

# DENTAL LIGHT

## *D-Lux*

Model AL-701M

Model AL-702M

Model AL-705M

## INSTALLATION AND OPERATION INSTRUCTIONS

### IMPORTANT

After installation is completed, check all the bolts, screws and fasteners to confirm that they are securely fastened.

The logo for Belmont, featuring a stylized square icon on the left and the word "Belmont" in a large, outlined, serif font to its right.

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### OPERATING INSTRUCTIONS

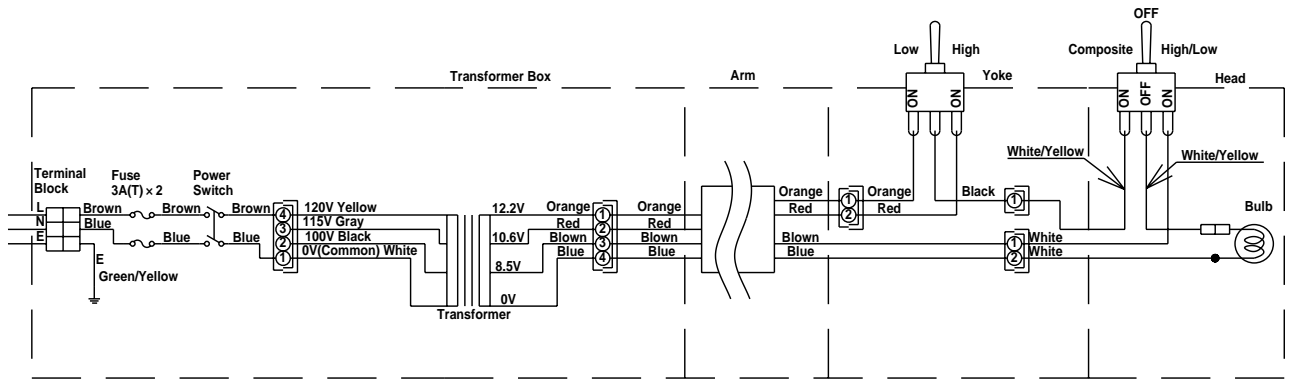
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## [1] SPECIFICATIONS

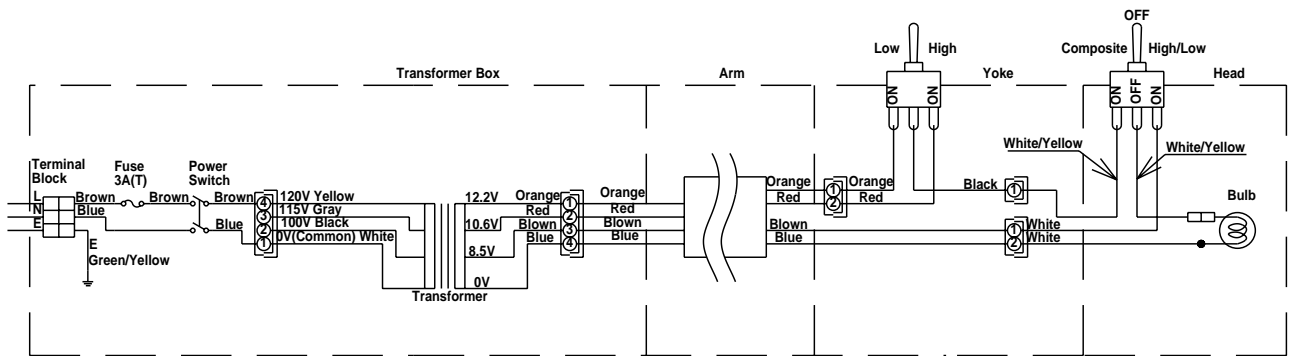
1. Focal Distance.....760 mm
2. Color Temperature.....4,200° Kelvin at 28,000 Lux
3. Light Intensity..... High : 28,000 Lux  
Low : 18,000 Lux  
Composite Mode : 8,000 Lux
4. Light Pattern..... .220 x 85 mm at 760 mm
5. Power Requirement.....AC. 120 V 50/60 Hz
6. Bulb Type.....Tungsten Halogen Type (JA 12-55WD/DL8)

[2] WIRING DIAGRAM

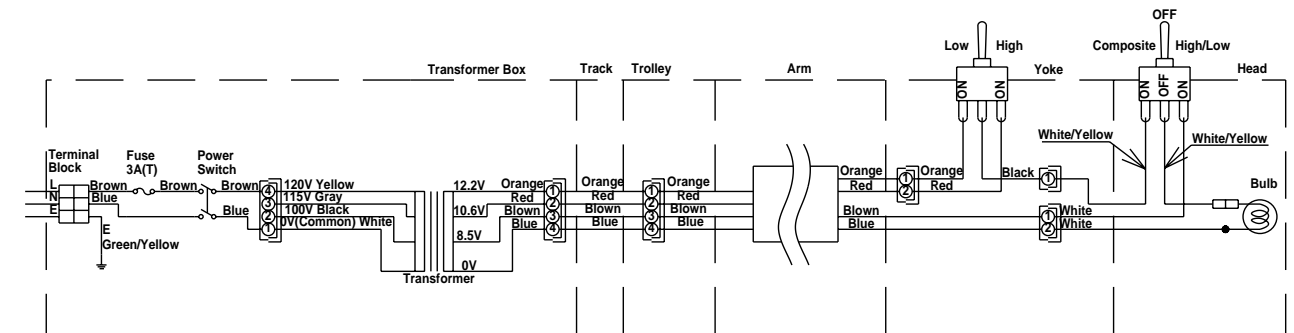
2-1. Unit Mount Type (AL-701M)



2-2. Ceiling Mount Type (AL-702M)

