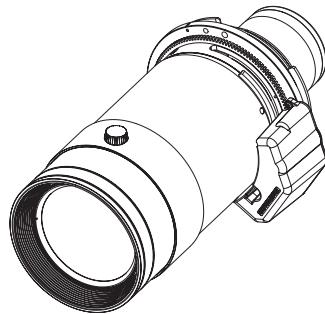


Panasonic®

Operating Instructions

Zoom Lens **Commercial Use**

Model No. **ET-D3LEW10**



ENGLISH

Thank you for purchasing this Panasonic product.

- To ensure correct use of this lens, please read the operating instructions supplied with the lens and the projector carefully.
- **Before using this product, be sure to read “Read this first!” (►Page 3).**
- Please save this manual for future use.

Contents

Read this first!	3
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Dimensions	12
Projected image size and Projection distance	Appendix / Annexe / 付録 1

The "Appendix" can be found after the Japanese language section ().

Read this first!

Always follow these precautions

WARNING:

Do not look at or place your skin into the light emitted from the lens while the projector is being used.

Doing so can cause burns or loss of sight.

- Strong light is emitted from the projector's lens. Do not look at or place your hands directly into this light.

- Turn off the power when moving away from the projection lens or projector.

Do not project an image with the lens cover attached.

- Doing so can cause fire.

CAUTION:

Before replacing the projection lens, be sure to turn off the power and disconnect the power plug from the wall outlet.

- Unexpected projection of light may cause injury to eyes.

- Replacing the projection lens without removing the power plug may result in electric shock.

Do not stand in front of the lens while the projector is being used.

Doing so can cause damage and burns to clothing.

- Strong light is emitted from the projector's lens.

Do not place objects in front of the lens while the projector is being used.

Doing so can cause fire, damage to the object, or malfunction of the lens and projector.

- Strong light is emitted from the projector's lens.

Do not open the desiccant bag. Do not eat the contents.

Inadvertently ingesting desiccant could be harmful.

- If the desiccant gets into your eyes or mouth, immediately rinse with plenty of water and seek medical attention.

- Keep desiccant out of the reach of children.

Before Use

This zoom lens is a projection lens equipped with an EEPROM^{*1} and stepping motor.

*1 EEPROM: Electrically erasable programmable read-only memory

■ Supported projectors

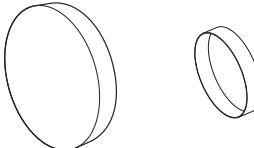
PT-RQ32K / PT-RZ31K / PT-RS30K / PT-RZ21K / PT-RS20K

Note

- Some of the alphabet letters at the end of projector model numbers may be omitted in this manual.
 - Models other than the above may also be supported. Refer to the operating instructions for your projector or the Panasonic website (<https://panasonic.net/cns/projector/>).
 - If the projector you are using is PT-RQ32K / PT-RZ31K / PT-RS30K / PT-RZ21K / PT-RS20K, you may not be able to use the projection lens depending on main version of the firmware. If main version of the firmware is the version number shown below, update to the latest firmware before use.
 - PT-RQ32K / PT-RZ31K / PT-RS30K: Earlier than 3.00
 - PT-RZ21K / PT-RS20K: Earlier than 2.00
- For details on the update procedure, refer to the latest firmware information on the Panasonic website (<https://panasonic.net/cns/projector/pass/>).
- The main version of the firmware can be checked in the [STATUS] screen.

■ Supplied Accessories

Make sure that the following has been provided.

Part name	Appearance	
Lens cover		(The product is delivered with a lens cover attached.) 1 each

Attaching the Lens / Detaching the Lens

Before replacing the projection lens

Return the projection lens to the home position before replacing or removing it. For details on how to return the lens to the home position, refer to the operating instructions of the projector.

