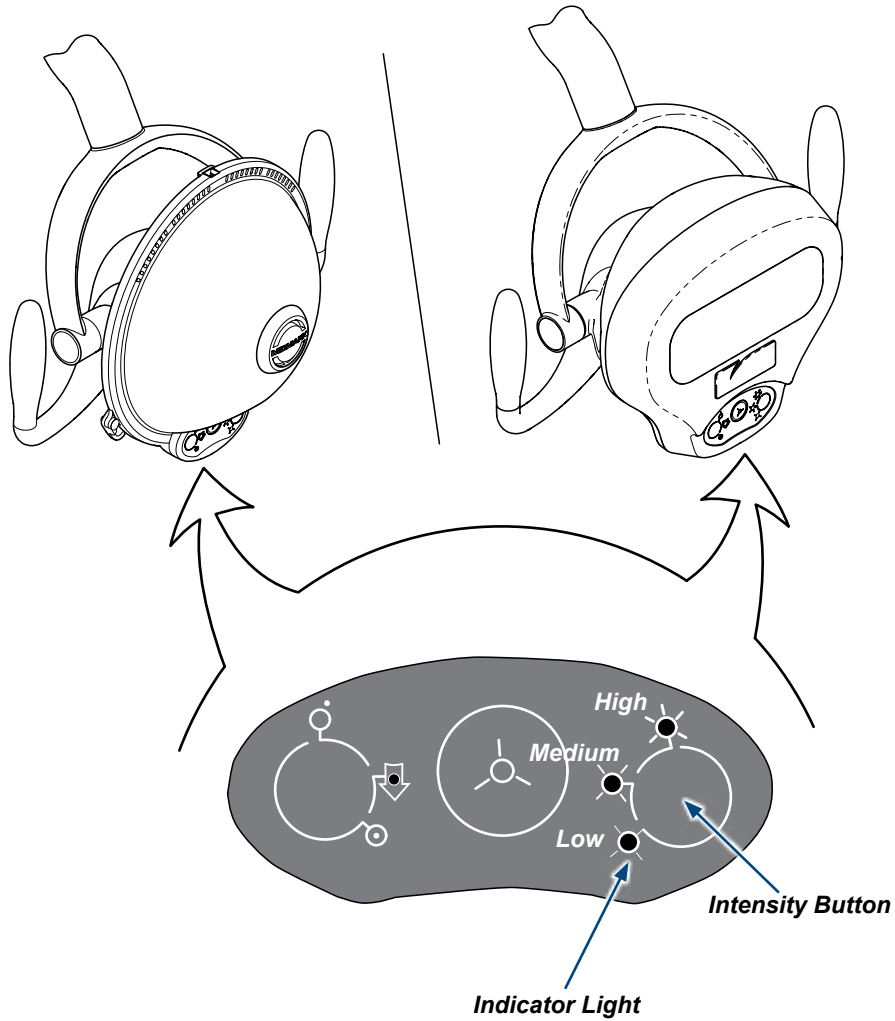
DA3455i

Adjust the Intensity

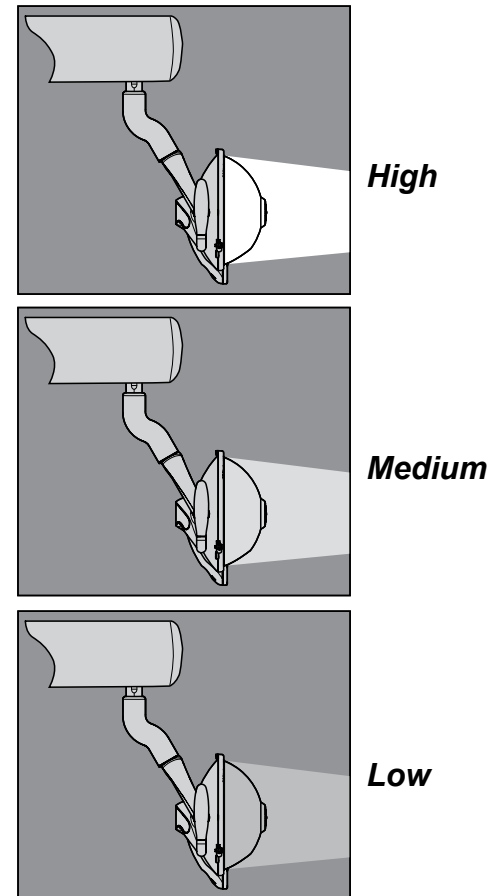
To Adjust Light Intensity...

