



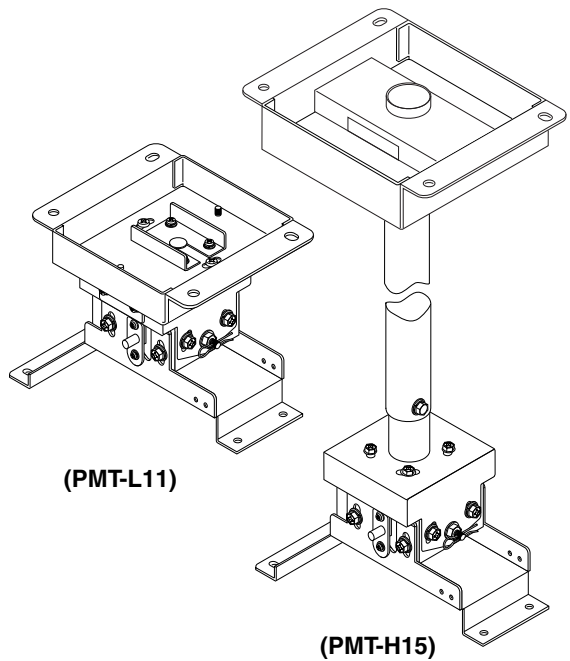
# Digital Cinema Projector Ceiling Bracket

## PMT-L11 (for Low Ceilings) PMT-H15 (for High Ceilings)

### Installation Manual

Be sure to read this manual thoroughly before using this bracket. After you have read this manual, retain it for future reference.

When installing the projector using this bracket, all installation work must be performed by a qualified contractor or dealer personnel. The customer must never attempt to perform this installation work.



#### Contents

Packing List .....	4
Names of Parts .....	5
Dimensions of Parts .....	7
Guidelines for the Projector Installation Position and Screen Size .....	8
Installation Examples .....	10
Installing the Projector .....	11
Adjusting the Projection Angle .....	14
Specifications .....	16

English

Français

Deutsch

Svenska

Italiano

Español

Nederlands

# Safety Instruction

- 1. Always follow the instructions set forth in this manual when installing the projector using this bracket.**

Improper or inadequate installation could cause the projector to fall and injure someone.

- 2. The installation must be secure enough to bear the weight of the projector, the ceiling bracket, and other hardware indefinitely, and must also be secure enough to withstand vibration.**

Inadequate installation could cause the projector to fall and injure someone.

- 3. To ensure safety, all bolts and screws must be tightened securely.**

Loose bolts or screws could cause the projector to fall and injure someone.

- 4. Use only the parts provided with the bracket, and any other parts (commercially available) that are specified in this manual.**

Using other parts could cause the projector to fall and injure someone.

- 5. Do not modify the bracket or the parts provided with the bracket.**

Modifying the bracket or the other parts could cause the projector to fall and injure someone.

- 6. Do not use damaged parts.**

Using damaged parts could cause the projector to fall and injure someone.  
If any parts become damaged, contact your dealer.

- 7. Make sure to leave enough open space around the unit to allow heat generated by the projector to dissipate.**

Failure to provide adequate space around the unit could cause the projector to overheat internally, causing a fire.

- 8. Before replacing the lamp cartridge, always remove the projector (with the mounting adapter attached) from the ceiling bracket.**

Attempting to replace the lamp cartridge while the projector is attached to the ceiling bracket could cause the projector or the ceiling bracket to fall and injure someone.

**9. Never hang from the projector or the ceiling bracket.**

Hanging from the projector or the ceiling bracket could cause the projector or the ceiling bracket to fall and injure someone.

**10. Do not install the projector in a location near an air conditioning vent or in a location subject to vibration.**

Such conditions could have an adverse effect on the projector, and could even cause a fire or electric shock.

**11. Do not install the projector in a location that is subject to high levels of dust or humidity.**

Dust accumulating inside the projector could cause a short circuit that in turn could cause a fire or electric shock.

**12. Do not install the projector in a location that is exposed to direct sunlight or in a location that is subject to extreme fluctuations in temperature (such as near an air conditioner).**

Such conditions can cause the projector housing to warp or to become discolored.

**13. Do not wipe the exterior of the ceiling bracket with benzene, paint thinner or cleaning compounds.**

Doing so could damage the finish.

**14. Special techniques and experience are essential when installing the projector using this bracket. Request that your dealer arrange to have the equipment installed. The customer should never attempt to suspend the projector from the ceiling.**

Improper installation could cause the ceiling bracket or the projector to fall and injure someone.

**15. Once the projector is installed, safety checks should be conducted on a regular basis.**

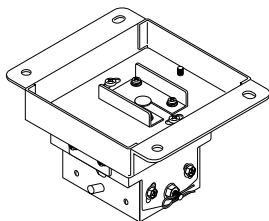
If the projector is used over an extended period of time, screws can become loose and the installation can become weaker due to the passage of time, vibration, etc.

# Packing List

Confirm that all of the parts are present.

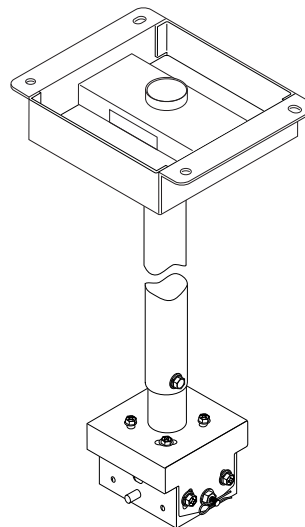
## PMT-L11

Ceiling bracket x 1



## PMT-H15

Ceiling bracket x 1

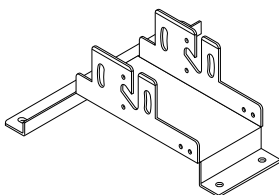


Adjustment pole locking screws (M5) x 4

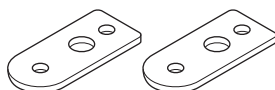


Common Components (The following parts are provided with each bracket.)