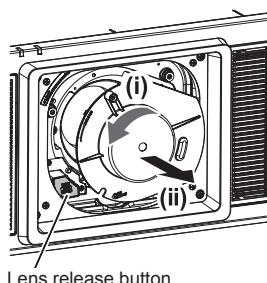
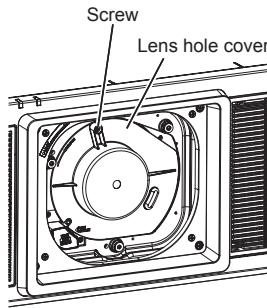
Attention

- Make sure that the projector power supply is switched off before attaching or detaching the projection lens.
- After removing the projection lens, store it safely away from vibration or impacts.
- Do not touch the electrical contacts of the projection lens with your fingers. Dust and dirt on the contacts may cause contact malfunctions, while static electricity may damage the unit.
- Do not touch the surface of the lens with bare hands. Finger prints and dirt on the surface of the lens will be magnified by the lens and lower the quality of the projected image. Place the supplied lens cover on the zoom lens when the projector is not in use.
- The lens is made of glass. The lens could be damaged if brought into contact with or rubbed against hard objects. Handle the lens carefully.
- Use a clean, soft and dry cloth to wipe away dust and dirt from the projection lens. Do not use fluffy cloths containing oil, water or dust for cleaning. The lens is easily damaged, so do not apply excessive pressure when wiping it.

Attaching the Lens

Attention

- Before attaching the Projection Lens, remove the lens hole cover (only lens options models) and the two lens covers attached to the Projection Lens.
- If the lens hole cover is already removed, start from step 3.



The illustrations in this procedure depict use of the PT-RZ21K as an example.

1) Loosen the lens hole cover screw.

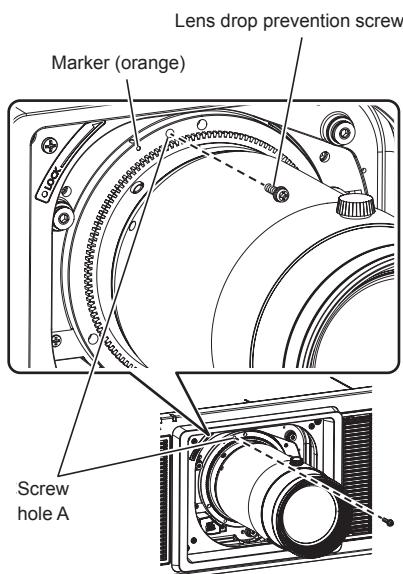
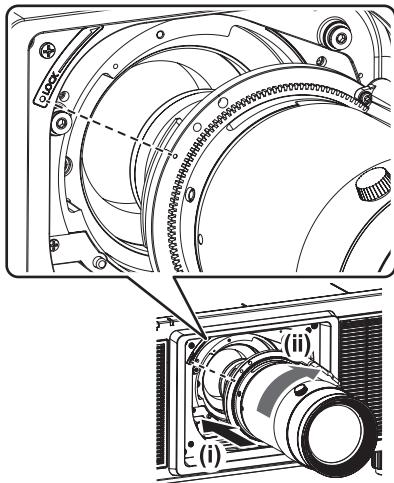
- Use a Phillips screwdriver to turn the lens hole cover screw counterclockwise until it is in its loosened state.

2) Remove the lens hole cover.

- (i) While pressing the lens release button, turn the lens hole cover counterclockwise until its marker (O) aligns with the marker on the projector (O to the left of "LOCK"). (ii) Then remove the lens hole cover.

Attaching the Lens / Detaching the Lens (continued)

- 3) (i) Insert the projection lens while aligning its marker (orange) with the marker on the projector (○ to the left of “LOCK”), and (ii) turn it clockwise until it clicks into place.



- 4) Use the lens drop prevention screw supplied with the projector to secure the projection lens.

- Use a Phillips screwdriver to secure the screw in hole A to the right of the marker (orange) on the projection lens.