Press (and release) the Intensity Button to advance thru the intensity settings: High / Medium / Low.

Note: Indicator light shows current setting.



View Light Specifications



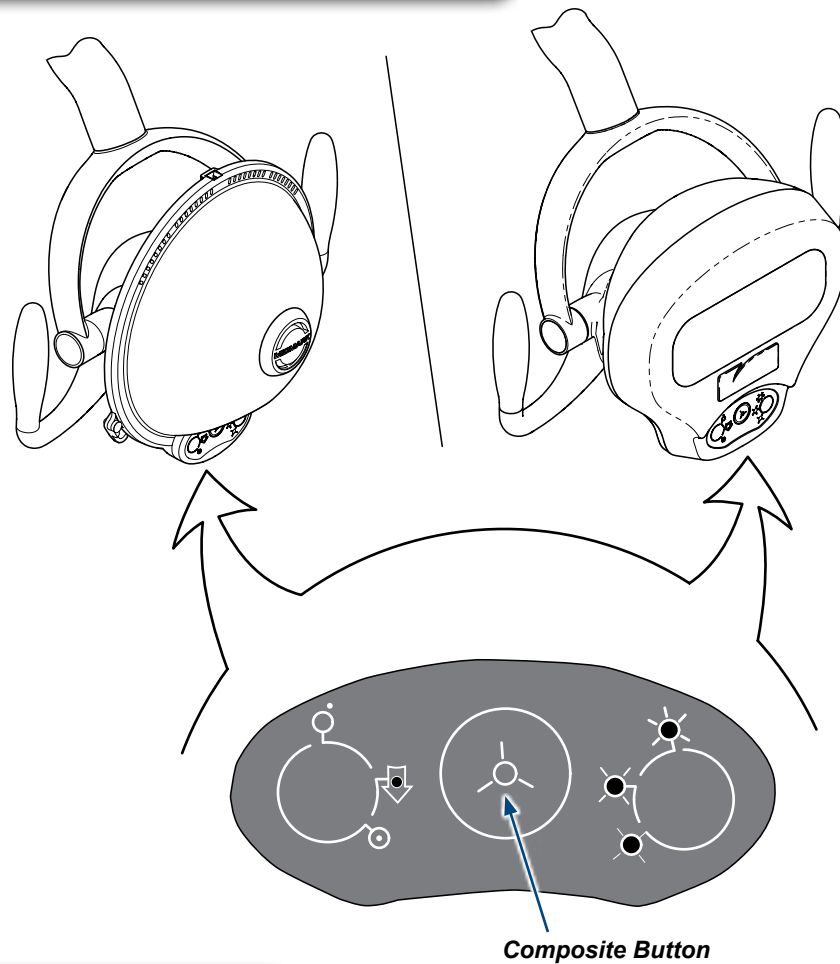
DA3457I

Composite Setting

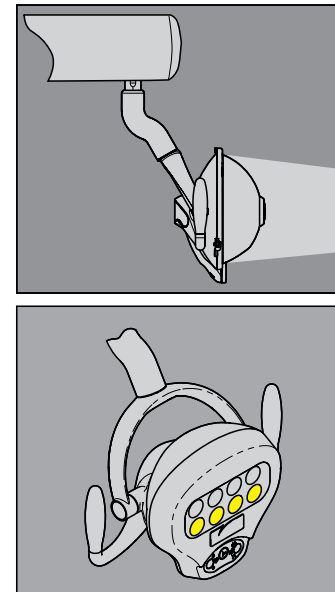
This setting provides illumination for a procedure without the normal intensity that can prematurely cure composite dental materials.

To activate the Composite Setting...

Press (and release) the Composite Button to produce an extra, low-intensity light beam.



View Light Specifications



DA3460i

Note

The Procenter Delivery Unit does not have a Composite Button.

