## Specifications

Main unit

| Power supply |  |  | AC $100 \mathrm{~V}-240 \mathrm{~V}, 50 \mathrm{~Hz} / 60 \mathrm{~Hz}$ |
| :---: | :---: | :---: | :---: |
| Power consumption ${ }^{1}$ | Maximum power consumption |  | 325 W (3.4-1.4 A) (330 VA) (Power consumption is 310 W at 200-240 V) |
|  | On-mode power consumption (Light power) | [NORMAL] | 290 W ( $100-120 \mathrm{~V}$ ), 280 W ( $200-240 \mathrm{~V}$ ) |
|  |  | [ECO] | $215 \mathrm{~W}(100-120 \mathrm{~V}), 205 \mathrm{~W}(200-240 \mathrm{~V}) \quad *$ Operating Temperature: $25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$, |
|  |  | [QUIET] | 210 W (100-120 V), 200 W (200-240 V) |
|  | Standby mode power consumption | [NORMAL] | 18 W <br> When [QUICK STARTUP] function is disabled, [IN STANDBY MODE] of [AUDIO SETTING] is set to [OFF], No device is connected to <DIGITAL LINK/LAN> terminal, and <USB (VIEWER/WIRELESS/DC OUT)> terminal is not in use. |
|  |  | [ECO] | 0.5 W |
| BTU value |  |  | Max 1,110 BTU |
| LCD panel | Size |  | 16.3 mm [0.64 in] diagonal (16:10 aspect ratio) |
|  | Display system |  | Transparent LCD panel ( $\times 3, \mathrm{R} / \mathrm{G} / \mathrm{B}$ ) |
|  | Number of pixels |  | 2,304,000 (1920 x 1200) pixels |
| Refresh rate |  |  | 60 Hz Refresh rate varies depending on scanning frequency. |
| Light source |  |  | Laser diode |
| Light output ${ }^{1}$ | Light Power | [NORMAL] | $5,200 \mathrm{~lm}$ <br> When [PICTURE MODE] is set to [DYNAMIC], [LIGHT POWER] is set to [NORMAL], and [SYSTEM DAYLIGHT VIEW] is set to [OFF]. |
|  |  | [ECO/QUIET] | 3,640 lm |
| Time until light output declines to $50 \%^{2}$ | Light Power | [NORMAL/ QUIET] | 20,000 hours |
|  |  | [ECO] | 24,000 hours |
| Filter Replacement Cycle |  |  | 20,000 hours (Under the dust conditions of $0.08 \mathrm{mg} / \mathrm{m}^{3}$ ) 10,000 hours (Under the dust conditions of $0.15 \mathrm{mg} / \mathrm{m}^{3}$ ) Filter cleaning cycle varies depending on environment. Filter can be washed and reused up to two times. |
| Resolution |  |  | WUXGA (1920 1200 pixels) |
| Contrast ratio ${ }^{1}$ |  |  | 3,000,000:1 (Full On/Full Off) <br> (When [PICTURE MODE] is set to [DYNAMIC] and [DYNAMIC CONTRAST] is set to [1].) |
| Screen size |  |  | 2.03-3.05 m [80-120 in], 16:10 aspect ratio |
| Center to corner zone ratio ${ }^{1}$ |  |  | 85\% |
| Lens |  |  | Fixed zoom, powered focus lens, $\mathrm{F}=1.7, \mathrm{f}=2.81 \mathrm{~mm}$, throw ratio: 0.235:1 |
| Digital Zoom Extender ${ }^{3}$ |  |  | 0.235-0.288:1 (aspect ratio 16:10) ${ }^{4}$ |
| Keystone correction range |  |  | Vertical $\pm 3^{\circ}$ (Manual), Horizontal $\pm 3^{\circ}$ (Manual) |
| Installation |  |  | Ceiling/desk, front/rear, free 360-degree installation |
| Built-in speaker |  |  | 10 W (monaural) |
| Compatible Signal | COMPUTER signal input |  | Video signal resolution: 480i (525i), 576i (625i), 480/60p to 1080/60p Computer signal resolution: $640 \times 480$ to $1920 \times 1200$ (non-interlace) Dot clock frequency: 13.5 MHz to 162 MHz |
|  | HDMI $^{\text {™ }}$ signal input |  | Video signal resolution: 480/60p, 576/50p to $4096 \times 2160 / 30$ p Computer signal resolution: $640 \times 480$ to $3240 \times 1080$ (non-interlace) Dot clock frequency: 25 MHz to 297 MHz |
|  | DIGITAL LINK signal input |  | Video signal resolution: 480/60p, 576/50p to $4096 \times 2160 / 30$ p Computer signal resolution: $640 \times 480$ to $3240 \times 1080$ (non-interlace) Dot clock frequency: 25 MHz to 297 MHz |
| Terminals | HDMITM IN 1/ IN 2 |  | HDMITM 19 pin $\times 2$ <br> Deep Color, compatible with HDCP 1.4, 4K/30p signal input5 ${ }^{5}$, CEC supported ${ }^{6}$ Audio Signal: Linear PCM (Sampling frequency: $48 \mathrm{kHz} / 44.1 \mathrm{kHz} / 32 \mathrm{kHz}$ ) |
|  | HDMITM OUT |  | HDMI ${ }^{\text {TM }} 19$ pin $\times 2$ <br> Deep Color, compatible with HDCP 1.4, 4K/30p signal input ${ }^{5}$, CEC not supported Audio Signal: Linear PCM (Sampling frequency: $48 \mathrm{kHz} / 44.1 \mathrm{kHz} / 32 \mathrm{kHz}$ ) |
|  | COMPUTER IN |  | D-sub 15pin (female) $\times 1$ |
|  |  | RGB | 0.7 V [p-p], 75 ohms ( 1.0 V [p-p], 75 ohms for sync on G ) <br> HD/SYNC, VD: TTL, high impedance, positive/negative automatic |
|  |  | YPB $\mathrm{P}_{\mathrm{R}}$ | $\mathrm{Y}: 1.0 \mathrm{~V}$ [p-p], including sync signal, $\mathrm{P}_{\mathrm{B}} / \mathrm{P}_{\mathrm{R}}\left(\mathrm{C}_{\mathrm{B}} / \mathrm{C}_{\mathrm{R}}\right)$ : 0.7 V [p-p], 75 ohms |
|  | AUDIO IN |  | M3 stereo mini-jack x 1 0.5 V [rms], input Impedance 22 k Ohms and more |


