

PA1505UL & PA1705UL Installation Guide

Rev 1.0

Desktop and Ceiling Mount

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Product Description

Type:	3 panel LCD projector, 1.0" p-Si TFT w/MLA	Dimensions: 23.6"(W) x 19.3"(D) x 8.5"(H)
		Weight: PA1505UL: 63.7 lbs PA1705UL: 63.7 lbs
Resolution:	1920 x 1200 (16:10)	Brightness: PA1505UL: 15,000 Lumens PA1705UL: 17,000 Lumens
Fan Noise:	PA1505UL: 40 dB / 36dB @ 1 meter PA1705UL: 42 dB / 39dB @ 1 meter	
Power Consumption:	PA1505UL: 960W (max) PA1705UL: 1035W (max)	BTU's: PA1505UL: 3264 BTU/hour PA1705UL: 3519 BTU/hour

Lens Specifications

NP53ZL:	Throw Ratio: 0.86 – 1.25:1 Focal Length: 19.0 – 27.6mm Screen Sizes: 60" - 500" F#: 1.8 – 2.24	Weight: 11.7lbs. / 5.3kg
NP54ZL:	Throw Ratio: 1.24 – 2.01:1 Focal Length: 27.7 – 44.9mm Screen Sizes: 60" - 500" F#: 1.8 – 2.24	Weight: 9.9lbs. / 4.5kg
NP55ZL:	Throw Ratio: 1.98 – 3.95:1 Focal Length: 43.8 – 87.4mm Screen Sizes: 60" - 500" F#: 1.84 -2.58	Weight: 11.9lbs. / 5.4kg

Screen/Aspect Ratio

4:3, 16:9 and 16:10 screens are fully supported with proper aspect ratio control for both type sources using NEC developed scaling technology. Menu selections have settings for each screen type and aspect ratio control for each source type.

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Formulas: 16:10 Aspect Ratio (WUXGA)

The Projection Formulas use the image width for calculation. Image width is the same for all aspect ratios, only vertical image size varies. For proper projector placement, determine the image width for a desired screen size. Use the Screen Formulas below to calculate all screen dimensions. Plug in the image width for "W" in the Projection Formulas. Refer to the diagrams and charts for popular screen sizes on page 2 and 3:

Projection Formulas:

NP53ZL: C(Wide) = 0.877W – 1.808 ----- C(Tele) = 1.279W – 1.970
NP54ZL: C(Wide) = 1.279W – 3.242 ----- C(Tele) = 2.044W – 2.920
NP55ZL: C(Wide) = 2.031W – 4.799 ----- C(Tele) = 4.000W – 4.742

Definitions:

W = Image Width
 H = Image Height (size)
 C = Throw distance

16:10 Screen Formulas

W = H x 16/10
 H = W x 10/16
 Diagonal = W x 18.868/16

Horizontal Lens Shift Max (Right) = 0.25W (NP53ZL, NP54ZL, NP55ZL)

Horizontal Lens Shift Max (Left) = 0.25W (NP53ZL, NP54ZL, NP55ZL)

Vertical Lens Shift Max (Up) = 0.65H (NP53ZL, NP54ZL, NP55ZL)

Vertical Lens Shift Max (Down) = 0.65H (NP53ZL, NP54ZL, NP55ZL)

Distance Chart for popular 16:10 Screens (WUXGA)

Screen Size (16:10)			Zoom Lenses					
			NP53ZL		NP54ZL		NP55ZL	
Diagonal	Width(W)	Height (H)	0.86 -1.25:1		1.24 -2.01:1		1.98 -3.95:1	
inches	inches	inches	inches		inches		inches	
40	34	21	N/A	- N/A	N/A	- N/A	N/A	- N/A
60	51	32	42.8	- 63.1	61.8	- 101.1	98.5	- 198.8
67	57	36	48.0	- 70.7	69.4	- 113.3	110.6	- 222.5
72	61	38	51.7	- 76.1	74.8	- 121.9	119.2	- 239.5
84	71	45	60.7	- 89.1	87.9	- 142.7	139.9	- 280.2
94	80	50	68.1	- 100.0	98.7	- 160.1	157.1	- 314.1
100	85	53	72.6	- 106.5	105.2	- 170.5	167.4	- 334.5
120	102	64	87.4	- 128.2	126.9	- 205.2	201.9	- 402.3
150	127	79	109.7	- 160.7	159.4	- 257.2	253.5	- 504.1
180	153	95	132.1	- 193.3	192.0	- 309.2	305.2	- 605.8
210	178	111	154.4	- 225.8	224.5	- 361.3	356.9	- 707.6
240	204	127	176.7	- 258.3	257.1	- 413.3	408.5	- 809.3
270	229	143	199.0	- 290.9	289.6	- 465.3	460.2	- 911.1
300	254	159	221.3	- 323.4	322.1	- 517.3	511.9	- 1012.9
400	339	212	295.7	- 431.9	430.6	- 690.7	684.1	- 1352.1
500	424	265	370.0	- 540.3	539.1	- 864.2	856.3	- 1691.3