Attention

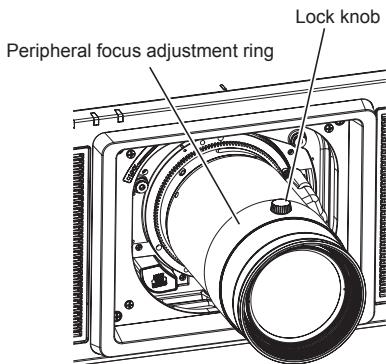
- Turn the projection lens counterclockwise, and verify that it is secure.
- Store the removed lens hole cover safely for future use.
- After attaching the projection lens, turn on the projector and perform lens calibration.
(→ page 8)

Attaching the Lens / Detaching the Lens (continued)

Peripheral focus adjustment function

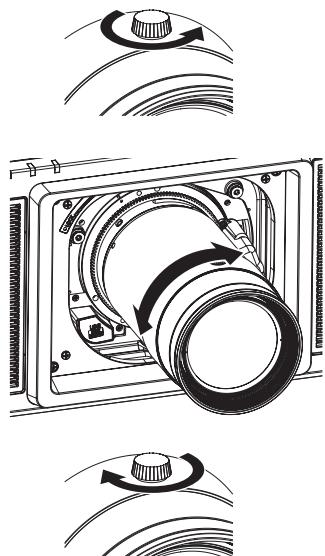
When using the projection lens, the focus balance between the center of the projected image and the peripheral areas differs depending on the size of the image.

The projection lens is equipped with a function for adjusting the peripheral focus.



The illustrations in this procedure depict use of the PT-RZ21K as an example.

■ Adjusting the focus



- 1) Operate the projector to align the focus of the center of the projected image.
- 2) Loosen the lock knob by turning it counterclockwise.
- 3) Turn the peripheral focus adjustment ring in the directions of the arrows to align the focus of the peripheral areas of the image.
- 4) Tighten the lock knob by turning it clockwise.

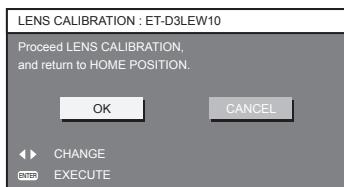
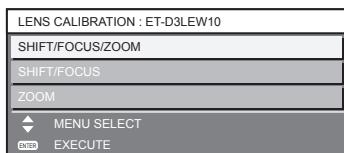
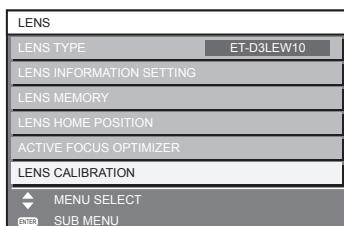
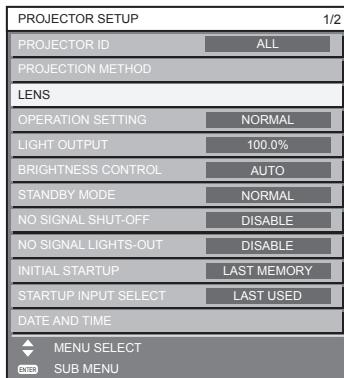
Note

- The screen sizes displayed on the lens are approximate guides.

Attaching the Lens / Detaching the Lens (continued)

Lens calibration

Perform lens calibration after attaching the lens.



- 1) Press the <MENU> button.
- 2) Use the ▲ and ▼ buttons to select [PROJECTOR SETUP], and press the <ENTER> button.
 - The [PROJECTOR SETUP] screen appears.
- 3) Use the ▲ and ▼ buttons to select [LENS], and press the <ENTER> button.
 - The [LENS] screen appears.
- 4) Use the ▲ and ▼ buttons to select [LENS CALIBRATION], and press the <ENTER> button.
 - The [LENS CALIBRATION] screen appears.
- 5) Use the ▲ and ▼ buttons to select [SHIFT/FOCUS/ZOOM], and press the <ENTER> button.
 - The confirmation screen appears.
- 6) Use the ◀ and ▶ buttons to select [OK], and press the <ENTER> button.
 - Lens calibration starts.
 - The projection lens moves to the home position after adjustment range calibration is complete.

