

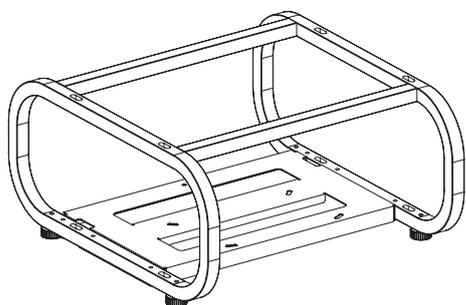
Panasonic[®]

Operating Instructions

Projector Frame for projectors

Commercial Use

Model No. **ET-PFD310**



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Thank you for purchasing a Panasonic product.

- Read these instructions completely and use this product correctly and safely.
- **Before using this product, be sure to read “Precautions with regard to safety” (page 2).**
- Please save this manual for future use.

Important Safety Notice

Dear Panasonic Customer:

This instruction booklet provides all the necessary operating information that you might require. We hope it will help you to get the most performance out of new product, and that you will be pleased with your Panasonic Projector Frame. The serial number of your product may be found on its back. You should note it in the space provided below and retain this booklet in case service is required.

Model number: **ET-PFD310**

Serial number:

Precautions with regard to safety

■ WARNING

Do not install in a place which is not strong enough.

- If the installation location is not strong enough, the ceiling bracket may fall down and 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 bracket, and an injury may result.

Do not loosen or remove the frame screws without due care and attention.

- The projector may fall down and injury may result.

Do not set up the projector in humid or dusty places or in places where the projector may come into contact with oily smoke or steam.

- Using the projector under such conditions may result in fire, electric shocks or plastic deterioration.
The plastic deterioration may cause the falling down of the projector which is mounted in the ceiling.

Do not place the projector on top of surfaces which are unstable.

- If the projector is placed on top of a surface which is sloped or unstable, it may fall down or tip over, and injury or damage could result.

Do not stack any more than two frames on top of each other.

- The frames may fall and cause injury.

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

- The attached metal fittings and screws can cause personal injury if swallowed.
- If swallowed, seek medical advice immediately.

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

- Once a projector is included, the total weight will exceed 30 kg (66.1 lbs.). Be sure that mounting and installation are carried out by two or more persons.

■ CAUTION

Do not install the frame in a place which may impede projector ventilation.

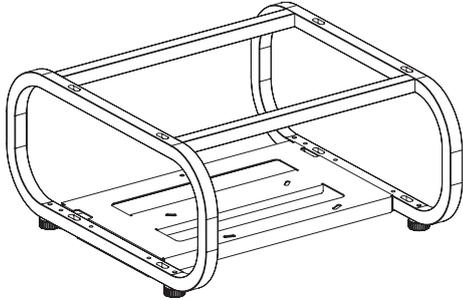
- If this is not observed, fire may result.

Product description

This frame is exclusively for the installation of dual projectors.

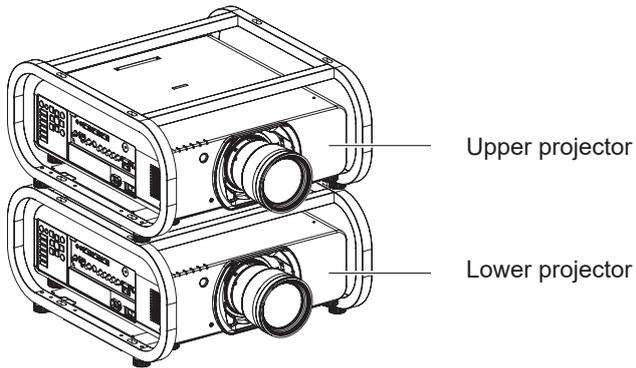
The frame is made up of the following components. Before assembling the frame, confirm that all components have been provided.

Structural components

Parts name	Sub-components (number of parts)																		
Frame	 <p style="text-align: right;">1</p>																		
Screws and bolts	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; vertical-align: middle;"></td> <td style="padding-left: 10px;">Hex-head bolt, captive washer(M6×16)</td> <td style="text-align: right; vertical-align: bottom;">5 pieces</td> </tr> <tr> <td style="text-align: center; vertical-align: middle;"></td> <td style="padding-left: 10px;">Hex nuts (M10)</td> <td style="text-align: right; vertical-align: bottom;">8</td> </tr> <tr> <td style="text-align: center; vertical-align: middle;"></td> <td style="padding-left: 10px;">Flat washers (M10)</td> <td style="text-align: right; vertical-align: bottom;">16</td> </tr> <tr> <td style="text-align: center; vertical-align: middle;"></td> <td style="padding-left: 10px;">Spring washers(M10)</td> <td style="text-align: right; vertical-align: bottom;">8</td> </tr> <tr> <td style="text-align: center; vertical-align: middle;"></td> <td style="padding-left: 10px;">Adjustment nuts (M10)</td> <td style="text-align: right; vertical-align: bottom;">4</td> </tr> <tr> <td style="text-align: center; vertical-align: middle;"></td> <td style="padding-left: 10px;">Hex head bolts (M10×110)</td> <td style="text-align: right; vertical-align: bottom;">4 pieces</td> </tr> </table>		Hex-head bolt, captive washer(M6×16)	5 pieces		Hex nuts (M10)	8		Flat washers (M10)	16		Spring washers(M10)	8		Adjustment nuts (M10)	4		Hex head bolts (M10×110)	4 pieces
	Hex-head bolt, captive washer(M6×16)	5 pieces																	
	Hex nuts (M10)	8																	
	Flat washers (M10)	16																	
	Spring washers(M10)	8																	
	Adjustment nuts (M10)	4																	
	Hex head bolts (M10×110)	4 pieces																	

- Store small parts in an appropriate manner, and keep them away from young children.
- Tightening torque for the screws are M6: 4±0.5 N•m and M10: 7±0.5 N•m.
- 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.