| Terminals | AUDIO OUT | M3 stereo mini-jack x 1 <br> 0 V [rms] to 2.0 V [rms] variable, output Impedance 2.2 k ohms and less |
| :---: | :---: | :---: |
|  | SERIAL IN | D-sub 9-pin (female) $\times 1$ <br> for computer control (RS-232C compliant) |
|  | LAN | $\begin{aligned} & \text { RJ-45 } \times 1 \\ & \quad \text { for network connection, PJLink }{ }^{\text {TM }} \text { (Class 2) compatible, 10Base-T/100Base-TX } \end{aligned}$ |
|  | DIGITAL LINK/LAN | $\text { RJ- } 45 \times 1$ <br> for network and DIGITAL LINK connection, HDBase-T ${ }^{\text {TM }}$ compliant, 100Base-TX, compatible with PJLink ${ }^{T M}$ (Class 2), HDCP 1.4, Deep Color, $4 \mathrm{~K} / 30$ p signal input ${ }^{6}$ |
|  | USB <br> (VIEWER/WIRELESS/DC OUT) | USB connector (Type A) x 1 <br> for Memory Viewer function, optional Wireless Module AJ-WM50, power supply (DC 5 V , maximum 2 A ) |
| Supported Internet protocol version |  | IPv4, IPv6 ${ }^{7}$ |
| Power cord length |  | India: 3.0 m [118 $1 / 8 \mathrm{in}]$ <br> Other countries or regions: 2.0 m [78 3/4 in] |
| Cabinet materials |  | Molded plastic |
| Dimensions (W $\times \mathrm{H} \times \mathrm{D}$ ) |  | $495 \times 160 \times 421 \mathrm{~mm}$ [19 $1 / 2 \times 6$ 19/64 $\times 1637 / 64 \mathrm{in}$ ( (excluding feet and protrusions), $495 \times 176 \times 421 \mathrm{~mm}$ [19 $1 / 2 \times 615 / 16 \times 16$ 37/64] (with feet at shortest position) |
| Weight with supplied lens ${ }^{8}$ |  | Approx. 9.5 kg (20.9 lbs) |
| Operating noise ${ }^{1}$ |  | 34 dB (NORMAL/ECO), 25 dB (QUIET) |
| Laser Classification | Laser Class | Class 1 (IEC/EN 60825-1:2014) |
|  | Risk Group | Risk Group 2 (IEC 62471-5:2015) |
| Operating environment | Operating environment temperature | $0-45^{\circ} \mathrm{C}\left(32-113{ }^{\circ} \mathrm{F}\right)^{9}$ |
|  | Operating environment humidity | 20\%-80\% (no condensation) |

## Remote control unit

| Power supply | 3V DC (AAA/R03/LR03 battery $\times 2$ ) |
| :--- | :--- |
| Operation range | Within Approx. $6 \mathrm{~m}[19 \mathrm{ft} 8 \mathrm{in}](\mathrm{when}$ operated directly in front of signal receptor) |
| Dimensions (W $\times \mathrm{H} \times \mathrm{D})$ | $48 \times 145 \times 27 \mathrm{~mm}[17 / 8 \times 523 / 32 \times 11 / 16 \mathrm{in}]$ |
| Weight $^{8}$ | Approx. $102 \mathrm{~g}(3.60 \mathrm{ozs}$.$) including batteries$ |

