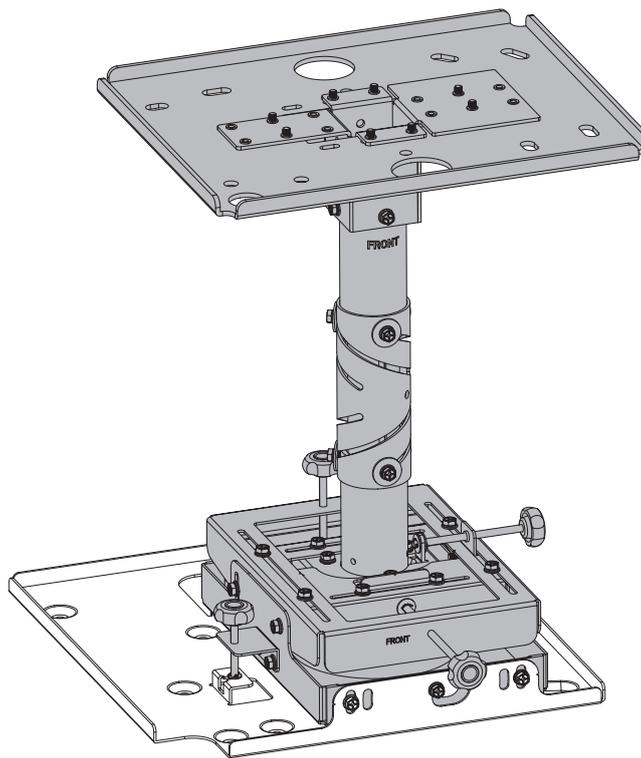


## Installation Instructions Ceiling Mount Bracket (for High Ceilings, 6-axis Adjustment)

Model No. **ET-PKD130H**



- \* The figure above shows a combination of this product and the separately sold ET-PKD130B projector mount bracket.
- \* Unless specified otherwise, the ET-PKD130B is used in the illustrations of the projector mount bracket in these instructions. The projection lens shown mounted on the projector in illustrations is the ET-DLE030 Fixed-focus lens.

Thank you for purchasing this Panasonic product.

- To customers  
The "Installation Instructions" is intended for use by installation personnel. Be sure to employ certified personnel to perform the installation.  
After installation, have the installation personnel return these "Installation Instructions" to you, and save it for future use.  
When moving or removing the projector, give this manual to the certified personnel and have them perform the procedure.
- To installation personnel  
Read the "Installation Instructions" thoroughly and then perform the operation correctly and safely.  
**Be sure to read through the section entitled "Read this first!" (page 3) before proceeding with the installation.**  
If the separately sold ET-DLE030 Fixed-focus lens will be used with the projector, obtain the "Operating Instructions" for the lens from the customer and refer to this manual and the "Installation Instructions" during installation.  
After installation, return these "Installation Instructions" to the customer.



# Contents

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## **WARNING:**

**Installation work should only be carried out by the certified personnel.**

- If this product is not installed correctly, serious accidents may result.
- Follow the instructions specified in "Installation" and "Attaching the wire rope to the ceiling" of this manual, and perform secure installation.

**Do not install in a location that is not strong enough.**

- If the installation location is not strong enough, the unit may fall down and damage to the projector or an injury may result.

**Make sure that your footing is safe and secure during installation.**

- If your footing is not secure, you may fall down or drop the unit, and an injury may result.

**Install the ceiling mount bracket in accordance with the structure and materials of the installation location.**

- If a mistake is made in the installation procedure, the ceiling mount bracket may fall down and an injury may result.

**Do not loosen or remove the unit screws and bolts unnecessarily.**

- The projector may fall down and an injury may result.

**Do not install the ceiling mount bracket in humid or dusty locations or in locations where the ceiling mount bracket may come into contact with oily smoke or steam.**

- Using the projector under such conditions may result in fire or electric shock. Also, the oil will cause the plastic to deteriorate and the projector may fall down when installed on a ceiling.

**Do not allow children to reach the supplied screws and metal fittings.**

- These items can cause personal injury if swallowed.
- If swallowed, seek medical help immediately.

**Mounting and installation must be carried out by two or more persons.**

- When installing the projector in an overhead location, for example, in a high ceiling, at least two persons will be required to handle the installation.

**Do not disassemble or modify the ceiling mount bracket.**

- The projector may be damaged or fall down, and an injury may result.

## **CAUTION:**

**Install only the designated projector.**

**Install only using the designated method.**

- Otherwise, the projector may fall and become damaged, and cause injury.

**Do not install the ceiling bracket in a place which may impede projector ventilation.**

- If this is not observed, fire may result.

**Do not hang from or hang objects on the projector or ceiling mount bracket.**

- The projector may fall and cause injury.

**When installing, always use the supplied components.**

- Otherwise, this may cause damaged projector to fall and cause injury.

**Install the mounting screws and power cable in such a way that they will not make contact with the inside parts of the ceiling.**

- Electric shocks may result from contact with any metal objects inside the ceiling.

■ **Panasonic Connect Co., Ltd. disclaims all liability for any accidents or any damage caused by the installation of the ceiling mount bracket using methods that are not described in these Installation Instructions or methods that do not use the parts specified in these Instructions.**

■ **If products are no longer being used, they should be dismantled and removed by the certified personnel as soon as possible.**

# Product description

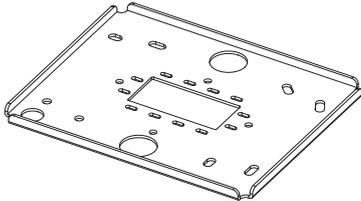
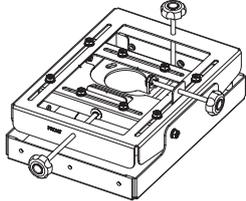
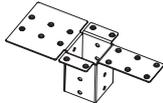
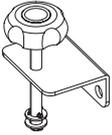
This is a ceiling mount bracket for installing projectors.  
Use this together with the projector mount bracket (sold separately).

## ■ Applicable projector mount bracket

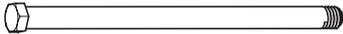
ET-PKD130B / ET-PKD120B

- Installation of the ET-PKD130B projector mount bracket is recommended if the projector will be used with the optional ET-DLE030 Fixed-focus lens. When installed using the ET-PKD130B you can more accurately adjust horizontal tilt of the projector. (→ Page 17)

## ■ Structural components

Parts name	Form (number of parts)	Applications
Attachment plate	 × 1	The attachment plate is attached to the ceiling via four ceiling mount bolts. Installation methods are different for concrete and wooden ceilings.
Adjustable pole unit	 × 1	This is the adjustment pole which is installed in between the attachment plate and the projector mount bracket (separately sold). It also includes a function for adjusting the distance between the ceiling and the projector itself.
Adjustable bracket unit	 × 1	The bracket has a function for adjusting angle and position.
Pole brace 1	 × 1	This is attached to the attachment plate to secure adjustable pole unit.
Pole brace 2	 × 1	This is attached to the adjustable pole unit.
Adjustable knob bracket	 × 1	The knob is attached to the adjustable bracket unit. By combining this product and the optional projector mount bracket ET-PKD130B you can adjust horizontal tilt of the projector.

## Product description (continued)

Parts name	Form (number of parts)	Applications
Screws and bolts	 <p>M6 Flat washer × 2 M6 Hex nut × 2</p> <p>Hex head bolt, captive washer (M6×80) × 2</p>	These are used to assemble the bracket and mount it onto the projector.
	 <p>Hex head bolt, captive washer (M6×16) × 26</p>	
	 <p>Hex head bolts (M8×107) × 2</p>	

### Note

- When the ET-PKD120B projector mount bracket is used, the adjustable knob bracket is not needed.
- When combined with the ET-PKD120B, 24 of the supplied 26 captive washer hex head bolts (M 6 × 16) will be required in the installation work.