Note

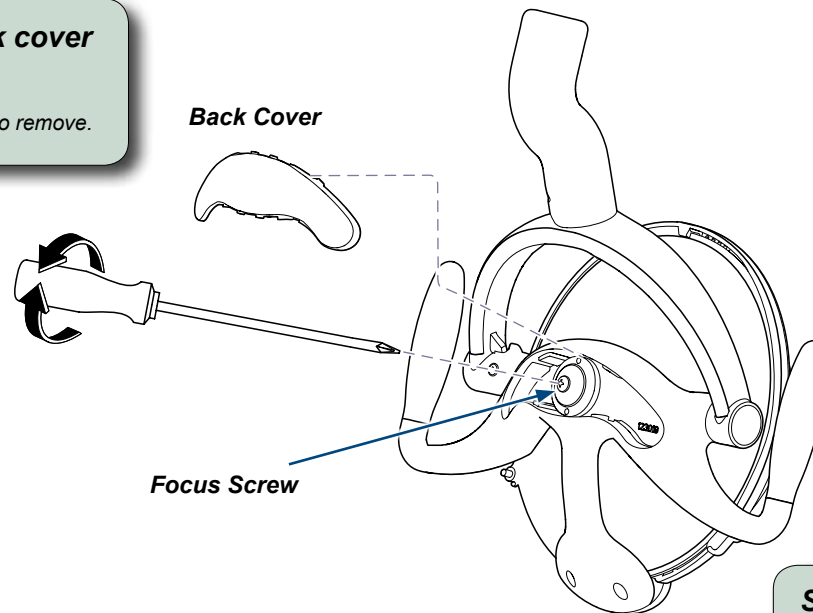
The Elevance Chair wireless control also has a Composite Button.

Light Focus Adjustment (Halogen ONLY)

This adjustment controls the sharpness of the light pattern at a specified distance. The light's focus is set at the factory for a distance of 27 inches (69 cm). This distance is measured from the lighthead to the patient.

Step 1: Remove the back cover
Pry the back cover off light.

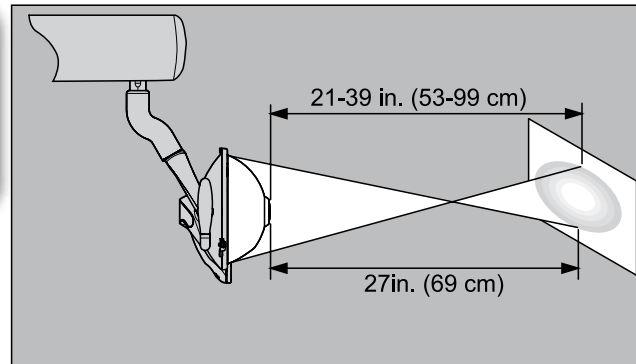
Note: May use a flat head screwdriver to remove.



Step 2: Set the target distance

Position the lighthead at desired distance from target (ex. wall) then turn light ON.

Note: Distance must be between 21-39 in. (53-99 cm).



Step 3: Focus Light

Use a Phillips head screw driver to adjust the Focus Screw.

Note: Suggested light focus is on oval shape approximately 3 x 8 in (8 x 20cm).

Note

Light intensity decreases as the target focus area grows.

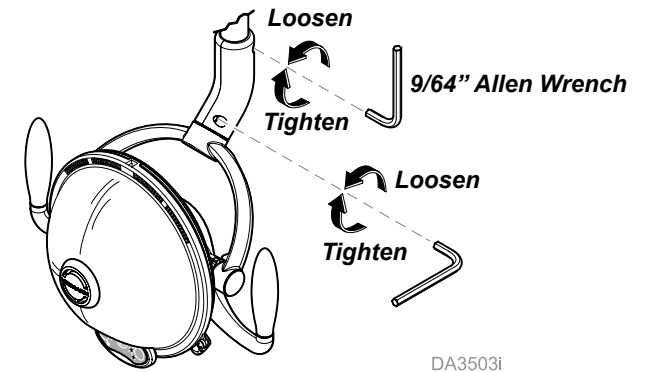
DA3461i

Pivot Joint Tension Adjustments

To adjust the Arm Pivot or Yoke Pivot Joint Tension...

- A. Remove screws and Pivot Cover using a 3/32" Allen wrench.
- B. Tighten or loosen the Rub Pad socket head screws at the Arm Pivot Joint or the Yoke Pivot Joint.