## Supplied accessories

Wireless remote control unit ( $\times 1$ )
Power cord (x 2 for Europe \& Asia model/ x 1 for other countries)
Batteries for remote control (RO3/AAA type $\times 2$ )

## Other Applications

Multi Monitoring \& Control Software (for Windows)
Projector Network Setup Software (for Windows)
Logo Transfer Software (for Windows)
Presenter Light Software (for Windows) ${ }^{10}$
Wireless Projector App (for iOS/Android) ${ }^{11}$

## Supported services of Control via LAN

PJLink ${ }^{\text {TM }}$ (Class2)
Crestron Connected ${ }^{\text {TM }}$
AMX Device Discovery

## Optional accessories

| Ceiling Mount Bracket | for high ceiling | ET-PKD120H |
| :--- | :--- | :--- |
|  | for highCeiling (6Axis adjustment) | ET-PKD130H |
|  | for low ceiling | ET-PKD120S |
| Projector Mount Bracket for ceiling mount bracket | ET-PKE301B |  |
| Wall Mount Bracket | ET-WBC100 |  |
| Replacement Filter Unit | ET-RFV500 |  |
| DIGITAL LINK switcher | ET-YFB200G |  |
| Digital Interface Box | ET-YFB100G |  |
| Wireless Module | AJ-WM50 Series <br> Note: product availability may vary by country or region. The suffix at the end of the model number is <br> omitted. Operating Temperature: $0-40^{\circ} \mathrm{C}\left(32-104{ }^{\circ}\right.$ ). |  |
| Early Warning Software | ET-SWA100 series <br> Note: part number suffix may differ depending on the license type. |  |
| Wireless Presentation System PressIT | TY-WPS1 (basic set) <br> Note: visit https://panasonic.net/cns/prodisplays/pressit/for more information. |  |

[^0]1 Measurement, measuring conditions, and method of notation all comply with ISO/IEC 21118: 2020 international standards. Value is average of all products when shipped
2 Around this time, light output will have decreased to approximately $50 \%$ of its original level ([PICTURE MODE]: [DYNAMIC], [DYNAMIC CONTRAST] set to [2], temperature $30^{\circ} \mathrm{C}$ ( $86^{\circ} \mathrm{F}$ ), elevation $700 \mathrm{~m}(2,297 \mathrm{ft})$ with $0.15 \mathrm{mg} / \mathrm{m}^{3}$ of particulate matter). Estimated time until light output declines to $50 \%$ varies depending on environment.
Resolution decreases when using this function.
4 When the screen aspect ratio is 16:10 and [DIGITAL ZOOM EXTENDER] is set to [80\%].
5 K signals are converted to the projector's resolution upon projection
Depending on the connected CEC command-compatible device, the link control may not operate normally.
Main version of the firmware must be 2.00 or higher. Optional wireless module AJ-WM50 does not support IPv6.
8 Average value. May dier depending on the actual unit.
9 Light output is limited at operating temperatures higher than $30^{\circ} \mathrm{C}\left(86^{\circ} \mathrm{F}\right)$, and projectors cannot be operated at altitudes higher than $2,700 \mathrm{~m}(8,858 \mathrm{ft})$ above sea level When optional AJ-WM50 Series Wireless Module is attached, operating temperature range becomes $0-40^{\circ} \mathrm{C}\left(32-104^{\circ} \mathrm{F}\right)$.
10 When using Presenter Light Software, images are projected with $1280 \times 800$ dots or $1024 \times 768$ dots onto the screen. Also, your PC display resolution may be forcibly changed and audio playback disrupted or become noisy, while images and sound are being transmitted.
11 When using the Wireless Projector app, display resolution diers depending on your iOS/AndroidTM device and the display device. The maximum supported display resolution is WXGA $(1280 \times 800)$.

## Terminals



| 1 | COMPUTER IN | 6 | LAN |
| :---: | :--- | :---: | :--- |
| 2 | USB (VIEWER/WIRELESS DC OUT 5V 2A) | 7 | LAN/DIGITAL LINK |
| 3 | HDMI $^{T M}$ IN 1 | 8 | AUDIO IN |
| 4 | HDMI $^{T M}$ IN 2 | 9 | AUDIO OUT |
| 5 | HDMI $^{T M}$ OUT | 10 | SERIAL IN |

Dimensions
unit: mm [inch] NOTE: This illustration is not drawn to scale.


## Projected image and throw distance

Install the projector referring to the projected image size and projection distance. Image size and image position can be adjusted in accordance with the screen size and screen position.