Notes

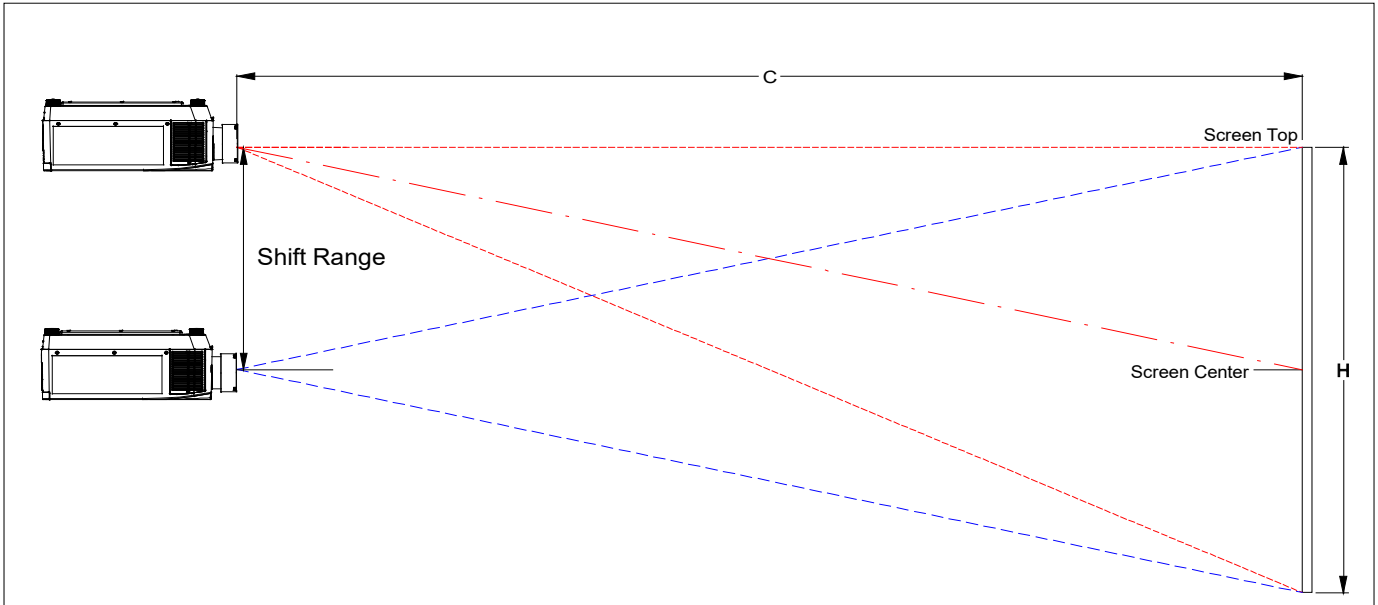
- For screen sizes not indicated on the projection tables, use the formulas above respective charts. If the figures on the tables do not match the results of formulas, use the figures in the table.
- Distances are in inches, for millimeters multiply by 25.4.
- Distances may vary ±5%.

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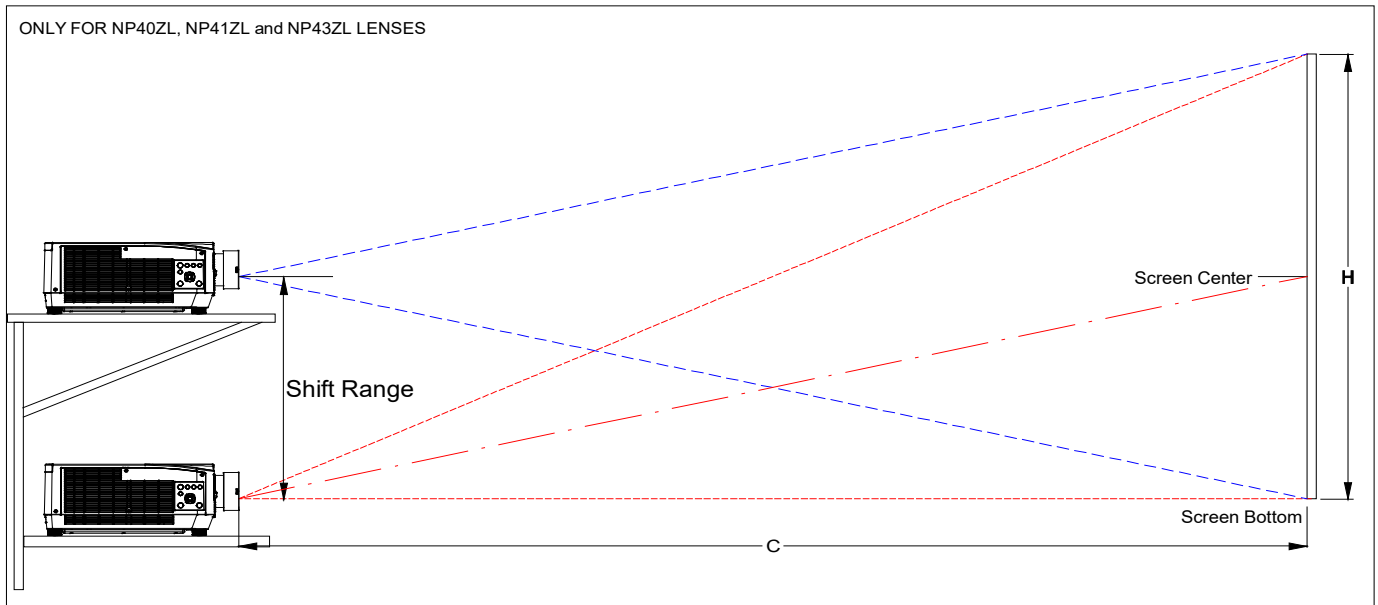
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Ceiling Mount Installation



