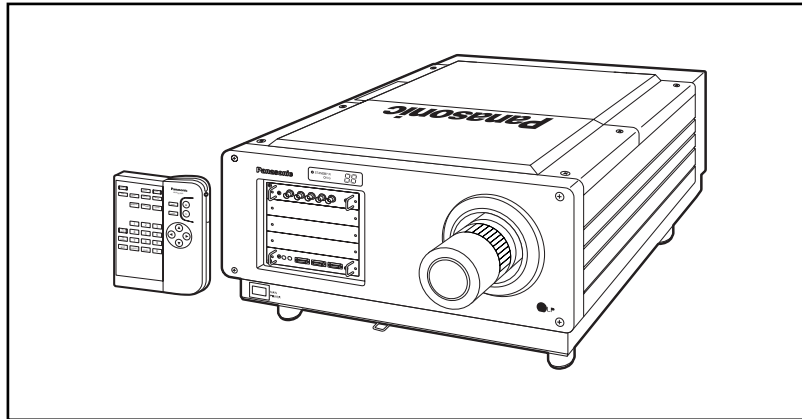


# DLP™ based Projector

Models No. **PT-D8600U**  
**PT-D8600E**



# Panasonic

**Note:**

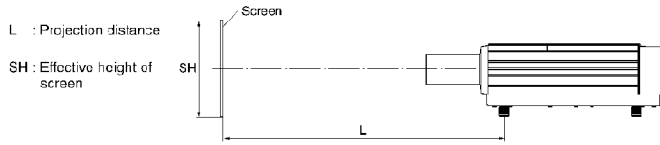
Because some pages in the user instruction manual are used for this chapter (pages 10 through 12 in this service manual) without change, note that the page numbers shown in the sentences of this chapter are those of the user instruction manual.

Only pages with changes to the "PT-D8500U/PT-D8500E Operating Instructions" are noted in this simplified manual.

# Projection distance for each projection lens

(sold separately)

The required project on distance depends on not only the target picture size but also the type of an optional projection lens. Obtain the appropriate projection lens for the installation space by referring to the projection distance for each projection lens shown in the table below and on the next page.



## Projection distance measurements (screen aspect ratio : 5:4)

unit: mm (feet/inches)

Picture size	Screen size		Projection distance						Fixed focal lens
			Zoom lens				ET-D95LE9 (0.8:1)		
	Effective height(SH)	Effective width(SW)	ET-D95LE1 (1.5-2.5:1)		ET-D95LE2 (2.5-4.0:1)		ET-D95LE3 (4.0-7.0:1)		
2.540 (100")	1.687 (5'3")	1.693 (6'7")	3.145 (10'4")	5.096 (16'8")	5.078 (16'8")	7.915 (26'0")	7.387 (24'3")	13.603 (44'9")	2.315 (7'8")
3.043 (120")	1.904 (6'3")	2.390 (7'10")	3.791 (12'3")	5.974 (19'8")	6.048 (19'11")	9.465 (31'1")	8.440 (27'8")	16.320 (53'9")	2.720 (8'9")
3.810 (150")	2.580 (7'10")	2.975 (10'0")	4.610 (15'2")	7.426 (24'5")	7.504 (24'6")	11.791 (38'9")	11.795 (38'10")	20.418 (67'2")	3.348 (11'0")
4.572 (180")	2.856 (9'5")	3.570 (11'8")	5.459 (18'1")	8.878 (29'2")	8.959 (29'5")	14.117 (46'5")	14.117 (46'6")	26.507 (86'7")	3.967 (13'1")
5.080 (200")	3.173 (10'6")	3.967 (13'1")	6.075 (20'0")	9.946 (32'5")	9.929 (32'6")	15.667 (51'7")	15.700 (51'8")	27.233 (89'7")	—
6.350 (250")	3.667 (13'1")	4.959 (16'4")	7.540 (24'10")	12.267 (40'4")	12.355 (40'5")	19.543 (64'4")	19.606 (64'6")	34.049 (112'0")	—
7.620 (300")	4.160 (15'8")	5.950 (19'7")	9.005 (29'7")	14.887 (48'4")	14.781 (48'5")	23.420 (77'4")	23.513 (77'4")	40.864 (134'5")	—
8.890 (350")	4.554 (18'3")	6.942 (22'10")	10.470 (34'5")	17.107 (56'3")	17.207 (56'7")	27.296 (89'10")	27.419 (90'2")	47.679 (156'10")	—
10.160 (400")	5.047 (20'11")	7.934 (26'1")	11.935 (39'3")	19.527 (64'3")	19.633 (64'7")	31.172 (102'7")	31.326 (102'9")	54.494 (179'3")	—
11.430 (450")	5.540 (23'6")	8.925 (29'4")	13.400 (44'1")	21.948 (72'2")	22.059 (72'2")	35.048 (115'4")	35.232 (115'11")	61.310 (201'3")	—
12.700 (500")	6.034 (24'6")	9.917 (32'6")	14.866 (48'11")	24.366 (80'2")	24.495 (80'7")	38.925 (128'6")	39.139 (128'9")	68.125 (224'1")	—
13.970 (550")	6.527 (26'11")	10.909 (35'11")	16.331 (53'8")	26.788 (88'1")	26.910 (88'6")	42.801 (140'10")	43.045 (141'7")	74.940 (246'6")	—
15.240 (600")	7.020 (31'4")	11.900 (39'2")	17.796 (58'6")	29.209 (96'1")	29.336 (96'6")	46.677 (153'7")	46.951 (154'5")	81.756 (268'11")	—