- This illustration is prepared on the assumption that the projected image size and position have been aligned to fit full in the screen.
- This illustration is not drawn to scale.

| SH | Projected image height |
| :---: | :--- |
| SW | Projected image width |
| SD | Projected image size |
| L | Projection distance (distance from the screen surface to the mirror reflection surface ${ }^{1}$ ) |
| L1 | Distance from the screen surface to the back surface of the projector |
| H | Distance from the bottom edge of the screen to the top surface of the projector |

1 The mirror reflection surface cannot be seen from the outside because it is located inside the projector.

## Standard setting position

Illustrations show the projector installed using optional ceiling mount bracket ET-PKD120H and projector mount bracket ET-PKE301B.


## Caution

- All construction work should be done by a qualified technician.
- When mounting to the ceiling, use the special mounting bracket.

Furthermore, in order to prevent it from falling down from the ceiling, use the supplied wire on the mounting bracket.

## Note

- This illustration is prepared on the assumption that the projected image size and position have been aligned to fit full in the screen

This illustration is not drawn to scale.

- The values are approximate.

Illustrations show the projector installed using optional ceiling mount bracket ET-PKD120S and projector mount bracket ET-PKE301B.


## Caution

- All construction work should be done by a qualified technician.
- When mounting to the ceiling, use the special mounting bracket.

Furthermore, in order to prevent it from falling down from the ceiling, use the supplied wire on the mounting bracket.

## Note

- This illustration is prepared on the assumption that the projected image size and position have been aligned to fit full in the screen

This illustration is not drawn to scale.

- The values are approximate.

Illustrations show the projector installed using optional ceiling mount bracket ET-PKD130H and projector mount bracket ET-PKE301B.


## Caution

- All construction work should be done by a qualified technician.

When mounting to the ceiling, use the special mounting bracket.
Furthermore, in order to prevent it from falling down from the ceiling, use the supplied wire on the mounting bracket.

## Note

- This illustration is prepared on the assumption that the projected image size and position have been aligned to fit full in the screen.
- This illustration is not drawn to scale
- The values are approximate.


## Projection distance

$\mathrm{A} \pm 5 \%$ error in listed projection distances may occur.
When [SCREEN ADJUSTMENT] is used, distance is corrected to become smaller than the specified image size.
Screen aspect ratio 16:10
Unit: meters

| Throw ratio |  | 0.235:1 |  |  | Digital Zoom Extender ${ }^{1}$$0.235-0.288: 1$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| Screen diagonal (SD) |  | Projection distance <br> (L) | Distance from screen surface to projector back surface (L1) | Distance from bottom edge of screen to projector top surface <br> (H) | Projection distance <br> (L) | Distance from screen surface to projector back surface (L1) |
| [60 in] | 1.52 | - | - | - | - | - |
| [65 in] | 1.65 | - | - | - | 0.42 | 0.016 |
| [70 in] | 1.78 | - | - | - | 0.44 | 0.044 |
| [75 in] | 1.91 | - | - | - | 0.47 | 0.072 |
| [80 in] | 2.03 | 0.41 | 0.010 | 0.13 | 0.50 | 0.10 |
| [85 in] | 2.16 | 0.43 | 0.033 | 0.15 | 0.53 | 0.13 |
| [90 in] | 2.29 | 0.46 | 0.055 | 0.16 | 0.56 | 0.16 |
| [95 in] | 2.41 | 0.48 | 0.078 | 0.17 | 0.59 | 0.19 |
| [100 in] | 2.54 | 0.50 | 0.10 | 0.18 | 0.61 | 0.21 |
| [110 in] | 2.79 | 0.55 | 0.15 | 0.20 | - | - |
| [120 in] | 3.05 | 0.59 | 0.19 | 0.23 | - | - |

1 When Digital Zoom Extender is set to $80 \%$.

Screen aspect ratio 16:10
Unit: feet

| Throw ratio |  | 0.235:1 |  |  | Digital Zoom Extender ${ }^{1}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 0.235-0.288:1 |
| Screen diagonal (SD) |  |  |  |  | Projection distance <br> (L) | Distance from screen surface to projector back surface <br> (L1) | Distance from bottom edge of screen to projector top surface | Projection distance <br> (L) | Distance from screen surface to projector back surface (L1) |
| [60 in] | 1.52 | - | - | - | - | - |
| [65 in] | 1.65 | - | - | - | 1.38 | 0.05 |
| [70 in] | 1.78 | - | - | - | 1.44 | 0.14 |
| [75 in] | 1.91 | - | - | - | 1.54 | 0.24 |
| [80 in] | 2.03 | 1.35 | 0.03 | 0.43 | 1.64 | 0.33 |
| [85 in] | 2.16 | 1.41 | 0.11 | 0.49 | 1.74 | 0.43 |
| [90 in] | 2.29 | 1.51 | 0.18 | 0.52 | 1.84 | 0.52 |
| [95 in] | 2.41 | 1.57 | 0.26 | 0.56 | 1.94 | 0.62 |
| [100 in] | 2.54 | 1.64 | 0.33 | 0.59 | 2.00 | 0.69 |
| [110 in] | 2.79 | 1.80 | 0.49 | 0.66 | - | - |
| [120 in] | 3.05 | 1.94 | 0.62 | 0.75 | - | - |