Finished assembly diagram



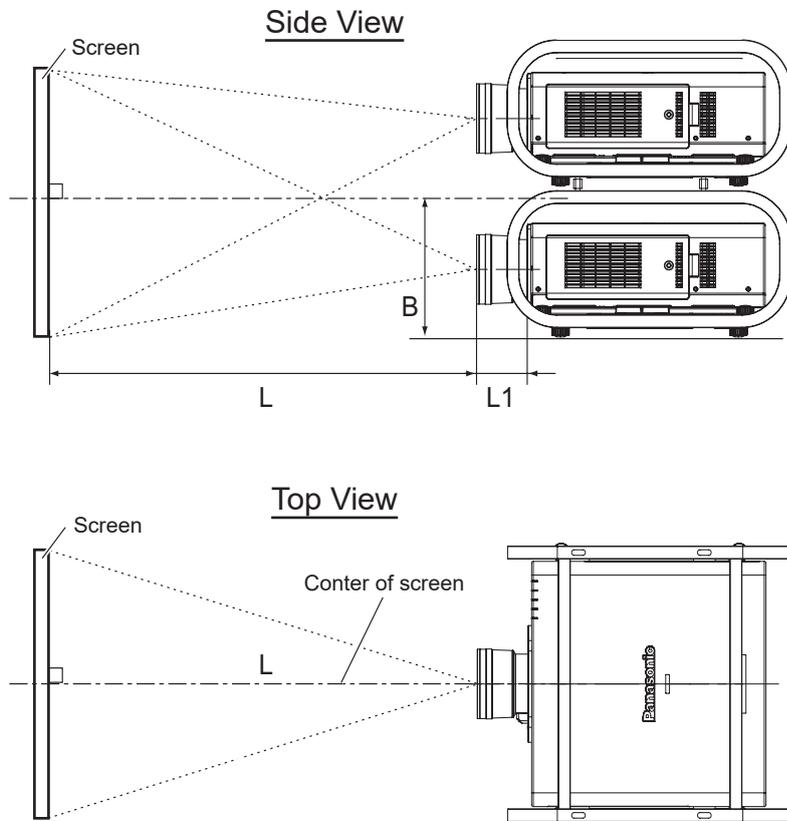
*: Another separate frame is required when stacking two frame together.

Assembly procedure (example of dual installation)

<p>1. Preparation</p>	<ul style="list-style-type: none"> ● Prepare the tools. <ul style="list-style-type: none"> ① Torque wrench ② Screwdriver ③ Soft cloth or other soft surface ● Check the strength of the setting-up location.
<p>2. Determine the setting-up position</p>	<ul style="list-style-type: none"> ● Select the placement position for the projectors based on the size and location of the screen and the lens (sold separately) to be used. (pages 5 to 8)
<p>3. Install the projectors</p>	<ul style="list-style-type: none"> ● After attaching the upper and lower projectors to the respective frames, place the upper projector on top of the lower projector for installation. (pages 9 to 10)
<p>4. Carry out adjustments</p>	<ul style="list-style-type: none"> ● Adjust so that the images projected by the upper and lower projectors converge on the screen. (pages 11 to 12)

Projection distances

When planning the projector and screen geometry, refer to the following figures and table on the next page for reference. After the projector is roughly positioned, picture size and vertical picture positioning can be finely adjusted with the powered zoom lens and lens shifting mechanism.



[Units : mm(")]

Projection lens number	L1 size (Approx.)
ET-D75LE1	114.4 (4-1/2")
ET-D75LE2	98.9 (3-29/32")
ET-D75LE3	102.4 (4-1/32")
ET-D75LE4	126.3 (4-31/32")
ET-D75LE5	202.4 (7-31/32")
ET-D75LE6	211.9 (8-11/32")
ET-D75LE8	254.4 (10-1/32")
ET-D75LE10	125 (4-29/32")
ET-D75LE20	121 (4-3/4")
ET-D75LE30	121 (4-3/4")
ET-D75LE40	124 (4-7/8")
ET-D75LE50	203 (8")

L: Projection distance

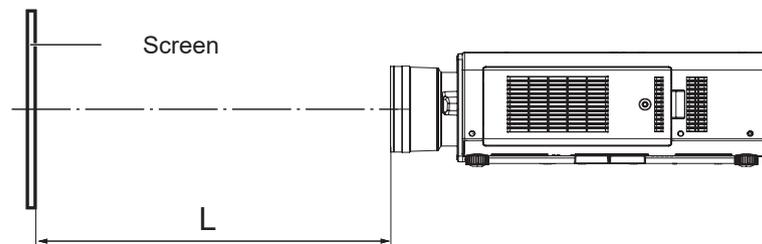
B: Distance from center of upper and lower lens to lower frame is approximately 310 mm (12-7/32").

Attention

- Install the projector with a space more than 500 mm (19-11/16") behind it so as not to interfere with projector ventilation.
- Leave a space of 500 mm (19-11/16") on each side of the projector.

Projection distances by the type of projection lens (optional)

Every type of optional projection lens has a different projection distance to achieve the same screen size. Select and purchase a projection lens most suitable to the size of your location and your screen size by referring to the figure below and the following tables of the projection distances by the type of projection lens from the next page.



Projection distances (Continued)

■ Projection distance according to the projector lens.

For the projection distances for projection [Lenses (optional)], refer to the operating instructions [Installation] provided with The projector. Or check the diagonal dimension (m) of your screen and calculate the projection distance using the following formula.