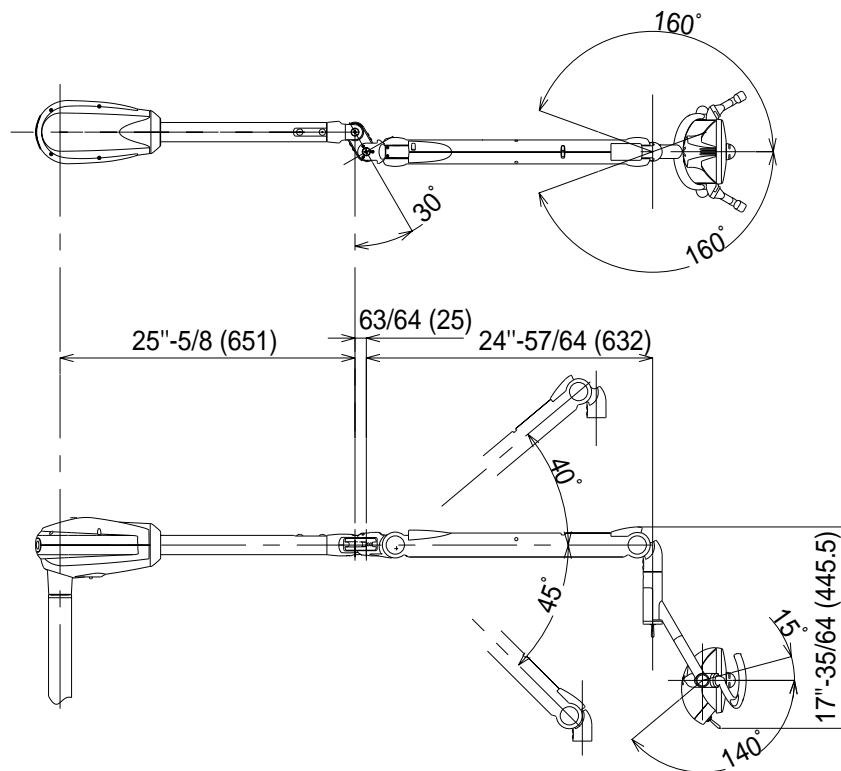


2-3. Track Mount Type (AL-705M)



### [3] UNIT MOUNT TYPE (AL-701M)

#### 3-1. Dimensions Inches & (Millimeters)



#### 3-2. Installation Instructions

##### 3-2-1. Connect the light -head with the balance arm (This section also applies to [4] Ceiling mount type and [5] Track type)

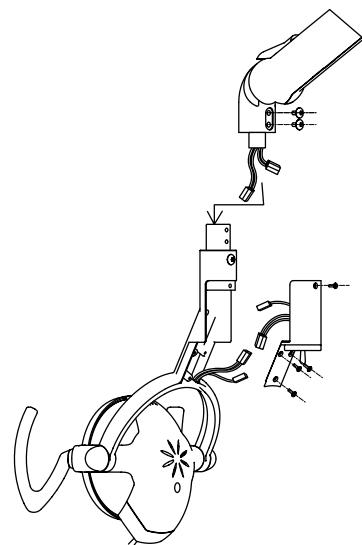
All necessary parts are included in the carton box.

M3 x 6 Painted Screw..... 4pcs.

Yoke Cover..... 1pce.

M5 x 10 Painted Screw..... 2pcs.

- 1) Install the light head to balance arm with M5 x 10 painted screws.
- 2) Connect the wire harness.
  - 2P connector:orange/ brown to orange/brown  
(same color to be met at each side of connector.)
  - 2P connector:brown/blue to white/white  
(brown or blue can be met either line of whites.)
  - 1P connector : black to white (yellow-striped)
- 3) Attach the yoke cover with M3 x 6 painted screw.



3-2-2. Insert the whole assembly consisting of light -head, balance arm, swing arm, and transformer box into the pole.(See FIGUER 1.)

- 1) Attach pole (if not existing) to chair per manufacture's instructions.
- 2) Slide pole adapter over cord, small end first.
- 3) Mount on pole guiding wire through (a pull cord may be helpful for this operation).
- 4) Attach a hospital grade plug cap(in Canada, CSA 5-15 Hospital Grade Plug Cap) to wire end. This is to be installed by a licensed electrician only, in accordance with the National Electrical Code(in the USA) or Canadian Electrical Code(in Canada), and local electrical codes as applicable.
- 5) Remove arm locking key (save for possible future shipment).
- 6) Attach the rubber cover.
- 7) To convert to left-hand operation (See FIGURE 2.):
  1. Remove small screw below H-bracket (as shown).
  2. Rotate H-bracket to other position and reinsert screw (loosen large upper & lower screws to help in moving bracket).