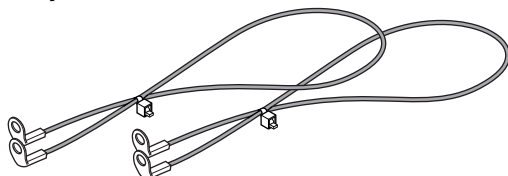
Projector mounting adapter x 1



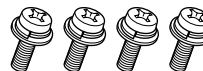
Safety brackets x 2



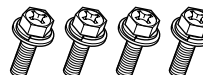
Safety wires x 2



Projector mounting screws (M6, pan head) x 4



Vertical angle adjustment screws (M6, hexagonal head) x 4



Safety bracket mounting screws (M4, pan head) x 4

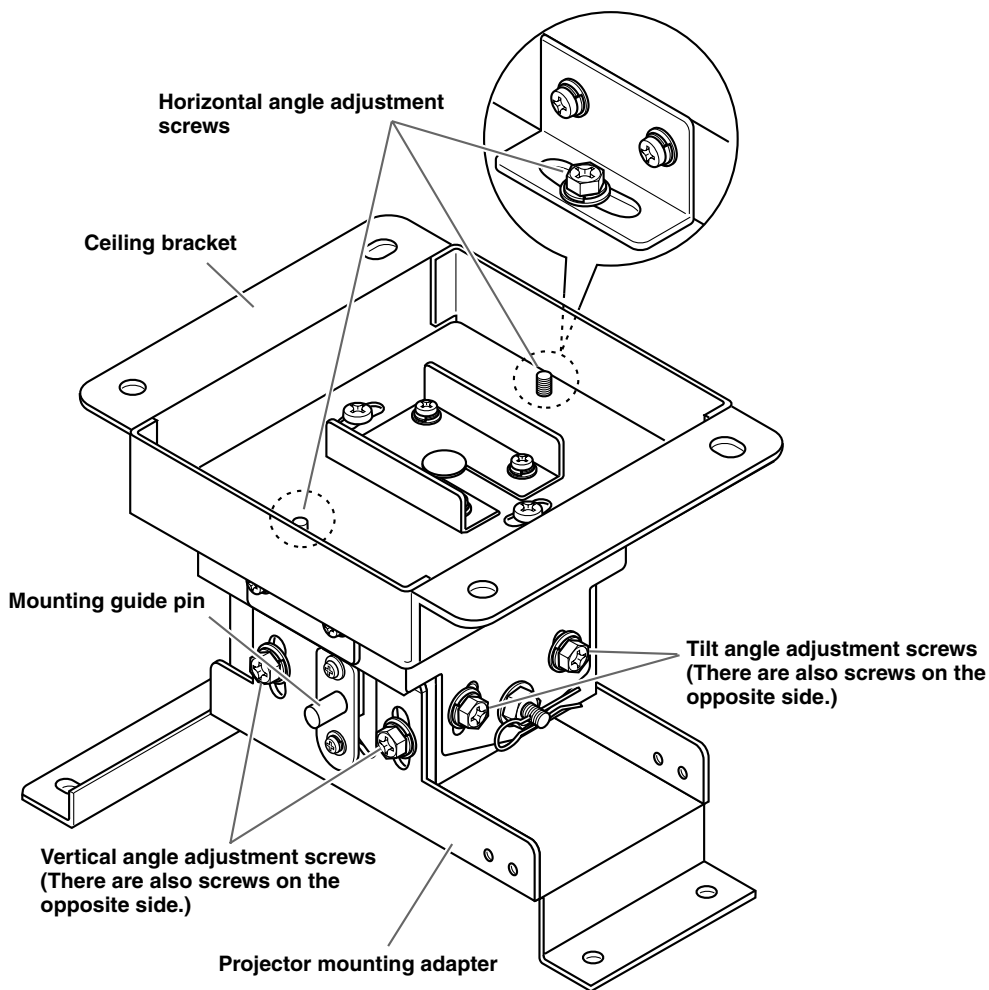


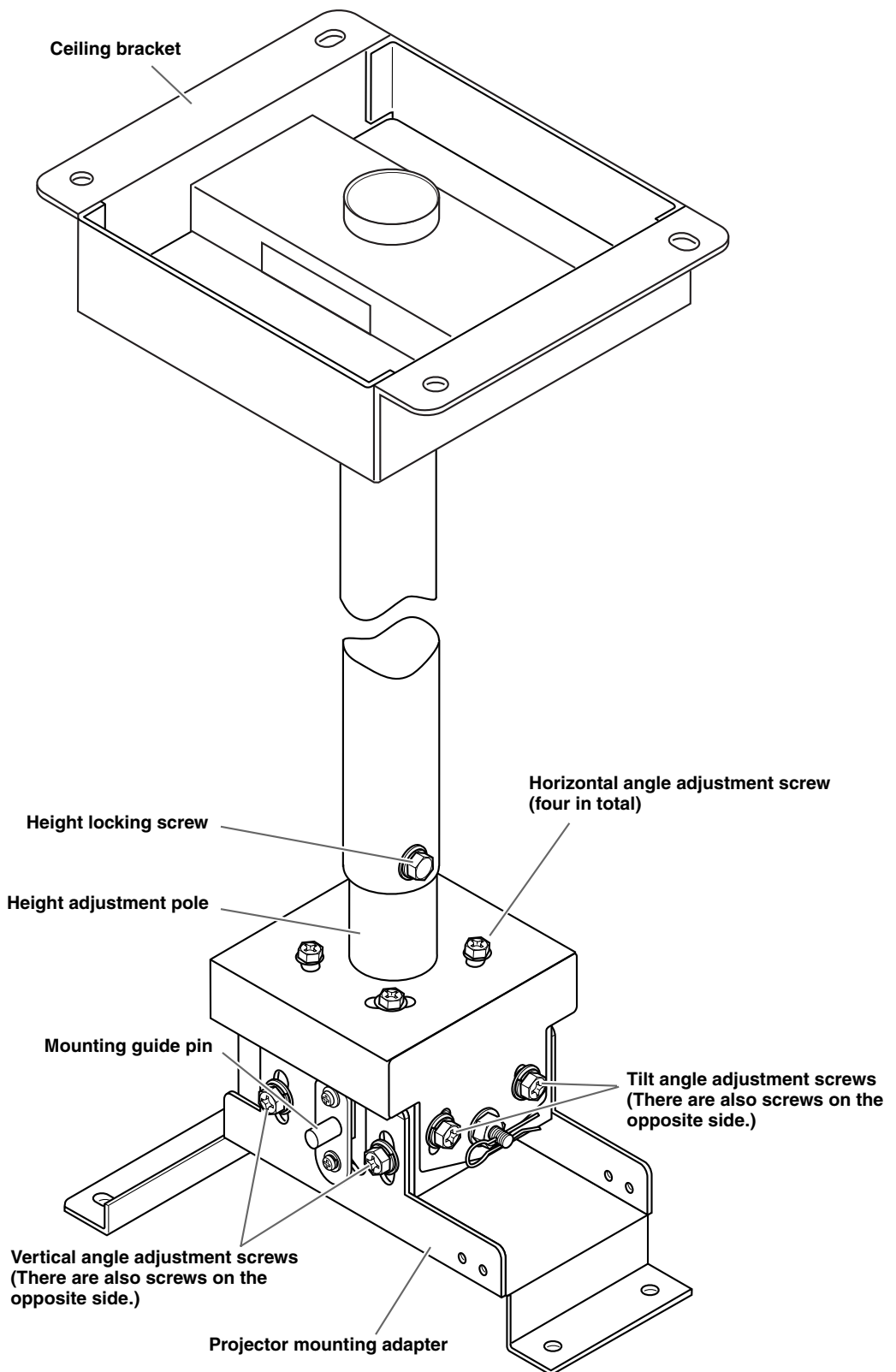
Safety wire mounting screws (M4, pan head) x 4