Units : m

Model number of projection lens (Throw ratio)	Aspect ratio	PT-DZ13K series / PT-DZ10K series / PT-DZ8700U and PT-DZ110XE		
		Projection distance (L) formula		
		Minimum	Maximum	
Zoom lens	ET-D75LE1 (1.4-1.8:1)	16:10	$L = 1.1732 \times \text{Screen diagonal (m)} - 0.0760$	$L = 1.5709 \times \text{Screen diagonal (m)} - 0.1004$
		16:9	$L = 1.2087 \times \text{Screen diagonal (m)} - 0.0760$	$L = 1.6142 \times \text{Screen diagonal (m)} - 0.1004$
	(1.6-2.2:1)	4:3	$L = 1.3307 \times \text{Screen diagonal (m)} - 0.0760$	$L = 1.7756 \times \text{Screen diagonal (m)} - 0.1004$
		16:10	$L = 1.5748 \times \text{Screen diagonal (m)} - 0.0795$	$L = 2.3661 \times \text{Screen diagonal (m)} - 0.1064$
	ET-D75LE2 (1.8-2.8:1)	16:9	$L = 1.6220 \times \text{Screen diagonal (m)} - 0.0795$	$L = 2.4291 \times \text{Screen diagonal (m)} - 0.1064$
		4:3	$L = 1.7835 \times \text{Screen diagonal (m)} - 0.0795$	$L = 2.6772 \times \text{Screen diagonal (m)} - 0.1064$
	ET-D75LE3 (2.8-4.6:1)	16:10	$L = 2.3661 \times \text{Screen diagonal (m)} - 0.0958$	$L = 3.9488 \times \text{Screen diagonal (m)} - 0.1216$
		16:9	$L = 2.4291 \times \text{Screen diagonal (m)} - 0.0958$	$L = 4.0591 \times \text{Screen diagonal (m)} - 0.1216$
	(3.3-5.5:1)	4:3	$L = 2.6772 \times \text{Screen diagonal (m)} - 0.0958$	$L = 4.4724 \times \text{Screen diagonal (m)} - 0.1216$
		16:10	$L = 3.9488 \times \text{Screen diagonal (m)} - 0.1158$	$L = 6.2795 \times \text{Screen diagonal (m)} - 0.1013$
	ET-D75LE4 (4.6-7.4:1)	16:9	$L = 4.0591 \times \text{Screen diagonal (m)} - 0.1158$	$L = 6.4528 \times \text{Screen diagonal (m)} - 0.1013$
		4:3	$L = 4.4724 \times \text{Screen diagonal (m)} - 0.1158$	$L = 7.1102 \times \text{Screen diagonal (m)} - 0.1013$
	ET-D75LE8 (7.3-13.8:1)	16:10	$L = 6.2795 \times \text{Screen diagonal (m)} - 0.3862$	$L = 11.7677 \times \text{Screen diagonal (m)} - 0.3598$
		16:9	$L = 6.4567 \times \text{Screen diagonal (m)} - 0.3862$	$L = 12.0945 \times \text{Screen diagonal (m)} - 0.3598$
	(8.8-16.5:1)	4:3	$L = 7.1102 \times \text{Screen diagonal (m)} - 0.3862$	$L = 13.3189 \times \text{Screen diagonal (m)} - 0.3598$
		16:10	$L = 0.7913 \times \text{Screen diagonal (m)} - 0.0566$	$L = 0.9488 \times \text{Screen diagonal (m)} - 0.0736$
	ET-D75LE6 (0.9-1.1:1)	16:9	$L = 0.8150 \times \text{Screen diagonal (m)} - 0.0566$	$L = 0.9764 \times \text{Screen diagonal (m)} - 0.0736$
		4:3	$L = 0.8976 \times \text{Screen diagonal (m)} - 0.0566$	$L = 1.0748 \times \text{Screen diagonal (m)} - 0.0736$
	ET-D75LE10 (1.3-1.7:1)	16:10	$L = 1.1186 \times \text{Screen diagonal (m)} - 0.0857$	$L = 1.4458 \times \text{Screen diagonal (m)} - 0.1085$
		16:9	$L = 1.1497 \times \text{Screen diagonal (m)} - 0.0857$	$L = 1.4860 \times \text{Screen diagonal (m)} - 0.1085$
(1.6-2.0:1)	4:3	$L = 1.2663 \times \text{Screen diagonal (m)} - 0.0857$	$L = 1.6367 \times \text{Screen diagonal (m)} - 0.1085$	
	16:10	$L = 1.4312 \times \text{Screen diagonal (m)} - 0.0832$	$L = 2.0795 \times \text{Screen diagonal (m)} - 0.1162$	
ET-D75LE20 (1.7-2.4:1)	16:9	$L = 1.4709 \times \text{Screen diagonal (m)} - 0.0832$	$L = 2.1373 \times \text{Screen diagonal (m)} - 0.1162$	
	4:3	$L = 1.6202 \times \text{Screen diagonal (m)} - 0.0832$	$L = 2.3542 \times \text{Screen diagonal (m)} - 0.1162$	
ET-D75LE30 (2.4-4.7:1)	16:10	$L = 2.0647 \times \text{Screen diagonal (m)} - 0.1131$	$L = 4.0041 \times \text{Screen diagonal (m)} - 0.1765$	
	16:9	$L = 2.1221 \times \text{Screen diagonal (m)} - 0.1131$	$L = 4.1155 \times \text{Screen diagonal (m)} - 0.1765$	
(2.9-5.6:1)	4:3	$L = 2.3374 \times \text{Screen diagonal (m)} - 0.1131$	$L = 4.5330 \times \text{Screen diagonal (m)} - 0.1765$	
	16:10	$L = 3.9532 \times \text{Screen diagonal (m)} - 0.1577$	$L = 6.3027 \times \text{Screen diagonal (m)} - 0.1615$	
ET-D75LE40 (4.6-7.4:1)	16:9	$L = 4.0631 \times \text{Screen diagonal (m)} - 0.1577$	$L = 6.4779 \times \text{Screen diagonal (m)} - 0.1615$	
	4:3	$L = 4.4754 \times \text{Screen diagonal (m)} - 0.1577$	$L = 7.1351 \times \text{Screen diagonal (m)} - 0.1615$	
Fixed-focus lens	ET-D75LE5 (0.7:1)	16:10	$L = 0.6063 \times \text{Screen diagonal (m)} - 0.0835$	
		16:9	$L = 0.6220 \times \text{Screen diagonal (m)} - 0.0835$	
	(0.8:1)	4:3	$L = 0.6850 \times \text{Screen diagonal (m)} - 0.0835$	
	ET-D75LE50 (0.7:1)	16:10	$L = 0.6072 \times \text{Screen diagonal (m)} - 0.0713$	
		16:9	$L = 0.6240 \times \text{Screen diagonal (m)} - 0.0713$	
	(0.8:1)	4:3	$L = 0.6873 \times \text{Screen diagonal (m)} - 0.0713$	

Note

- The values obtained from the above formulas may contain slight errors.
- The throw ratio is based on the value during projection onto a 3 810 mm (150") screen size.
- When GEOMETRY or KEYSTONE adjustment is used, compensation is made so that the screen size becomes smaller than the specified size.

