



A-dec 6300 Ceiling-Mount Dental Light

INSTALLATION GUIDE



Recommended Tools

- Hex key set
- Plumb bob
- Drill
- 3/16" drill bit
- 6' piece of tubing
- Level
- Phillips head screwdriver
- Tape measure
- Anti-static strap
- 7/16" socket and ratchet

Before You Begin



NOTE A data line has been included with the dental light for use with A-dec products that can operate the light through the touchpad. These products include the A-dec 500, A-dec 400, and A-dec 300, as well as Decade®, Cascade®, and Performer® dental chairs that have upgraded chair circuit boards and delivery system touchpads. The data line should never be plugged into a telephone jack. If the system does not include a touchpad, disregard the instructions for the data line.



DANGER Failure to turn off the power before you begin this procedure can lead to electrical shock.

Figure 1. A-dec 6300 Ceiling-Mount Dental Light



WARNING Failure to turn off the power before you begin this procedure can lead to product damage and result in serious injury or death.

Check with local and state code authorities about installation requirements for this product.

Electrical wiring must be installed by a licensed electrician according to the local building codes.

Install the Light

Prepare the Ceiling



WARNING Ensure that the ceiling and/or framing can support the 70 lb (31.5 kg) dead weight of the light and the additional force of movement and positioning of the light.

Consult a licensed professional, e.g. structural or architectural engineer, for mounting to a metal joist or masonry ceiling. Ensure that all installations conform to local code requirements. The mounting structure must be designed to support a minimum 70 lb (31.5kg) static load and a minimum moment of 150 ft.-lb (203 Nm).

Determine the Location

1. Check with the doctor to determine whether a left- or right-hand installation is desired.
2. Determine the mounting location for the ceiling-mount light in relationship to the chair.

Determine the Ceiling and Bracing Type

Determine the type of ceiling (wood frame or suspended) to which the dental light is being installed and complete any required modifications to the ceiling structure. The structures use either wood framing or a fabricated metal brace (per local codes) for a suspended ceiling. See Figure 3 on page 3.

Figure 2. Determine the Mounting Locations

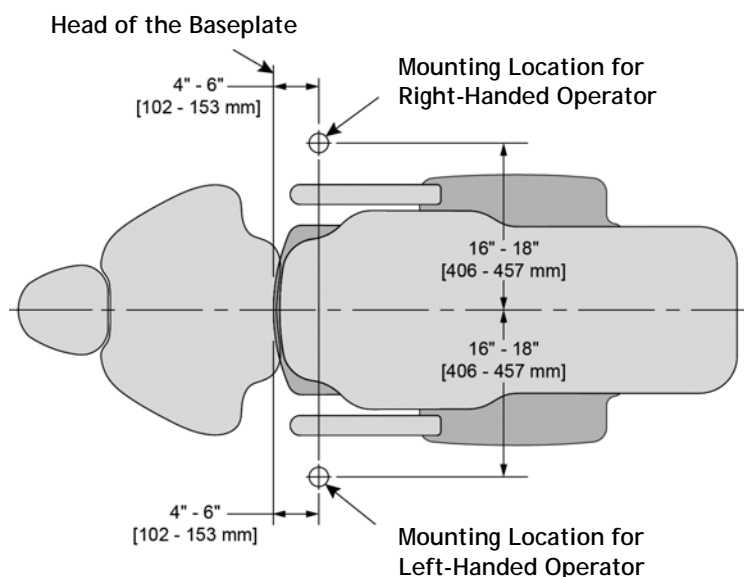
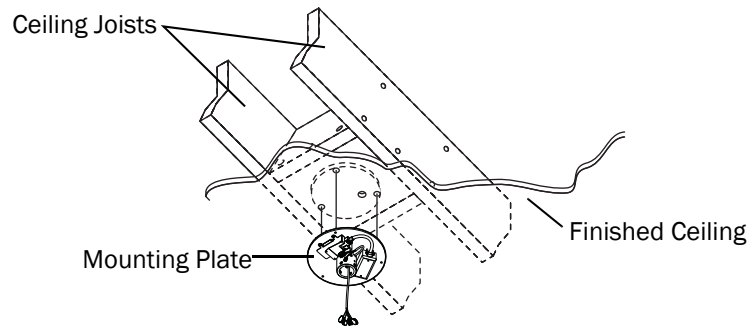
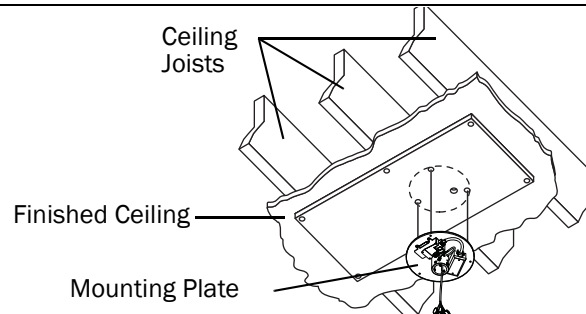