# Names of Parts

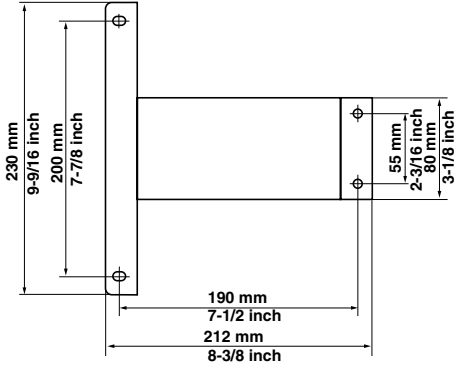
PMT-L11





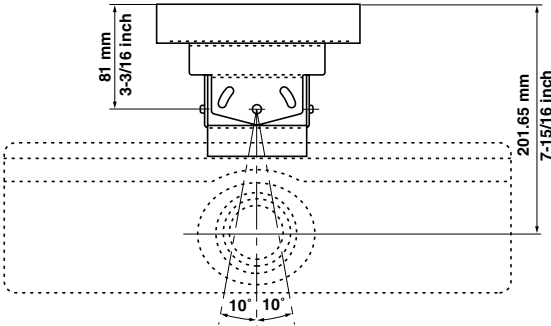
# Dimensions of Parts

## Projector Mounting Adapter



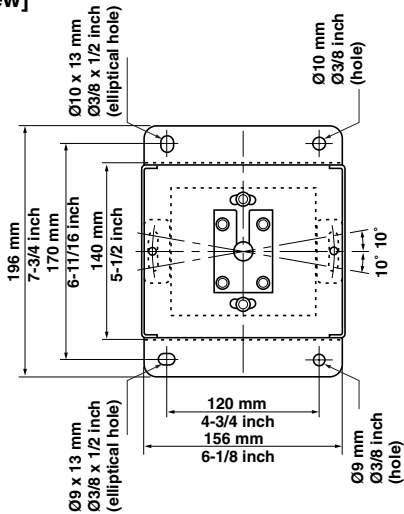
## PMT-L11

[Front View]



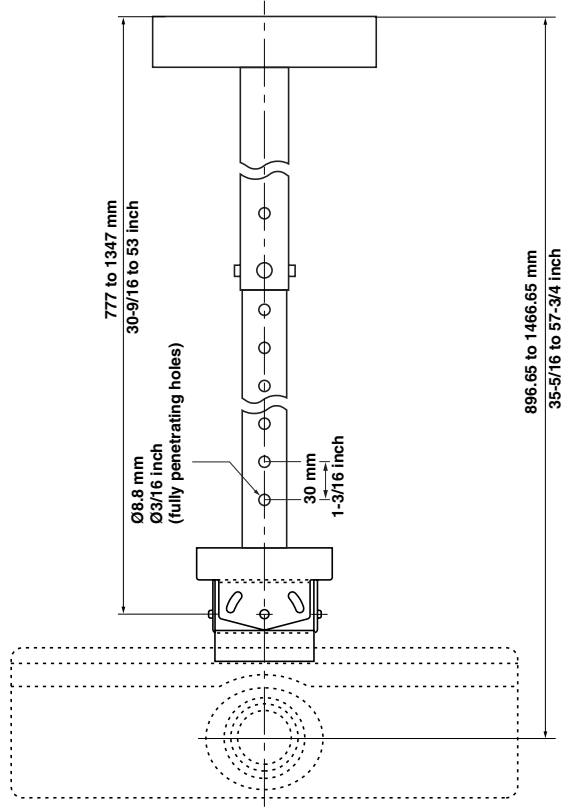
with the DPX-1 installed (lens center)

[Top View]



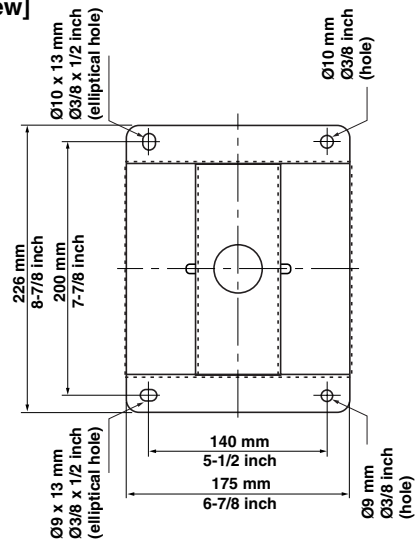
## PMT-H15

[Front View]