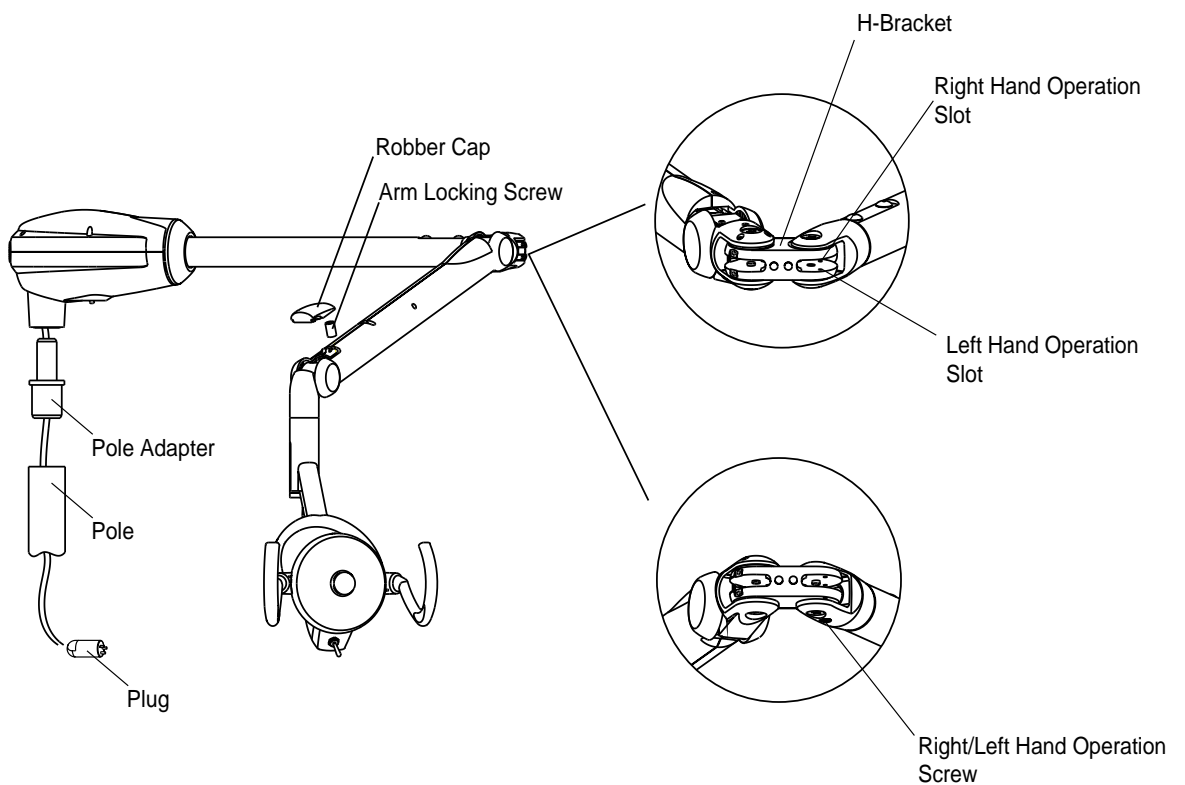
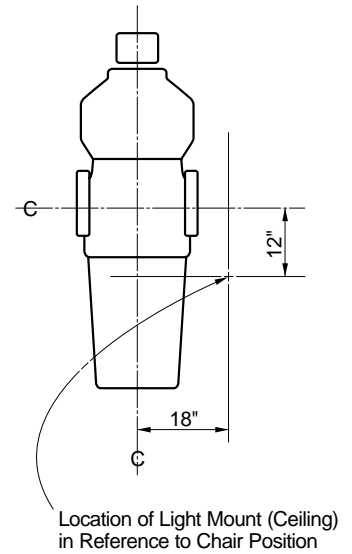
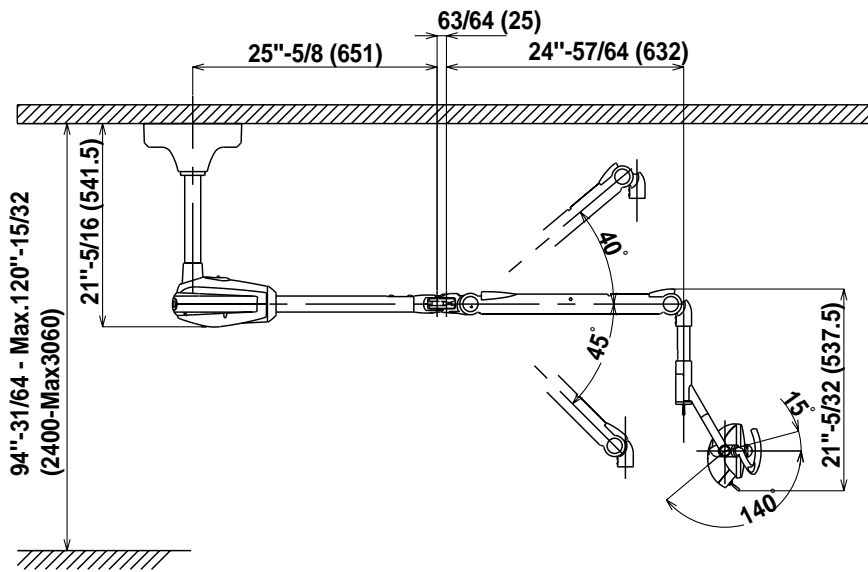


FIGURE 1

FIGURE 2

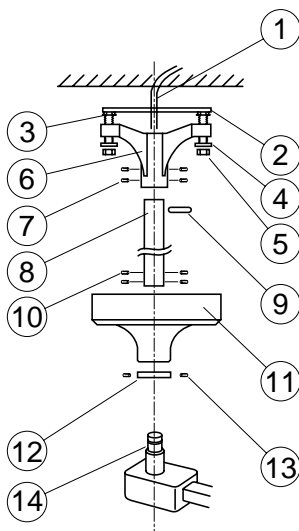
**[4] CEILING MOUNT TYPE (AL-702M)**

4-1. Dimensions Inches & (Millimeters)



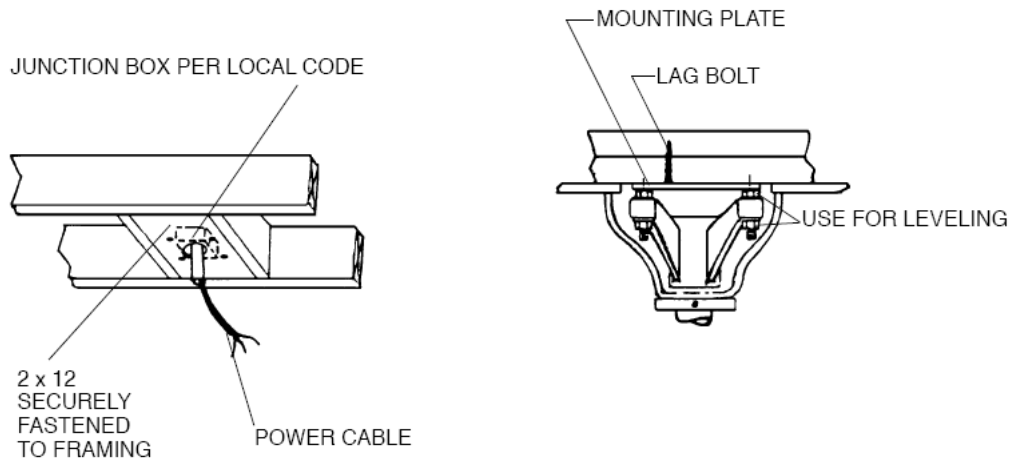
4-2. Installation Instructions

- 1) Secure mounting plate to the ceiling.
- 2) Route the power supply through the center of the mounting plate.
- 3) Install the levelling nuts between the mounting plate and the ceiling flange.
- 4) Install the ceiling flange to the mounting plate with washers and nuts supplied.
- 5) Insert the suspension into the ceiling flange and secure with roll pin and set screws supplied.
- 6) Be sure the suspension tube is plumb.
- 7) Slide the flange cover and flange cover ring (flat side up) over the suspension tube and secure about half way up the tube. Use only one set screw as you will be moving this on final installation.
- 8) Install the light assembly to the suspension tube running the 3 wire cord up through the tube to the ceiling flange. Secure with 4 Allen set screws.
- 9) Connect the incoming power to the 3 wire cord from the light assembly. Be sure to follow local electrical codes.
- 10) Test light for proper operation.
- 11) Reposition flange cover and secure with flange cover ring - Secure all set screws.