### ■ The user must also obtain the following parts. (commercially-available)

Installation work		Required parts	Page
Installing the attachment plate to the ceiling (nominal diameter: M10)	Installing to a wooden structure	Ceiling mount bolt (× 4), Hex nut (× 16), Flat washer (× 16), Spring washer (× 8)	11
	Installing to a concrete structure	Ceiling mount bolt (× 4), Hex nut (× 12), Flat washer (× 12), Spring washer (× 8), Anchoring nut or curled plug (× 4)	12
Attaching the wire rope to the ceiling (nominal diameter: M8 or M10*)	Installing to a wooden structure	Ceiling mount bolt (× 1), Hex nut (× 2), Flat washer (× 1), Spring washer (× 1)	21
	Installing to a concrete structure	Anchoring nut or curled plug (× 1), Hex head bolt (× 1), Spring washer (× 1)	21

\* When the wire rope is attached using M10 ceiling bolts, anchor nuts or curled plugs, you will need to obtain an extra flat washer with a diameter of 40 mm or more.

- Store small parts in an appropriate manner, and keep them away from small children.

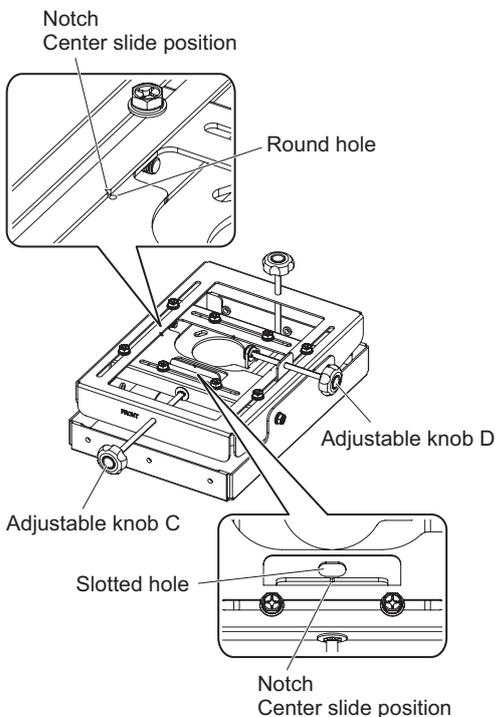
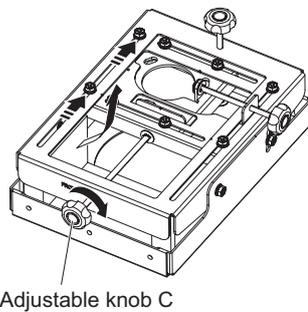
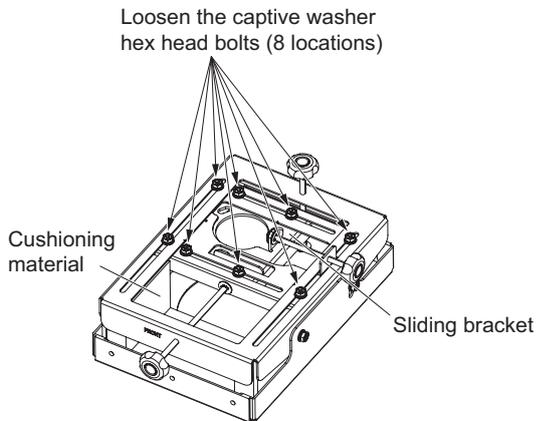
### Attention

- Dispose of the packaging materials properly after taking the product out of it.

# Before Installation

The adjustable bracket unit is not at the center slide position when shipped.

To ensure evenness in the initial lateral and horizontal slide ranges of the slide bracket adjusted in (5) and (6) on page 19 of the Installation Instructions, perform the following to center the slide bracket.



- 1) Loosen the eight captive washer hex head bolts (M6 × 16) in the sliding bracket.

- The adjustable bracket unit is in the figure on the left condition when shipped.

- 2) Turn adjustable knob C clockwise to move the slide bracket back, and remove the cushioning material.

- The cushioning material cannot be removed when the slide bracket is in the forward position.

- 3) Turn the adjustable knob C counterclockwise to center the slide bracket and firmly tighten the captive washer hex head bolts (4 locations) at the front and rear of the bracket to secure it in longitudinal direction.

- The slide bracket is in the center position when the notch and the round hole are aligned as in the figure on the left.

- 4) Turn the adjustable knob D counterclockwise to center the slide bracket and firmly tighten the captive washer hex head bolts (4 locations) at the right and left sides of the bracket to secure it in horizontal direction.

- The slide bracket is in the center position when the notch and the slotted hole are aligned as in the figure on the left.

# Installation

After checking the height, width, and structure of the installation location, determine the appropriate positions for setting up the screen and installing the projector.

## Setting up the screen

Set up the screen according to the specified method in a position which takes into account the projection distance and angle and the type of screen being used.

## Screws tightening torques

M6 .....  $4\pm 0.5$  N•m

M8 .....  $10\pm 1$  N•m

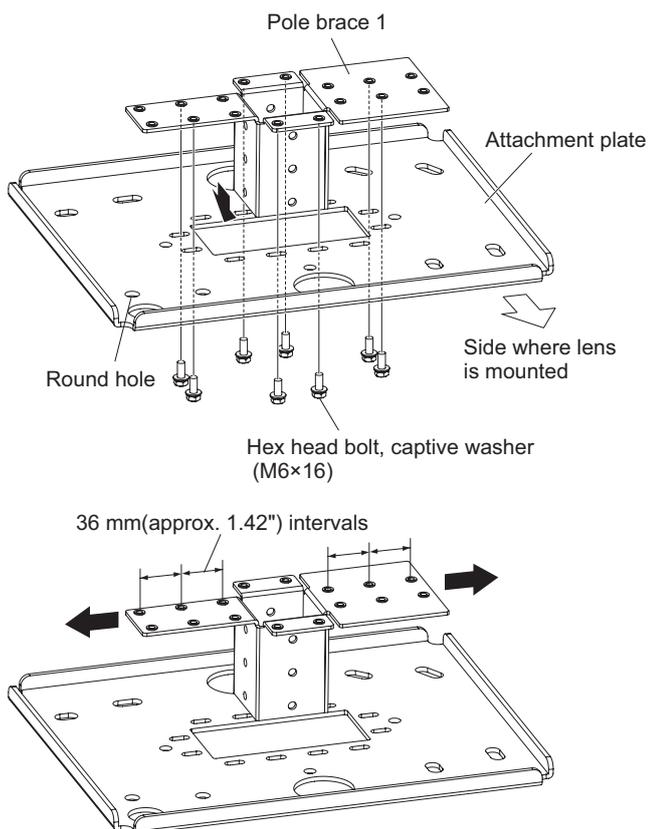
M10 .....  $20\pm 1$  N•m

- Hex head bolts (M 8 × 107) are not used for assembly but for adjusting projector position.
- Use a torque screwdriver or torque wrench to tighten screws and bolts to their specified tightening torques. Do not use electric screwdrivers or impact screwdrivers.

## Preparing the attachment plate

Before installing the attachment plate to the ceiling, use the steps below to join the pole brace (1 and 2), the adjustable pole unit and adjustable bracket unit to the attachment plate.

### ■ Attaching the pole brace 1 to the attachment plate



Insert the pole brace 1 into the center of the attachment plate, and secure the pole brace 1 with the supplied eight captive washer hex head bolts (M6 × 16). (Refer to the figure on the left for the directions of the attachment plate and the pole brace 1.)