## Projection distance measurements (screen aspect ratio : 16:9)

unit: mm (feet/inches)

Picture size	Screen size		Projection distance						Fixed focal lens
			Zoom lens				ET-D95LE9 (0.8:1)		
	Effective height(SH)	Effective width(SW)	ET-D95LE1 (1.5-2.5:1)		ET-D95LE2 (2.5-4.0:1)		ET-D95LE3 (4.0-7.0:1)		
2.540 (100")	1.745 (4'1")	2.214 (7'3")	2.486 (8'2")	3.486 (11'4")	5.568 (18'4")	6.641 (21'8")	8.815 (29'0")	8.784 (28'11")	15.186 (49'9")
3.043 (120")	1.994 (6'7")	2.657 (8'9")	4.140 (13'8")	6.648 (22'1")	8.648 (28'2")	10.914 (35'7")	10.546 (34'7")	18.229 (56'0")	3.017 (9'11")
3.810 (150")	2.241 (8'0")	3.021 (9'11")	5.121 (17'3")	8.269 (27'2")	10.911 (35'7")	13.672 (45'3")	13.142 (43'3")	22.793 (73'0")	3.706 (12'2")
4.572 (180")	2.491 (8'2")	3.428 (11'3")	6.756 (22'3")	10.971 (36'1")	11.057 (36'5")	17.468 (57'6")	17.515 (57'6")	30.400 (100'0")	—
5.080 (200")	2.713 (9'0")	3.536 (11'6")	8.391 (27'7")	13.672 (45'3")	13.764 (45'3")	21.795 (71'8")	21.875 (71'8")	38.007 (125'0")	—
6.350 (250")	3.138 (10'3")	4.611 (15'2")	9.959 (32'8")	16.402 (53'11")	16.472 (54'2")	25.121 (82'7")	25.121 (82'7")	45.614 (150'0")	—
7.620 (300")	3.736 (12'3")	5.459 (18'1")	11.662 (38'4")	19.075 (62'9")	19.075 (62'9")	30.448 (100'3")	30.448 (100'3")	53.221 (175'1")	—
8.890 (350")	4.358 (14'4")	6.411 (21'0")	13.662 (45'0")	22.597 (74'5")	22.777 (74'6")	34.448 (112'8")	34.448 (112'8")	60.826 (200'1")	—
10.160 (400")	4.961 (16'4")	7.426 (24'5")	15.658 (51'8")	24.478 (80'6")	24.595 (80'11")	39.101 (128'8")	39.101 (128'8")	68.436 (225'1")	—
11.430 (450")	5.564 (18'3")	8.269 (27'2")	17.662 (58'1")	27.160 (89'5")	27.303 (89'10")	43.427 (142'10")	43.427 (142'10")	76.042 (250'2")	—
12.700 (500")	6.167 (20'5")	9.209 (30'5")	19.676 (64'7")	29.209 (96'1")	29.346 (96'6")	47.754 (157'1")	47.754 (157'1")	83.648 (275'4")	—