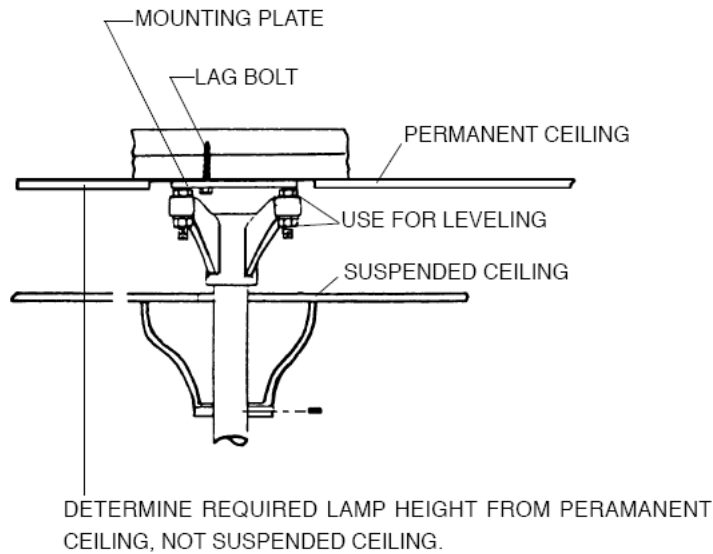


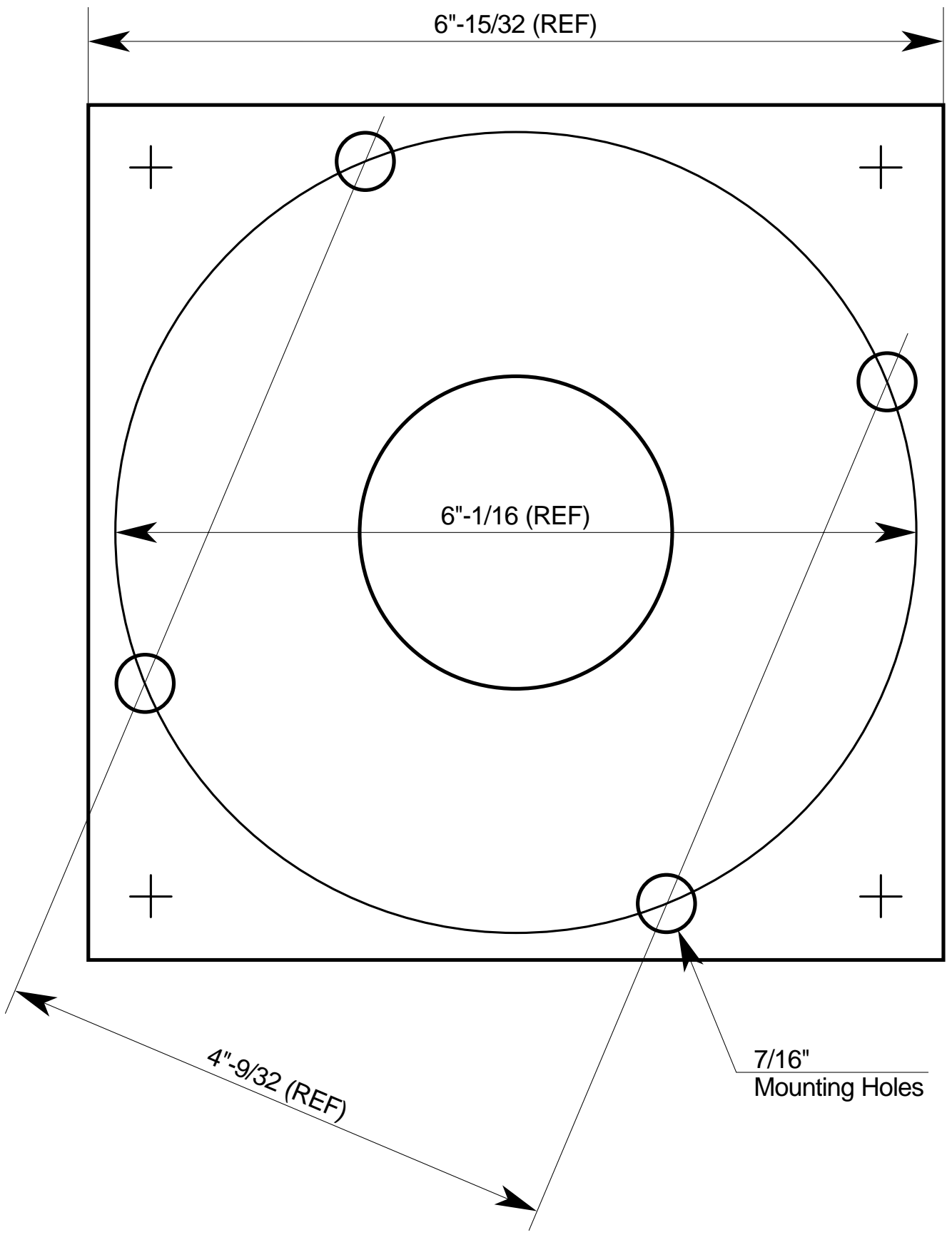
- |                             |                             |
|-----------------------------|-----------------------------|
| (1) Power Supply Cable      | (11) Flange Cover           |
| (2) Mounting Plate          | (12) Cover Ring             |
| (3) Adjusting Nut           | (13) Socket Screw for Ring  |
| (4) Washer                  | (14) Suspension Tube of Arm |
| (5) Nut                     |                             |
| (6) Ceiling Flange          |                             |
| (7) Socket Screw for Flange |                             |
| (8) Suspension Tube         |                             |
| (9) Roll Pin                |                             |
| (10) Socket Screw for Arm   |                             |

In conventional ceilings with joist construction, a double 2 x 12 bridge block securely boxed in place is suitable for attachment of mounting plate with four 5/16" x 3" lag bolts.



For suspended ceilings, appropriate rigid structure must be attached to ceiling framework. Required lamp height must be determined from permanent ceiling, not suspended ceiling.