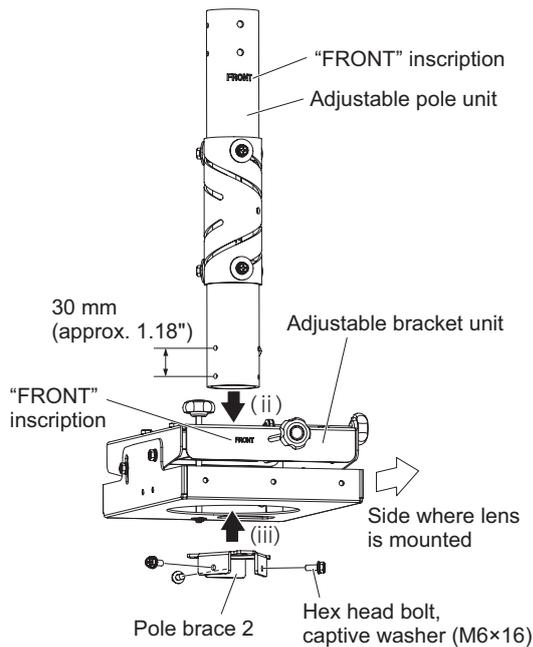
- The attachment plate must be mounted in the ceiling to enable aligning the lens with the center of the screen. When the location of the attachment plate is determined, secure the pole brace 1 to the adjustment plate. At this time, align any of the holes that are spaced horizontally at 36 mm intervals on the pole brace 1 with the through holes in the attachment plate and secure the two parts.

### Attention

- Be sure to tighten the screws and bolts to their specified tightening torques. Insufficient tightening torque may cause the projection screen to tilt.

## Installation (continued)

### ■ Attach the adjustable bracket unit and the pole brace 2 to the adjustable pole unit.

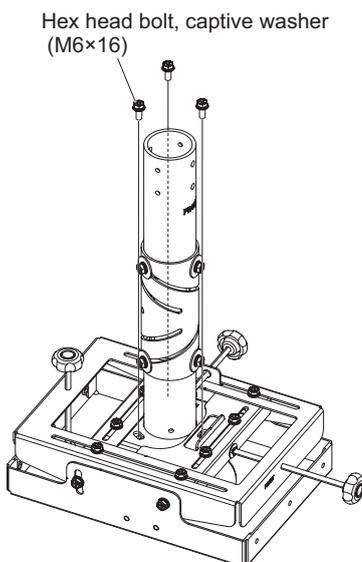


- 1) Join the adjustable pole unit, the adjustable bracket unit and the pole brace 2.
  - Before inserting the adjustable pole unit in the adjustable bracket unit extend the pole to its maximum length.
  - i ) Loosen the captive washer hex head bolts (6 locations) in the center of the adjustable pole unit, fully extend the pole and retighten the bolts.
  - ii ) Insert the adjustable bracket unit so that the FRONT inscription on the adjustable pole unit is on the same side as the lens as illustrated on the left.
  - iii ) Attach the pole brace 2 to the adjustable pole unit and use the three supplied captive washer hex head bolts (M6 × 16) to firmly secure them.
    - The base of the adjustable pole unit comes with positioning holes spaced 30 mm apart. Use screen position and the vertical slide range (0 to 100 mm) of the adjustable pole unit to determine where to secure the pole brace 2.

- 2) Use the three supplied captive washer hex head bolts (M6 × 16) to firmly secure the pole brace 2 and the adjustable bracket unit.

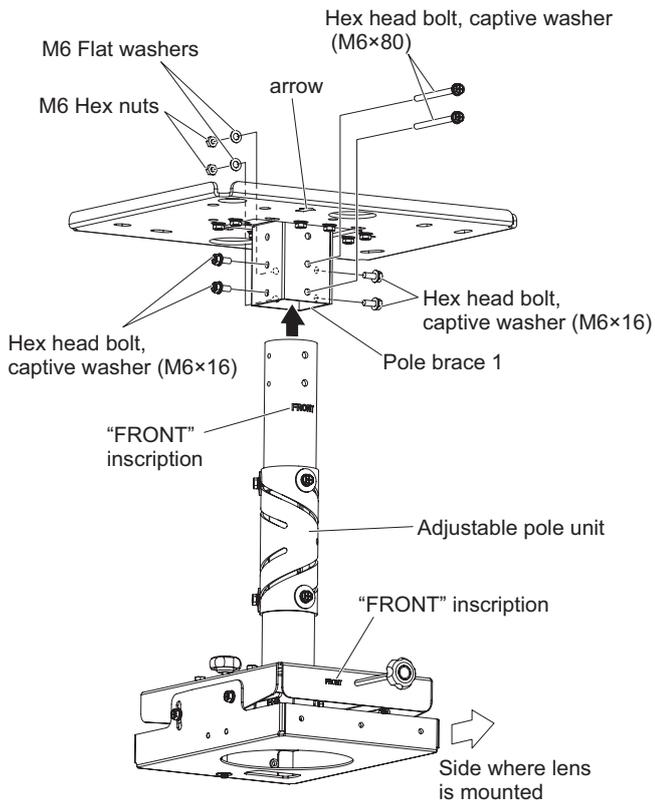
#### Note

- The adjustable pole unit is shipped fully retracted.



## Installation (continued)

### ■ Joining the pole brace 1 and the adjustable pole unit



- 1) Insert the adjustable pole unit in the pole brace 1 and orient it so that the FRONT inscription is on the side where the lens will be mounted.
- 2) Pass the two supplied captive washer hex head bolts (M6 × 80) through the pole brace 1 from the lens side and finger tighten using M6 flat washers and M6 hex nuts.
  - The top of the pole brace 1 come with positioning holes spaced 30 mm apart. Use screen position and the vertical slide range (0 to 100 mm) of the adjustable pole unit to determine where to secure the pole brace 1.
- 3) Use the four supplied captive washer hex head bolts (M6 × 16), two each on the right and left sides of the pole brace 1 and finger tighten them.
- 4) One by one tighten the captive washer hex head bolts that were finger tightened in steps 2) and 3) to firmly join the pole brace 1 and the adjustable pole unit.

#### Attention

- Be sure to tighten the screws and bolts to their specified tightening torques. Insufficient tightening torque may cause the projection screen to tilt .

## Installation (continued)

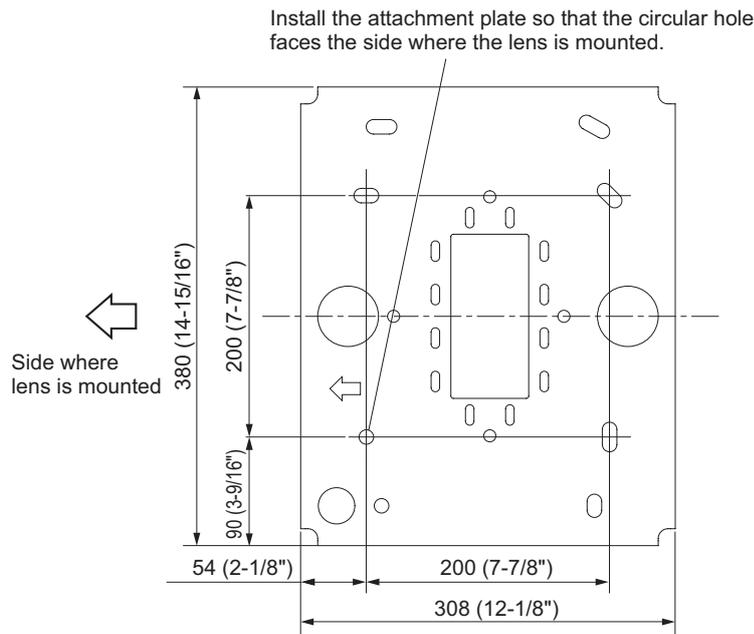
### Installing the attachment plate to the ceiling

After checking the height, width, and structure of the installation location, determine the appropriate positions for setting up the screen and installing the projector. Determine the location of the attachment plate in the ceiling to align the lens with the center of the screen.