Figure 3. Ceiling and Bracing Type

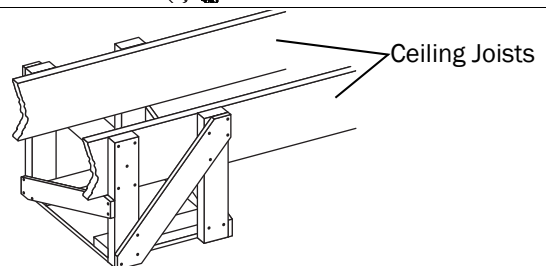
New Construction



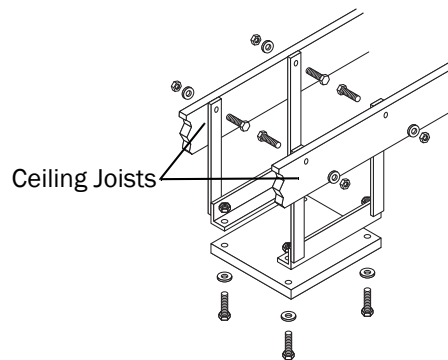
Existing Construction



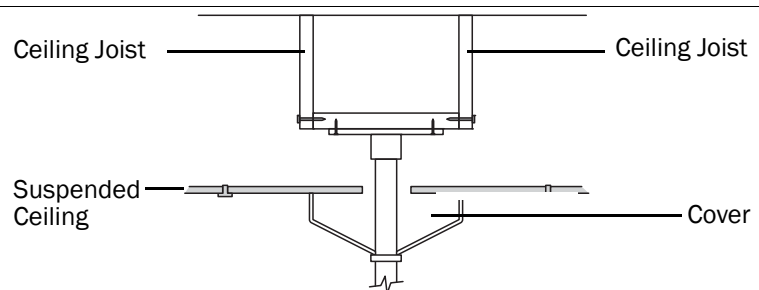
Suspended Ceiling, Wood Construction



Suspended Ceiling, Metal Construction



Suspending Ceiling, Support Structure



Install the Ceiling Mounting Plate

1. Position the mounting template on the ceiling. Mark the mounting holes, power stub, and data line.



NOTE When securing the mounting plate and post, position the collar bolt holes in relation to the chair's position as shown in Figure 4. Be sure to position the threaded hole for the collar bolt next to the junction box.

2. Make sure the electrical power conduit reaches the access holes in the top of the mounting plate. See Figure 5.
3. Position the mounting template (included in the kit) on the ceiling and mark the five holes for the mounting screws, power cable, and data line.