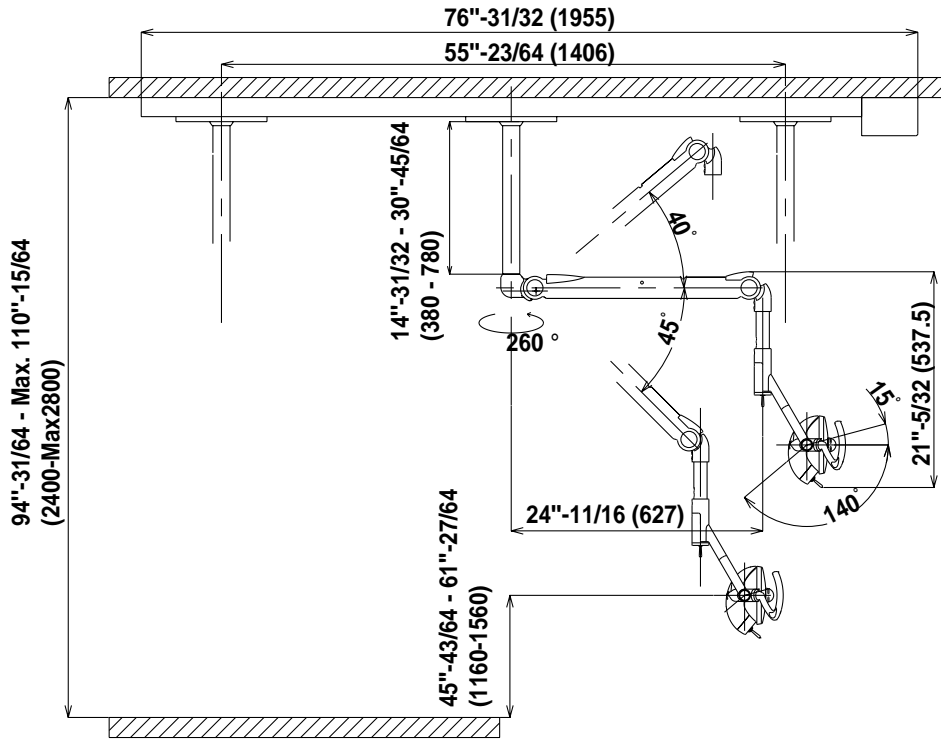






[5] TRACK LIGHT (AL-505T)

5-1. Dimensions Inches & (Millimeters)



5-2. Ceiling Preparation

For safety in operation as well as stability of the light source, the importance of proper ceiling structure cannot be overemphasized. In general, a ceiling structure capable of supporting 200 lb. dead weight is required.

- 1) In conventional ceilings with joists perpendicular to center line of light, attach pallet by at least 6 - 5/16 x 3" lag screws. Suitable holes are provided in pallet for most installations,utilizing 16" or 12" cc ceiling joists. For other spacings or locations, additional holes can be cut in pallet. (SEE FIGURE 1.)

**IMPORTANT:**Locate transformer end of track at headrest end of chair. - Not legrest.

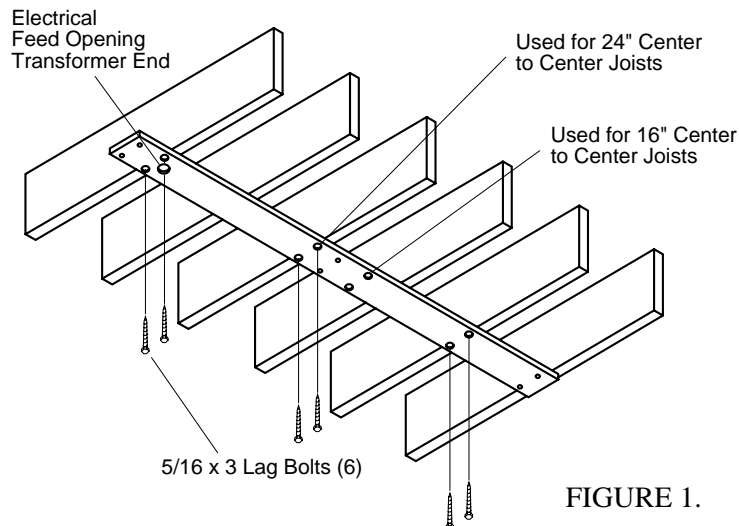


FIGURE 1.

- 2) For conventional ceilings with joists parallel to center line of light, cross blocks must be installed in 3 places to allow mounting with at least 6 - 5/16 x 3" lag screws. (SEE FIGURE 2.)

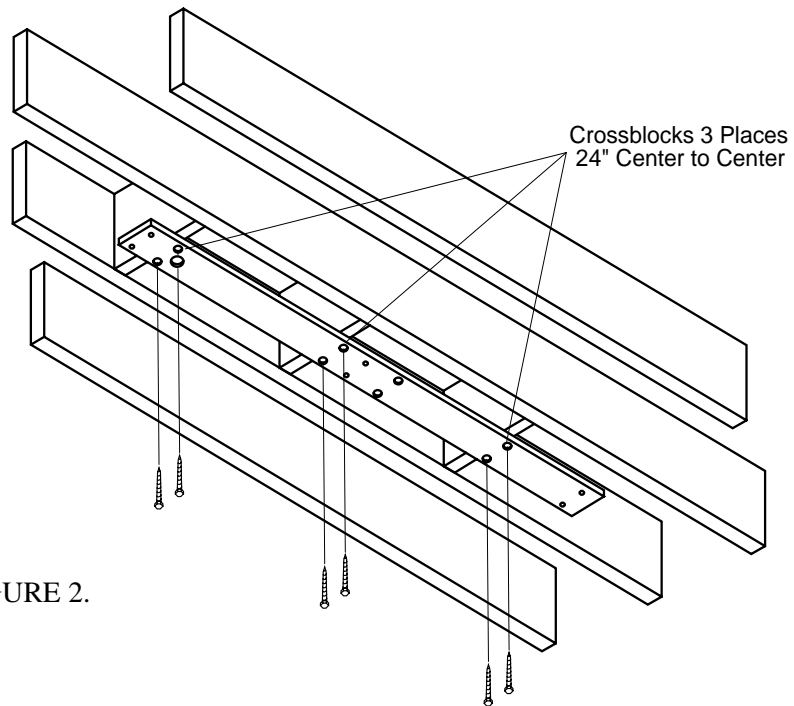


FIGURE 2.

- 3) For suspended ceilings, appropriate rigid structure must be attached to ceiling framework to provide 200 lb. dead weight capacity. (SEE FIGURE 3.)