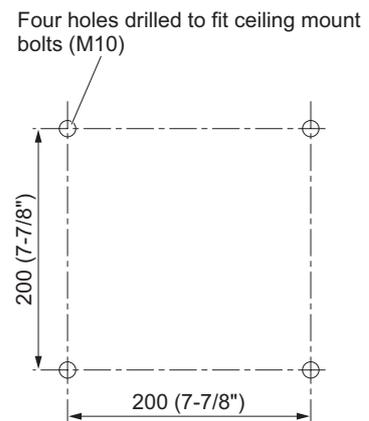
#### ■ Attachment plate mounting hole sizes and preparation

Make mounting holes while referring to the attachment plate diagram.

Figure showing the attachment plate



Bolt mounting hole size



<Units: mm (")>

#### Attention

- If installing to a concrete structure, the sizes of the mounting holes should match the sizes of the anchoring nuts or curled plugs.
- Use commercially available ceiling mount bolts, hex nuts, flat washers, spring washers, and anchoring nuts or curled plugs.

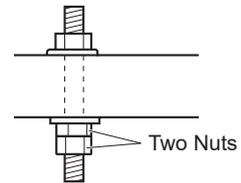
## Installation (continued)

### ■ Installing the attachment plate

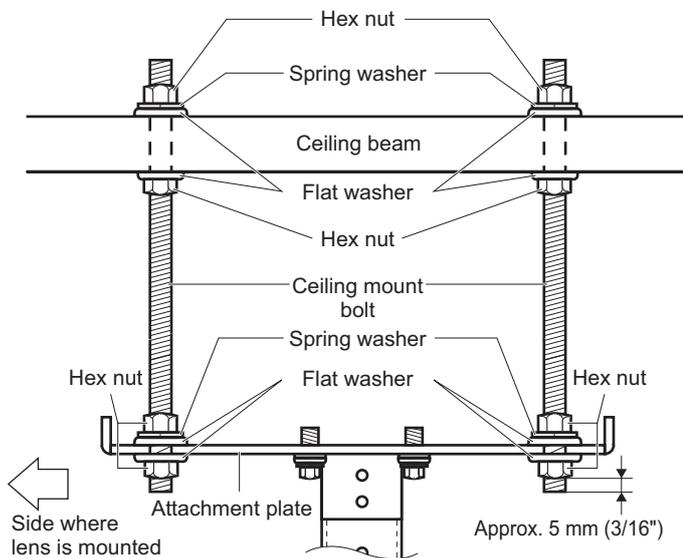
Depending on whether it is installed on a concrete or wooden ceiling structure, there are two different installation methods. Carry out by the appropriate installation method which is suited to each ceiling. Before installation, check to make sure that the ceiling where the ceiling bolts are fastened is sturdy enough to support the weight of the projector and the ceiling mount bracket and withstand the twisting of external forces they may be exposed to.

#### Attention

- Make sure to use the ceiling mount bolts, hex nuts, flat washers, spring washers, anchoring nuts or curled plugs for M10.
- All nuts and bolts should be securely tightened, and sufficient measures such as using two nuts or locking the bolts should be employed as necessary to prevent any loosening.



### ● Installing to a wooden structure



- 1) Drill four penetration holes in the ceiling beam for the ceiling mount bolts.
  - Refer to the section "Bolt mounting hole size" on page 10.
  - If the ceiling where the ceiling bolts are attached is not of sufficient strength, make the necessary reinforcements to ensure a safe installation.
- 2) Securely fix the four ceiling mount bolts to the ceiling beam.
- 3) Firmly secure the attachment plate using ceiling mount bolts.
  - Secure the attachment plate so that the screen side edge of the plate is parallel with the upper edge of the screen.
  - The threaded end of ceiling mount bolt at the attachment plate side should protrude by approx. 5 mm (3/16") from the hex nut. Be sure to use commercially available flat and spring washers to install the attachment plate.

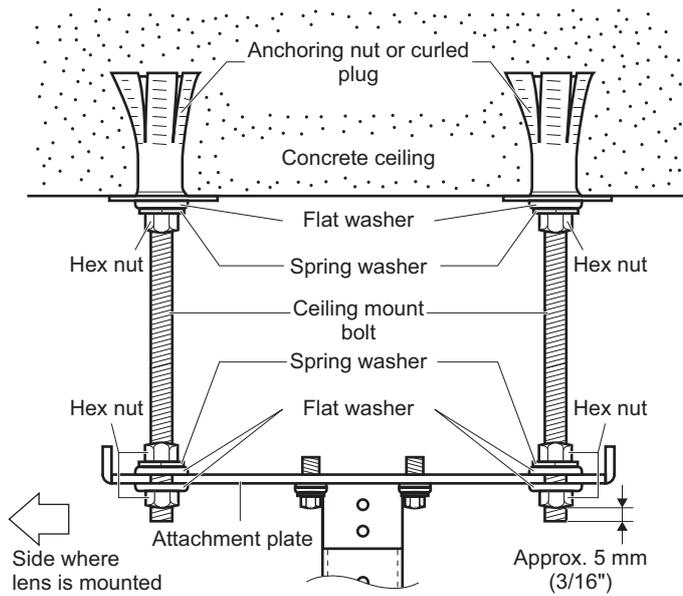
#### Note

- Since the inside of the adjustable pole unit is narrower than other ceiling mount brackets\*, it is not wide enough to accommodate the signal cable or other cables from the projector.

\*The inner diameter of the adjustable pole of the ceiling mount bracket varies with the product. Please refer to the installation instructions or other supplied instructions.

## Installation (continued)

### ● Installing to a concrete structure



- 1) Attach the anchoring nuts or curled plugs to a concrete ceiling and securely fix the four ceiling mount bolts. (Refer to page 10 for attachment positions.)
  - When installing anchoring nuts or curled plugs, strictly adhere to the installation instructions supplied by the manufacturer of the nuts so that they will not loosen in the concrete structure or be dislodged from the intended positions.
  - If the concrete ceiling is fragile or brittle with age, reinforce it using steel or wood.
- 2) Firmly secure the attachment plate using ceiling mount bolts.
  - Secure the attachment plate so that the screen side edge of the plate is parallel with the upper edge of the screen.
  - The threaded end of ceiling mount bolt at the attachment plate side should protrude by approx. 5 mm (3/16") from the hex nut. Be sure to use commercially available flat and spring washers to install the attachment plate.

#### Note

- Since the inside of the adjustable pole unit is narrower than other ceiling mount brackets\*, it is not wide enough to accommodate the signal cable or other cables from the projector.
- \*The inner diameter of the adjustable pole of the ceiling mount bracket varies with the product. Please refer to the installation instructions or other supplied instructions.

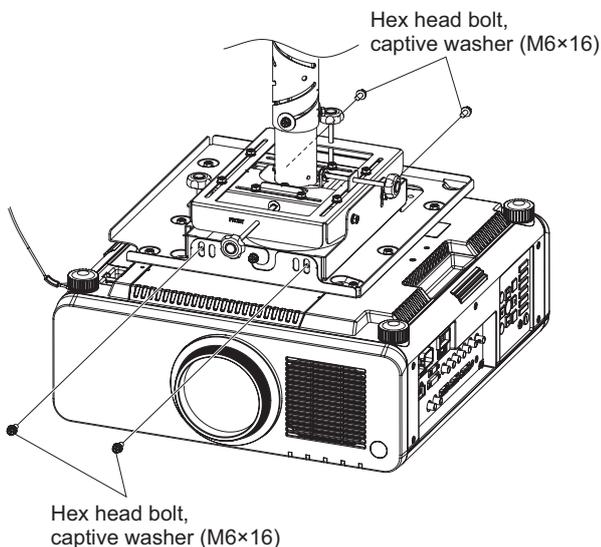
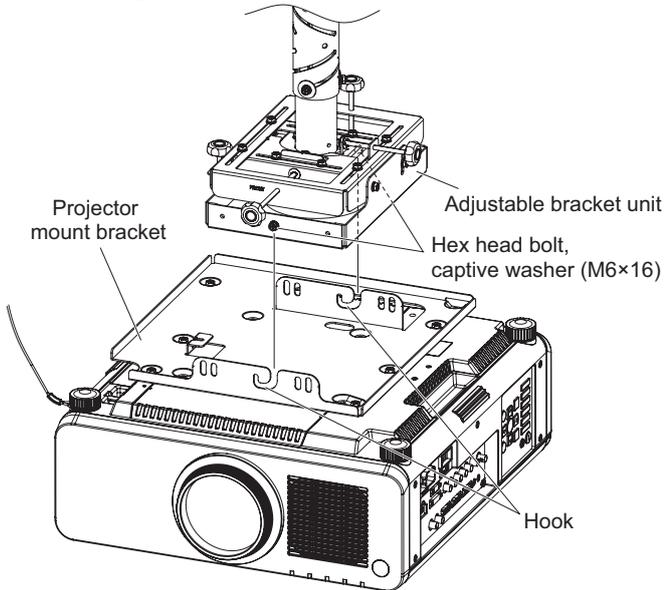
## Installation (continued)

### Suspending the projector

Install the adjustable bracket unit to the projector mount bracket (sold separately) that is pre-installed to the projector (sold separately).