Desktop Installation



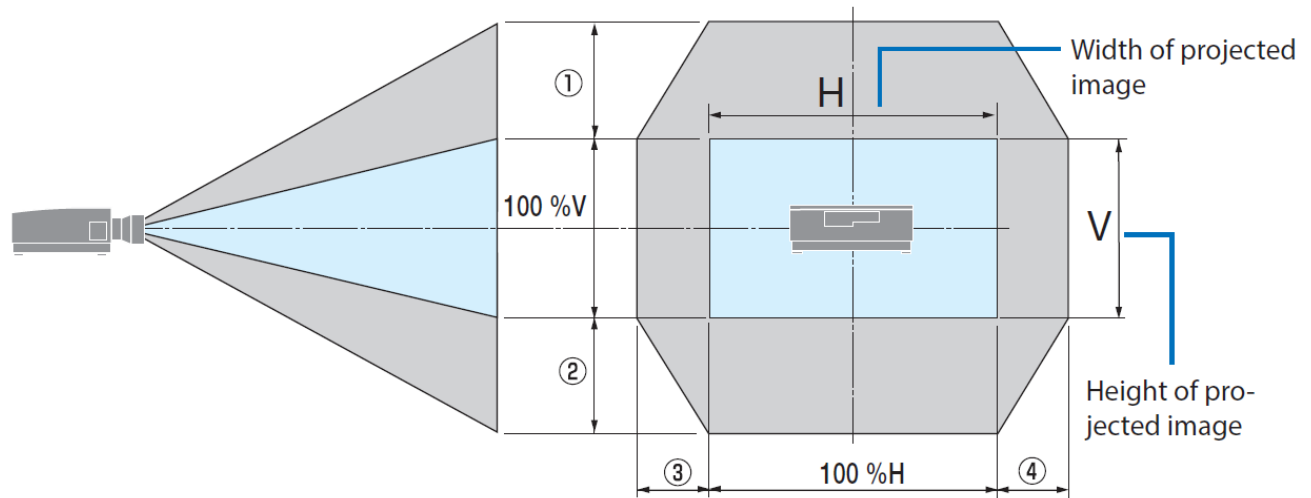
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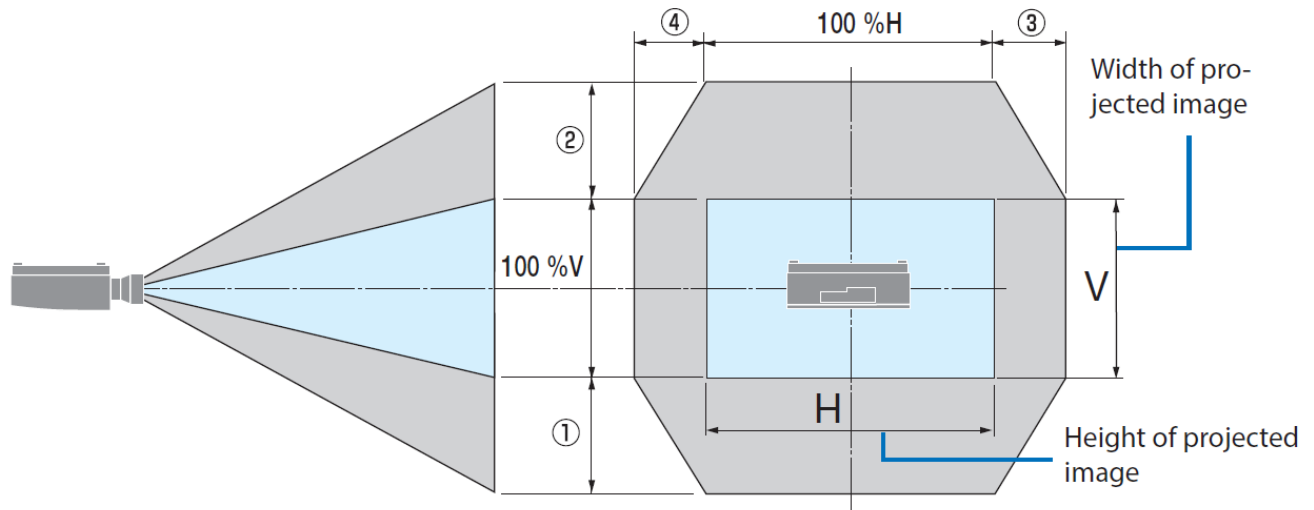
Desktop and Ceiling Mount

Lens Shift Adjustable Range

Desk/front projection



Ceiling/front projector



Number in the figure	Lens Unit					
	NP51ZL	NP52ZL	NP53ZL	NP54ZL	NP55ZL	NP56ZL
① ②	50%V	55%V	65%V			
③ ④	20%H		25%H			

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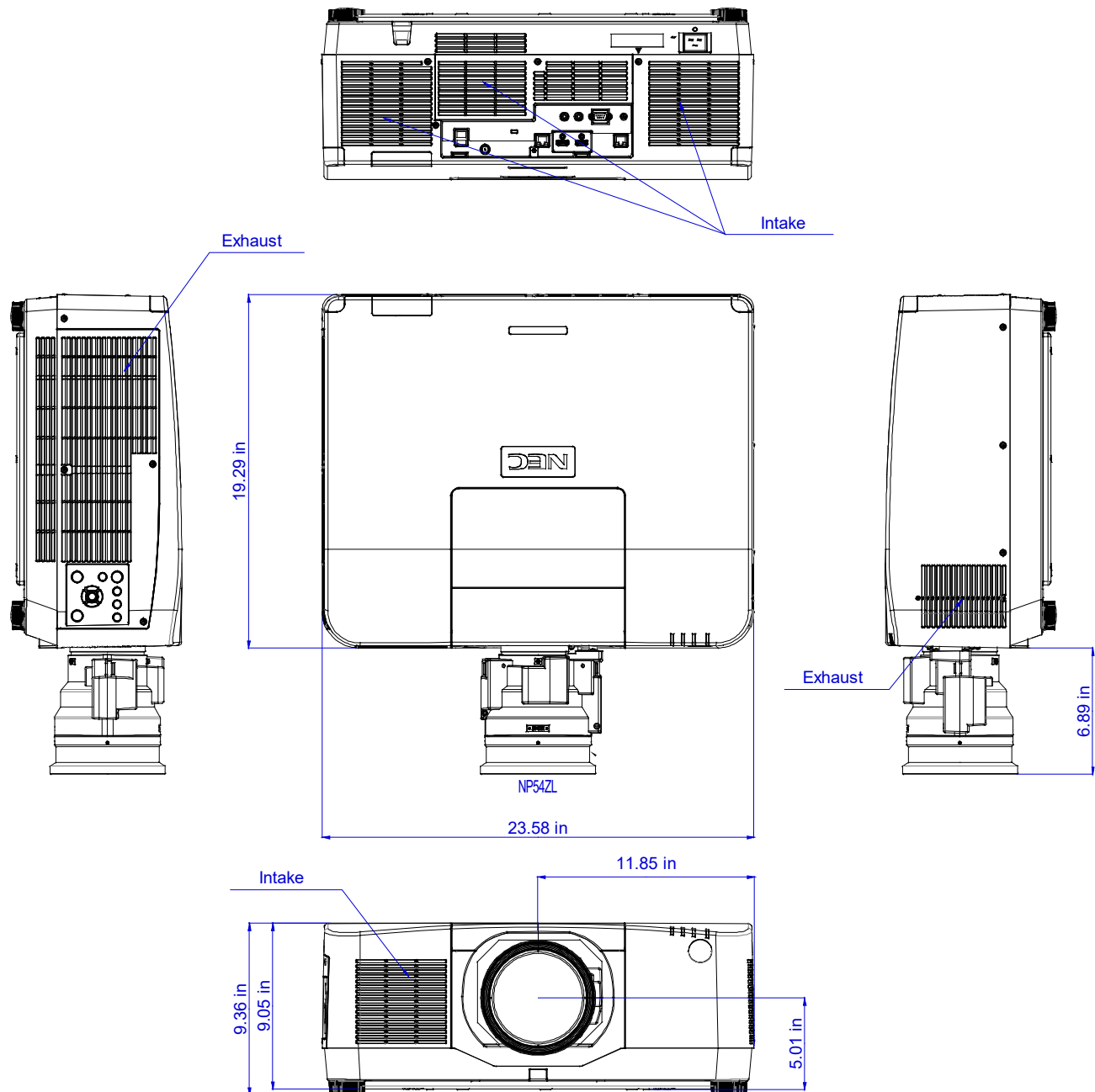
Desktop and Ceiling Mount

Cabinet Dimensions

The following diagrams show the cabinet dimensions for the PA1505UL/PA1705UL.