Projection distances (Continued)

Units : m

Model number of projection lens (Throw ratio)		Aspect ratio	PT-DS12K series / PT-DS8500U and PT-DS100XE	
			Projection distance (L) formula	
			Minimum	Maximum
Zoom lens	ET-D75LE1 (1.5-2.0:1)	4:3	$L = 1.2087 \times \text{Screen diagonal (m)} - 0.0760$	$L = 1.6142 \times \text{Screen diagonal (m)} - 0.1004$
		16:9	$L = 1.3150 \times \text{Screen diagonal (m)} - 0.0760$	$L = 1.7559 \times \text{Screen diagonal (m)} - 0.1004$
	ET-D75LE2 (2.0-3.0:1)	4:3	$L = 1.6220 \times \text{Screen diagonal (m)} - 0.0795$	$L = 2.4291 \times \text{Screen diagonal (m)} - 0.1064$
		16:9	$L = 1.7638 \times \text{Screen diagonal (m)} - 0.0795$	$L = 2.6457 \times \text{Screen diagonal (m)} - 0.1064$
	ET-D75LE3 (3.0-5.0:1)	4:3	$L = 2.4291 \times \text{Screen diagonal (m)} - 0.0958$	$L = 4.0591 \times \text{Screen diagonal (m)} - 0.1216$
		16:9	$L = 2.6457 \times \text{Screen diagonal (m)} - 0.0958$	$L = 4.4213 \times \text{Screen diagonal (m)} - 0.1216$
	ET-D75LE4 (5.0-8.0:1)	4:3	$L = 4.0591 \times \text{Screen diagonal (m)} - 0.1158$	$L = 6.4528 \times \text{Screen diagonal (m)} - 0.1013$
		16:9	$L = 4.4213 \times \text{Screen diagonal (m)} - 0.1158$	$L = 7.0315 \times \text{Screen diagonal (m)} - 0.1013$
	ET-D75LE8 (7.9-15.0:1)	4:3	$L = 6.4567 \times \text{Screen diagonal (m)} - 0.3862$	$L = 12.0945 \times \text{Screen diagonal (m)} - 0.3598$
		16:9	$L = 7.0315 \times \text{Screen diagonal (m)} - 0.3862$	$L = 13.1732 \times \text{Screen diagonal (m)} - 0.3598$
	ET-D75LE6 (1.0-1.2:1)	4:3	$L = 0.8150 \times \text{Screen diagonal (m)} - 0.0566$	$L = 0.9764 \times \text{Screen diagonal (m)} - 0.0736$
		16:9	$L = 0.8858 \times \text{Screen diagonal (m)} - 0.0566$	$L = 1.0630 \times \text{Screen diagonal (m)} - 0.0736$
	ET-D75LE10 (1.4-1.8:1)	4:3	$L = 1.1425 \times \text{Screen diagonal (m)} - 0.0857$	$L = 1.4767 \times \text{Screen diagonal (m)} - 0.1085$
		16:9	$L = 1.2446 \times \text{Screen diagonal (m)} - 0.0857$	$L = 1.6086 \times \text{Screen diagonal (m)} - 0.1085$
	ET-D75LE20 (1.8-2.6:1)	4:3	$L = 1.4618 \times \text{Screen diagonal (m)} - 0.0832$	$L = 2.1241 \times \text{Screen diagonal (m)} - 0.1162$
		16:9	$L = 1.5924 \times \text{Screen diagonal (m)} - 0.0832$	$L = 2.3137 \times \text{Screen diagonal (m)} - 0.1162$
ET-D75LE30 (2.6-5.1:1)	4:3	$L = 2.1089 \times \text{Screen diagonal (m)} - 0.1131$	$L = 4.0899 \times \text{Screen diagonal (m)} - 0.1765$	
	16:9	$L = 2.2972 \times \text{Screen diagonal (m)} - 0.1131$	$L = 4.4552 \times \text{Screen diagonal (m)} - 0.1765$	
ET-D75LE40 (5.0-8.0:1)	4:3	$L = 4.0379 \times \text{Screen diagonal (m)} - 0.1577$	$L = 6.4377 \times \text{Screen diagonal (m)} - 0.1615$	
	16:9	$L = 4.3985 \times \text{Screen diagonal (m)} - 0.1577$	$L = 7.0126 \times \text{Screen diagonal (m)} - 0.1615$	
Fixed-focus lens	ET-D75LE5 (0.8:1)	4:3	$L = 0.6220 \times \text{Screen diagonal (m)} - 0.0835$	
		16:9	$L = 0.6772 \times \text{Screen diagonal (m)} - 0.0835$	
	ET-D75LE50 (0.8:1)	4:3	$L = 0.6202 \times \text{Screen diagonal (m)} - 0.0713$	
		16:9	$L = 0.6755 \times \text{Screen diagonal (m)} - 0.0713$	

Note

- The values obtained from the above formulas may contain slight errors.
- The throw ratio is based on the value during projection onto a 3 810 mm (150") screen size.
- When GEOMETRY or KEYSTONE adjustment is used, compensation is made so that the screen size becomes smaller than the specified size.