For installing the projector mount bracket (sold separately) and the wire rope (supplied with the projector mount bracket) to the projector, refer to the installation instructions for the projector mount bracket.

#### <When using the ET-PKD130B>



- 1) Insert one each of the supplied captive washer hex head bolts (M6 × 16) (a total of 2 bolts in the front and rear) in the center of the three screw holes on the front and rear of the adjustable bracket unit and tighten them finger tight only.

#### Attention

- Make sure that the thread ridges of the temporarily fastened captive washer hex head bolts are tightly engaged with the screw holes on the adjustable bracket unit.

- 2) Fit the captive washer hex head bolts finger tightened in step 1) in the hooks on projector mount bracket.

#### Attention

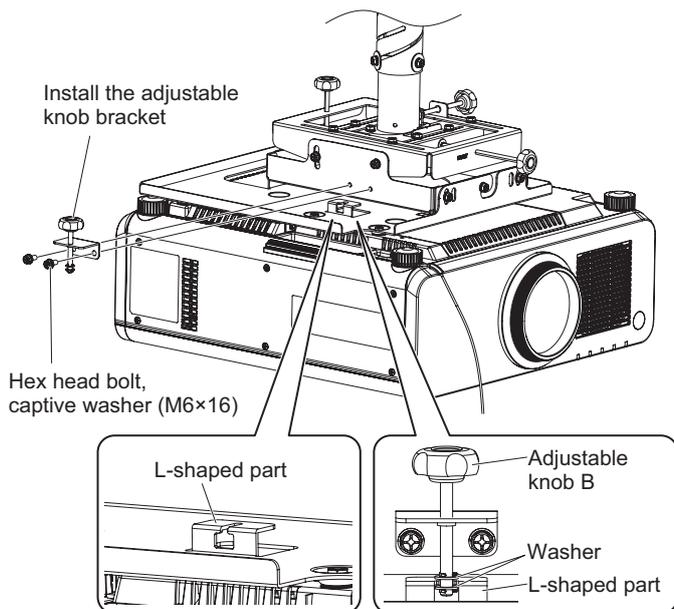
- Hold the projector firmly until the captive washer hex head bolts are securely placed in the hook of the projector mount bracket.

#### WARNING:

**Mounting and installation must be carried out by two or more persons.**

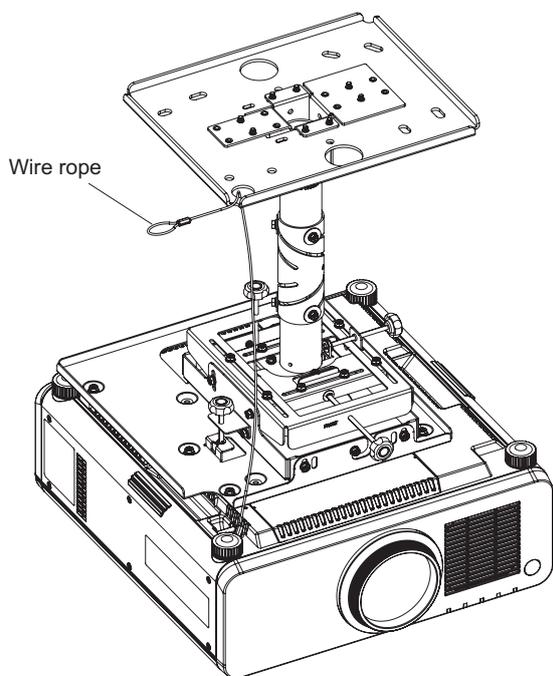
- 3) Place two each of the four supplied captive washer hex head bolts (M6 × 16) in the screw holes on the right and left sides (4 locations on the front and rear) of the hex head bolts that were finger tightened in step 1) and tighten them firmly.
- 4) Firmly tighten the captive washer hex head bolts that were finger tightened in step 1).

## Installation (continued)



5) Place the bolts of the adjustable knob bracket in the L-shaped part of the projector mount bracket and use the two supplied captive washer hex head bolts (M6 × 16) to secure the adjustable knob bracket to the adjustable bracket unit.

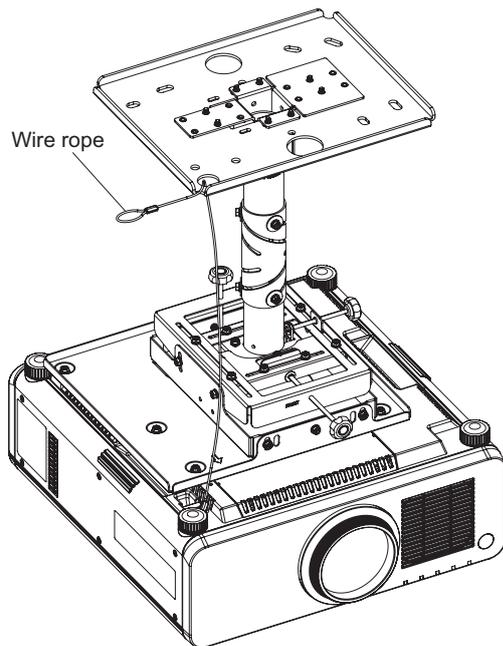
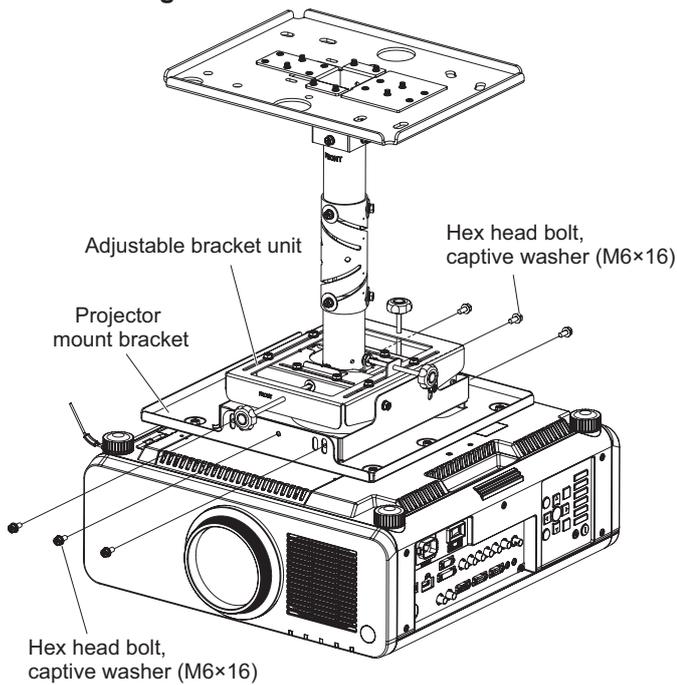
- Place the two washers at the front end of the adjustable knob bolts in the adjustable knob bracket on either side of the L-shaped part.
- If the holes are not aligned, rotate the adjustable knob B to adjust the position of the adjustable knob bracket.