Dimensions are in inches. For millimeters multiply by 25.4.

Note: Dimensions below shown with the NP54ZL lens

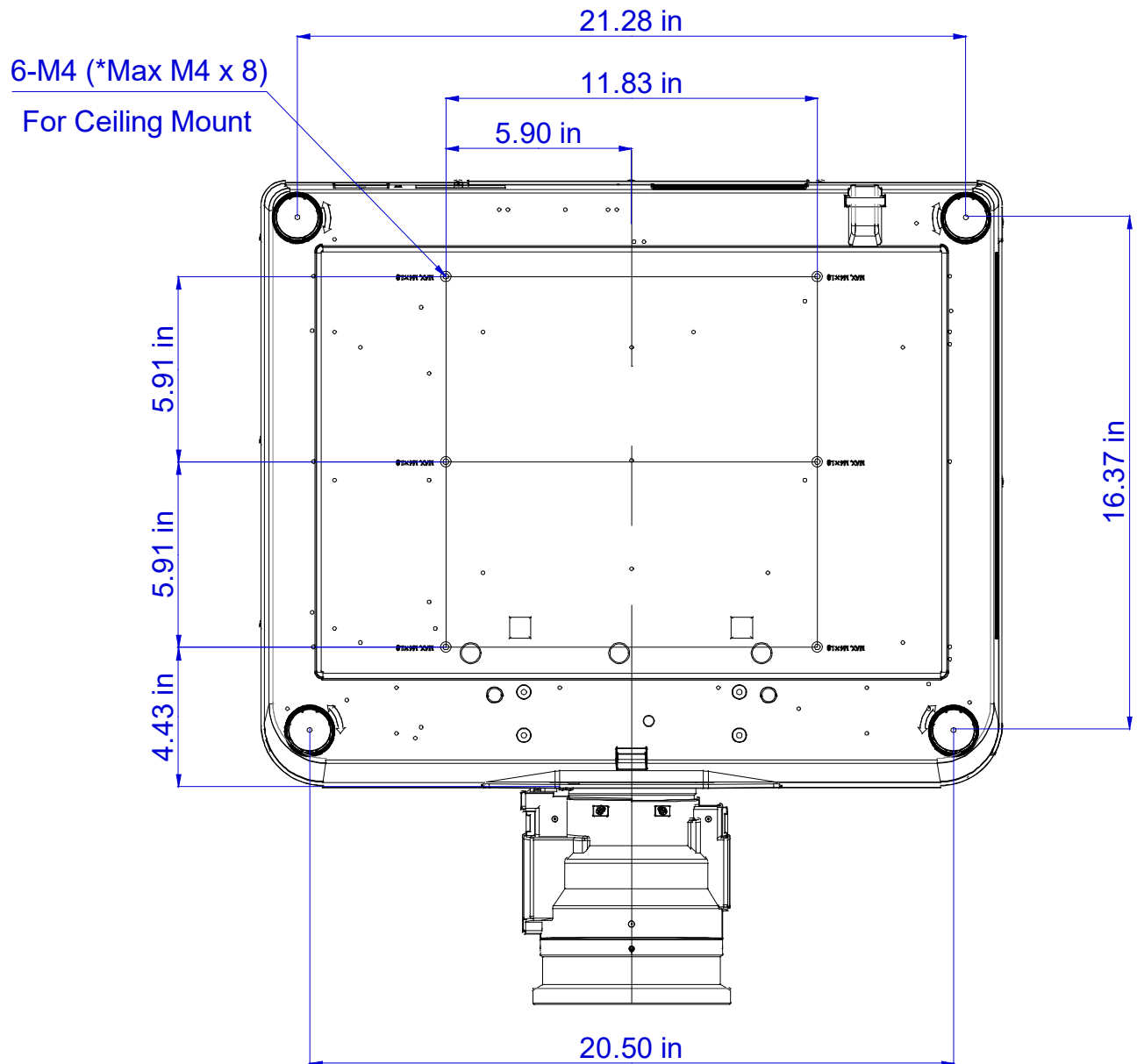


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Cabinet Dimensions

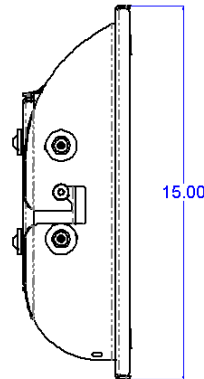
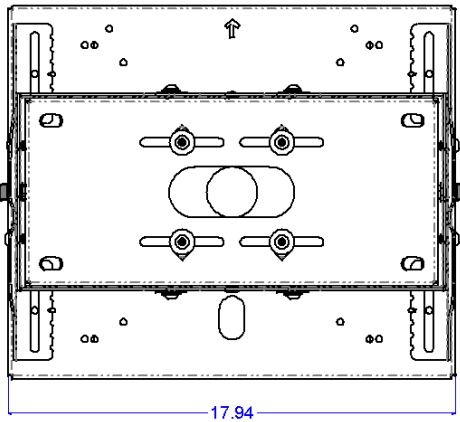
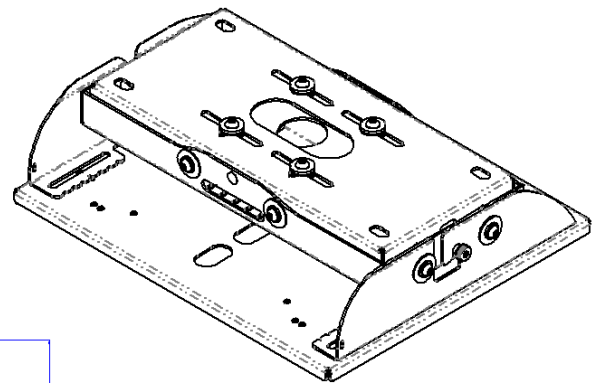
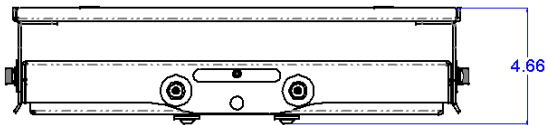