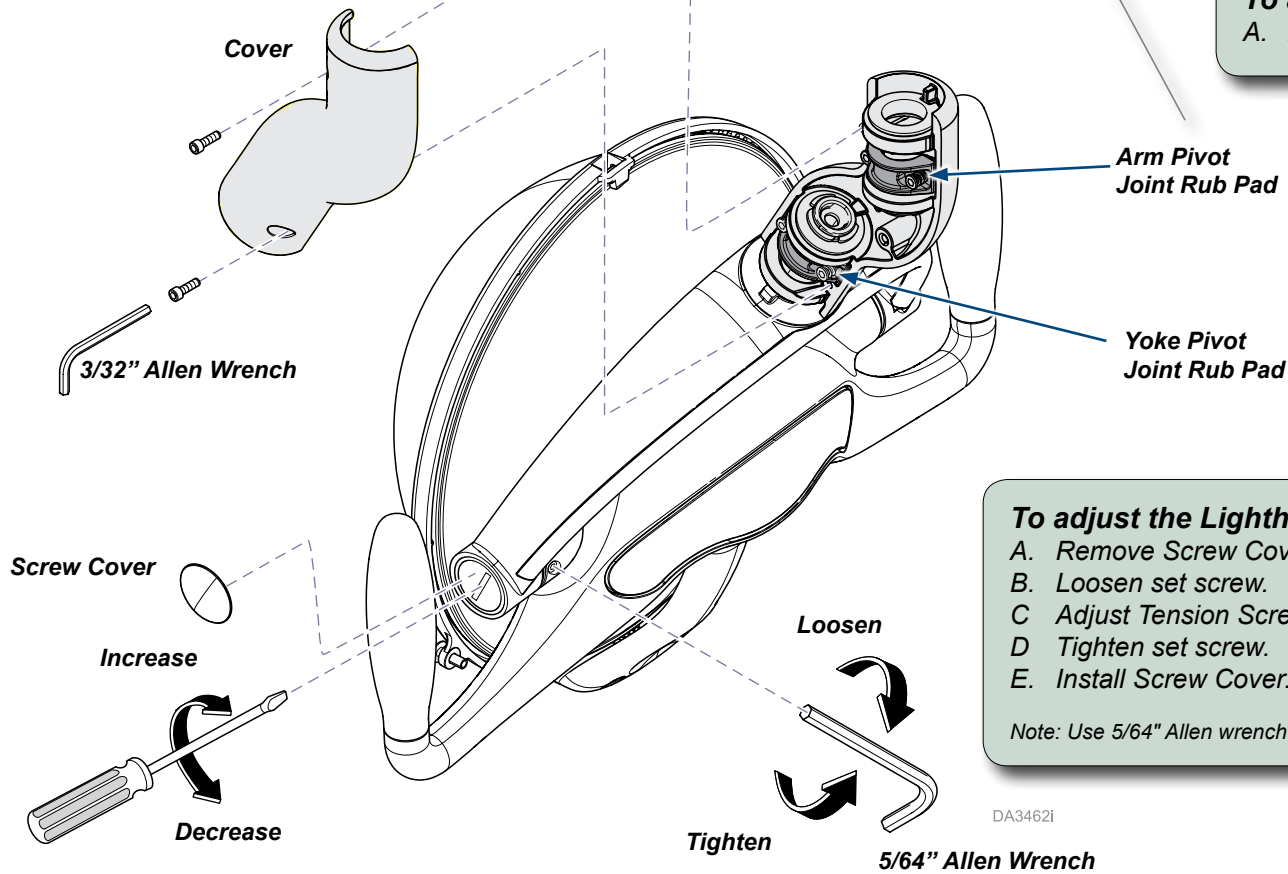
Note: Use a 3/32" Allen wrench to remove cover and make these adjustments.



To adjust the Arm Pivot Joint Tension...

- A. Adjust the set screw with 9/64" Allen wrench.

Halogen Shown



To adjust the Lighthouse Pivot Joint Tension...

- A. Remove Screw Cover.
- B. Loosen set screw.
- C. Adjust Tension Screw as necessary.
- D. Tighten set screw.
- E. Install Screw Cover.

Note: Use 5/64" Allen wrench for set screw.

Cleaning and Maintenance

Barriers

Single-use barriers and disposable items significantly reduce the need for chemical cleaners, thus prolonging the life of the equipment. Barrier material must be impervious to moisture / fluids.

Examples of protective barriers:

- Plastic covers (available from your dealer or equipment manufacturer)
- Clear plastic wrap
- Plastic bags
- Plastic sheets
- Plastic tubing
- Plastic-backed paper
- Materials similar to those listed here

Cleaning Procedures

Use cleaners that are appropriate for the situation, such as warm water and mild detergents, or a 10% solution of bleach with water.

NOTE

Every dental practice is different, and no single cleaner is the best choice for every facility. Listed below are some organizations to assist you in choosing the best cleaners available for your practice.