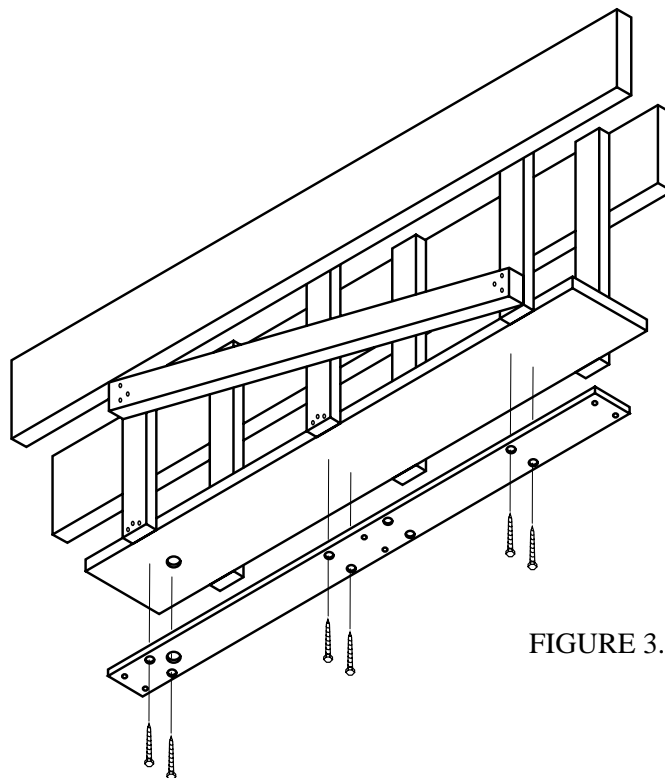
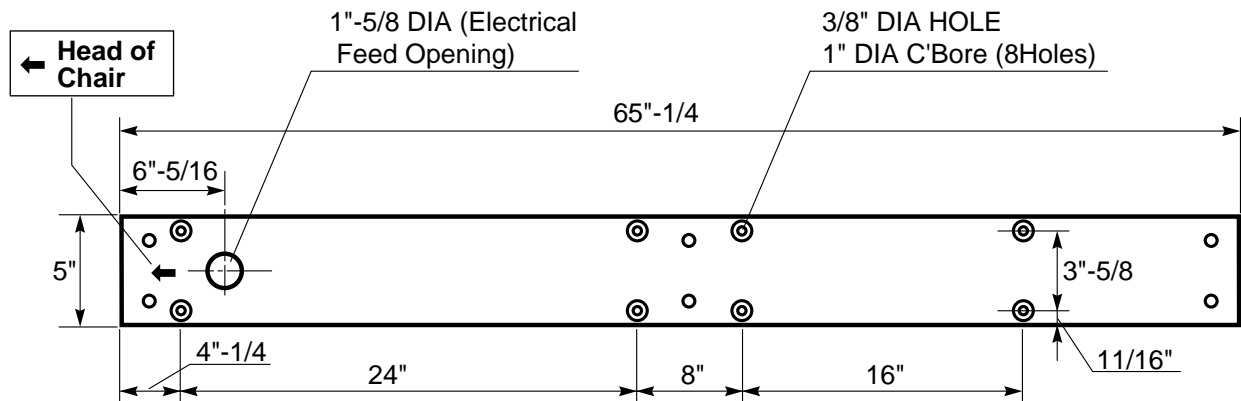


FIGURE 3.

### 5-3. ELECTRICAL PREPARATION

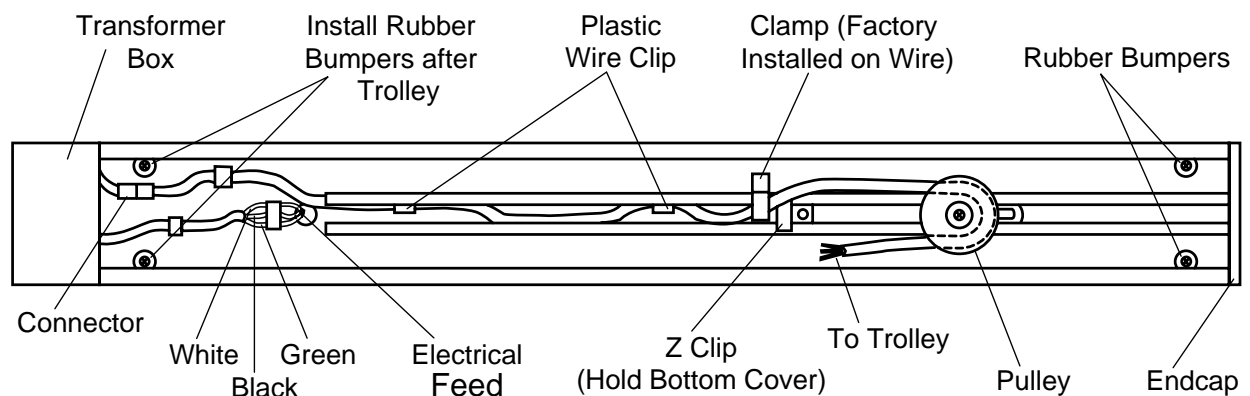
Refer to FIGURE 4 for location of electrical feed opening in pallet, provide 3 wire, 115 V, 60Hz circuit (15 amp. fuse or breaker through flexible conduit with enough slack to protrude at least 2" below pallet when installed. Terminate conduit with 1/2" body box connector suitable for mounting through 3/16 thickness.

A readily accessible shut-off switch for this circuit is recommended. Use wiring suitable for 90°C service.