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IPJ2000CM

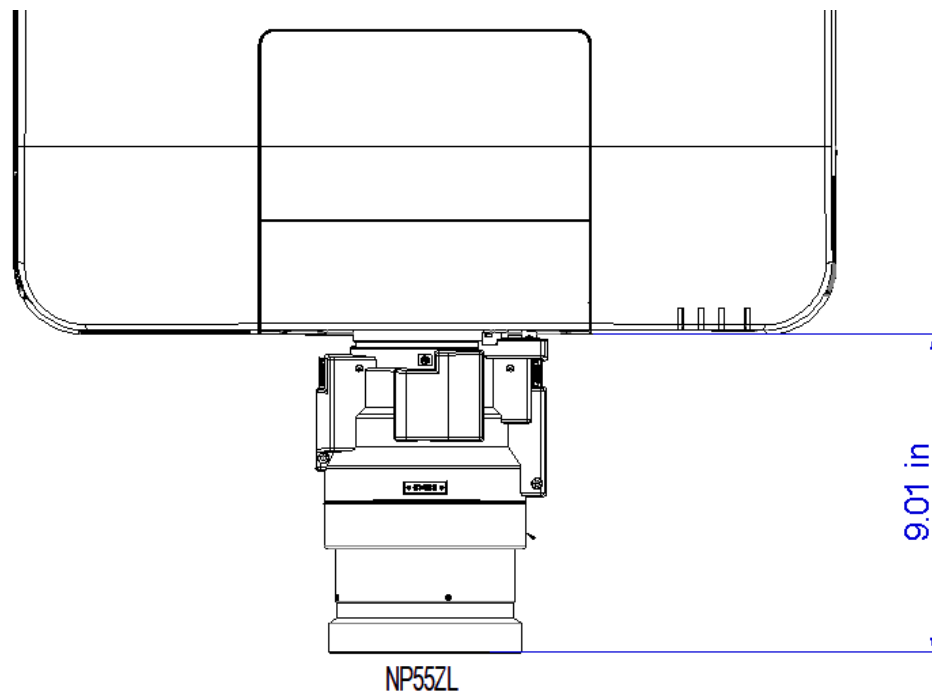
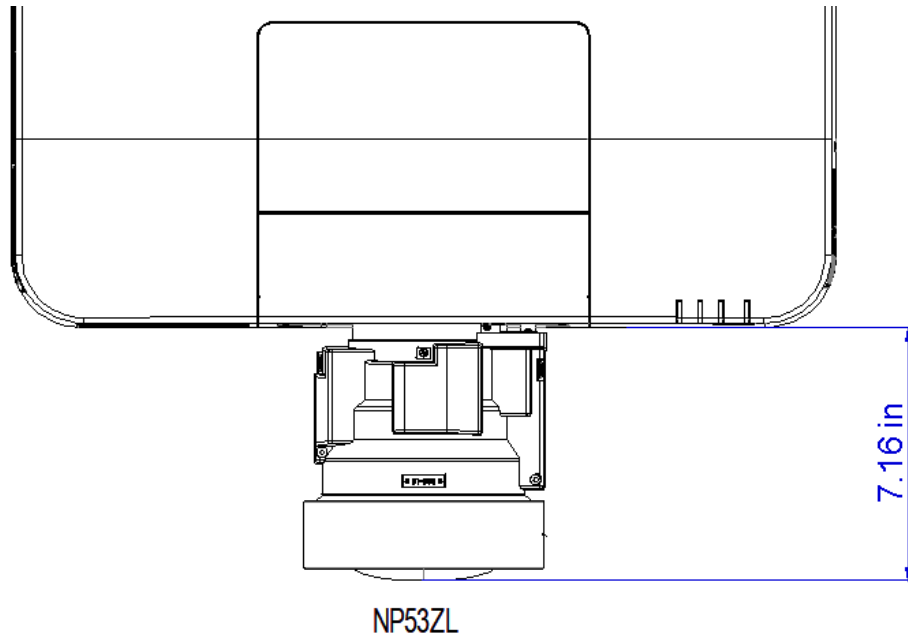


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Optional Lens Dimensions (NP53ZL and NP55ZL)