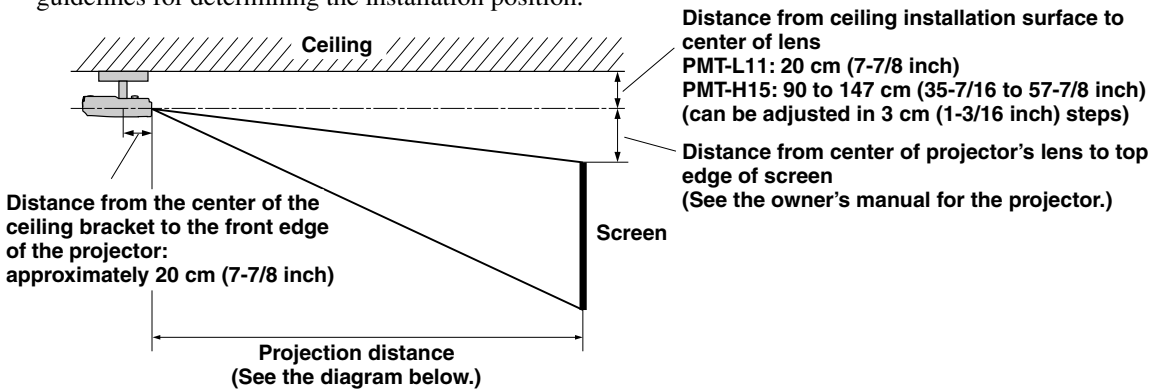
with the DPX-1 installed (lens center)

[Top View]



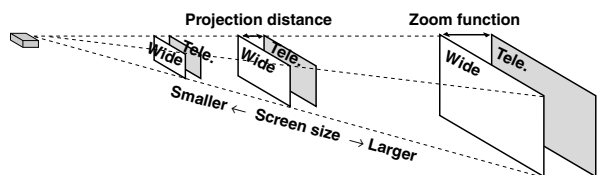
# Guidelines for the Projector Installation Position and Screen Size

- The relationship between the projection distance and the screen size is shown below. Use these values as guidelines for determining the installation position.



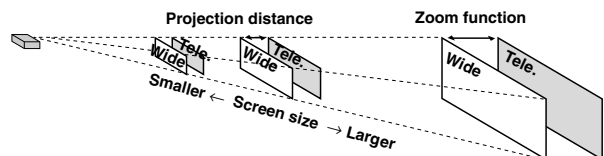
## When using a 4:3 Screen

Screen size (inch)	Projection distance (m)	Projection distance (feet, inch)
60	2.4 – 2.9	7' 10" – 9' 6"
80	3.2 – 3.9	10' 6" – 12' 10"
100	4.0 – 4.9	13' 1" – 16'
120	4.8 – 5.8	15' 9" – 19'
150	6.1 – 7.3	20' – 23' 11"
200	8.1 – 9.8	26' 7" – 32' 2"



## When using a 16:9 Screen

Screen size (inch)	Projection distance (m)	Projection distance (feet, inch)
60	2.6 – 3.2	8' 6" – 10' 6"
80	3.5 – 4.2	11' 6" – 13' 9"
100	4.4 – 5.3	14' 5" – 17' 5"
120	5.3 – 6.4	17' 5" – 21'
150	6.6 – 8.0	21' 8" – 26' 3"
200	8.8 – 10.6	28' 10" – 34' 9"



## Cautions

- The projection distance is the horizontal distance from the surface of the projector lens to the surface of the screen. In the case of the DPX-1, the surface of the lens is recessed by approximately 4 cm (1-9/16 inch) from its exterior.
- Although the ceiling bracket permits adjustment of the vertical angle of the projector over a range of  $\pm 15^\circ$ , a large angle adjustment will distort the projected image somewhat. Therefore, we recommend adjusting both the angle of the projector and the angle of the screen.

## Adjustment Through Digital Lens Shift

When "SCREEN ASPECT" is set to 16:9 in the SETUP menu, it is possible to use the projector's digital shift function to adjust the distance from the center of the projector's lens to the top edge of the screen. The range of adjustment is indicated at right.

Screen size (inch)	Distance to top edge of screen (cm)	Distance to top edge of screen (inch)
60	19 – 44	7-1/2 to 17-5/16
80	26 – 59	10-1/4 to 23-1/4
100	32 – 74	12-5/8 to 29-1/8
120	39 – 89	15-3/8 to 35
150	49 – 111	19-3/8 to 43-3/4
200	65 – 145	25-5/8 to 57



## PMT-H15 Height Adjustment

The height adjustment pole for the PMT-H15 has holes spaced 3 cm apart that can be used to adjust the height. When the bracket is shipped from the factory, the pole is set at the shortest height.

Follow the procedure described below to adjust the pole to the appropriate height. For details on the appropriate height, refer to “Guidelines for the Projector Installation Position and Screen Size” on page 8.

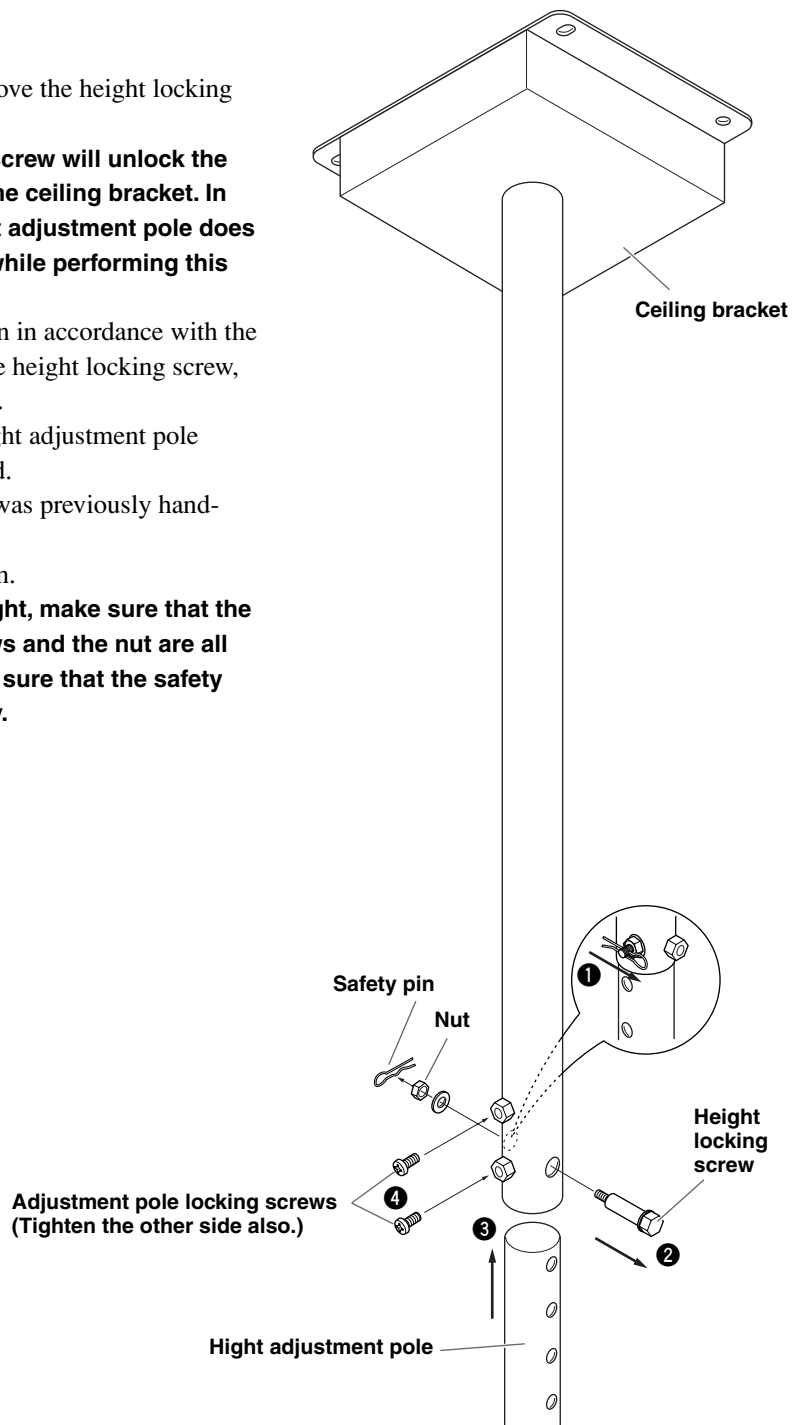
### [Adjustment Procedure]