[^1]Screen aspect ratio 16:9
Unit: meters

| Throw ratio |  | 0.234:1 |  |  | Digital Zoom Extender ${ }^{1}$$0.234-0.287: 1$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| Screen diagonal (SD) |  | Projection distance <br> (L) | Distance from screen surface to projector back surface (L1) | Distance from bottom edge of screen to projector top surface <br> (H) | Projection distance <br> (L) | Distance from screen surface to projector back surface (L1) |
| [60 in] | 1.52 | - | - | - | - | - |
| [65 in] | 1.65 | - | - | - | 0.43 | 0.026 |
| [70 in] | 1.78 | - | - | - | 0.46 | 0.055 |
| [75 in] | 1.91 | - | - | - | 0.48 | 0.084 |
| [80 in] | 2.03 | 0.42 | 0.020 | 0.19 | 0.51 | 0.11 |
| [85 in] | 2.16 | 0.44 | 0.043 | 0.21 | 0.54 | 0.14 |
| [90 in] | 2.29 | 0.47 | 0.067 | 0.23 | 0.57 | 0.17 |
| [95 in] | 2.41 | 0.49 | 0.090 | 0.24 | 0.60 | 0.20 |
| [100 in] | 2.54 | 0.51 | 0.11 | 0.26 | - | - |
| [110 in] | 2.79 | 0.56 | 0.16 | 0.29 | - | - |
| [120 in] | 3.05 | 0.61 | 0.21 | 0.32 | - | - |

1 When Digital Zoom Extender is set to $80 \%$.

Screen aspect ratio 16:9
Unit: feet

| Throw ratio |  | 0.234:1 |  |  | Digital Zoom Extender ${ }^{1}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 0.234-0.287:1 |
| Screen diagonal (SD) |  |  |  |  | Projection distance <br> (L) | Distance from screen surface to projector back surface (L1) | Distance from bottom edge of screen to projector top surface <br> (H) | Projection distance <br> (L) | Distance from screen surface to projector back surface <br> (L1) |
| [60 in] | 1.52 | - | - | - | - | - |
| [65 in] | 1.65 | - | - | - | 1.41 | 0.09 |
| [70 in] | 1.78 | - | - | - | 1.51 | 0.18 |
| [75 in] | 1.91 | - | - | - | 1.57 | 0.28 |
| [80 in] | 2.03 | 1.38 | 0.07 | 0.62 | 1.67 | 0.36 |
| [85 in] | 2.16 | 1.44 | 0.14 | 0.69 | 1.77 | 0.46 |
| [90 in] | 2.29 | 1.54 | 0.22 | 0.75 | 1.87 | 0.56 |
| [95 in] | 2.41 | 1.61 | 0.30 | 0.79 | 1.97 | 0.66 |
| [100 in] | 2.54 | 1.67 | 0.36 | 0.85 | - | - |
| [110 in] | 2.79 | 1.84 | 0.52 | 0.95 | - | - |
| [120 in] | 3.05 | 2.00 | 0.69 | 1.05 | - | - |

1 When Digital Zoom Extender is set to $80 \%$.

Screen aspect ratio 4:3
Unit: meters

| Throw ratio |  | 0.279:1 |  |  | Digital Zoom Extender ${ }^{1}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| Screen diagonal (SD) |  | Projection distance <br> (L) | Distance from screen surface to projector back surface | Distance from bottom edge of screen to projector top surface | Projection distance <br> (L) | Distance from screen surface to projector back surface |
| [60 in] | 1.52 | - | - | - | 0.43 | 0.032 |
| [65 in] | 1.65 | - | - | - | 0.46 | 0.064 |
| [70 in] | 1.78 | 0.41 | 0.007 | 0.13 | 0.50 | 0.096 |
| [75 in] | 1.91 | 0.43 | 0.032 | 0.14 | 0.53 | 0.13 |
| [80 in] | 2.03 | 0.46 | 0.058 | 0.16 | 0.56 | 0.16 |
| [85 in] | 2.16 | 0.48 | 0.083 | 0.17 | 0.59 | 0.19 |
| [90 in] | 2.29 | 0.51 | 0.11 | 0.19 | 0.62 | 0.22 |
| [95 in] | 2.41 | 0.54 | 0.13 | 0.20 | - | - |
| [100 in] | 2.54 | 0.56 | 0.16 | 0.21 | - | - |
| [110 in] | 2.79 | 0.61 | 0.21 | 0.24 | - | - |
| [120 in] | 3.05 | - | - | - | - | - |