6) Pass the wire rope, which is already attached to the projector, through the hole of the attachment plate as shown in the figure on the left.

## Installation (continued)

<When using the ET-PKD120B>



1) Align the screw holes in the adjustable bracket unit and the projector mount bracket as shown in the figure. Then tighten the supplied captive washer hex head bolts (M6 × 16) in three locations each on the front and rear of the adjustable bracket unit to join the two brackets.

- First tighten the center screws on each side then insert the remaining four bolts and firmly tighten them one by one.

### Note

- When the ET-PKD120B projector mount bracket is used, the supplied adjustable knob bracket is not needed.

### WARNING:

**Mounting and installation must be carried out by two or more persons.**

2) Pass the wire rope, which is already attached to the projector, through the hole of the attachment plate as shown in the figure on the left.

# Adjusting the installation angle and position

This ceiling mount bracket allows adjustment through horizontal rotation, horizontal and vertical tilt and by adjusting forward/backward, horizontal and vertical position.

<When using the projector with the ET-DLE030 Fixed-focus lens>

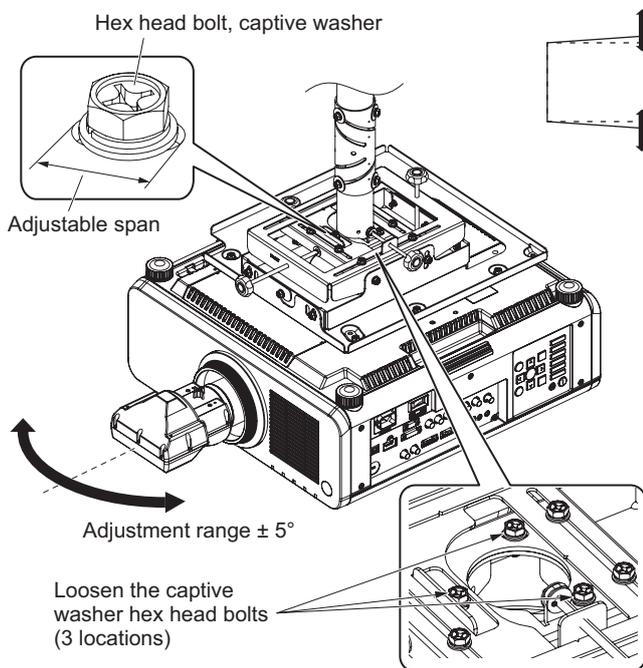
- While referring to the operating instructions for the projector, project an image onto the screen and make a rough adjustment of screen size and focus. Then adjust projector installation angle and position after adjusting lens shift. For details on lens shift adjustment, refer to the operating instructions supplied with the Fixed-focus lens.
- Without applying keystone correction in the [POSITION] menu of the projector, adjust the installation angle so that all sides of the picture are parallel with the sides of the screen. If the projector is not perpendicular to the screen, keystone distortion will occur. Adjust the installation angle while making sure that the projector and screen face each other directly.
- Keystone correction is only possible on some projector models when the ET-DLE030 Fixed-focus lens is mounted. Be sure to position the projector and the screen at right angles to each other.

<When using the projector with a projection lens other than the ET-DLE030>

- While referring to the operating instructions for the projector, project an image onto the screen and make a rough adjustment of screen size and focus. Then adjust projector installation angle and position.
- Without applying keystone correction in the [POSITION] menu of the projector, adjust the installation angle so that all sides of the picture are parallel with the sides of the screen. If the projector is not perpendicular to the screen, keystone distortion will occur. Adjust the installation angle while making sure that the projector and screen face each other directly.
- Make sure that a projector equipped with a projection lens having a shift function is in standard position \*1 before making adjustments.

\*1: The standard position is the position the projector occupies when it has been moved to the home position.

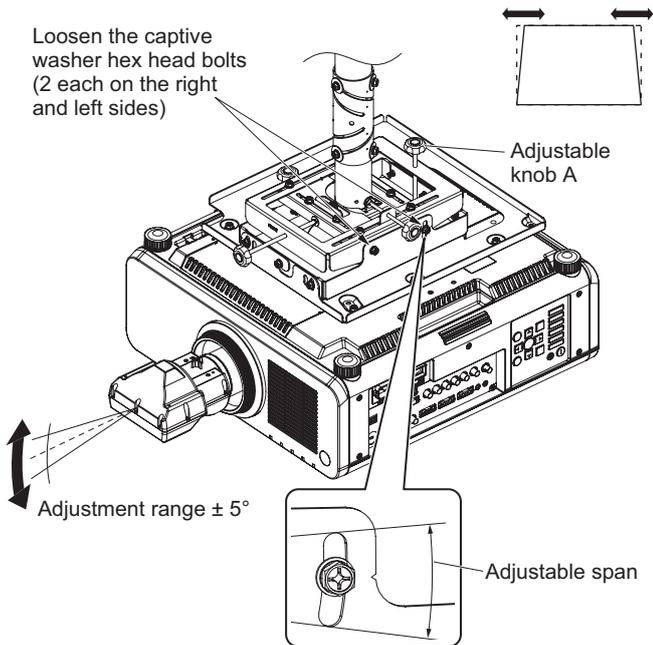
## (1) If the top and bottom edges of the picture are not parallel (horizontal swing adjustment)



- 1) Loosen the captive washer hex head bolts (3 locations) that secure the adjustable bracket unit and move the projector horizontally to make the top and bottom edges of the picture parallel.
- 2) Once the top and bottom edges of the picture are parallel, be sure to retighten the captive washer hex head bolts (3 locations) securely.

## Adjusting the installation angle (continued)

### (2) If the right and left edges of the screen are not parallel (vertical tilt adjustment)



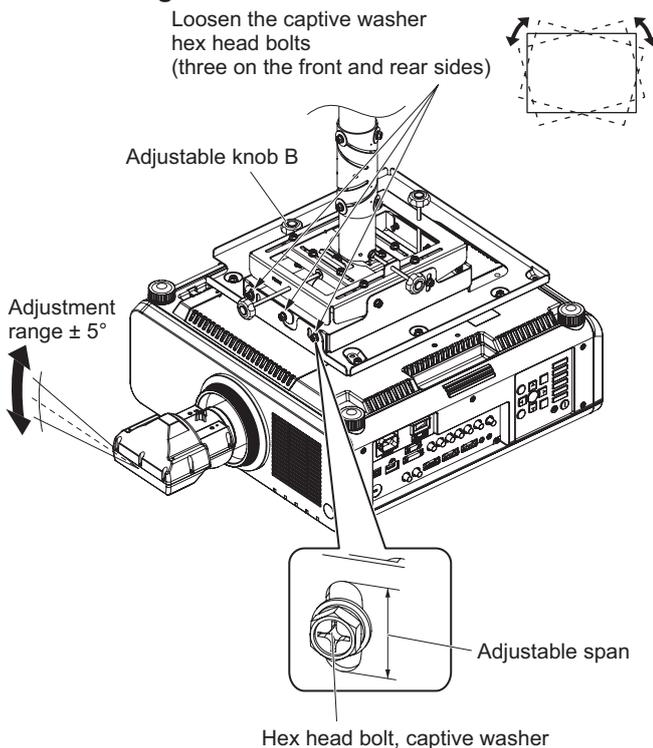
- 1) Loosen the captive washer hex head bolts (2 each on the right and left sides) that secure the vertical tilt orientation of the adjustable bracket unit as shown in the figure on the left.
- 2) Turn the adjustable knob A so that the right and left sides of the picture become parallel.
- 3) Once the right and left edges of the picture are parallel, be sure to firmly retighten the captive washer hex head bolts (2 each on the right and left sides).

#### Attention

- Do not over-loosen the captive washer hex head bolts. If the bolts become too loose, the projector could fall down.