- ❶ Remove the safety pin.
- ❷ Loosen the nut, and then remove the height locking screw.

**Removing the height locking screw will unlock the height adjustment pole from the ceiling bracket. In order to ensure that the height adjustment pole does not fall, always hold the pole while performing this work.**

- ❸ Determine the correct position in accordance with the height of the screen, insert the height locking screw, and then hand-tighten the nut.
- ❹ Securely tighten the four height adjustment pole locking screws (M5) provided.
- ❺ Securely tighten the nut that was previously hand-tightened.
- ❻ Be sure to insert the safety pin.

**Finally, after adjusting the height, make sure that the adjustment pole locking screws and the nut are all tightened securely. Also make sure that the safety pin has been inserted properly.**



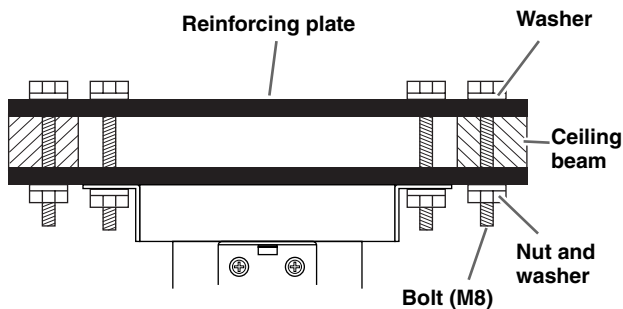
# Installation Examples

## When the ceiling is made of wood

- 1 Drill matching holes through the reinforcing plate and the ceiling in the proper locations and then pass bolts through the holes.
- 2 Tighten the bolts to secure the reinforcing plate to a ceiling beam.

### Cautions

- Make sure that the reinforcing plate is strong enough to bear the weight of the projector and the ceiling bracket.
- Use M8 bolts (commercially available).



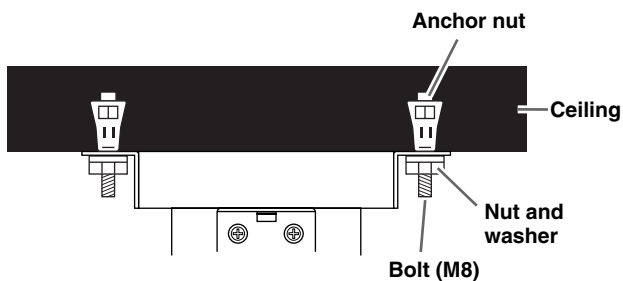
(Obtain the reinforcing plate, bolts, nuts and washers commercially available.)

## When the ceiling is made of concrete

- 1 Install anchor nuts in the ceiling.
- 2 Screw the bolts into the anchor nuts.

### Cautions

- Make sure that the anchor nuts are strong enough to bear the weight of the projector and the ceiling bracket.
- Use M8 bolts (commercially available).

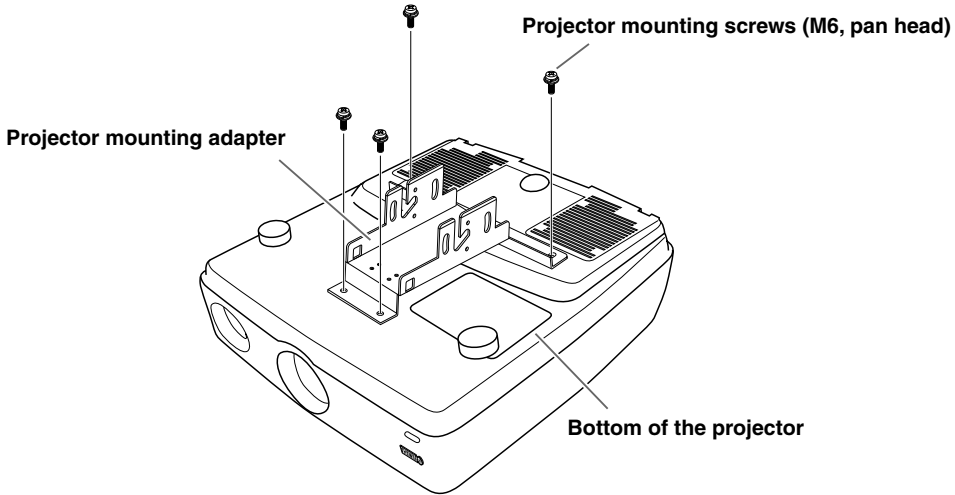


(Obtain the anchor nuts, bolts, nuts and washers commercially available.)