Projection distances (Continued)

Units : m

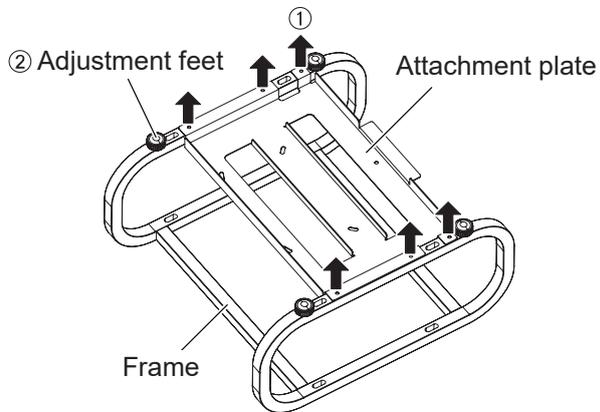
Model number of projection lens (Throw ratio)		Aspect ratio	PT-DW11K series / PT-DW8300U and PT-DW90XE	
			Projection distance (L) formula	
			Minimum	Maximum
Zoom lens	ET-D75LE1 (1.5-2.0:1)	16:9	$L = 1.3504 \times \text{Screen diagonal (m)} - 0.0760$	$L = 1.8031 \times \text{Screen diagonal (m)} - 0.1004$
	(2.0-2.7:1)	4:3	$L = 1.6496 \times \text{Screen diagonal (m)} - 0.0760$	$L = 2.2047 \times \text{Screen diagonal (m)} - 0.1004$
	ET-D75LE2 (2.1-3.1:1)	16:9	$L = 1.8110 \times \text{Screen diagonal (m)} - 0.0795$	$L = 2.7126 \times \text{Screen diagonal (m)} - 0.1064$
	(2.7-4.1:1)	4:3	$L = 2.2165 \times \text{Screen diagonal (m)} - 0.0795$	$L = 3.3228 \times \text{Screen diagonal (m)} - 0.1064$
	ET-D75LE3 (3.1-5.2:1)	16:9	$L = 2.7126 \times \text{Screen diagonal (m)} - 0.0958$	$L = 4.5315 \times \text{Screen diagonal (m)} - 0.1216$
	(4.1-6.9:1)	4:3	$L = 3.3228 \times \text{Screen diagonal (m)} - 0.0958$	$L = 5.5472 \times \text{Screen diagonal (m)} - 0.1216$
	ET-D75LE4 (5.2-8.2:1)	16:9	$L = 4.5315 \times \text{Screen diagonal (m)} - 0.1158$	$L = 7.2087 \times \text{Screen diagonal (m)} - 0.1013$
	(6.9-11.0:1)	4:3	$L = 5.5472 \times \text{Screen diagonal (m)} - 0.1158$	$L = 8.8228 \times \text{Screen diagonal (m)} - 0.1013$
	ET-D75LE8 (8.2-15.4:1)	16:9	$L = 7.2087 \times \text{Screen diagonal (m)} - 0.3862$	$L = 13.5039 \times \text{Screen diagonal (m)} - 0.3598$
	(10.9-20.5:1)	4:3	$L = 8.8228 \times \text{Screen diagonal (m)} - 0.3862$	$L = 16.5354 \times \text{Screen diagonal (m)} - 0.3598$
	ET-D75LE6 (1.0-1.2:1)	16:9	$L = 0.9094 \times \text{Screen diagonal (m)} - 0.0566$	$L = 1.0906 \times \text{Screen diagonal (m)} - 0.0736$
	(1.4-1.6:1)	4:3	$L = 1.1142 \times \text{Screen diagonal (m)} - 0.0566$	$L = 1.3346 \times \text{Screen diagonal (m)} - 0.0736$
	ET-D75LE10 (1.4-1.9:1)	16:9	$L = 1.2759 \times \text{Screen diagonal (m)} - 0.0857$	$L = 1.6491 \times \text{Screen diagonal (m)} - 0.1085$
	(1.9-2.5:1)	4:3	$L = 1.5620 \times \text{Screen diagonal (m)} - 0.0857$	$L = 2.0190 \times \text{Screen diagonal (m)} - 0.1085$
	ET-D75LE20 (1.8-2.7:1)	16:9	$L = 1.6324 \times \text{Screen diagonal (m)} - 0.0832$	$L = 2.3720 \times \text{Screen diagonal (m)} - 0.1162$
	(2.5-3.6:1)	4:3	$L = 1.9986 \times \text{Screen diagonal (m)} - 0.0832$	$L = 2.9040 \times \text{Screen diagonal (m)} - 0.1162$
	ET-D75LE30 (2.7-5.2:1)	16:9	$L = 2.3550 \times \text{Screen diagonal (m)} - 0.1131$	$L = 4.5673 \times \text{Screen diagonal (m)} - 0.1765$
	(3.6-6.9:1)	4:3	$L = 2.8833 \times \text{Screen diagonal (m)} - 0.1131$	$L = 5.5917 \times \text{Screen diagonal (m)} - 0.1765$
ET-D75LE40 (5.1-8.2:1)	16:9	$L = 4.5092 \times \text{Screen diagonal (m)} - 0.1577$	$L = 7.1891 \times \text{Screen diagonal (m)} - 0.1615$	
(6.8-10.9:1)	4:3	$L = 5.5206 \times \text{Screen diagonal (m)} - 0.1577$	$L = 8.8016 \times \text{Screen diagonal (m)} - 0.1615$	
Fixed-focus lens	ET-D75LE5 (0.8:1)	16:9	$L = 0.6929 \times \text{Screen diagonal (m)} - 0.0835$	
	(1.0:1)	4:3	$L = 0.8504 \times \text{Screen diagonal (m)} - 0.0835$	
	ET-D75LE50 (0.8:1)	16:9	$L = 0.6925 \times \text{Screen diagonal (m)} - 0.0713$	
	(1.0:1)	4:3	$L = 0.8479 \times \text{Screen diagonal (m)} - 0.0713$	

Note

- The values obtained from the above formulas may contain slight errors.
- The throw ratio is based on the value during projection onto a 3 810 mm (150") screen size.
- When GEOMETRY or KEYSTONE adjustment is used, compensation is made so that the screen size becomes smaller than the specified size.