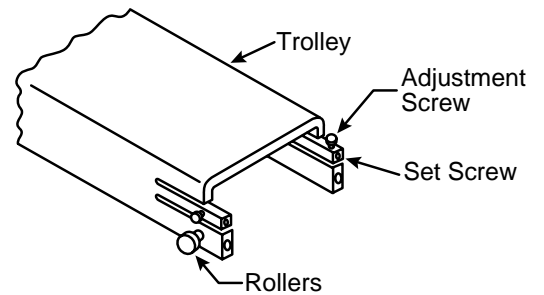


### 5-4. INSTALLATION INSTRUCTIONS

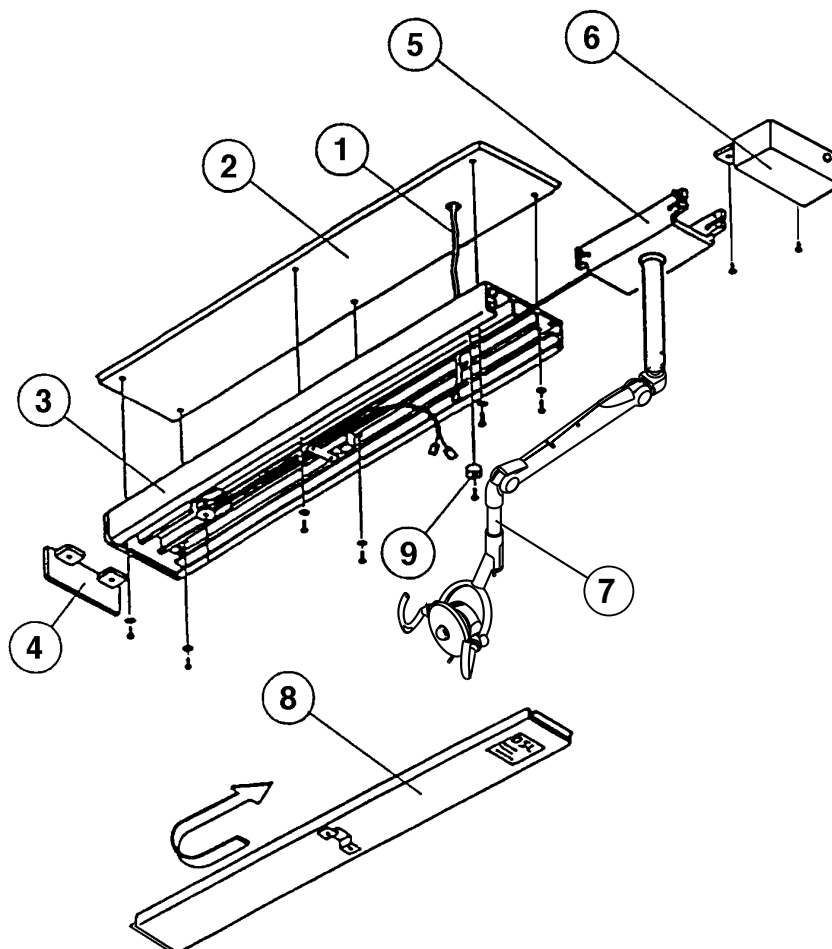
- 1) Lead out the power supply cable from the ceiling where the track light is mounted.
- 2) Run the power supply cable through the pallet and mount pallet.
- 3) Place track against pallet and slightly engage two mounting bolts at end opposite the electrical opening.
- 4) Allowing the free end to hang down slightly for access, install the conduit box connector to the track.
- 5) Finish bolting track securely to pallet.
- 6) Connect wires from feed to terminal block.
- 7) Slide trolley onto track (end near electrical opening) with arrow on trolley oriented toward pulley on track.
- 8) Carefully guide wire from trolley, around spring loaded pulley and back toward end of track.
- 9) Attach retainer clamp to small screw in track. Clip free end of trolley wire into plastic clip near end.
- 10) Install rubber bumpers at end of track in holes provided.



- 11) Check operation of trolley. It is factory adjusted to provide smooth effortless travel, without play; however rollers can be readjusted if necessary. Loosen set screw and adjust socket cap screw to very roller clearance.



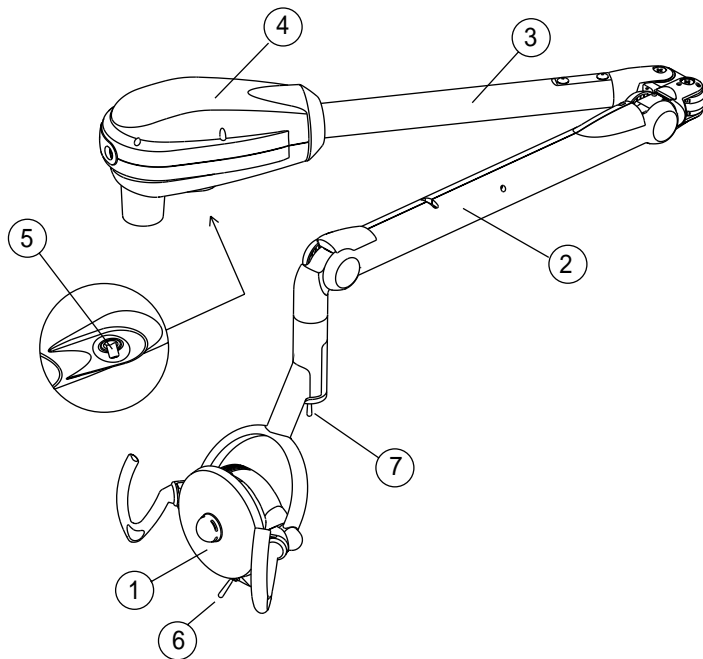
- 12) Unpack transformer / housing assembly and mount to track with screws provided.
- 13) Attach pigtail leads to corresponding power line wires at terminal block. Retain wires under plastic clip.
- 14) Connect plug-in connector to trolley wire.
- 15) Carefully slide bottom cover onto track from free end. Be sure to engage lip onto Z bracket.
- 16) Install end-cap with screws provided.
- 17) Slide trolley back and forth checking for binding or rubbing.
- 18) Confirm that swing arm is properly adjusted to stay where it is placed. If necessary, move head up or down to expose appropriate cross drilled nut and adjust with tool provided.
- 19) Turn on power and check electrical operation of light.