# Installing the Projector

## 1 Mount the projector mounting adapter onto the projector.

Align the holes in the mounting adapter with the holes in the bottom of the projector, and then use the four projector mounting screws (M6, pan head) provided to securely attach the mounting adapter to the projector.

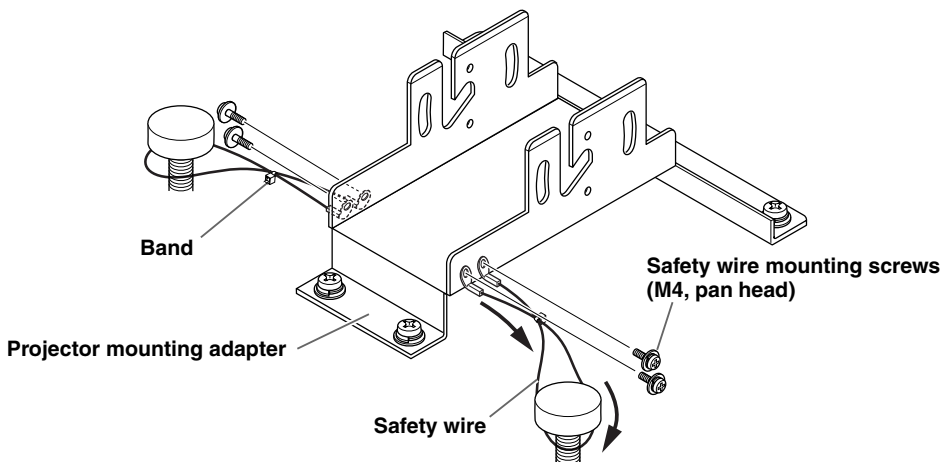


### Caution

- Do not tighten the projector mounting screws excessively. Excessive tightening could damage the mount and cause the projector to fall.

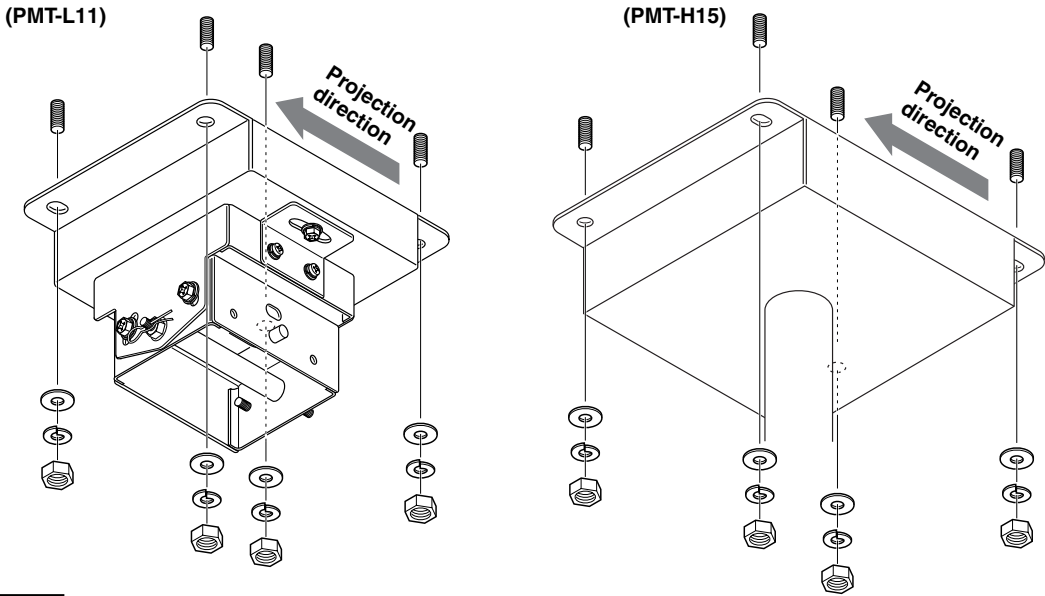
## 2 Attach the safety wire.

Use the four safety wire mounting screws (M4, pan head) provided to attach the safety wires to the projector mounting adapter. (Use two screws on the left side and two screws on the right.) After tightening the screws, place the wire loops around the projector's adjusters, and then tighten the band.



### 3 Install the ceiling bracket on the ceiling.

First hand-tighten the four nuts, determine the position, and then tighten the nuts securely.



#### Caution

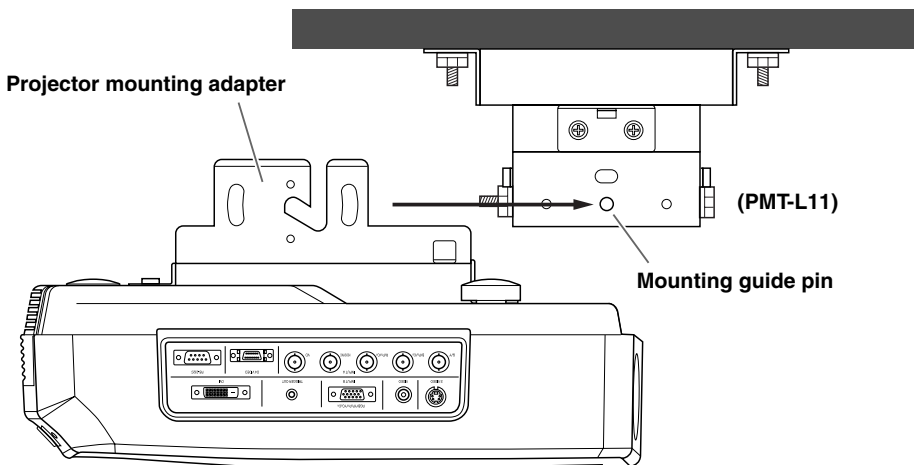
- Use M8 bolts (commercially available) to install the ceiling bracket. Using any bolts other than M8 bolts could cause the projector to fall.

#### Note to Dealers and Installers

For the customer's safety, make sure that the location where the projector is to be installed is strong enough to bear the weight of the projector, the ceiling bracket, and the other hardware before installing the ceiling bracket.