Figure 5. Install the Ceiling Mounting Plate

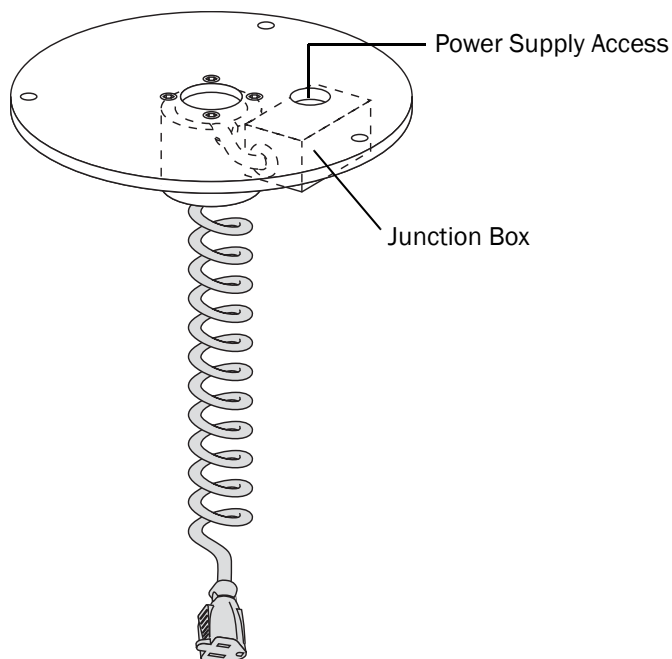
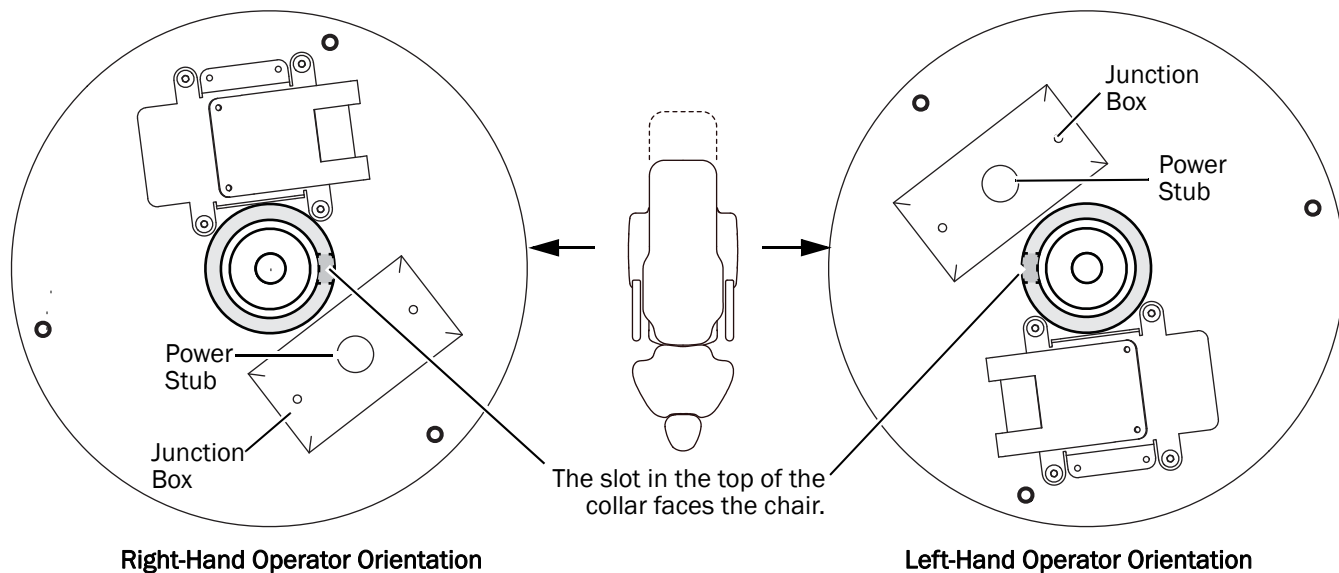
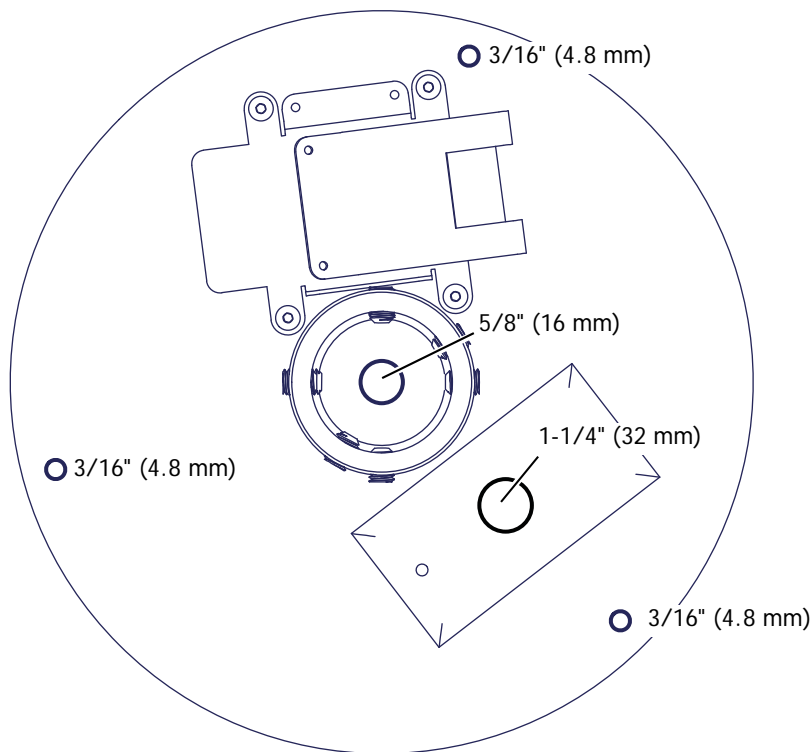