- **Organization for Safety & Asepsis Procedures:**

<http://www.osap.org>

- **American Dental Association:**

<http://www.ada.org>

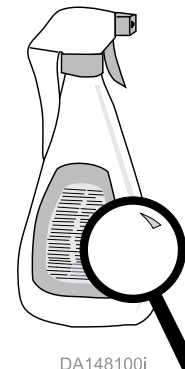
- **Dept. of Health & Human Resources
Centers for Disease Control & Prevention (CDC):**

<http://www.cdc.gov>



Caution

Midmark assumes no responsibility or liability for any result, expressed or implied. These are suggested practices, based on the best information available at this time this is written.



DA148100i

**Read all labels
carefully!**

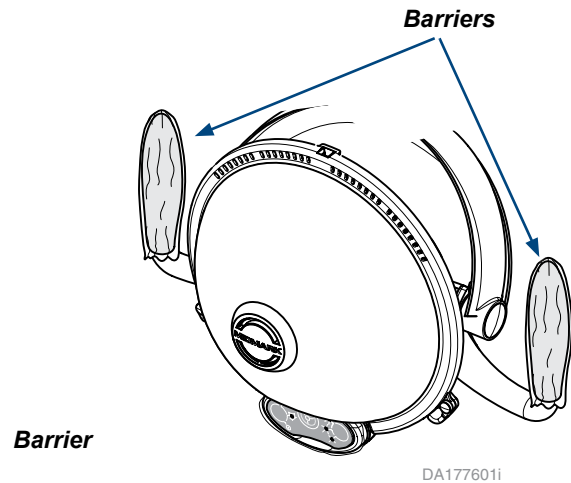


DA177400i

Cleaning the Dental Light

At the beginning of each work day...
Use barrier protection to cover surfaces that must be protected from contamination.

Note: Replace barriers for each patient.



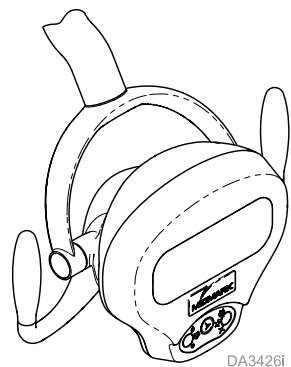
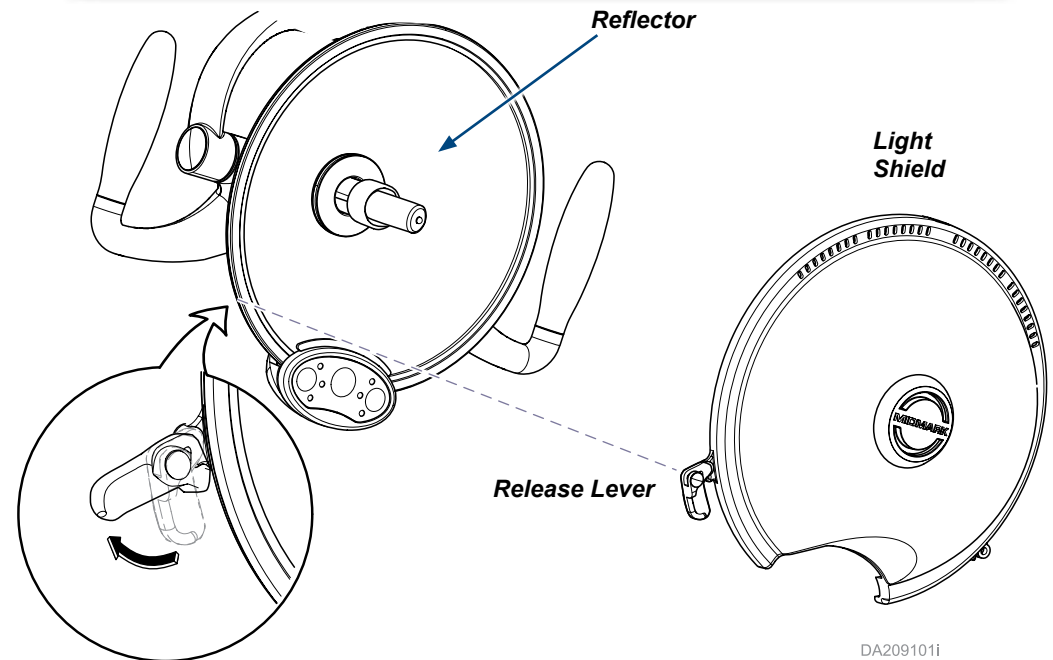
To clean the outside of the light shield... (Halogen ONLY)

Gently wipe with a soft cloth using mild soap and water.