### (3) If the picture is tilted to the right or left (horizontal tilt adjustment)

#### <When using the ET-PKD130B>



- 1) Loosen the captive washer hex head bolts (3 each on the front and rear sides) that secure the projector mount bracket unit lengthwise.
- 2) Turn the adjustable knob B so that the sides of the picture become parallel with the sides of the screen.
  - The adjustable knob may become difficult to turn unless the adjustable knob bracket is correctly attached to the L-shaped part on the projector mount bracket. Refer to the instructions on page 14 to correct installation of the adjustable knob bracket.
- 3) Once the picture is no longer tilted, be sure to firmly retighten the captive washer hex head bolts (3 each on the front and rear sides).

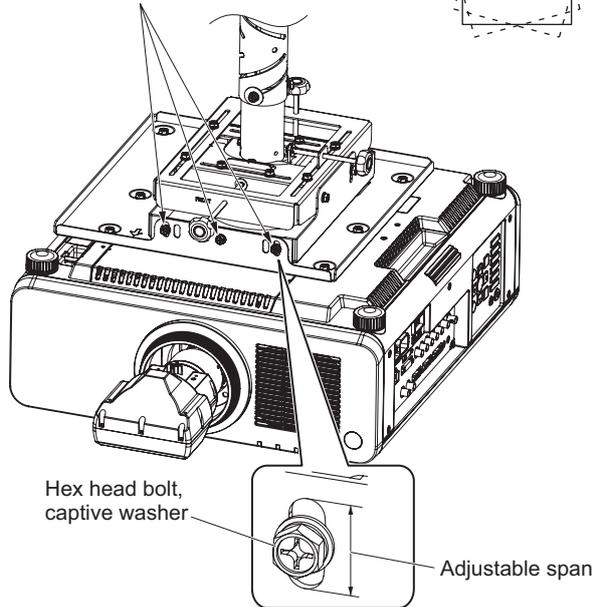
#### Attention

- Do not over-loosen the captive washer hex head bolts that secure the projector mount bracket unit lengthwise. If the bolts become too loose, the projector could fall down.

## Adjusting the installation angle (continued)

### <When using the ET-PKD120B>

Loosen the captive washer hex head bolts (three on the front and rear sides)

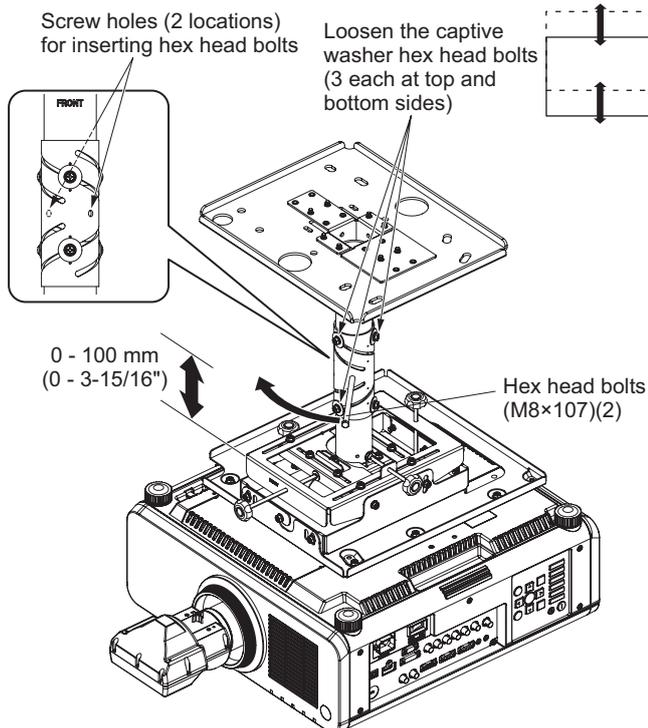


- 1) Loosen the captive washer hex head bolts (3 each on the front and rear sides) that secure the projector mount bracket unit lengthwise.
- 2) Adjust the horizontal tilt of the projector so that the sides of the picture become parallel with the sides of the screen.
- 3) Once the picture is no longer tilted, be sure to firmly retighten the captive washer hex head bolts (3 each on the front and rear sides).

#### Attention

- Do not over-loosen the captive washer hex head bolts that secure the projector mount bracket unit lengthwise. If the bolts become too loose, the projector could fall down.

### (4) If the picture is too far to the top or bottom of the screen (vertical slide)



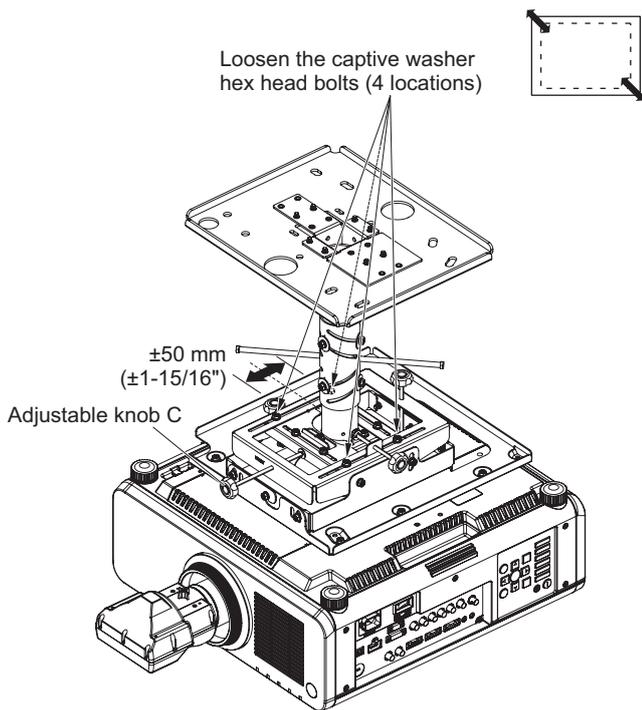
- 1) Install two hex head bolts (M8 × 107) in the screw holes on the adjustable pole unit.
- 2) Evenly loosen the captive washer hex head bolts (3 each at top and bottom sides) that secure the adjustable pole unit lengthwise.
  - If you loosen the captive washer hex head bolts while the adjustable pole unit is not fully extended, the weight of the projector could cause the pole unit to slide to its extended position. Either hold the installed hex bolts (M8 × 107) firmly in place or support the projector from below while loosening the captive washer hex head bolts.
- 3) Use the two hex head bolts (M8 × 107) to turn the adjustable pole until the picture is vertically aligned with the screen.
  - Make sure the projector is properly supported from below while doing this.
- 4) Once the position of the picture has been corrected, be sure to firmly retighten the captive washer hex head bolts (3 each on the top and bottom sides).

#### Attention

- Do not over-loosen the captive washer hex head bolts (3 each on the top and bottom sides). Loosening the bolts more than necessary could damage parts inside the bracket or cause the bolts to fall out, which could cause the projector to fall.
- When all adjustments have been completed, be sure to remove the hex head bolts (M8 × 107) used for the adjustment and store them for the next time you need to make adjustments.

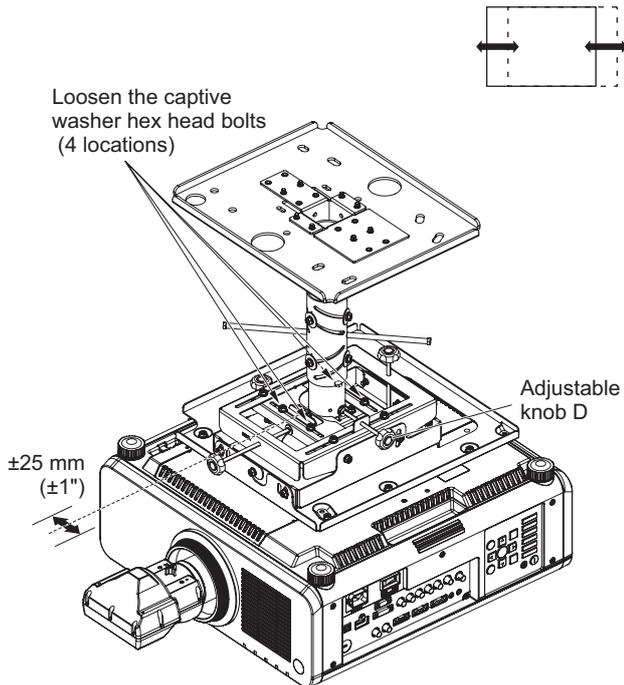
## Adjusting the installation angle (continued)

### (5) If the picture is too small or too large (lengthwise slide)



- 1) Loosen the captive washer hex head bolts (4 locations) that secure the adjustable bracket unit lengthwise as shown in the figure on the left.
- 2) Turn the adjustable knob C so that the size of the picture properly fits the screen.
- 3) Once the size of the picture is appropriate, be sure to firmly retighten the captive washer hex head bolts (4 locations).