1 When Digital Zoom Extender is set to $80 \%$.

## Screen aspect ratio 4:3

Unit: feet

| Throw ratio |  | 0.279:1 |  |  | Digital Zoom Extender ${ }^{1}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| Scree |  | Projection distance <br> (L) | Distance from screen surface to projector back surface (L1) | Distance from bottom edge of screen to projector top surface <br> (H) | Projection distance <br> (L) | Distance from screen surface to projector back surface (L1) |
| [60 in] | 1.52 | - | - | - | 1.41 | 0.10 |
| [65 in] | 1.65 | - | - | - | 1.51 | 0.21 |
| [70 in] | 1.78 | 1.35 | 0.02 | 0.43 | 1.64 | 0.31 |
| [75 in] | 1.91 | 1.41 | 0.10 | 0.46 | 1.74 | 0.43 |
| [80 in] | 2.03 | 1.51 | 0.19 | 0.52 | 1.84 | 0.52 |
| [85 in] | 2.16 | 1.57 | 0.27 | 0.56 | 1.94 | 0.62 |
| [90 in] | 2.29 | 1.67 | 0.36 | 0.62 | 2.03 | 0.72 |
| [95 in] | 2.41 | 1.77 | 0.43 | 0.66 | - | - |
| [100 in] | 2.54 | 1.84 | 0.52 | 0.69 | - | - |
| [110 in] | 2.79 | 2.00 | 0.69 | 0.79 | - | - |
| [120 in] | 3.05 | - | - | - | - | - |

1 When Digital Zoom Extender is set to $80 \%$.

## Formula for calculating the projection distance

To use a projected image size not listed in this manual, check the projected image size SD ( m ) and use the respective formula to calculate the value.
The unit of all the formulae is m . (Values obtained by the following calculation formulae contain a slight error.) When calculating the value using image size designation (value in inches), multiply the value in inches by 0.0254 and substitute it into $S D$ in the formula.

| Unit: meters |  |  |  |
| :---: | :---: | :---: | :---: |
| Aspect ratio | 16:10 | 16:9 | 4:3 |
| Screen height (SH) | $=0.530 \times$ SD | $=0.490 \times$ SD | $=0.6 \times$ SD |
| Screen width (SW) | $=0.848 \times$ SD | $=0.872 \times$ SD | $=0.8 \times$ SD |
| Projection distance (L) ${ }^{1}$ | $=0.1782 \times$ SD/X +0.0485 | $=0.1831 \times$ SD/X +0.0485 | $=0.2017 \times$ SD/X +0.0485 |
| Distance from screen surface to projector back surface (L1) | $=0.0100+(L-0.4105)$ |  |  |
| Distance from bottom edge of screen to projector top surface (H) | $=0.0933 \times$ SD - 0.0562 | $=0.1231 \times$ SD - 0.0562 | $=0.1056 \times$ SD - 0.0562 |

1 X in the formulas represents the setting value of [DIGITAL ZOOM EXTENDER] (100\%=1.00, 99\%=0.99, ...).

- The value for L (distance to screen) varies slightly within $\pm 5 \%$ depending on the zoom lens characteristics.
- When keystone correction is used, the image is corrected in the direction that reduces its projected size.


## [SCREEN ADJUSTMENT] projection range

| [V] (viewed from the side) | [H] (viewed from above) |
| :---: | :---: |
|  |  |
| Vertical arc correction (viewed from the side) | Horizontal arc correction (viewed from above) |
|  |  |
|  |  |


| Only [KEYSTONE] used |  | [KEYSTONE] and [CURVED CORRECTION] used together |  |  | Only [CURVED CORRECTION] used |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Vertical keystone <br> correction angle <br> $\alpha\left({ }^{\circ}\right)$ | Horizontal <br> keystone <br> correction angle <br> $\beta\left({ }^{\circ}\right)$ | Vertical keystone <br> correction angle <br> $\alpha\left({ }^{\circ}\right)$ | Horizontal <br> keystone <br> correction angle <br> $\beta\left({ }^{\circ}\right)$ | Min. value of <br> R2/L2 | Min. value of <br> R3/L3 | Min. value of <br> R2/L2 | Min. value of <br> R3/L3 |
| $\pm 3$ | $\pm 3$ | $\pm 3$ | $\pm 3$ | 13.11 | 16.04 | 13.12 | 16.06 |

## Note

- When [SCREEN ADJUSTMENT] is used, the focus may not be able to match the whole screen as correction increases.
- The curved screen should be in the shape of a circular arc part of a perfect circle.


## Installable angle

Install the projector at an angle within the range shown below.