Note

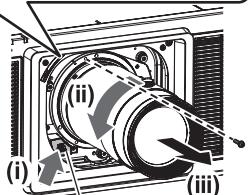
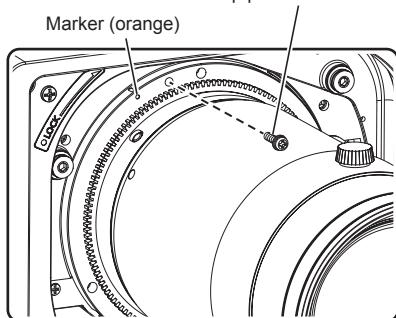
- If lens calibration is not performed, the available zoom range will be narrowed.

Attaching the Lens / Detaching the Lens (continued)

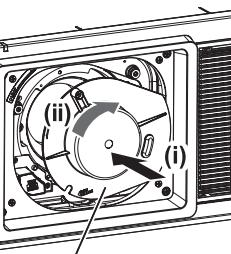
Removing the Lens

Lens drop prevention screw

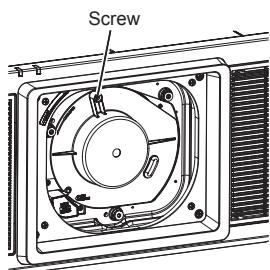
Marker (orange)



Lens release button



Lens hole cover



Attention

- Store the removed projection lens safely without subjecting it to vibration or impact.
- Store the removed lens drop prevention screw safely for future use.

The illustrations in this procedure depict use of the PT-RZ21K as an example.

1) Remove the lens drop prevention screw.

- Use a Phillips screwdriver to remove the screw in first hole to the right of the marker (orange) on the projection lens.

2) (i) While pressing the lens release button, (ii) turn the projection lens counterclockwise, and (iii) remove it.

- Turn the projection lens counterclockwise until its marker (orange) aligns with the marker on the projector (○ to the left of "LOCK").
- If you intend to transport or store the projector, proceed to step 3.

3) Attach the lens hole cover supplied with the projector.

- (i) Insert the lens hole cover while aligning its marker (○) with the marker on the projector (○ to the left of "LOCK"), and (ii) turn it clockwise until it clicks into place.

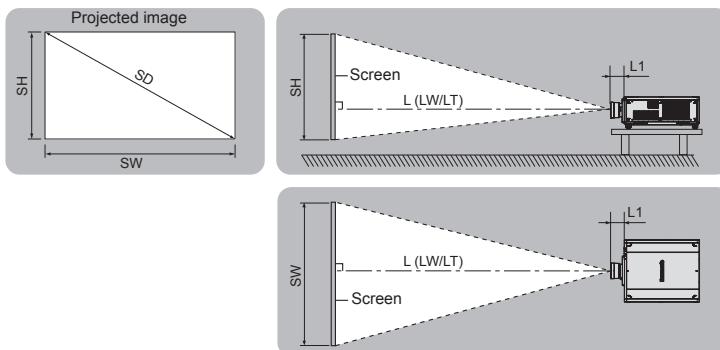
4) Secure the lens hole cover.

- Use a Phillips screwdriver to tighten the lens hole cover screw.

Projection relationships

The dimensional relationship between the screen and the projector is shown below.

■ Dimensional relationship diagram



Note

- This diagram assumes that the size and position of the projected image will be adjusted so that the image fills the entire screen.
- This illustration is not drawn to scale.