- (1) Power supply cable
- (2) Pallet
- (3) Track
- (4) End-cap
- (5) Trolley
- (6) Transformer Box
- (7) Light Assembly
- (8) Bottom Cover
- (9) Rubber bumper

## [6] OPERATING INSTRUCTIONS

### 6-1. Major Parts Identification

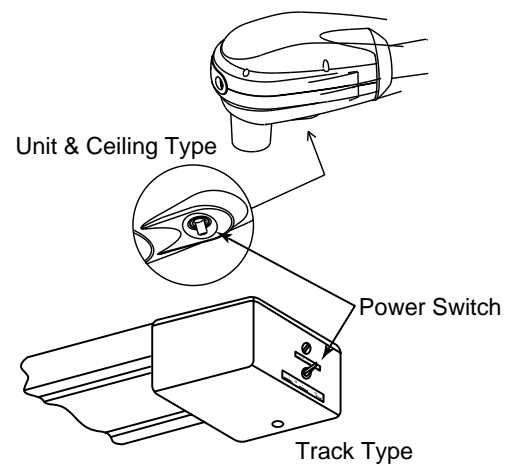


1. Head Assembly
2. Balance Arm Assembly
3. Swing Arm Assembly
4. Transformer Housing Assembly
5. Power Switch
6. Manual Switch
7. Intensity Switch

### 6-2. Power Switch

Place the toggle switch to the side marked with 'I' to turn on the machine.

I ; ON  
O ; OFF

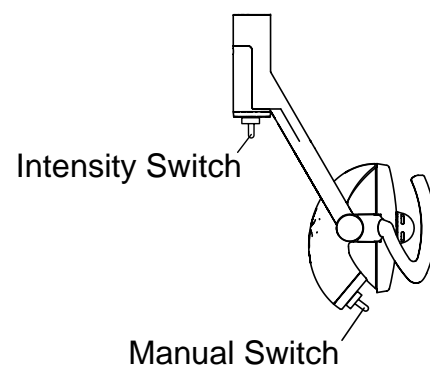


### 6-3. Manual Switch

High (Low) beam ; Push toggle to left  
Composite Mode beam ; Push toggle to right

### 6-4. Intensity Switch

High beam ; Push toggle to left  
Low beam ; Push toggle to right



## [7] ADJUSTING TENSION of BALANCE ARM

### 7-1. Adjusting Tension of Balance Arm

Use slot A when making adjustment for drifting of balance arm.

Insert adjusting bar into slot A on top of balance arm, turn spring adjustment nut clockwise for more tension ; counterclockwise for less tension.

### 7-2. Adjusting Angle of Head

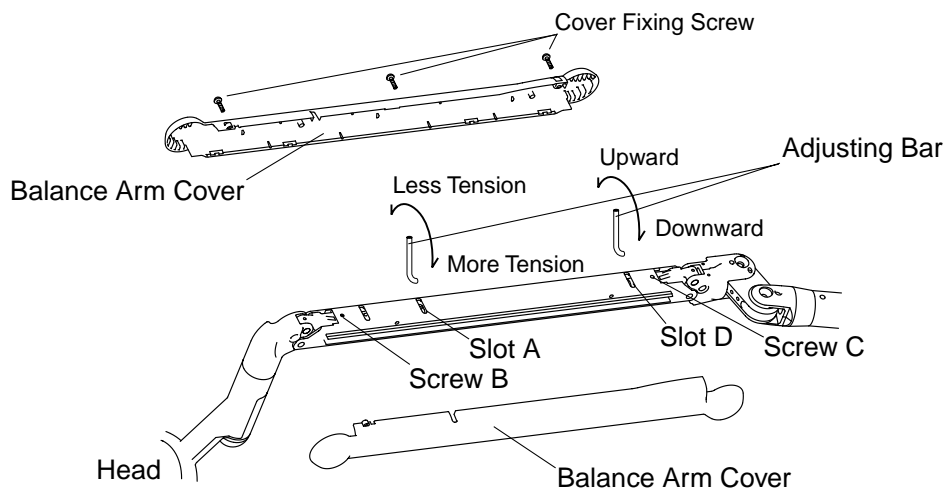
Use slot D when adjusting head angle.

Remove three cover fixing screws and remove the balance arm cover.

Lift the balance arm to upmost position, and hold it.

Loosen screw B and C.

Insert adjusting bar into slot D on top of balance arm, turn spring adjustment nut clockwise for downward angle ; counterclockwise for upward angle.



## [8] HALOGEN LAMP CHANGING



### CAUTION

Make sure the power supply is turned off.

Halogen bulb and surrounding parts be hot immediately after the lamp goes off.

Wait until they get cool down.

### IMPORTANT

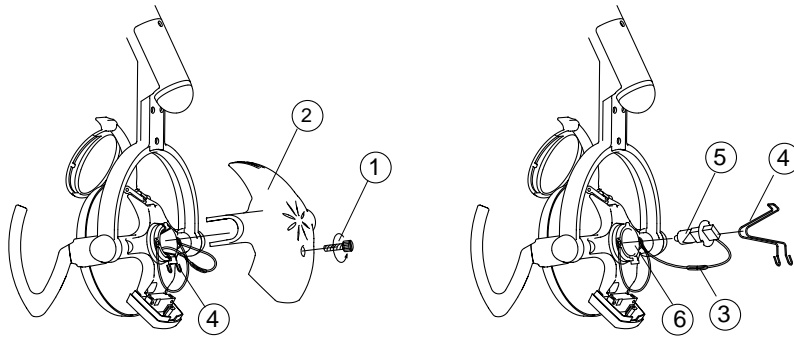
Do not touch glass with bare hand.

Halogen bulb surface must be clean.

Oil or body moisture will affect bulb span of life.

If glass surface is touched, clean with alcohol.

- 1) To install replacement halogen bulb, turn light off and remove back cover by loosening stopper screw.
- 2) Disconnect the electrical connector of halogen lamp.
- 3) Unlock the spring clip and pull the electrical wire of halogen bulb to remove the halogen bulb from socket.
- 4) Attach the electrical wire of new halogen lamp and insert halogen lamp into socket.
- 5) After new halogen lamp is seated in housing, insert and lock spring clip into position.
- 6) Reattach back cover.



1. Stopper Screw
2. Back Cover
3. Electrical wire of halogen bulb
4. Spring Clip
5. Halogen Bulb
6. Socket

## [9] CLEANING

Use soft cloth or cotton only. Soak with alcohol. Clean both side of front shield.

Inside surface of reflector can be cleaned with a soft damp or dry cloth. Back side of the reflector should be wiped gently with a soft cloth. Extreme care should be taken not to scratch surface or mar appearance of painted surface.

Exterior cleaning is all that should be necessary until after many months of use.



TAKARA BELMONT CORPORATION

1-1, 2-Chome, Higashi-shinsaibashi, Chuo-ku, Osaka, Japan

TEL. : (06) 6213-5945

FAX. : (06) 6212-3680

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