$360^{\circ}$ vertically

$360^{\circ}$ horizontally

(combination of vertical and horizontal)

## Cautions when setting the projectors

- Use the adjustable feet only for the floor standing installation and for adjusting the angle. Using them for other purposes may damage the projector.
- When installing the projector with a method other than the floor installation using the adjustable feet or the installation using the ceiling / wall mount bracket, use the four screw holes for ceiling / wall mount (as shown in the figure) to fix the projector. In such case, make sure that there is no clearance between the screw holes to fix the projector on the projector bottom and the setting surface by inserting spacers (metallic) between them.
- Use a torque screwdriver or Allen torque wrench to tighten the fixing screws to their specified tightening torques. Do not use electric screwdrivers or impact screwdrivers.
(Screw diameter: M6, tapping depth inside the projector: 12 mm [15/32 in], torque: $4 \pm 0.5 \mathrm{~N} \cdot \mathrm{~m}$ )


Positions of adjustable feet and screw holes to fix the projector

- Do not block the intake and exhaust vents of the projector.
- Avoid heating and cooling air from the air conditioning system directly blow to the intake and exhaust vents of the projector.

- When installing two or more projectors in parallel, provide at least $1200 \mathrm{~mm}[471 / 4 \mathrm{in}]$ of space between the projectors.


If 1200 mm [47 $1 / 4 \mathrm{in}$ ] of space cannot be secured, install a partition between the projectors to block heat from the exhaust vent.
The partition should exceed the projector by about 20 mm [25/32 in] in height and depth, and should be installed at least 300 mm [11 13/16 in] away from the intake and exhaust vents of the projector.


- Do not install the projector in a confined space.

When placing the projector in a confined space, a ventilation and/or air conditioning system is required. Exhaust heat may accumulate when the ventilation is not enough, triggering the protection circuit of the projector.

- Panasonic Connect Co., Ltd. takes no responsibility for any damage to the product caused by an inappropriate choice of location for installing the projector, even if the warranty period of the product has not expired.


## List of compatible signals

The following table specifies the type of signals compatible with the projector.
This projector supports the signal with $\checkmark$ in the compatible signal column.