Figure 4. Mounting Plate Orientations



4. Drill the 3/16" (4.8 mm) diameter mounting holes, the 5/8" (15.8 mm) hole for the data line, and the 1-1/4" (31.7 mm) hole for power.
5. Use a Phillips head screwdriver to remove the junction box cover before mounting the plate to the ceiling. Use a 7/16" socket and ratchet to mount the plate to the ceiling with the lag screws from the kit.

Figure 6. Hole Sizes



Wire and Level the Post

1. Use wire nuts to connect the electrical wiring as follows:
 - Brown wire from the power cord to the black or brown wire from the electrical stub.
 - Blue wire from the power cord to the white or blue wire from the electrical stub.
 - Green/yellow wire from the power cord to the ground wire from the electrical stub, and the green wire from the junction box.
2. Replace the junction box cover. Route the cables past the strain relief, then slide the power cord and data line through the post and up into the collar. For lights with a long post, use a piece of tubing tied to the power cord to pull the cord and data line through the post.
3. If the system has a touchpad, use the in-line connector to connect the data line from the light to a second data line (not provided), which routes to the chair circuit board.
4. Line up the holes in the post and the collar where the collar bolt installs. It does not matter where the slot in the post faces. Use a 7/16" socket and ratchet to install the bolt through the collar and post. Firmly tighten the bolt.

Figure 7. Wire the Post

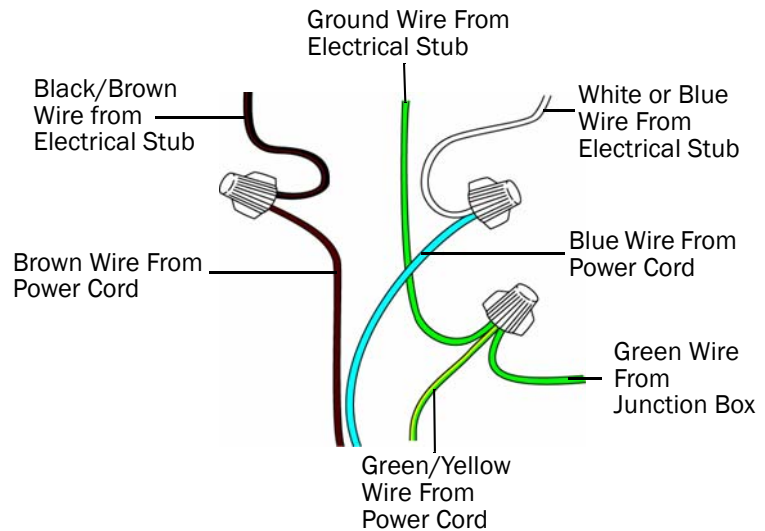
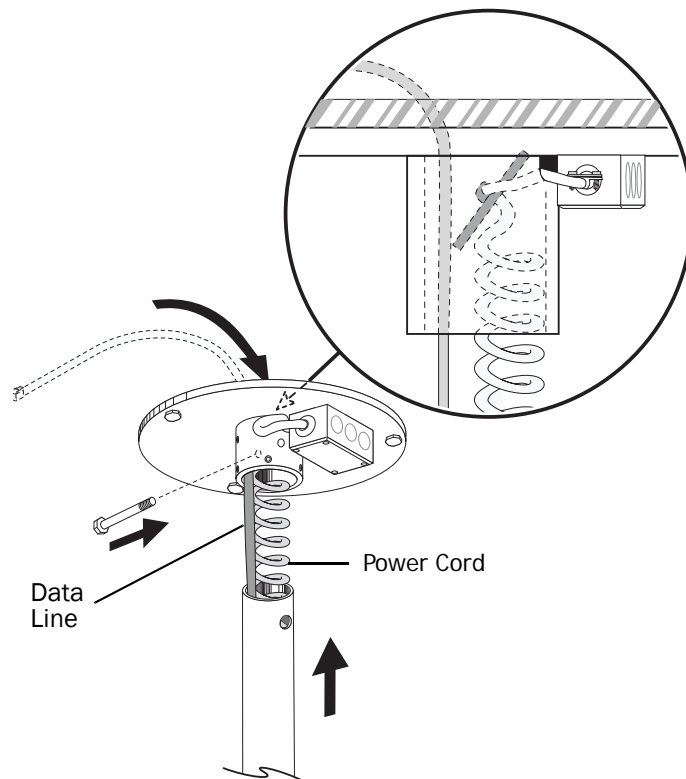
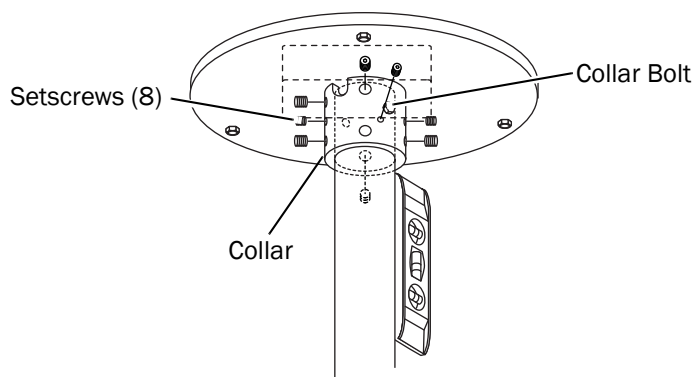