L	Projection distance
LW	Minimum distance
LT	Maximum distance
L1	Lens protrusion dimension
SH	Projected image height
SW	Projected image width
SD	Projected image size

● Dimension for L1 (approximate values)

(Unit: m)

Projector model	Dimension for L1 (approximate value)
PT-RQ32K / PT-RZ31K / PT-RS30K	0.18
PT-RZ21K / PT-RS20K	0.21

Note

- The illustrations of projectors in this manual are for informational purposes only and do not represent a specific projector model. Configurations may vary with the model.

Attention

- To prevent obstruction of the intake and exhaust vents, install the projector with a clearance at least 500 mm (1 ft. 7 in.) from walls and objects.
If you are installing the projector in a sealed space, be sure to provide additional air conditioning equipment and ventilation equipment. Insufficient ventilation will result in an accumulation of heat and may activate the projector's protection circuit.
- Avoid setting up in places which are subject to sudden temperature changes, such as near an air conditioner or lighting equipment (studio lamps, etc.).

■ Dimensional relationship

For details on the projection distance (L), refer to "Projected image size and Projection distance" and "Projection distance formulas" in the Appendix.

Lens shift ranges

After moving the lens to the home position according to “Lens calibration” on page 8, you can use the position of the projected image at that position (i.e., the standard projection position) as a basis, and use the lens shift adjustment function on the projector to adjust the position of the projected image within the respective lens shift ranges.

Perform lens shift adjustment within the ranges shown in the following illustrations.

Moving the lens outside of the adjustment ranges may alter the focus. This occurs due to limitations in lens movement that are intended to protect the optical components.

The following illustrations depict lens shift ranges for floor installations of the projector.

PT-RQ32K	
PT-RZ31K / PT-RZ21K	
PT-RS30K / PT-RS20K	

Note

- The home position of the projector is a point of origin position for the lens shift (i.e., vertical and horizontal positions of the lens) based on the results of lens calibration. It is not the optical center position of the screen.

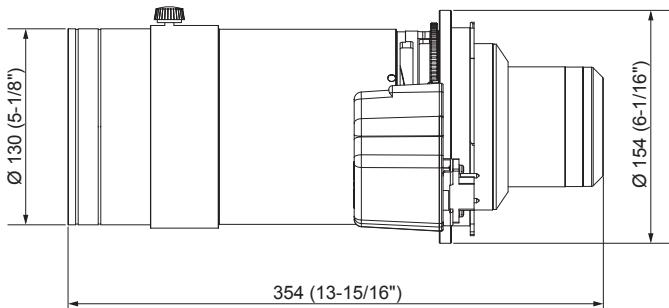
Specifications

F value	2.5
Focal length (f)	26.6 mm (1-1/16") - 36.4 mm (1-7/16")
Dimensions ^{*1}	Width 154 mm (6-1/16") Height 154 mm (6-1/16") Depth 354 mm (13-15/16")
Net Weight	Approx. 6.2 kg (13.7 lb)

*1: Excluding protrusions.

Dimensions

(Unit: mm)



Information for users in the European Union

Importer's name and address within the European Union
Panasonic Marketing Europe GmbH
Panasonic Testing Centre
Winsbergring 15, 22525 Hamburg, Germany

Disposal of Old Equipment

Only for European Union and countries with recycling systems



This symbol on the products, packaging, and/or accompanying documents means that used electrical and electronic products must not be mixed with general household waste.

For proper treatment, recovery and recycling of old products, please take them to applicable collection points in accordance with your national legislation.

By disposing of them correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment.

For more information about collection and recycling, please contact your local municipality.

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Information on Disposal in other Countries outside the European Union

This symbol is only valid in the European Union.

If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

Product Information (for Turkey only)



AEEE Yönetmeliğine Uygundur.

Eski Ekipman ve Bataryaların İşlenmesi.

Sadece geri dönüşüm sistemleri olan Avrupa Birliği ve ülkeleri için geçerlidir.

Ürünler, ambalaj ve/veya ekli belgeler üzerindeki bu semboller kullanılmış elektrik ve elektronik ürünlerin genel ev atığı ile karıştırılmaması gerektiğini ifade eder.