Installing the projector

Installation procedure

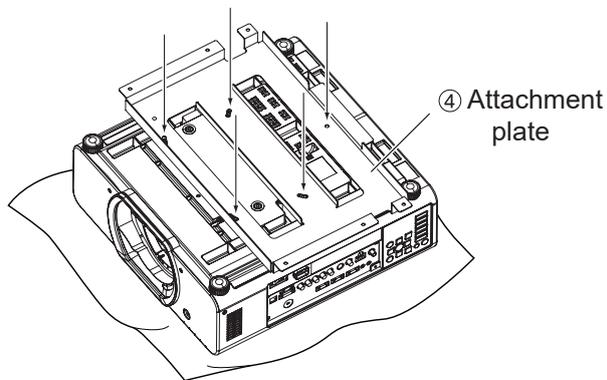


- ① Remove attachment plate from frame.
※Place the frame with its base facing upwards, remove the six hex-head bolts (M6 X 16) and then remove the attachment plate from the frame.

Attention

- The removed bolts are needed for re-installation so do not lose them.

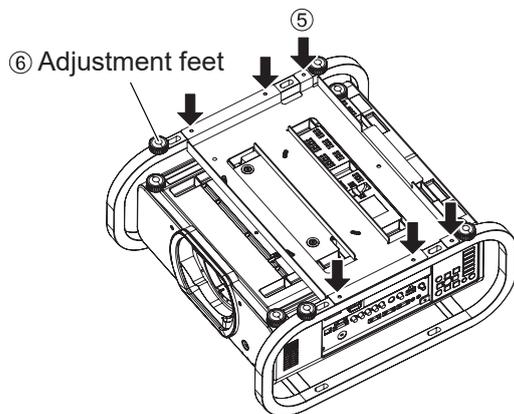
- ② Remove the four adjustment feet of the frame.



- ③ Place the projector with its base facing upwards on a soft cloth.
- ④ Secure the attachment plate to the projector using the five hex-head bolts (M6 × 16) provided.

Note

- Try to center the bolts when installing into the elongated holes.

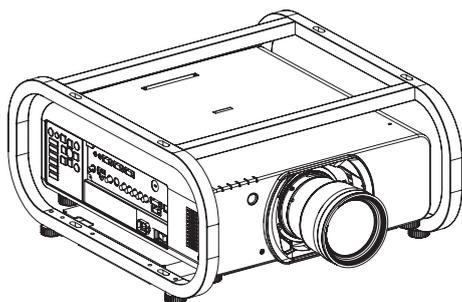


- ⑤ Secure the frame with the six hex-head bolts (M6 × 16) removed in Step ①.

Attention

- Be careful not to trap your hands or fingers when securing the frame.

- ⑥ Install the four adjustment feet removed in step ② to the frame.



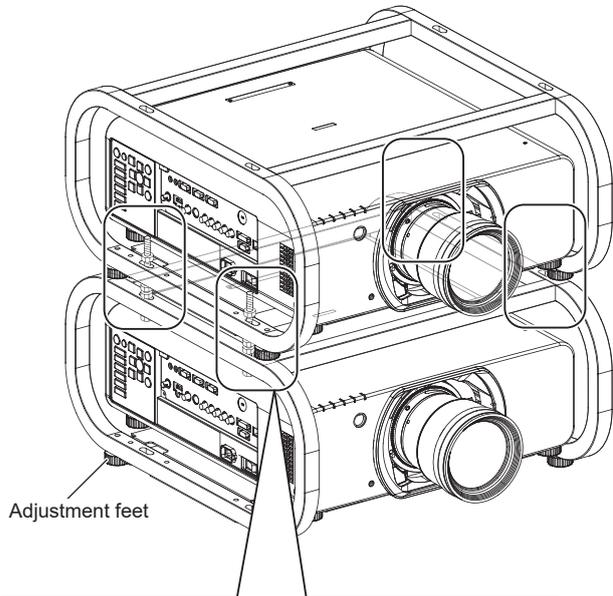
- ⑦ Turn the projector together with the frame upside down so that the bottom panel is face down again.

- ⑧ Attach the projection lens. (For more information on removing, please refer to [How to install / remove the projection lens (optional)] in the Operating Instructions manual of the projector.)

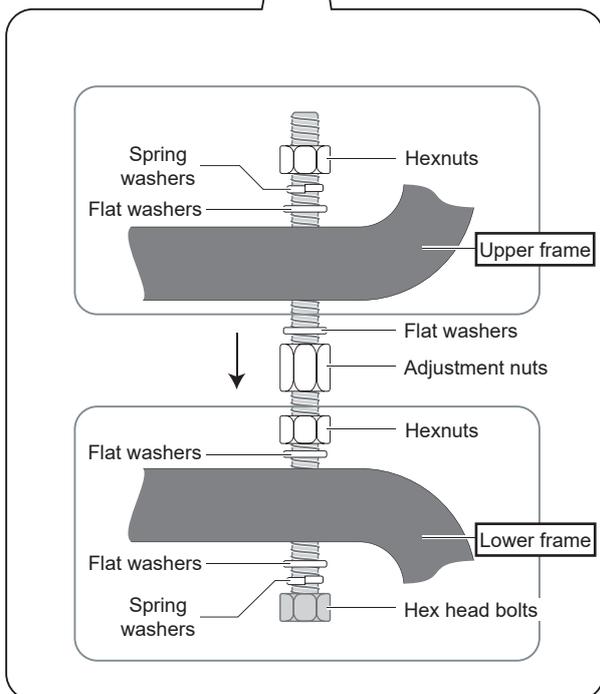
Installing the upper projector

Installation procedure

- Another separate frame is required when stacking two frames together. Refer to [Installing the projector] for the installation procedure of a frame and a projector. (page 9)



- ① Adjust the adjustment feet of the bottom frame so that the lower projector is horizontal.
- ② Install the hex head bolts into the four mounting holes in the lower frame with the hex nut, spring washer and flat washer. Use the hex nuts to secure the lower frame and the hex head bolts.
- ③ Place the adjustment nuts and flat washer onto the hex head bolts.
- ④ Align the four mounting holes in the upper frame for the upper projector with the vertical fixing bolts in the lower frame, and place the upper frame onto the lower frame.
- ⑤ Secure the projector using the four adjustment nuts so that it is horizontal.
- ⑥ Place the flat washer and spring washer and hex nut onto the hex head bolts.
- ⑦ Use the hex nuts to secure the upper frame and the hex head bolts.