### NOTE:

- The projection distance listed in the table may have a variation within  $\pm 5\%$ .
- Keystone (trapezoidal distortion) is compensated to be smaller than the screen size.

## Calculation of the projection distance for each projection lens (inches)

If there is no reference made to the require picture size, calculate the projection distance using an expression below after obtaining the diagonal measurement (inch) of the screen you will use.

Model No.	of projection lens	Aspect ratio	Methods of calculation of Projection distance (L)	Unit : inches
ZOOM	ET-D95LE1	(1.5 - 2.5 : 1)	4:3 Min. : L = diagonal of screen(inches) x 1.182 + 8.5 Max. : L = diagonal of screen(inches) x 1.952 + 6.5	—
			5:4 Min. : L = diagonal of screen(inches) x 1.154 + 8.5 Max. : L = diagonal of screen(inches) x 1.906 + 6.5	
	ET-D95LE2	(2.5 - 4.0 : 1)	16:9 Min. : L = diagonal of screen(inches) x 1.289 + 8.5 Max. : L = diagonal of screen(inches) x 2.127 + 6.5	—
			4:3 Min. : L = diagonal of screen(inches) x 1.957 + 8.9 Max. : L = diagonal of screen(inches) x 3.127 + 6.4	
SUPER	ET-D95LE3	(4.0 - 7.0 : 1)	5:4 Min. : L = diagonal of screen(inches) x 1.910 + 8.9 Max. : L = diagonal of screen(inches) x 3.052 + 6.4	—
			16:9 Min. : L = diagonal of screen(inches) x 2.132 + 8.9 Max. : L = diagonal of screen(inches) x 3.407 + 6.4	
	ET-D95LE9	(0.8 : 1)	4:3 Min. : L = diagonal of screen(inches) x 3.151 + 2.9 Max. : L = diagonal of screen(inches) x 5.498 - 1.1	—
			5:4 Min. : L = diagonal of screen(inches) x 3.076 + 2.9 Max. : L = diagonal of screen(inches) x 5.968 - 1.1	
Fixed focal lens	ET-D95LE9	(0.8 : 1)	4:3 L = 0.833 x diagonal of screen(inches) + 9.9	—
			5:4 L = 0.813 x diagonal of screen(inches) + 9.9	
			16:9 L = 0.907 x diagonal of screen(inches) + 9.9	

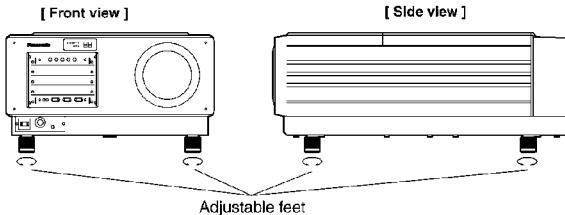
### Calculation of the projection distance for each projection lens (mm)

If there is no reference made to the require picture size, calculate the projection distance using an expression below after obtaining the diagonal measurement (inch) of the screen you will use.