Figure 8. Connect Post to Hub Assembly



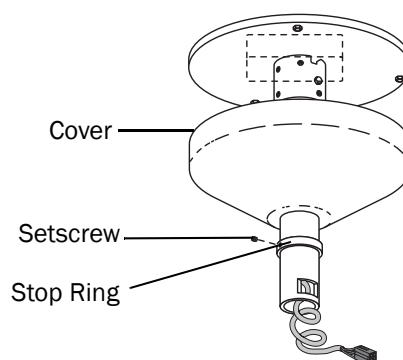
5. Use a 3/16" hex key and a level to plumb the post by adjusting the eight setscrews in the collar.

Figure 9. Level the Light Post



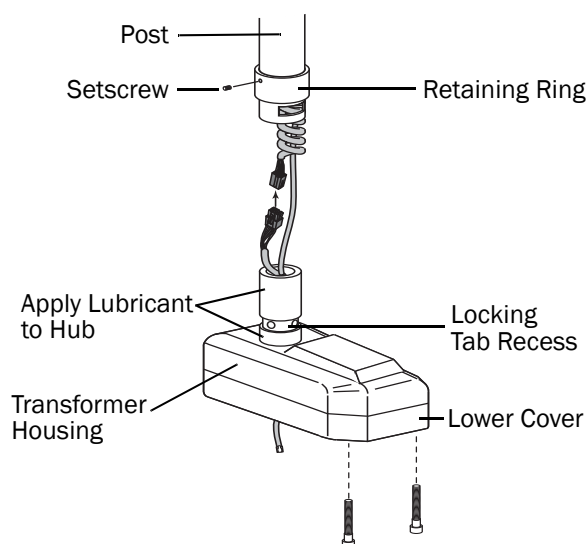
6. Slide the cover and small stop ring up the post. Use a 1/16" hex key to slightly tighten the setscrew in the stop ring and hold the cover in place. To prevent marring the post, do not over-tighten the setscrew.

Figure 10. Install the Cover



7. Slide the retaining ring onto the post. Use a 1/16" hex key to slightly tighten the setscrew in the retaining ring. This holds it in place on the post.

Figure 11. Connect the Power Cord and Data Line



Set Up the Dental Light

1. Use a 5/32" hex key to remove the two screws securing the lower cover and remove the cover.
2. Apply a light coat of lubricant (provided) on the hub of the dental light assembly. Do not lubricate the locking tab recess.
3. With the rigid arm over the chair, lift the dental light assembly into position just below the post.