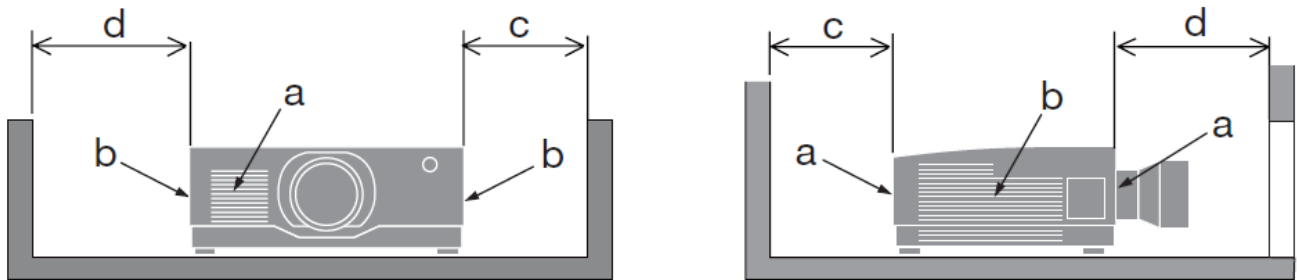


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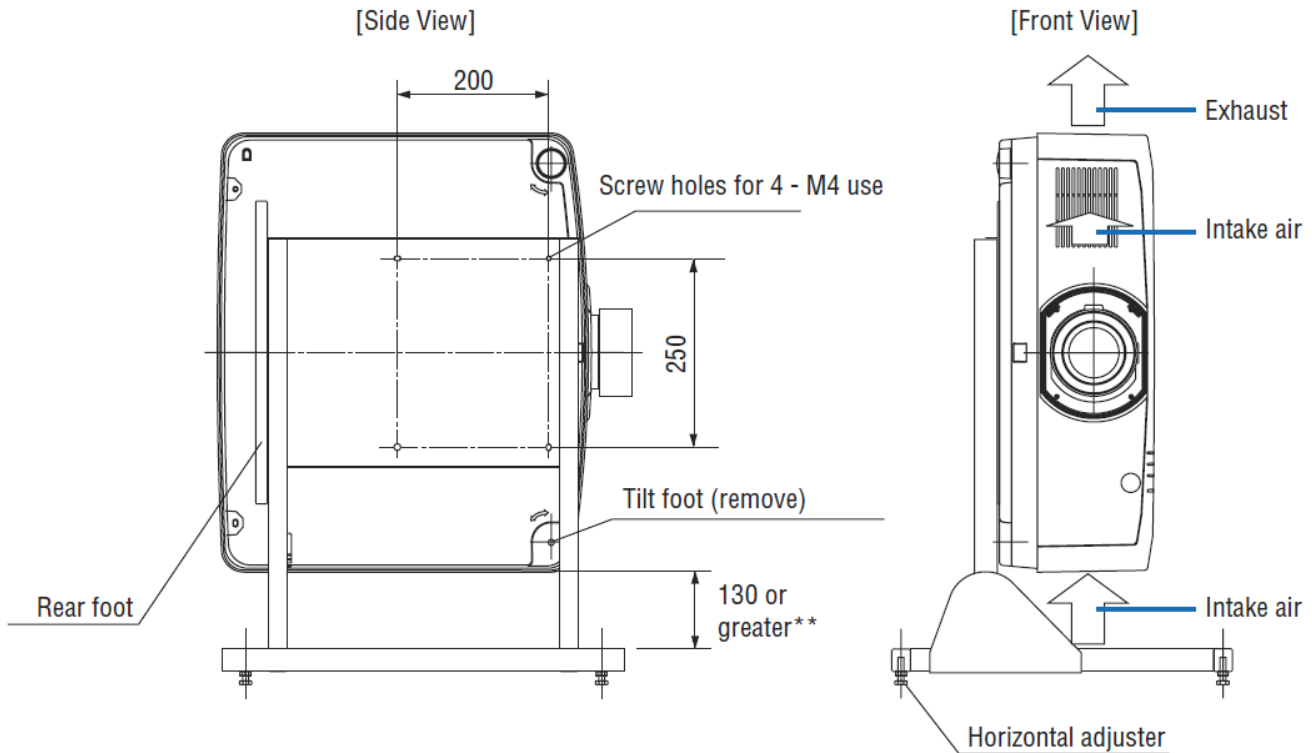
Desktop and Ceiling Mount

Ventilation Requirements



a: Intake vent / b: Exhaust vent / c: 20 cm/8" or greater / d: 30 cm/12" or greater

Portrait Requirements



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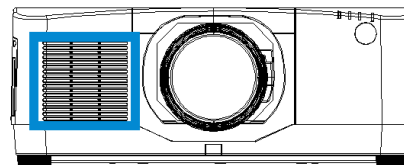
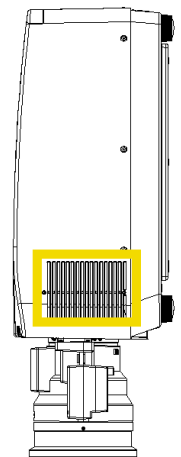
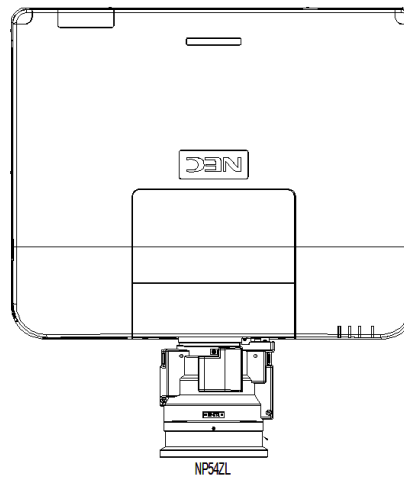
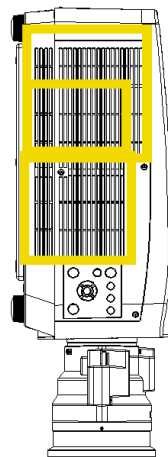
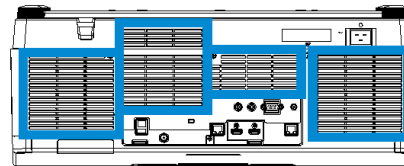
Airflow

NP-PA1505UL

Air volume

EX Air Total	
25deg	6.58 m3/min 232 CFM
Max	14.9 m3/min 526 CFM

IN Air Total	
25deg	3.66 m3/min 129 CFM
Max	7.6 m3/min 267 CFM



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Airflow

NP-PA1705UL

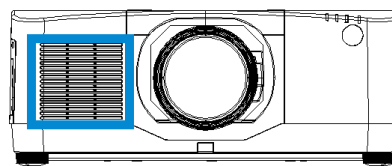
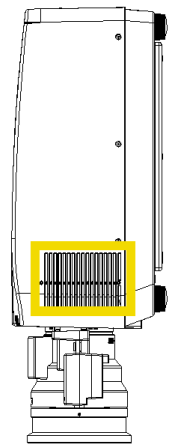
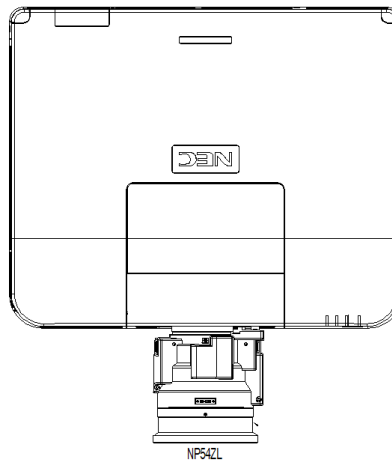
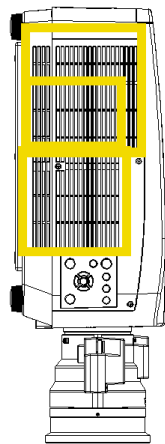
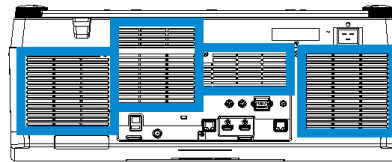
Air volume