Model No. of projection lens		Aspect ratio	Methods of calculation of Projection distance (L)		Unit : mm
SUWUOON	ET-D95LE1 (1.5 - 2.5 : 1)	4:3	Min. : L = diagonal of screen(inches) x 30.019 + 215	Max. : L = diagonal of screen(inches) x 49.592 + 165	
		5:4	Min. : L = diagonal of screen(inches) x 29.301 + 215	Max. : L = diagonal of screen(inches) x 48.406 + 165	
		16:9	Min. : L = diagonal of screen(inches) x 32.705 + 215	Max. : L = diagonal of screen(inches) x 54.029 + 165	
	ET-D95LE2 (2.5 - 4.0 : 1)	4:3	Min. : L = diagonal of screen(inches) x 49.706 + 226	Max. : L = diagonal of screen(inches) x 79.424 + 162	
		5:4	Min. : L = diagonal of screen(inches) x 48.517 + 226	Max. : L = diagonal of screen(inches) x 77.525 + 162	
		16:9	Min. : L = diagonal of screen(inches) x 54.153 + 226	Max. : L = diagonal of screen(inches) x 86.530 + 162	
	ET-D95LE3 (4.0 - 7.0 : 1)	4:3	Min. : L = diagonal of screen(inches) x 80.043 + 74	Max. : L = diagonal of screen(inches) x 139.615 - 28	
		5:4	Min. : L = diagonal of screen(inches) x 78.129 + 74	Max. : L = diagonal of screen(inches) x 136.306 - 28	
		16:9	Min. : L = diagonal of screen(inches) x 87.204 + 74	Max. : L = diagonal of screen(inches) x 152.139 - 28	
Fixed focal lens	ET-D95LE9 (0.8 : 1)	4:3	L = 21.146 x diagonal of screen(inches) + 252		
		5:4	L = 20.640 x diagonal of screen(inches) - 252		
		16:9	L = 23.039 x diagonal of screen(inches) - 252		

### Adjusting projector feet

The four feet on the bottom of the projector are adjustable for the height ( 0 mm / 0" to 25 mm / 1" ) and can be used for its adjustment when the installation position is not level.



Adjustment Item	Operation	Adjustment Details
SHARPNESS H	Makes the horizontal contours sharper.	Nine steps from OFF to 8 (factory default : 2) A larger value causes a greater effect
SHARPNESS V	Makes the vertical contours sharper.	Four steps from OFF to 3 (factory default : 2) A larger value causes a greater effect
NR (Noise Reduction)	Selects the noise reduction effectiveness.	OFF: No correction 1 : Weak 2 : Medium (factory default) 3 : Strong A larger value causes a greater effect
GAMMA MODE	Selects the gamma mode.	Eight steps from 0 to 7 (factory default : 6) The only setting 6, 7 allows the COLOR TEMP adjustment and color matching adjustment.
FILTER	Use this adjustment to select interpolation filter settings for signals other than SXGA.	Five types from 0 to 4 (factory default : 2) 0 : Gives priority to contrast. 4 : Restricts the loss in picture information to a minimum.
FRAME RATE	Use this adjustment to choose the best frame rate conversion for minimum flicker on individual HDTV signal input.	24p → 60p / 24p → 24p (factory default: 24p → 60p) 25p → 50p / 25p → 25p (factory default: 25p → 50p) 30p → 60p / 30p → 30p (factory default: 30p → 60p)
PAL CINEMA	Use this adjustment to further enhance vertical resolution when a 576i PAL (or SECAM) signal is applied.	OFF: Normal ON : Effect On (see the following notes.)

- NOTE**
- SHARPNESS V and NR (noise reduction) settings cannot be adjusted for analog RGB input and TMDS input.
  - The FILTER adjustment is ineffective for SXGA (1 280 x 1 024) mode. It is also ineffective for any video input mode other than analog RGB and TMDS modes, or if "THROUGH" is chosen for the SIZE mode (see page 57).
  - FRAME RATE is effective only for analog RGB, HD serial, 1080/30p, 1080/25p, 1080/24p, and 1080/24sF video signal formats.
  - PAL CINEMA is effective only for the 576i PAL (or SECAM) standard.
  - PAL CINEMA will cause degraded picture quality (lowered vertical resolution) if used for signals other than those pulled down at a 2:2 ratio.
  - For 480p, 480i or 576i scan format, SHARPNESS H defaults to 7.