Eski ürünlerin toplanması ve geri kazanılması için bu atıklar lütfen yasaya belirlenmiş olan uygun toplama merkezlerine teslim ediniz.

Bu atıkların doğru işlenmesiyle, değerli kaynakların korunmasına ve insan sağlığı ve çevreye olası negatif etkilerinin engellenmesine yardımcı olabilirsiniz.

Atıkların toplanması ve geri dönüşümü için detaylı bilgi için lütfen bağlı olduğunuz yerel yönetimlerle iletişime geçiniz.

Atıkların atılmasıyla ilgili yanlış uygulamalar yasaya belirlenmiş olan cezalara sebebiyet verebilir.

Panasonic Corporation

Web Site : <https://panasonic.net/cns/projector/>
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Panasonic System Solutions Company of North America

Two Riverfront Plaza, Newark, NJ 07102
TEL: (877) 803 - 8492

Panasonic Canada Inc.

5770 Ambler Drive, Mississauga, Ontario L4W 2T3
TEL: (905) 624 - 5010

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Appendix / Annexe / 付録

(Unit / Unités / 単位 : m)

- When the screen aspect ratio is 16:10
- Lorsque le rapport d'aspect de l'écran est 16:10
- アスペクト比 16:10

PT-RQ32K
Throw ratio /
Rapport de projection /
スローレシオ :
[1.35 - 1.84:1]

PT-RZ31K / PT-RZ21K
Throw ratio /
Rapport de projection /
スローレシオ :
[1.26 - 1.72:1]

SD	SH	SW	LW	LT	LW	LT
1.78 (70")	0.942	1.508	1.99	2.73	1.85	2.54
2.03 (80")	1.077	1.723	2.28	3.14	2.13	2.92
2.29 (90")	1.212	1.939	2.58	3.54	2.40	3.30
2.54 (100")	1.346	2.154	2.88	3.95	2.68	3.68
3.05 (120")	1.615	2.585	3.47	4.76	3.23	4.43
3.81 (150")	2.019	3.231	4.36	5.97	4.06	5.57
5.08 (200")	2.692	4.308	5.84	7.99	5.44	7.45
6.35 (250")	3.365	5.385	7.32	10.02	6.83	9.34
7.62 (300")	4.039	6.462	8.80	12.04	8.21	11.23
8.89 (350")	4.712	7.539	10.28	14.07	9.59	13.12
10.16 (400")	5.385	8.616	11.76	16.09	10.97	15.01
12.70 (500")	6.731	10.770	14.73	20.14	13.74	18.79
15.24 (600")	8.077	12.923	17.69	24.19	16.50	22.57
17.78 (700")	9.423	15.077	20.65	28.24	19.27	26.35
20.32 (800")	10.770	17.231	23.61	32.29	22.03	30.13
22.86 (900")	12.116	19.385	26.58	36.33	24.80	33.90
25.40 (1000")	13.462	21.539	29.54	40.38	27.56	37.68

(Unit / Unités / 単位 : m)

- When the screen aspect ratio is 16:9
- Lorsque le rapport d'aspect de l'écran est 16:9
- アスペクト比 16:9

PT-RQ32K
Throw ratio /
Rapport de projection /
スローレシオ :
[1.35 - 1.84:1]

PT-RZ31K / PT-RZ21K
Throw ratio /
Rapport de projection /
スローレシオ :
[1.26 - 1.72:1]

PT-RS30K / PT-RS20K
Throw ratio /
Rapport de projection /
スローレシオ :
[1.37 - 1.86:1]