EX Air Total

25deg	9.21 m3/min 325 CFM
Max	14.9 m3/min 526 CFM

IN Air Total

25deg	4.23 m3/min 149 CFM
Max	7.6 m3/min 267 CFM



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Desktop and Ceiling Mount

Regulatory Labels

Label 1
Laser explanatory label

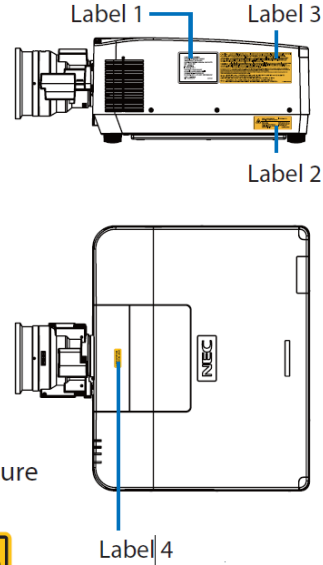


This product complies with EN 50689:2021 except using the lens of NP56ZL

Label 2
Laser explanatory label for USA



Label 4
Laser aperture label



Label 3
Lens replacement caution label

PA1705UL-W/PA1705UL-B

CAUTION < DO NOT STARE INTO THE BEAM : RG2 > THIS PROJECTOR MAY BECOME RG3 WHEN AN INTERCHANGEABLE LENS WITH THROW RATIO GREATER THAN 2.6 IS INSTALLED. REFER TO THE MANUAL FOR THE LENS LIST AND HAZARD DISTANCE BEFORE OPERATION. SUCH COMBINATIONS OF PROJECTOR AND LENS ARE INTENDED FOR PROFESSIONAL USE ONLY AND ARE NOT INTENDED FOR CONSUMER USE.

ATTENTION < NE PAS REGARDER DANS LE FAISCEAU : RG2 > CE PROJECTEUR PEUT DEVENIR RG3 LORSQU'UN OBJECTIF INTERCHANGEABLE AVEC UN RAPPORT DE PROJECTION SUPÉRIEUR À 2,6 EST INSTALLÉ. AVANT UTILISATION, REPORTEZ-VOUS AU MANUEL POUR TROUVER LA LISTE DES OBJECTIFS ET LA DISTANCE DE DANGER. CES COMBINAISONS DE PROJECTEUR ET D'OBJECTIF SONT DESTINÉES À UN USAGE PROFESSIONNEL UNIQUEMENT ET NE SONT PAS DESTINÉES À UNE UTILISATION GRAND PUBLIC.

VORSICHT < NICHT DIREKT IN DEN STRAHL BLICKEN : RG2 > DIESER PROJECTOR KANN IN DIE GRUPPE RG3 FALLEN, WENN EIN AUSTAUSCHBARES OBJEKTIV MIT EINEM BILDSTANDSVERHÄLTNISS VON MEHR ALS 2,6 INSTALLIERT WIRD. BEACHTEN SIE VOR DEM BETRIEB DAS HANDBUCH FÜR EINE LISTE DER OBJEKTIVE UND ZU DEN GEFAHENBEREICHEN. SOLICHE KOMBINATIONEN AUS PROJECTOR UND OBJEKTIV SIND NUR FÜR DEN PROFESSIONELLEN EINSATZ UND NICHT FÜR ALLGEMEINE VERBRAUCHER BESTIMMT.

ВНИМАНИЕ < НЕ СМОТРИТЕ НА ЛУЧ : RG2 > ЭТОТ ПРОЕКТОР МОЖЕТ СТАТЬ RG3, ЕСЛИ УСТАНОВЛЕН СМЕННЫЙ ОБЪЕКТИВ С ПРОЕКЦИОННЫМ ЧИСЛОМ БОЛЬШЕ 2,6. ПЕРЕД НАЧАЛОМ РАБОТЫ ОБРАТИТЕСЬ К РУКОВОДСТВУ ПОЛЬЗОВАТЕЛЯ ДЛЯ ОЗНАКОМЛЕНИЯ СО СПИСОКОМ ОБЪЕКТИВОВ И ЗНАЧЕНИЕМ БЕЗОПАСНОГО РАССТОЯНИЯ. ДАННЫЕ КОМБИНАЦИИ ПРОЕКТОРА И ОБЪЕКТИВА ПРЕДНАЗНАЧЕНЫ ТОЛЬКО ДЛЯ ПРОФЕССИОНАЛЬНОГО ИСПОЛЬЗОВАНИЯ И НЕ ПРЕДНАЗНАЧЕНЫ ДЛЯ ИСПОЛЬЗОВАНИЯ ПОТРЕБИТЕЛЕМ.

주의 < 빔 응시 금지 : RG2 > 이 프로젝터는 투사율이 2.6보다 큰 교환식 렌즈가 설치된 경우 RG3이 될 수 있습니다. 사용 전 렌즈 목록 및 위험 거리에 대해서는 설명서를 참조하십시오. 프로젝터와 렌즈의 이러한 조합은 전문가용으로만 사용해야 하며 소비자용으로 사용해서는 안 됩니다.

警告 < 請勿直視光束 : RG2 > 在安裝了投射比大於 2.6 的互換式鏡頭時, 本投影儀可能變為 RG3。在操作前請參閱手冊瞭解鏡頭列表和危險距離。此投影儀和鏡頭的組合僅供專業用途, 不供客戶使用。

PA1505UL-W/PA1505UL-B

CAUTION < DO NOT STARE INTO THE BEAM : RG2 > THIS PROJECTOR MAY BECOME RG3 WHEN AN INTERCHANGEABLE LENS WITH THROW RATIO GREATER THAN 2.9 IS INSTALLED. REFER TO THE MANUAL FOR THE LENS LIST AND HAZARD DISTANCE BEFORE OPERATION. SUCH COMBINATIONS OF PROJECTOR AND LENS ARE INTENDED FOR PROFESSIONAL USE ONLY AND ARE NOT INTENDED FOR CONSUMER USE.

ATTENTION < NE PAS REGARDER DANS LE FAISCEAU : RG2 > CE PROJECTEUR PEUT DEVENIR RG3 LORSQU'UN OBJECTIF INTERCHANGEABLE AVEC UN RAPPORT DE PROJECTION SUPÉRIEUR À 2,9 EST INSTALLÉ. AVANT UTILISATION, REPORTEZ-VOUS AU MANUEL POUR TROUVER LA LISTE DES OBJECTIFS ET LA DISTANCE DE DANGER. CES COMBINAISONS DE PROJECTEUR ET D'OBJECTIF SONT DESTINÉES À UN USAGE PROFESSIONNEL UNIQUEMENT ET NE SONT PAS DESTINÉES À UNE UTILISATION GRAND PUBLIC.