Attention

- Mounting and installation must be carried out by two or more persons.
- Do not stack any more than two frames on top of each other.

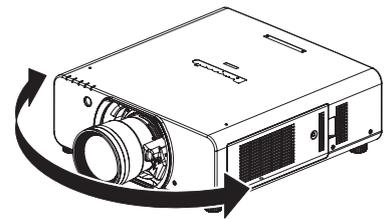
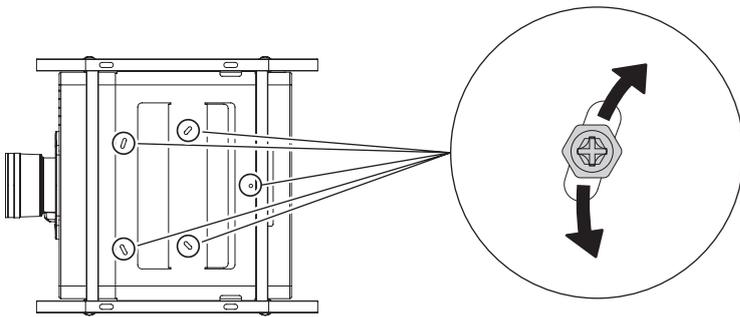
Adjusting the upper projector

Follow the steps below to adjust the angle of the upper projector so that the image projected on the screen matches that of the lower projector whereby the screen size, position, and focus is already adjusted to the screen. Only the angle of the upper projector is adjustable.

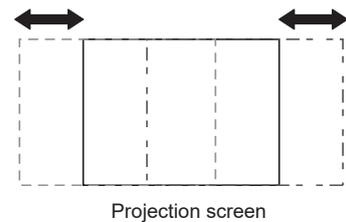
- Referring to the Operating Instructions manual of the projector, project an image on the screen and then use the zoom and focus functions to adjust its size and focus roughly before adjusting the angle.
- Loosen the securing hex nuts (A) of the upper frame and then adjust the adjustment nuts.

① Adjusting the horizontal angle

Loosen the five fixing bolts of the bottom of the upper projector and adjust the horizontal angle of the projector so as to adjust the horizontal position of the screen. When adjustment is complete, retighten the five bolts securely.

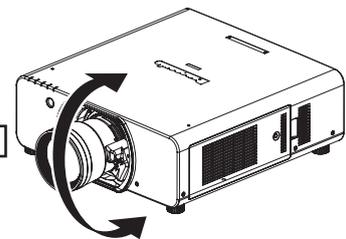
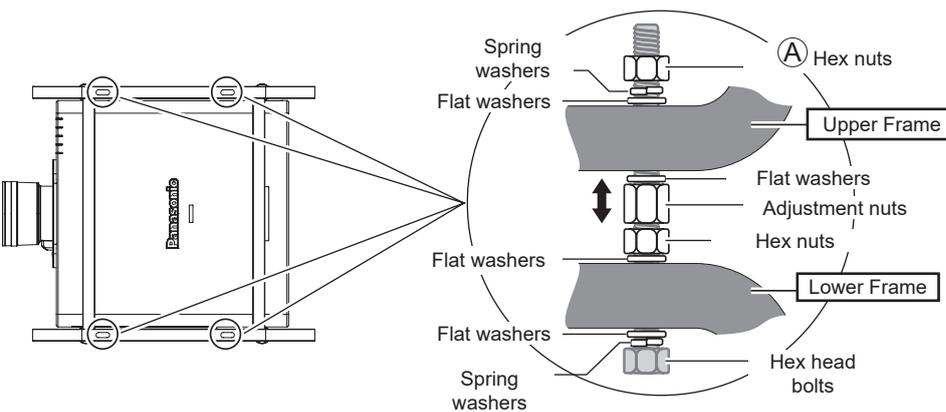


Movement of the projection screen and the horizontal angle of the upper projector.
(frame omitted from illustration)

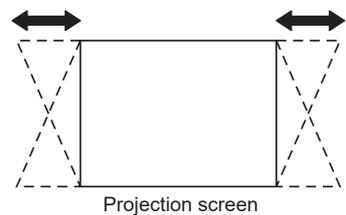


② Adjusting the vertical angle

Turn the four adjustment nuts to adjust the vertical angle and correct the keystone distortion on the projection screen. Make sure to turn the right and left adjustment nuts at the front, and the right and left adjustment nuts at the rear, by the same amount.