Caution

The bulb and surrounding components may be HOT! Allow the bulb to cool for at least five minutes before removing the light shield. Never operate the light with light shield removed.



To clean LED light ...

Use damp soft cloth with mild soap gently wiping exterior surface.

To clean the inside of the light shield and reflector... (Halogen ONLY)

- A) Turn light off and allow it to cool for at least 5 minutes.
- B) Unlock the two levers
- C) Gently wipe with a soft cloth using a mild soap and water..
- D) Replace the light shield and lock the two release levers

Bulb and Parts Replacement (Halogen ONLY)



Equipment Alert

Never touch a new bulb with bare hands. Leave plastic sleeve on bulb to protect it from bodily oils. Bodily oils cause "hot spots" on the bulb that will reduce bulb life.



Caution

The bulb and surrounding components may be HOT! Allow the bulb to cool for at least five minutes before removing the light shield. Never operate the light with light shield removed.

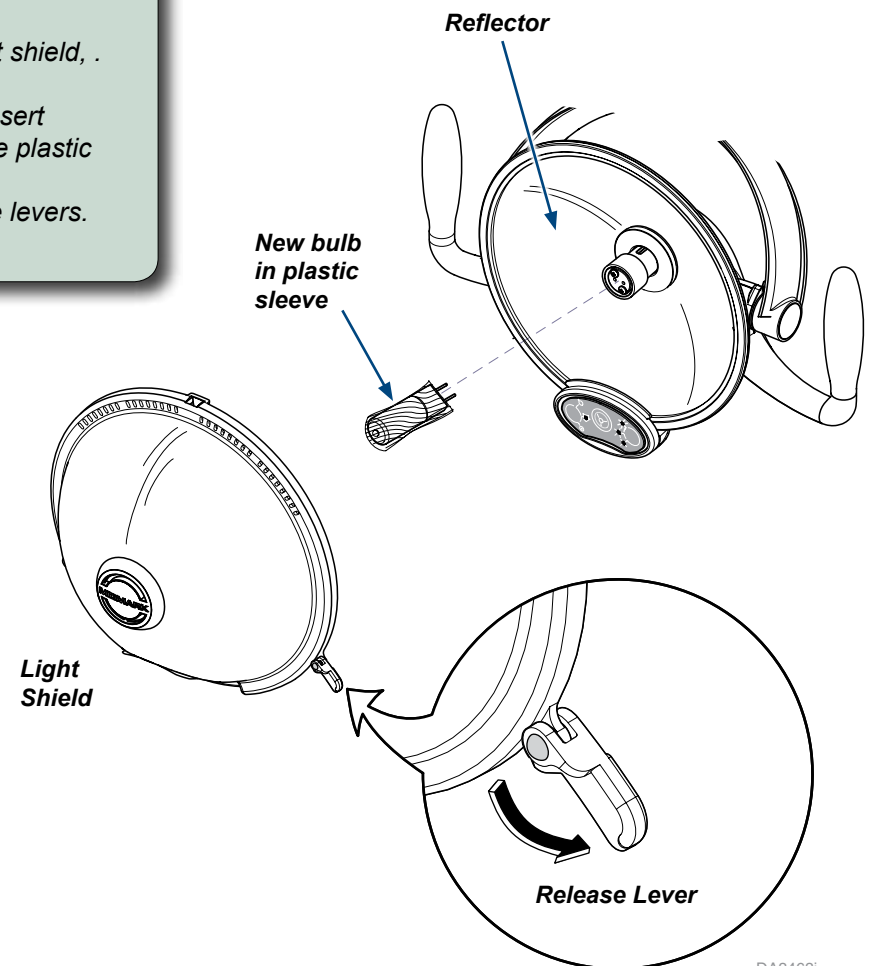
To replace the bulb...

- Allow bulb to cool for at least 5 minutes.
- Unlock the two release levers, remove light shield, then remove the bulb.
- Leave plastic sleeve on new bulb as you insert it into the light bulb socket, then remove the plastic sleeve.
- Install the light shield and lock both release levers.



Caution

Never operate the light when the Light Shield is removed.