SD	SH	SW	LW	LT	LW	LT	LW	LT
1.78 (70")	0.872	1.550	2.04	2.81	1.90	2.62	2.07	2.84
2.03 (80")	0.996	1.771	2.35	3.23	2.19	3.00	2.37	3.26
2.29 (90")	1.121	1.992	2.65	3.64	2.47	3.39	2.68	3.68
2.54 (100")	1.245	2.214	2.96	4.06	2.76	3.78	2.99	4.10
3.05 (120")	1.494	2.657	3.57	4.89	3.32	4.56	3.61	4.94
3.81 (150")	1.868	3.321	4.48	6.14	4.18	5.72	4.53	6.20
5.08 (200")	2.491	4.428	6.00	8.22	5.60	7.66	6.07	8.31
6.35 (250")	3.113	5.535	7.53	10.30	7.02	9.61	7.60	10.41
7.62 (300")	3.736	6.641	9.05	12.38	8.44	11.55	9.14	12.51
8.89 (350")	4.358	7.748	10.57	14.46	9.86	13.49	10.68	14.61
10.16 (400")	4.981	8.855	12.09	16.54	11.28	15.43	12.22	16.71
12.70 (500")	6.226	11.069	15.14	20.70	14.12	19.32	15.30	20.92
15.24 (600")	7.472	13.283	18.18	24.86	16.96	23.20	18.37	25.12
17.78 (700")	8.717	15.497	21.23	29.02	19.81	27.08	21.45	29.33
20.32 (800")	9.962	17.710	24.27	33.19	22.65	30.97	24.52	33.53
22.86 (900")	11.207	19.924	27.32	37.35	25.49	34.85	27.60	37.74
25.40 (1000")	12.453	22.138	30.36	41.51	28.33	38.73	30.68	41.94

Appendix / Annexe / 付録 (continued / suite / つづき)

(Unit / Unités / 単位 : m)

- When the screen aspect ratio is 4:3
- Lorsque le rapport d'aspect de l'écran est 4:3
- アスペクト比 4:3

SD	SH	SW	LW	LT	LW	LT	LW	LT
1.78 (70")	1.067	1.422	2.26	3.11	2.10	2.89	1.89	2.60
2.03 (80")	1.219	1.626	2.60	3.56	2.42	3.32	2.17	2.99
2.29 (90")	1.372	1.829	2.93	4.02	2.73	3.75	2.46	3.37
2.54 (100")	1.524	2.032	3.27	4.48	3.04	4.18	2.74	3.76
3.05 (120")	1.829	2.438	3.94	5.40	3.67	5.03	3.30	4.53
3.81 (150")	2.286	3.048	4.94	6.77	4.61	6.31	4.15	5.69
5.08 (200")	3.048	4.064	6.62	9.06	6.17	8.45	5.56	7.62
6.35 (250")	3.810	5.080	8.30	11.36	7.74	10.59	6.97	9.55
7.62 (300")	4.572	6.096	9.98	13.65	9.30	12.73	8.39	11.48
8.89 (350")	5.334	7.112	11.65	15.94	10.87	14.87	9.80	13.41
10.16 (400")	6.096	8.128	13.33	18.23	12.43	17.01	11.21	15.34
12.70 (500")	7.620	10.160	16.68	22.82	15.56	21.29	14.03	19.20
15.24 (600")	9.144	12.192	20.04	27.40	18.69	25.56	16.86	23.05
17.78 (700")	10.668	14.224	23.39	31.98	21.82	29.84	19.68	26.91
20.32 (800")	12.192	16.256	26.75	36.57	24.95	34.12	22.51	30.77
22.86 (900")	13.716	18.288	30.10	41.15	28.09	38.40	25.33	34.63
25.40 (1000")	15.240	20.320	33.45	45.73	31.22	42.67	28.16	38.49

Note

- A ±5 % error in listed projection distances may occur.
In addition, when [KEYSTONE] is used, distance is corrected to become smaller than the specified screen size.
- The throw ratio is based on the value during projection with the projected image size of 3.81 m (150").