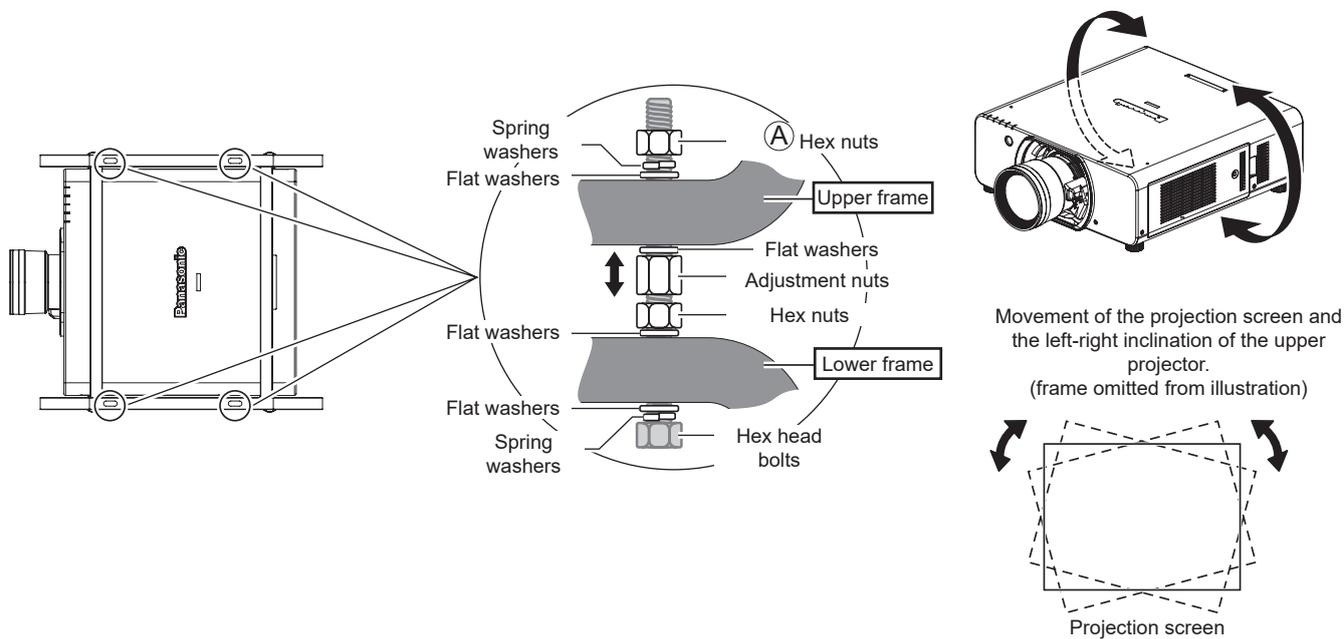
Movement of the projection screen and the vertical angle of the upper projector.
(frame omitted from illustration)



Adjusting the upper projector (Continued)

③ Adjusting right-left inclination

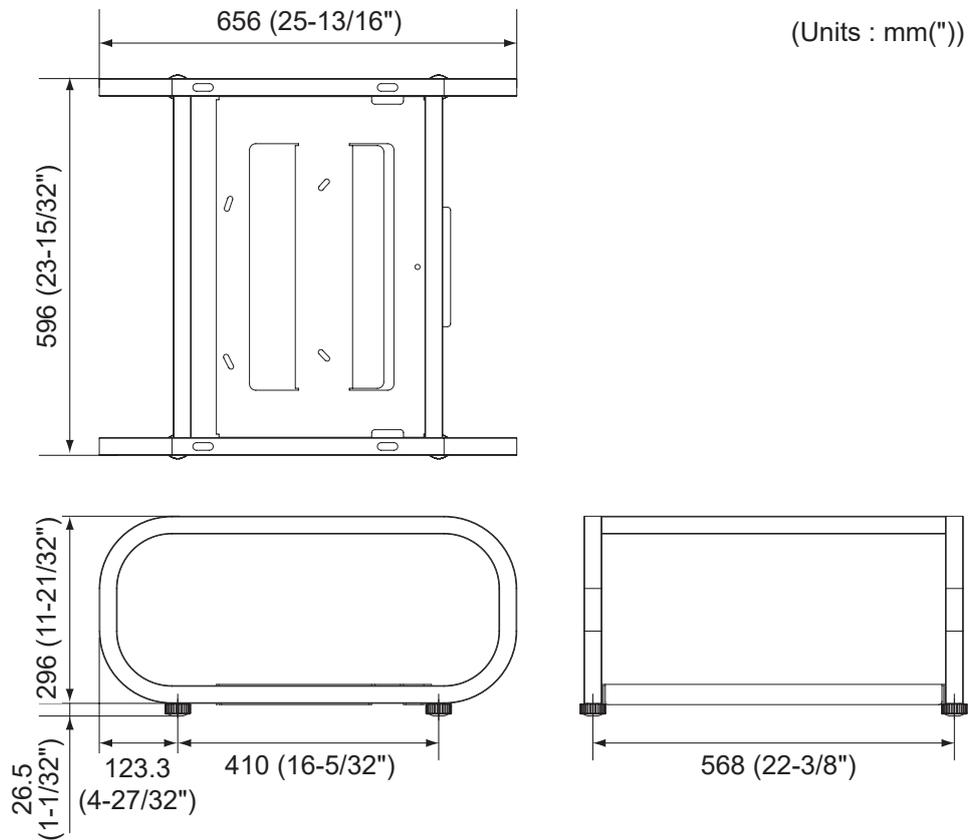
Turn the four adjustment nuts to adjust the right-left inclination and correct the rotational distortion on the projection screen. Make sure to turn the front and rear adjustment nuts on the right, and the front and rear adjustment nuts on the left, by the same amount.



④ Repeat the steps ②, ③ to make fine adjustments.

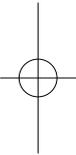
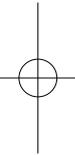
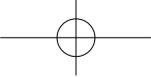
⑤ When adjustment is complete, tighten the hex nuts (A) to fix the projector in position.

Dimensions



Specifications

Adjustable range	Vertical tilt correction angle : $\pm 1.5^\circ$ Horizontal tilt correction angle : $\pm 1.5^\circ$ Horizontal swing correction angle : $\pm 1.5^\circ$
Assembled external dimensions	Width 596 mm (23-15/32") Height 322.5 mm (12-11/16") Depth 656 mm (25-13/16")
Weight (excluding the projector)	8.7 kg (19.2 lbs.)



Attention

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

Disposal

When discarding this product, please contact your local authorities or dealer and ask for the correct method of disposal.

Panasonic Corporation

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