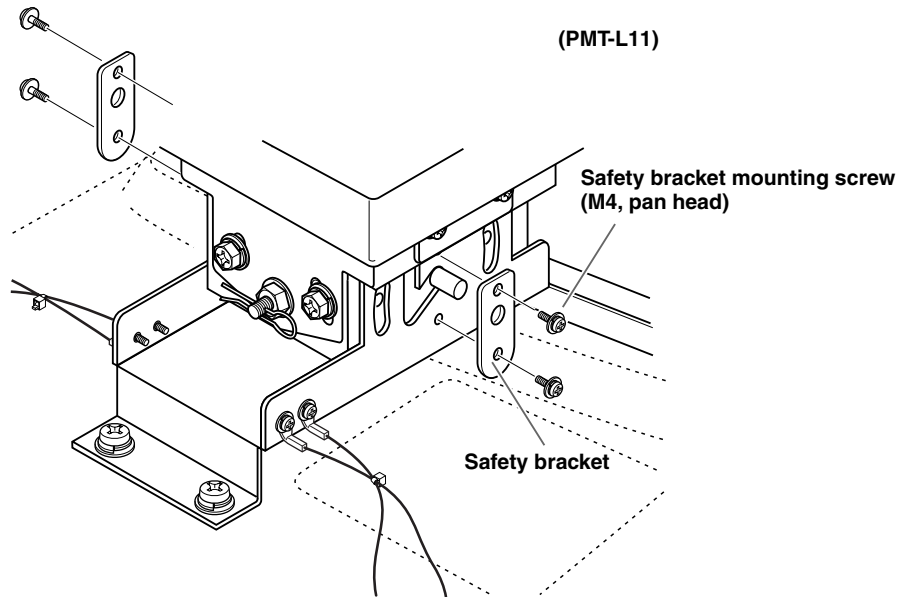
### 4 Hang the projector from the ceiling bracket.

Slide the mounting guide pin all of the way into the notch on the projector mounting adapter. This pin is only meant to support the projector temporarily, and does not hold the projector securely. Make sure that the projector does not fall.



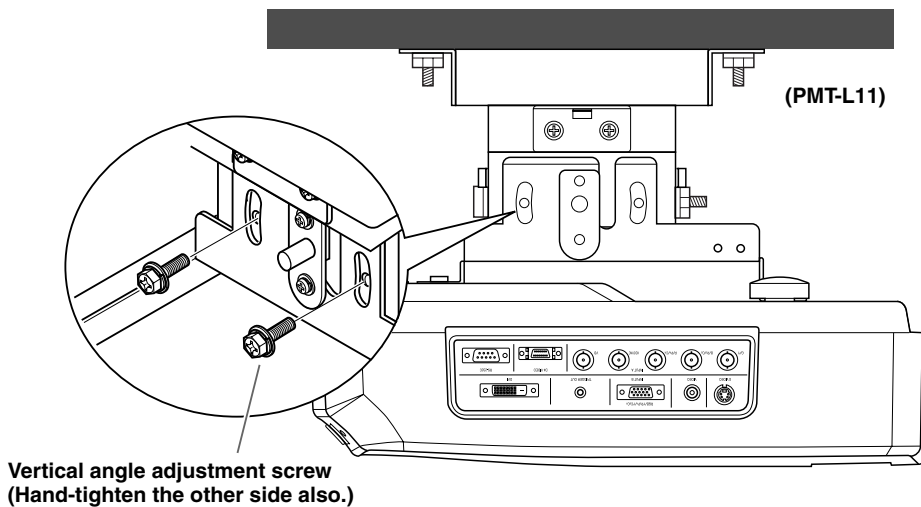
## 5 Install the safety brackets.

Align the safety brackets so that the mounting guide pin fits into the hole, and then use the four safety bracket mounting screws (M4, pan head) to secure the brackets. (Use two screws on the left side and two screws on the right.)



## 6 Temporarily secure the projector mounting adapter.

Use the four vertical angle adjustment screws (M6, hexagonal head) provided to temporarily secure the projector mounting adapter. (Use two screws on the left side and two screws on the right.)