| Signal type | Signal name | Resolution (Display Resolution) | Scanning freq. |  | Dot clock freq. (MHz) | compatible signal |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Horizontal (kHz) | Vertical <br> (Hz) |  | COMPUTER | DIGITAL LINK | HDMITM |
| Video <br> Signal | 480i (525i) | $712 \times 483 i$ | 15.7 | 59.9 | 13.5 | $\checkmark$ | - | - |
|  | 576 i (625i) | $702 \times 575 i$ | 15.6 | 50.0 | 13.5 | $\checkmark$ | - | - |
|  | 480/60p | $720 \times 480$ | 31.5 | 59.9 | 27.0 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | 576/50p | $720 \times 576$ | 31.3 | 50.0 | 27.0 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | 720/60p | $1280 \times 720$ | 45.0 | $60.0^{1}$ | 74.3 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | 720/50p | $1280 \times 720$ | 37.5 | 50.0 | 74.3 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | 1080/60i | $1920 \times 1080 \mathrm{i}$ | 33.8 | $60.0^{1}$ | 74.3 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | 1080/50i | $1920 \times 1080 \mathrm{i}$ | 28.1 | 50.0 | 74.3 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | 1080/24p | $1920 \times 1080$ | 27.0 | $24.0{ }^{1}$ | 74.3 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | 1080/24sF | $1920 \times 1080 \mathrm{i}$ | 27.0 | $48.0{ }^{1}$ | 74.3 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | 1080/25p | $1920 \times 1080$ | 28.1 | 25.0 | 74.3 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | 1080/30p | $1920 \times 1080$ | 33.8 | $30.0{ }^{1}$ | 74.3 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | 1080/60p | $1920 \times 1080$ | 67.5 | $60.0{ }^{1}$ | 148.5 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | 1080/50p | $1920 \times 1080$ | 56.3 | 50.0 | 148.5 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $3840 \times 2160 / 24 p$ | $3840 \times 2160$ | 54.0 | $24.0{ }^{1}$ | 297.0 | - | $\checkmark$ | $\checkmark$ |
|  | $3840 \times 2160 / 25 p$ | $3840 \times 2160$ | 56.3 | 25.0 | 297.0 | - | $\checkmark$ | $\checkmark$ |
|  | $3840 \times 2160 / 30 \mathrm{p}$ | $3840 \times 2160$ | 67.5 | $30.0{ }^{1}$ | 297.0 | - | $\checkmark$ | $\checkmark$ |
|  | $4096 \times 2160 / 24 p$ | $4096 \times 2160$ | 54.0 | $24.0{ }^{1}$ | 297.0 | - | $\checkmark$ | $\checkmark$ |
|  | $4096 \times 2160 / 25 p$ | $4096 \times 2160$ | 56.3 | 25.0 | 297.0 | - | $\checkmark$ | $\checkmark$ |
|  | $4096 \times 2160 / 30 \mathrm{p}$ | $4096 \times 2160$ | 67.5 | $30.0{ }^{1}$ | 297.0 | - | $\checkmark$ | $\checkmark$ |
| Computer Signal | $640 \times 480 / 60$ | $640 \times 480$ | 31.5 | 59.9 | 25.2 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $800 \times 600 / 60$ | $800 \times 600$ | 37.9 | 60.3 | 40.0 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1024 \times 768 / 50$ | $1024 \times 768$ | 39.6 | 50.0 | 51.9 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1024 \times 768 / 60$ | $1024 \times 768$ | 48.4 | 60.0 | 65.0 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1024 \times 768 / 70$ | $1024 \times 768$ | 56.5 | 70.1 | 75.0 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1024 \times 768 / 75$ | $1024 \times 768$ | 60.0 | 75.0 | 78.8 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1152 \times 864 / 75$ | $1152 \times 864$ | 67.5 | 75.0 | 108.0 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1152 \times 864 / 85$ | $1152 \times 864$ | 77.1 | 85.0 | 119.7 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1280 \times 720 / 60$ | $1280 \times 720$ | 44.8 | 59.9 | 74.5 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1280 \times 768 / 60$ | $1280 \times 768$ | 47.8 | 59.9 | 79.5 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1280 \times 800 / 50$ | $1280 \times 800$ | 41.3 | 50.0 | 68.0 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1280 \times 800 / 60$ | $1280 \times 800$ | 49.7 | 59.8 | 83.5 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1280 \times 800 / 75$ | $1280 \times 800$ | 62.8 | 74.9 | 106.5 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1280 \times 800 / 85$ | $1280 \times 800$ | 71.6 | 84.9 | 122.5 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1280 \times 960 / 60$ | $1280 \times 960$ | 60.0 | 60.0 | 108.0 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1280 \times 1024 / 60$ | $1280 \times 1024$ | 64.0 | 60.0 | 108.0 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1280 \times 1024 / 75$ | $1280 \times 1024$ | 80.0 | 75.0 | 135.0 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1280 \times 1024 / 85$ | $1280 \times 1024$ | 91.1 | 85.0 | 157.5 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1366 \times 768 / 60$ | $1366 \times 768$ | 47.7 | 59.8 | 85.5 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1400 \times 1050 / 60$ | $1400 \times 1050$ | 65.3 | 60.0 | 121.8 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1400 \times 1050 / 75$ | $1400 \times 1050$ | 82.2 | 75.0 | 155.9 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1440 \times 900 / 60$ | $1440 \times 900$ | 55.9 | 59.9 | 106.5 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1600 \times 900 / 60$ | $1600 \times 900$ | 55.9 | 60.0 | 119.0 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1600 \times 1200 / 60$ | $1600 \times 1200$ | 75.0 | 60.0 | 162.0 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1680 \times 1050 / 60$ | $1680 \times 1050$ | 65.3 | 60.0 | 146.3 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1920 \times 1080 / 50$ | $1920 \times 1080$ | 55.6 | 49.9 | 141.5 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1920 \times 1200 / 50$ | $1920 \times 1200$ | 61.8 | 49.9 | 158.3 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1920 \times 1200 / 60$ RB | $1920 \times 1200^{3}$ | 74.0 | 60.0 | 154.0 | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  | $1920 \times 720 / 60$ | $1920 \times 720$ | 46.0 | 60.0 | 95.0 | - | $\checkmark$ | $\checkmark$ |
|  | $1920 \times 810 / 60$ | $1920 \times 810$ | 51.7 | 60.0 | 107.0 | - | $\checkmark$ | $\checkmark$ |
|  | $2048 \times 1536 / 60$ | $2048 \times 1536$ | 95.5 | 60.0 | 267.3 | - | $\checkmark$ | $\checkmark$ |
|  | $2560 \times 1080 / 60 \mathrm{RB}$ | $2560 \times 1080$ | 66.6 | 60.0 | 181.3 | - | $\checkmark$ | $\checkmark$ |
|  | $3240 \times 1080 / 60$ | $3240 \times 1080$ | 69.0 | 60.0 | 237.1 | - | $\checkmark$ | $\checkmark$ |

1 It also supports signals with vertical scanning frequency of $1 / 1.001$ times.
2 VESA CVT-RB (Reduced Blanking)-compliant

## Note

- A signal with a different resolution is converted to the number of display dots. $1920 \times 1200$
- The "i" at the end of the resolution indicates an interlaced signal.
- When interlaced signals are connected, flickering may occur on the projected image.
- Even the above signals exist, some image signals recorded in special method may not be displayed.


[^0]:    Weights and dimensions shown are approximate. Specifications subject to change without notice

[^1]:    1 When Digital Zoom Extender is set to $80 \%$.