4. Connect the power cable and route the data line through the transformer housing. See Figure 11 on page 7. For lights with a short post, twist the power cord to slide the cord into the post. Avoid crimping the wires.



CAUTION The locking tab holds the dental light assembly in the post. While you are installing the stop screw and locking tab, keep a firm hold on the dental light assembly to prevent it from falling.

5. Push the data line through the hub, then slide the hub up into the post with the recess visible through the slot in the post. Insert the locking tab. See Figure 12.
6. Rotate the dental light to the desired position over the head of the chair. Then rotate the dental light away from the head of the chair to where it should stop. One of the three holes in the recessed area of the hub should be visible through the hole on the back side of the post. See Figure 12.
7. Use a 5/32" hex key to install a 10-32 x 3/8" (10 mm) stop screw into the hole. See Figure 13.
8. Loosen the retaining ring stop screw, then slide the ring down over the slot in the post and tighten the stop screw. See Figure 12.

Figure 12. Rotate the Light Into Position Over the Chair

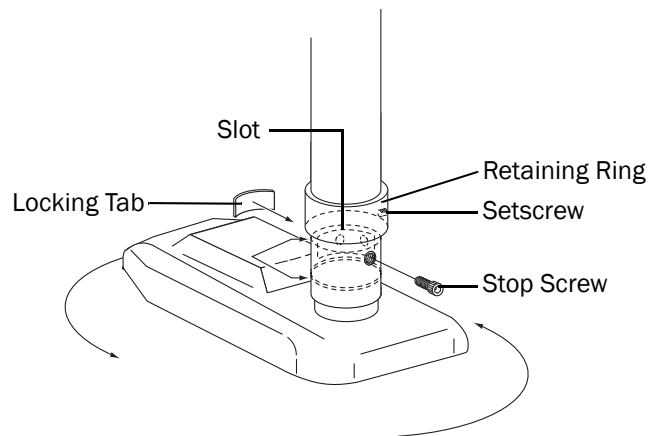
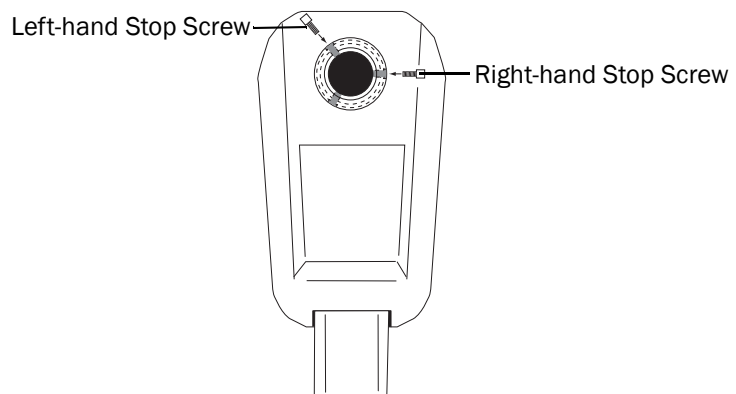


Figure 13. Install the Left/Right Stop Screw



NOTE The stop screw prevents the light from rotating 360 degrees and keeps the dental light power cord from being unplugged or damaged.

9. If the system includes a touchpad, plug in the data line, connect the strain relief, and then reinstall the cover.

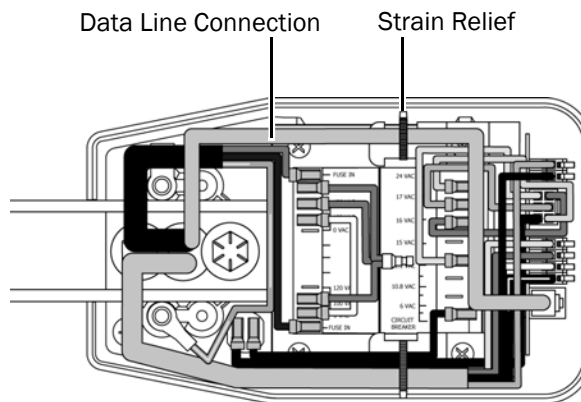


CAUTION Circuit boards are sensitive to static electricity. Electrostatic Discharge (ESD) precautions are required when touching a circuit board or making connections to or from the circuit board. Circuit boards should be installed only by an electrician or qualified service person.



CAUTION When removing or replacing covers, take care not to damage any wiring or tubing. Verify that the covers are secure after replacing them.