### (6) If the picture is too far to the right or left of the screen (horizontal slide)

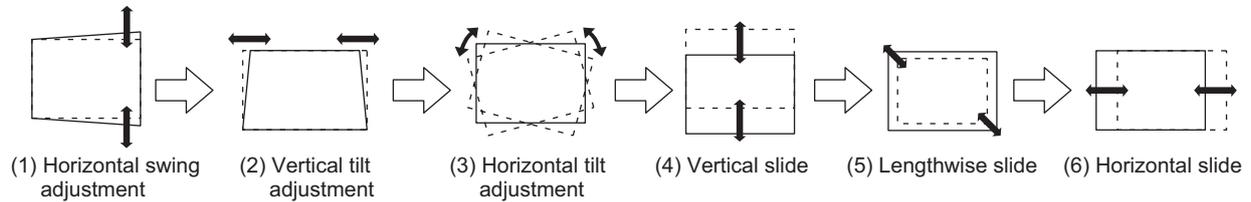


- 1) Loosen the captive washer hex head bolts (4 locations) that secure the adjustable bracket unit horizontally as shown in the figure on the left.
- 2) Turn the adjustable knob D so that the position of the picture is aligned with the screen.
- 3) Once the position of the picture has been corrected, be sure to firmly retighten the captive washer hex head bolts (4 locations).

## Adjusting the installation angle (continued)

### Note

- If the angle and position of the picture are not aligned with the screen, perform steps (1) to (6) in order. After minimizing picture distortions by performing adjustments in steps (1) to (3), you are recommended to perform adjustments in steps (4) to (6).



- If keystone distortion occurs in the image after adjusting the installation angle (while keystone correction is not applied in the [POSITION] menu of the projector), the projector and screen are not positioned correctly in relation to each other. Verify that the projector and screen face each other directly. If a projection lens other than the ET-DLE030 fixed-focus lens is mounted, you can also perform keystone correction on the projector.
- The wire rope is not shown in the illustration.

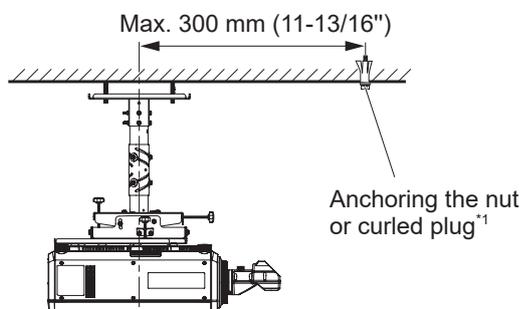
### Attention

- When all adjustments have been completed, be sure to remove the hex head bolts (M8 × 107) used for the adjustment and store them for the next time you need to make adjustments.

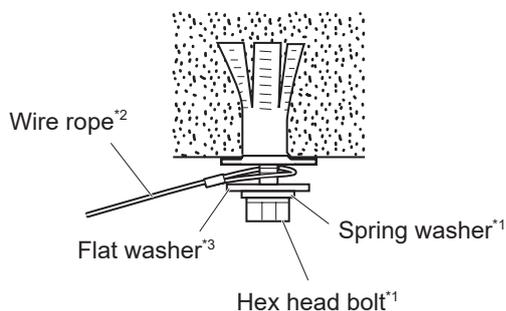
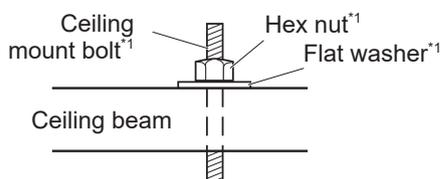
# Attaching the wire rope to the ceiling

Attach the other end of the wire rope attached to the projector to the ceiling.

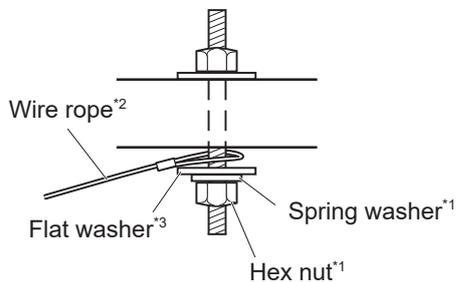
\*These instructions assume installation in a concrete ceiling and use of M8 ceiling bolts, anchor nuts and curled plugs. When M10 ceiling bolts, anchor nuts or curled plugs are used, you need to obtain a commercially available flat washer with a diameter that is 40 mm or larger instead of the flat washer supplied with the projector mount bracket.



## ● Installing to a wooden structure



## ● Installing to a wooden structure



1) Mount the anchoring nut or curled plug (M8) in the concrete ceiling (at a single point within the area shown in the diagram on the left).

- If it is to be attached to a wooden surface, drill one penetration hole in the ceiling beam for the ceiling mount bolt, and secure the ceiling mount bolt using the flat washer (M8)<sup>\*3</sup> and a commercially available hex head bolt (M8).

### Attention

- When mounting the anchoring nut or curled plug (M8) to the ceiling, be careful that there is no slack in the wire rope between the projector and the ceiling.

2) Tighten the commercially available hex head bolt (M8) to the anchor, passing it through the commercially available spring washer (M8), the flat washer (M8)<sup>\*3</sup>, and the ring of the end of the wire rope.

- If it is to be attached to a wooden surface, pass the ceiling mount bolt through the ring at the end of the wire rope as shown to the left, and secure it firmly to the ceiling beam.

### Attention

- Purchase the commercially available anchoring nut or curled plug, hex head bolt, and spring washer.

### Note

- For attaching the wire rope to the projector, refer to the installation instructions for the separately sold projector mount bracket.

\*1: Commercially available product

\*2: Supplied with the optional projector mount bracket

\*3: Use commercially available fasteners or those supplied with the optional projector mount bracket. (40 mm in diameter or wider)

# Specifications

Range of adjustment	Horizontal swing angle	±5°
	Vertical tilt angle	±5°
	Horizontal tilt angle	±5°
	Vertical slide amount	0 - 100 mm (0 - 3-15/16")* <sup>1</sup>
	Lengthwise slide amount	±50 mm (1-15/16")
	Horizontal slide amount	±25 mm (1")* <sup>2</sup>
External dimensions* <sup>4</sup>		Width: 380 mm (14-15/16") Height: 329 mm - 489 mm (12-15/16" - 19-1/4") (350 mm - 510 mm (13-3/4" - 20-1/16") when the projector mount bracket* <sup>3</sup> is installed) Depth: 308 mm (12-1/8")
Weight		Approx. 10 kg (22.05 lbs.)

\*1: Vertical position can be set to between 0 - 160 mm (0 - 6-5/16") when the installation range of the pole brace 1 and 2 are included.

\*2: Horizontal position can be set to between -61 and +61 mm (-2-3/8" and 2-3/8") when the installation range of the pole brace 1 on the attachment plate is included.

\*3: The separately sold ET-PKD130B or ET-PKD120B

\*4: The height dimensions include the thickness of the attachment plate.

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## Panasonic Connect Co., Ltd.

Web Site : <https://panasonic.net/cns/projector/>

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