Remarque

- Une erreur de ±5 % dans des distances de projection énumérées peut se produire.
En outre, lorsque [CORRECTION DE TRAPÈZE] est utilisé, la distance est corrigée pour devenir inférieure à la taille d'écran spécifiée.
- Le rapport de projection est basé sur la valeur en cours de projection avec une taille de l'image projetée de 3,81 m (150").

お知らせ

- 記載の投写距離は±5%以下の範囲内で誤差が発生します。
また、[台形補正] 使用時は、所定の画面サイズよりも小さくなる方向で補正されます。
- スローレシオは、投写画面サイズ 150 型投写時の値を基準にしています。

Setting-up dimensions which are not given in the above table can be calculated using the formulas below. Check the projected image size SD (m) and use the following formula to determine projection distance (L).

La configuration des dimensions qui ne sont pas données dans le tableau ci-dessus peut être calculée à l'aide des formules suivantes. Vérifiez la taille de l'image projetée SD (m) et utilisez la formule suivante pour déterminer la distance de projection (L).

上記の表以外の投写寸法は次の計算式で求めることができます。画面対角サイズ SD (m) をご確認のうえ、それぞれの計算式で投写距離 (L) を求めてください。

Appendix / Annexe / 付録 (continued / suite / つづき)

- Projection distance formulas
- Formules de distance de projection
- 投写距離計算式

The dimensions of the following table contain a slight error.

Periods are used to represent decimal points in the calculation formulas in the following table.

Les dimensions du tableau suivant peuvent présenter un léger écart.

Les points sont utilisés pour indiquer les décimales dans les formules de calcul dans le tableau suivant.

次の表内の寸法は若干の誤差があります。

(Unit / Unités / 単位 : m)

		L	
		LW	LT
PT-RQ32K	When the screen aspect ratio is 16:10 Lorsque le rapport d'aspect de l'écran est 16:10 アスペクト比 16:10 のとき	=1.1663 × SD-0.0867	=1.5939 × SD-0.1025
	When the screen aspect ratio is 16:9 Lorsque le rapport d'aspect de l'écran est 16:9 アスペクト比 16:9 のとき	=1.1988 × SD-0.0867	=1.6382 × SD-0.1025
	When the screen aspect ratio is 4:3 Lorsque le rapport d'aspect de l'écran est 4:3 アスペクト比 4:3 のとき	=1.3205 × SD-0.0867	=1.8046 × SD-0.1025
PT-RZ31K / PT-RZ21K	When the screen aspect ratio is 16:10 Lorsque le rapport d'aspect de l'écran est 16:10 アスペクト比 16:10 のとき	=1.0886 × SD-0.0867	=1.4876 × SD-0.1025
	When the screen aspect ratio is 16:9 Lorsque le rapport d'aspect de l'écran est 16:9 アスペクト比 16:9 のとき	=1.1188 × SD-0.0867	=1.5290 × SD-0.1025
	When the screen aspect ratio is 4:3 Lorsque le rapport d'aspect de l'écran est 4:3 アスペクト比 4:3 のとき	=1.2324 × SD-0.0867	=1.6841 × SD-0.1025
PT-RS30K / PT-RS20K	When the screen aspect ratio is 16:9 Lorsque le rapport d'aspect de l'écran est 16:9 アスペクト比 16:9 のとき	=1.2112 × SD-0.0867	=1.6552 × SD-0.1025
	When the screen aspect ratio is 4:3 Lorsque le rapport d'aspect de l'écran est 4:3 アスペクト比 4:3 のとき	=1.1119 × SD-0.0867	=1.5195 × SD-0.1025

Panasonic Corporation

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

Panasonic System Solutions Company of North America

Two Riverfront Plaza, Newark, NJ 07102

TEL: (877) 803 - 8492

Panasonic Canada Inc.

5770 Ambler Drive, Mississauga, Ontario L4W 2T3

TEL: (905) 624 - 5010

パナソニック株式会社 コネクティッドソリューションズ社

〒 571-8503 大阪府門真市松葉町2番15号 電話 ☎ 0120-872-601