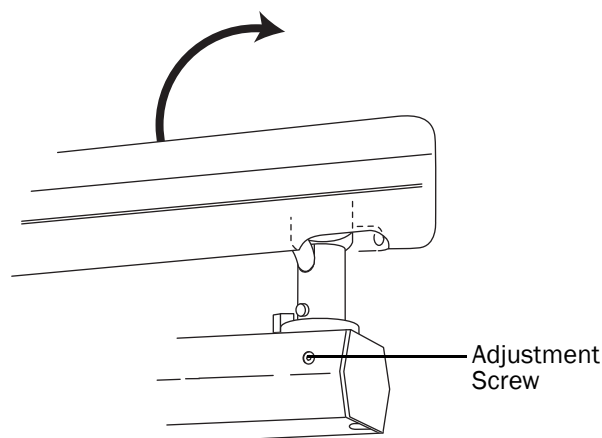
Figure 14. Connect the Data Line and Strain Relief



Adjust the Light Rotation

Rotate the light to make sure the range of motion is correct. To correct the range of motion, tighten or loosen the adjustment screw in the arm, move the arm to the desired position, then retighten the adjustment screw.

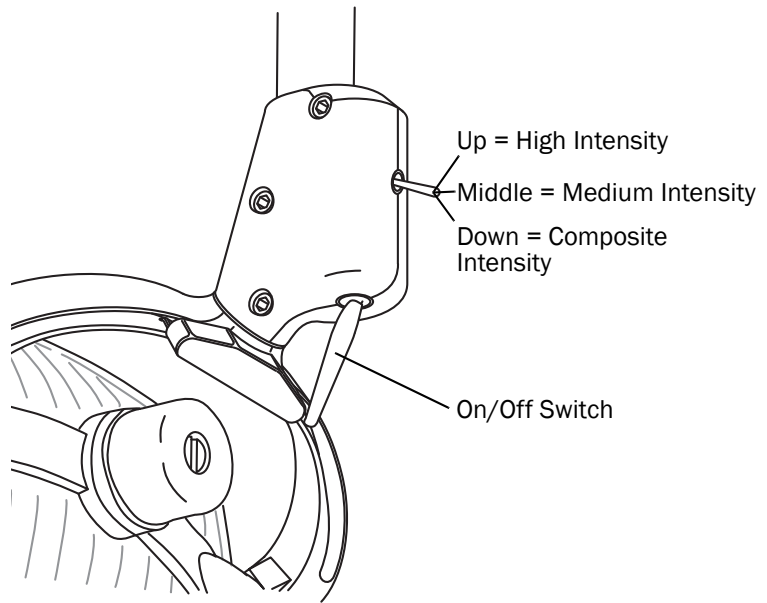
Figure 15. Adjust the Light Rotation



Test the Light

1. Turn on the dental light.
2. Move the dental light on/off switch at the base of the light head swivel to the on position. If the light does not work, verify there is power to the transformer and check all electrical connections.
3. The dental light intensity switch is the small switch located on the back of the light head swivel. With the on/off switch in the on position, verify that there are three intensity levels.
4. If the system includes a touchpad, from the touchpad, verify that the dental light turns on and off and toggles between high, medium, and composite intensities.

Figure 16. Test the On/Off and Intensity Switches



Before Leaving

Make Adjustments

1. Recheck the position of the light post with a level. Make the necessary adjustments if the post is not level. See step 5 on page 7.
2. Loosen the setscrew in the stop ring, then slide the stop ring and cover up the post to the ceiling. Tighten the setscrew on the stop ring to hold the cover against the ceiling.

Regulatory Information

Regulatory information mandated by agency requirements is provided in the *Regulatory Information, Specifications, and Warranty* document (p/n 86.0221.00), which is available in the Document Library at www.a-dec.com.

A-dec Headquarters

2601 Crestview Drive
Newberg, OR 97132 USA
Tel:1.800.547.1883 Within USA/Canada
Tel:1.503.538.7478 Outside USA/Canada
Fax:1.503.538.0276
www.a-dec.com / www.a-dec.biz

A-dec Inc. makes no warranty of any kind with regard to the content in this document including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.



85.0521.00 Rev R
Copyright 2014 A-dec Inc.
All rights reserved.
IGunbw10