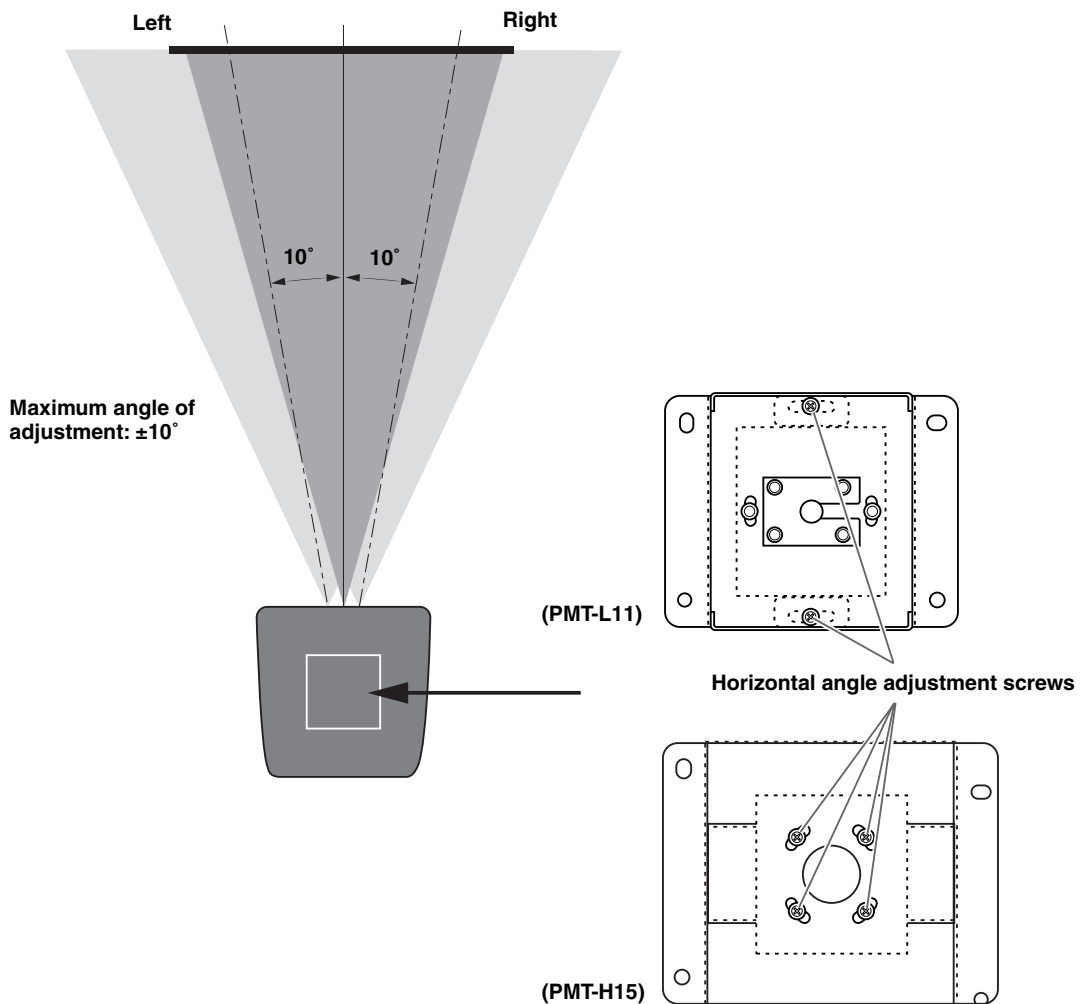
# Adjusting the Projection Angle

## Prior to Adjustment

- After reading the owner's manual for the projector, turn the projector on, and project an image.
- Check the INSTALLATION item in the SETUP menu, and set the installation status. If projecting from the front of the unit, select "FRONT/CEILING;" if projecting from the rear of the unit, select "REAR/CEILING."
- Select a projection size using the zoom feature, and then adjust the angle.

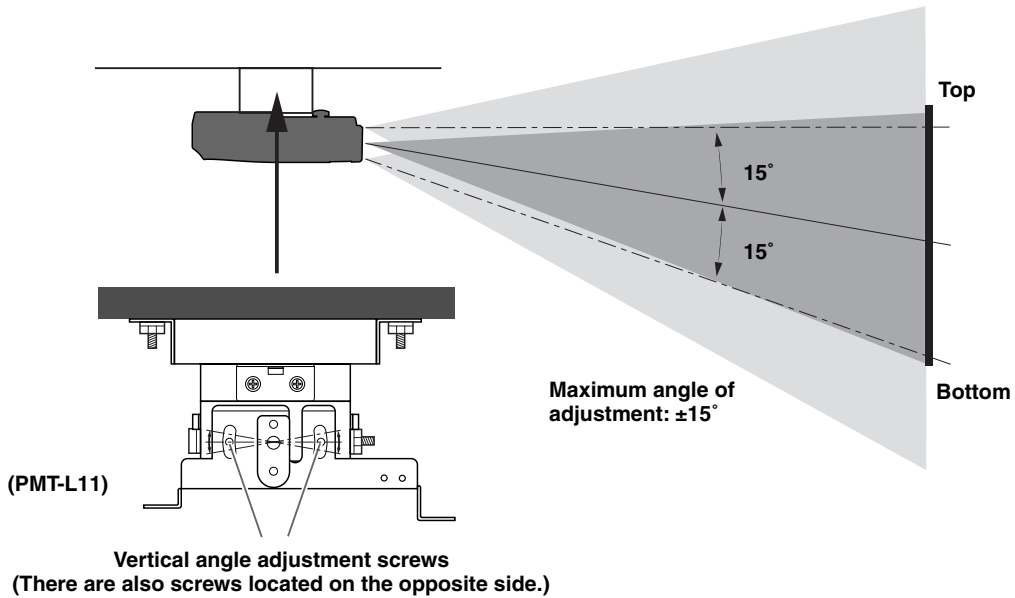
## 1 Adjust the horizontal angle.

Adjust the projector so that the projected image is centered horizontally on the screen, and then tighten the horizontal angle adjustment screws.



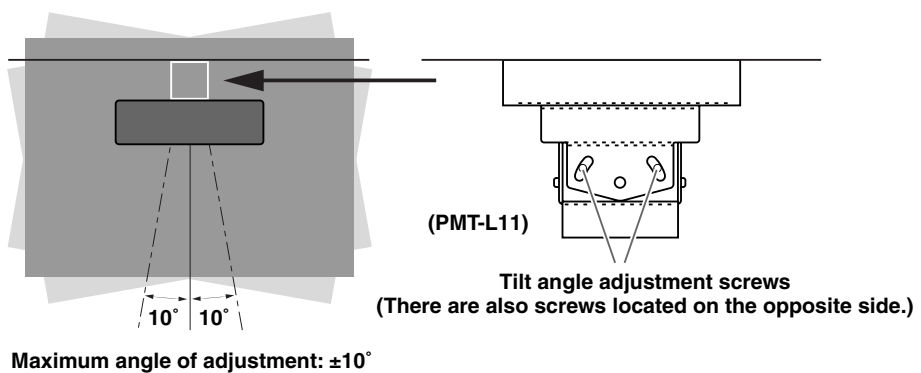
## 2 Adjust the vertical angle.

Adjust the projector so that the projected image is centered vertically on the screen, and then tighten the four vertical angle adjustment screws.



## 3 Adjust the tilt angle.

Adjust the projector so that the projected image is not tilted at all compared to the screen, and then tighten the four tilt angle adjustment screws.



If the projector still needs further adjustment, start over from step 1.

**After adjustment is completed, make sure that the projector is secured in place.**

# Specifications

Product Name		Digital Cinema Projector Ceiling Bracket	
Model No.		PMT-L11	PMT-H15
Adjustment range	Height	94 mm (3-11/16 inch) (fixed)	789 to 1359 mm (31-1/16 to 53-1/2 inch) (variable in 30-mm (1-3/16-inch) steps)
	Vertical angle	±15°	±15°
	Horizontal angle	±10°	±10°
	Tilt angle	±10°	±10°
External dimensions of ceiling bracket (w x d x h)		156 x 196 x 94 mm (6-1/8 x 7-3/4 x 3-11/16 inch)	176 x 226 x 789 to 1359 mm (6-15/16 x 8-7/8 x 31-1/16 to 53-1/2 inch) (Height is variable in 30-mm (1-3/16-inch) steps)
External dimensions of adapter (w x d x h)		230 x 212 x 80 mm (9-1/16 x 8-3/8 x 3-1/8 inch)	
Weight		2.2 kg (4 lbs 14 oz)	4.0 kg (8 lbs 13 oz)

- Specifications are subject to change without notice.