Refer to Parts Manuals in the Technical Library on www.midmark.com for all Replacement Parts

DA3463i

Light Specifications

Midmark Dental Light Models:		
	Halogen	LED
Bulb (Light Assembly):	17 VAC, 95W, GY 6.35 size	No User Servicable Parts
Fuse Rating:	Type 3AG, T2.5AL, 250 VAC 1/4 x 1-1/4 in.	Type 3AG, T2.5AL, 250 VAC 1/4 x 1-1/4 in.
Color Temperature	Bulb...3000° K Light Assembly... 5000° K (+/- 500° K) (Off Reflector)	5700 Kelvin (Operation Mode)
Light Intensity:		
Low Setting	<1900 ft.-Candles (<20,500 lux)	<1275 ft.-Candles (<13,700 lux)
Medium Setting	<2800 ft.-Candles (<30,100 lux)	<2100 ft.-Candles (<22,600 lux)
High Setting	<3500 ft.-Candles (<37,700 lux)	<2375 ft.-Candles (<25,500 lux)
Composite Setting	< 750 ft.-Candles (<8,100 lux)	<2150 ft.-Candles (<23,100 lux)
Pattern Size	3-3/4" x 7-7/8" (9.5 cm x 20 cm)	3-1/3" x 7-1/2" (8.5 cm x 19.1 cm)
Weight of Light	27 pounds (12.2 Kilograms)	27 pounds (12.2 Kilograms)
Weight of Light and Arm:		
L/R Version:	40.1 lbs (18.2 kg)	40.1 lbs (18.2 kg)
Console Version:	28.5 lbs (12.9 kg)	28.5 lbs (12.9 kg)
Track Version:	19.5 lbs (8.8 kg)	19.5 lbs (8.8 kg)



WARNING

Do not modify this equipment without authorization of the manufacturer.



WARNING

Equipment is not suitable for use in the presence of a flammable anesthetic mixture with oxygen, air, or nitrous oxide.

Clarification: Equipment is suitable for use in the presence of oxygen, air, or nitrous oxide.



Caution

To completely isolate the light from electrical mains supply:

For lights provided with a power cord, the power cord must be unplugged.

For lights wired directly to mains supply, the wiring must be connected to an appropriately sized circuit breaker and the circuit breaker must be turned off.

Light Specifications...continued

Midmark Dental Light Model: (Halogen)		
Mounting Style	Electrical Rating:	Complies to the applicable requirements of:
Elevance and Ultra Chairs: 153818 (-001 thru -006) 153914 (-002)	Power Supply Model No.:153808-001, -002	Class I, Type B Applied Part, Ordinary Equipment (IPX0), Continuous Operation ES/IEC/EN 60601-1, CAN/CSA C22.2 60601-1 (Safety Standards), EN/IEC 60601-1-2 (EMC Standards)
Knight Chair: 153937 (-001 thru -004)	Power Supply Model No.:153935-001, -002	Class I, Type B Applied Part, Ordinary Equipment (IPX0), Continuous Operation
Ceiling: 153637-001 Wall: 153640-001 Cabinet: 153641-001 Universal: 153639-001	115/230VAC, 2A/1A, 50/60 Hz	ES/IEC/EN 60601-1, CAN/CSA C22.2 60601-1 (Safety Standards), EN/IEC 60601-1-2 (EMC Standards)
Track Light/Monitor: 153829 (-001 thru -008) & 153830 (-001 thru -008)	115VAC, 1.5 A, 50/60 Hz	UL 60601-1:2003 R6.03 CAN/CSA C22.2 No. 601.1-M90
Track: 153656-001	115/230VAC, 1.2/0.6 A, 50/60 Hz	UL 60601-1:2003 R6.03 CAN/CSA C22.2 No. 601.1-M90

Midmark Dental Light Model: (LED)		
Mounting Style	Electrical Rating:	Complies to the applicable requirements of:
Elevance and Ultra Chairs: 153901(-001 thru -006) 153915 (-002)	Power Supply Model No.:153808-001, -002	Class I, Type B Applied Part, Ordinary Equipment (IPX0), Continuous Operation ES/IEC/EN 60601-1, CAN/CSA C22.2 60601-1 (Safety Standards), EN/IEC 60601-1-2 (EMC Standards)
Knight Chair: 153938 (-001 thru -004)	Power Supply Model No.:153935-001, -002	Class I, Type B Applied Part, Ordinary Equipment (IPX0), Continuous Operation
Ceiling: 153905-002 Wall 153908-002 Cabinet: 153909-002 Universal: 153904-002	115/230VAC, 190mA/330mA, 50/60HZ	ES/IEC/EN 60601-1, CAN/CSA C22.2 60601-1 (Safety Standards), EN/IEC 60601-1-2 (EMC Standards)
Track Light/Monitor: 153906 (-010 thru -018) & 153907 (-010 thru -018)	115VAC, 600 mA, 50/60 Hz	UL 60601-1:2003 R6.03 CAN/CSA C22.2 No. 601.1-M90
Track: 153910-002	115/230VAC, 300 mA, 50/60 Hz	UL 60601-1:2003 R6.03 CAN/CSA C22.2 No. 601.1-M90