VORSICHT < NICHT DIREKT IN DEN STRAHL BLICKEN : RG2 > DIESER PROJECTOR KANN IN DIE GRUPPE RG3 FALLEN, WENN EIN AUSTAUSCHBARES OBJEKTIV MIT EINEM BILDSTANDSVERHÄLTNISS VON MEHR ALS 2,9 INSTALLIERT WIRD. BEACHTEN SIE VOR DEM BETRIEB DAS HANDBUCH FÜR EINE LISTE DER OBJEKTIVE UND ZU DEN GEFAHENBEREICHEN. SOLICHE KOMBINATIONEN AUS PROJECTOR UND OBJEKTIV SIND NUR FÜR DEN PROFESSIONELLEN EINSATZ UND NICHT FÜR ALLGEMEINE VERBRAUCHER BESTIMMT.

ВНИМАНИЕ < НЕ СМОТРИТЕ НА ЛУЧ : RG2 > ЭТОТ ПРОЕКТОР МОЖЕТ СТАТЬ RG3, ЕСЛИ УСТАНОВЛЕН СМЕННЫЙ ОБЪЕКТИВ С ПРОЕКЦИОННЫМ ЧИСЛОМ БОЛЬШЕ 2,9. ПЕРЕД НАЧАЛОМ РАБОТЫ ОБРАТИТЕСЬ К РУКОВОДСТВУ ПОЛЬЗОВАТЕЛЯ ДЛЯ ОЗНАКОМЛЕНИЯ СО СПИСОКОМ ОБЪЕКТИВОВ И ЗНАЧЕНИЕМ БЕЗОПАСНОГО РАССТОЯНИЯ. ДАННЫЕ КОМБИНАЦИИ ПРОЕКТОРА И ОБЪЕКТИВА ПРЕДНАЗНАЧЕНЫ ТОЛЬКО ДЛЯ ПРОФЕССИОНАЛЬНОГО ИСПОЛЬЗОВАНИЯ И НЕ ПРЕДНАЗНАЧЕНЫ ДЛЯ ИСПОЛЬЗОВАНИЯ ПОТРЕБИТЕЛЕМ.

주의 < 빔 응시 금지 : RG2 > 이 프로젝터는 투사율이 2.9보다 큰 교환식 렌즈가 설치된 경우 RG3이 될 수 있습니다. 사용 전 렌즈 목록 및 위험 거리에 대해서는 설명서를 참조하십시오. 프로젝터와 렌즈의 이러한 조합은 전문가용으로만 사용해야 하며 소비자용으로 사용해서는 안 됩니다.

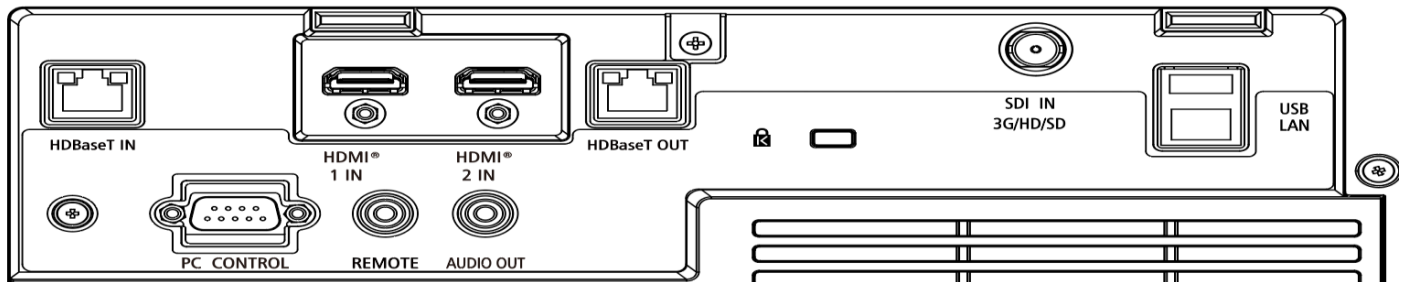
警告 < 請勿直視光束 : RG2 > 在安裝了投射比大於 2.9 的互換式鏡頭時, 本投影儀可能變為 RG3。在操作前請參閱手冊瞭解鏡頭列表和危險距離。此投影儀和鏡頭的組合僅供專業用途, 不供客戶使用。

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Input Panel



PC Control Codes

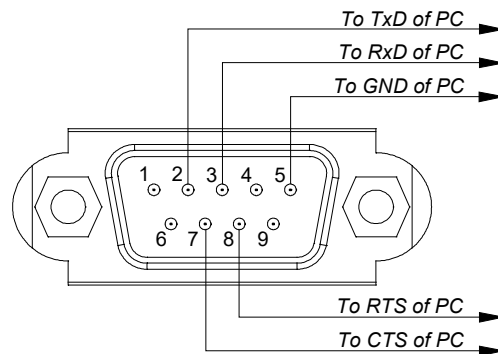
Function	Code Data
POWER ON	02H 00H 00H 00H 00H 02H
POWER OFF	02H 01H 00H 00H 00H 03H
INPUT SELECT HDMI1	02H 03H 00H 00H 02H 01H A1H A9H
INPUT SELECT HDMI2	02H 03H 00H 00H 02H 01H A2H AAH
INPUT SELECT HDBaseT	02H 03H 00H 00H 02H 01H BFH C7H
PICTURE MUTE ON	02H 10H 00H 00H 00H 12H
PICTURE MUTE OFF	02H 11H 00H 00H 00H 13H
SOUND MUTE ON	02H 12H 00H 00H 00H 14H
SOUND MUTE OFF	02H 13H 00H 00H 00H 15H
ON SCREEN MUTE ON	02H 14H 00H 00H 00H 16H
ON SCREEN MUTE OFF	02H 15H 00H 00H 00H 17H
AUTO ADJUST	02H 0FH 00H 00H 02H 05H 00H 18H

Cable Connection

Communication Protocol:

- Baud Rate: 38400 bps (for cable lengths longer than 20', it is recommended changing to 9600 bps in setup menu)
- Data Length: 8 bits
- Parity: No Parity
- Stop Bit: 1 bit
- X on/off: None
- Communications: Full duplex

PC Control Connector (D-Sub 9P)



NOTE 1: Pins 1, 4, 6, and 9 are used inside the projector.

NOTE 2: For long cable runs it is recommended to set communication speed within the projector to 9600 bps.

NOTE 3: Jumper "Request to Send" and "Clear to Send" together on both ends of the cable to simplify cable connection.