Warranty Information

SCOPE OF WARRANTY

Midmark Corporation (“Midmark”) warrants to the original purchaser its Dental products and components (except for components not warranted under “Exclusions”) manufactured by Midmark to be free from defects in material and workmanship under normal use and service. Midmark’s obligation under this warranty is limited to the repair or replacement, at Midmark’s option, of the parts or the products the defects of which are reported to Midmark within the applicable warranty period and which, upon examination by Midmark prove to be defective.

APPLICABLE WARRANTY PERIOD

The applicable warranty period, measured from the date of delivery to the original user, shall be as follows:

1. DENTAL PRODUCTS are warranted against defect in material and workmanship for the period indicated below from the time of delivery:
 - (a) Two (2) years for all products and components (except for the periods in b thru e).
 - (b) “KINK-VALVE” module carries a ten (10) year warranty.
 - (c) The original light bulb on a new light carries a one (1) year warranty.
 - (d) Accessories not manufactured by Midmark are excluded.
 - (e) Replacement parts and accessories carry a ninety (90) day warranty.
2. Oral Surgery PRODUCTS are warranted against defect in material and workmanship for a period of one (1) year from the time of delivery.
3. STERILIZERS PRODUCTS are warranted against defect in material and workmanship for a period of one (1) year from the time of delivery.
4. ULTRASONIC CLEANER PRODUCTS when used in accordance with manufacturer’s instructions and under normal use, are guaranteed for two (2) years after date of shipment. Within the period guaranteed, the manufacturer will repair or replace free of charge, at its sole discretion, all parts that are defective because of material or workmanship including costs for removing or installing parts. Repairs are made on a FOB repair depot basis. Manufacturer’s liability, whether based on warranty, negligence or other cause, arising out of and/or incidental to sale, use or operation of the transducer elements, or any part thereof, shall not in any case exceed the cost of repair or replacement of the defective equipment, and such repair or replacement shall be the exclusive remedy of the purchaser, and in no case shall manufacturer be responsible for any and/or all consequential or incidental damages including without limitation, and/or all consequential damages arising out of commercial losses.

5. INTEGRA™ DENTAL CASEWORK AND ARTIZAN™ DENTAL FURNITURE PRODUCTS are warranted against defect in material and workmanship for the period indicated below from the time of delivery:

- (a) Five (5) years for all products and components (except for the shorter periods in (b and c), including plastic laminate top surfaces, door and drawer fronts, casters, and electrical components such as task lights and cords. (b) Three (3) years for task light ballast. (c) One year (1) for plastic laminate, solid surface countertops and accessories.

EXCLUSIONS

This warranty does not cover and Midmark shall not be liable for the following;

- (1) repairs and replacements because of misuse, abuse, negligence, alteration, accident, freight damage, or tampering;
- (2) matching of color, grain, or texture except to commercially acceptable standards;
- (3) changes in color caused by natural or artificial light;
- (4) products which are not installed, used, and properly cleaned as required in the Midmark “Installation” and or “Installation/Operation” Manual for this applicable product;
- (5) products considered to be of a consumable nature;
- (6) accessories or parts not manufactured by Midmark;
- (7) specially manufactured products;
- (8) charges by anyone for adjustments, repairs, replacement parts installation, or other work performed upon or in connection with such products which is not expressly authorized in writing in advance by Midmark.

EXCLUSIVE REMEDY

Midmark’s only obligation under this warranty is the repair or replacement of defective parts. Midmark shall not be liable for any direct, special indirect, incidental, exemplary or consequential damages or delay including, but not limited to, damages for loss of profits or loss of use.

NO AUTHORIZATION

No person or firm is authorized to create for Midmark any other obligation or liability in connection with the products.

THIS WARRANTY IS MIDMARK’S ONLY WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. MIDMARK MAKES NO IMPLIED WARRANTIES OF ANY KIND INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS.