

## PA622U Installation Guide

### Desktop and Ceiling Mount

Rev 1.0

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### Product Description

<b>Type:</b>	3 panel LCD projector, 0.76 p-Si TFT w/MLA (PA622U)	<b>Dimensions:</b> 19.7"(W) x 6.5"(H) x 14.4"(D)	<b>Weight:</b> 18.5 lbs
<b>Resolution:</b>	1920 x 1200 (16:10)	<b>Brightness:</b> PA622U:	6200 Lumens
<b>Fan Noise:</b>	39 dB / 33dB @ 1 meter		
<b>Power Consumption:</b>	460W (max)	<b>BTU's:</b>	1571 BTU/hour

Network Ready, integrated wired and wireless adapter  
Manual: Lens Shift, Horizontal & Vertical /Zoom/ Focus

### Lens Specifications

<b>NP11FL:</b> Throw Ratio: ~ 0.8:1 Screen Sizes: 60"-150"	Focal Length: 13.2mm F/#:2.3	<b>NP14ZL:</b> Throw Ratio: 2.97 -4.79:1 Screen Sizes: 60" - 200"	Focal Length: 48.5 - 77.6mm F/#:2.2 -2.64
<b>NP12ZL:</b> Throw Ratio: 1.19 - 1.56:1 Screen Sizes: 40" - 200"	Focal Length: 19.4 – 25.3mm F/#:2.2 – 2.69	<b>NP15ZL:</b> Throw Ratio: 4.70 - 7.02:1 Screen Sizes: 80" - 200"	Focal Length: 76.6 - 116.5mm F/#:2.2 - 2.7
<b>NP13ZL:</b> Throw Ratio: 1.50 - 3.02:1 Screen Sizes: 40" - 200"	Focal Length: 24.4 – 48.6mm F/#:1.7 – 2.37	<b>NP30ZL:</b> Throw Ratio: 0.79 – 1.04:1 Screen Sizes: 40" - 200"	Focal Length: 13.2 – 17.2mm F/#:1.9 - 2.1

### 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.

### Notes

- For screen sizes not indicated on the projection tables, use the formulas below.  
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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### Formulas: 16:10 Aspect Ratio (PA622U—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:**

- NP11FL: C = 0.807W – 1.354
- NP12ZL: C(Wide) = 1.185W – 1.794 ----- C(Tele) = 1.541W – 1.794
- NP13ZL: C(Wide) = 1.488W – 1.974 ----- C(Tele) = 2.970W – 1.972
- NP14ZL: C(Wide) = 2.961W – 4.844 ----- C(Tele) = 4.737W – 4.844
- NP15ZL: C(Wide) = 4.681W – 7.630 ----- C(Tele) = 7.115W – 7.630
- NP30ZL: C(Wide) = 0.808W – 1.537 ----- C(Tele) = 1.054W – 1.537

**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
- Screen Diagonal = W x 18.868/16

### Distance Chart for popular 16:10 Screens (WUXGA)

Screen Size (16:10)			Rear Lens	Zoom Lenses							
Diagonal	Width(W)	Height (H)	NP11FL	NP30ZL	NP12ZL	NP13ZL	NP14ZL	NP15ZL			
inches	inches	inches	0.8:1	0.79 - 1.04:1	1.19 - 1.56:1	1.50 - 3.02:1	2.97 -4.79:1	4.70 - 7.20:1			
			inches	inches	inches	inches	inches	inches			
40	34	21	26.08	25.9 - 34.3	38.5 - 50.6	48.6 - 99.0	95.8 - 156.2	151.5 - 237.9			
60	51	32	39.80	39.7 - 52.2	58.6 - 76.8	73.9 - 149.5	146.2 - 236.7	231.1 - 360.6			
67	57	36	44.65	44.5 - 58.5	65.8 - 86.0	82.8 - 167.3	163.9 - 265.2	259.2 - 404.0			
72	61	38	47.87	47.8 - 62.8	70.5 - 92.2	88.8 - 179.2	175.8 - 284.1	277.9 - 432.9			
84	71	45	55.94	55.8 - 73.3	82.3 - 107.6	103.7 - 208.9	205.4 - 331.5	324.7 - 505.1			
90	76	48	59.98	59.9 - 78.6	88.3 - 115.3	111.1 - 223.7	220.2 - 355.2	348.1 - 541.2			
100	85	53	67.24	67.1 - 88.1	98.9 - 129.2	124.5 - 250.5	246.8 - 397.8	390.3 - 606.2			
120	102	64	80.96	80.9 - 106.0	119.1 - 155.4	149.8 - 301.0	297.2 - 478.3	469.8 - 728.9			
150	127	79	101.14	101.1 - 132.3	148.7 - 193.9	187.0 - 375.2	371.2 - 596.8	586.9 - 909.4			
180	153	95	NA	122.1 - 159.7	179.5 - 234.0	225.7 - 452.4	448.2 - 719.9	708.6 - 1097.2			
210	178	111	NA	142.3 - 186.1	209.1 - 272.5	262.9 - 526.7	522.2 - 838.3	825.6 - 1277.7			
240	204	127	NA	163.3 - 213.5	239.9 - 312.6	301.6 - 603.9	599.2 - 961.5	947.3 - 1465.5			
270	229	143	NA	183.5 - 239.8	269.6 - 351.1	338.8 - 678.2	673.2 - 1079.9	1064.3 - 1646.0			
300	254	159	NA	203.7 - 266.2	299.2 - 389.6	376.0 - 752.4	747.3 - 1198.4	1181.3 - 1826.5			
400	339	212	NA	272.4 - 355.8	399.9 - 520.6	502.5 - 1004.9	998.9 - 1601.0	1579.2 - 2440.3			
500	424	265	NA	341.1 - 445.4	500.6 - 651.6	628.9 - 1257.3	1250.6 - 2003.6	1977.1 - 3054.1			

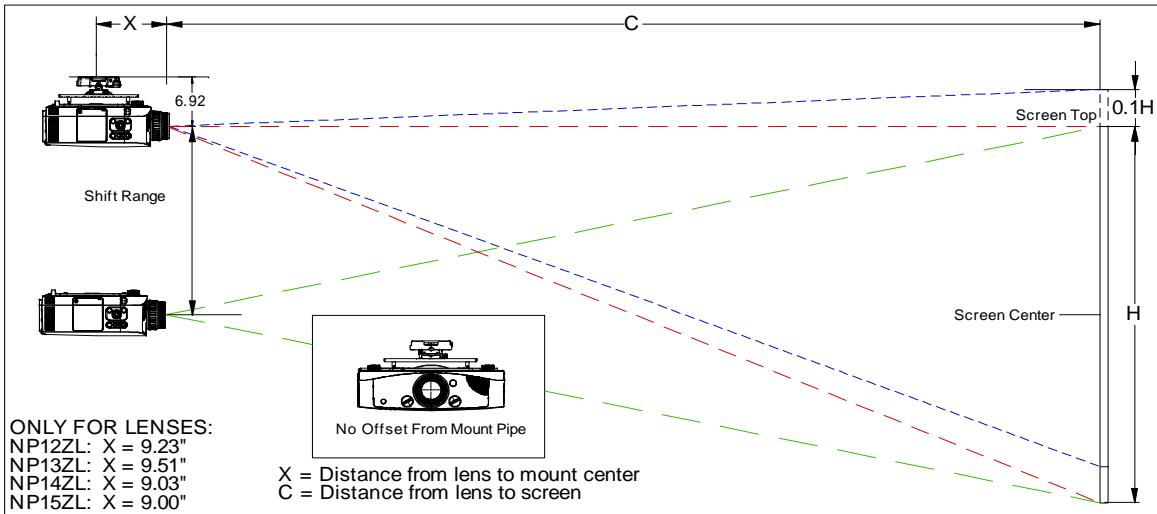
**Note:** For screen sizes not indicated in projection tables, refer to formulas above respective charts.

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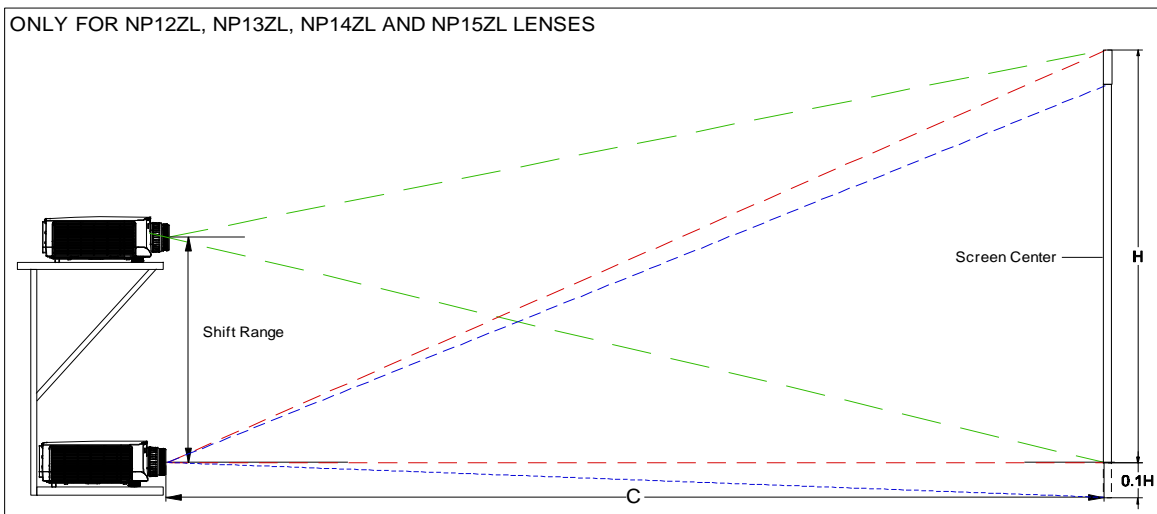
### Desktop and Ceiling Mount

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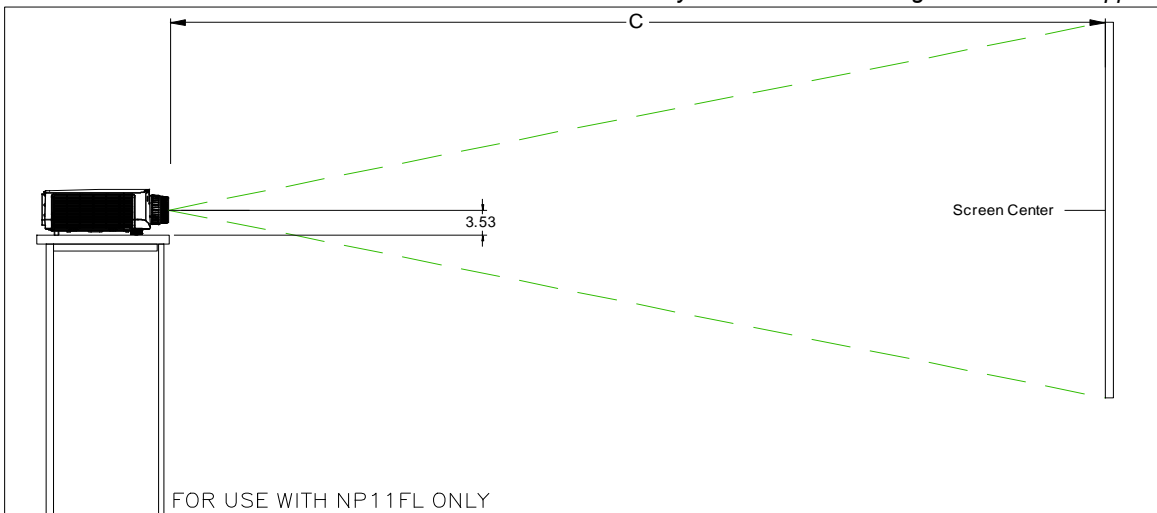
#### Ceiling Mount Installation



#### Desktop Installation



**Note:** Lens Shift Feature is not available to NP11FL. This lens should only be used for "zero degree"/"no-offset" applications. See below

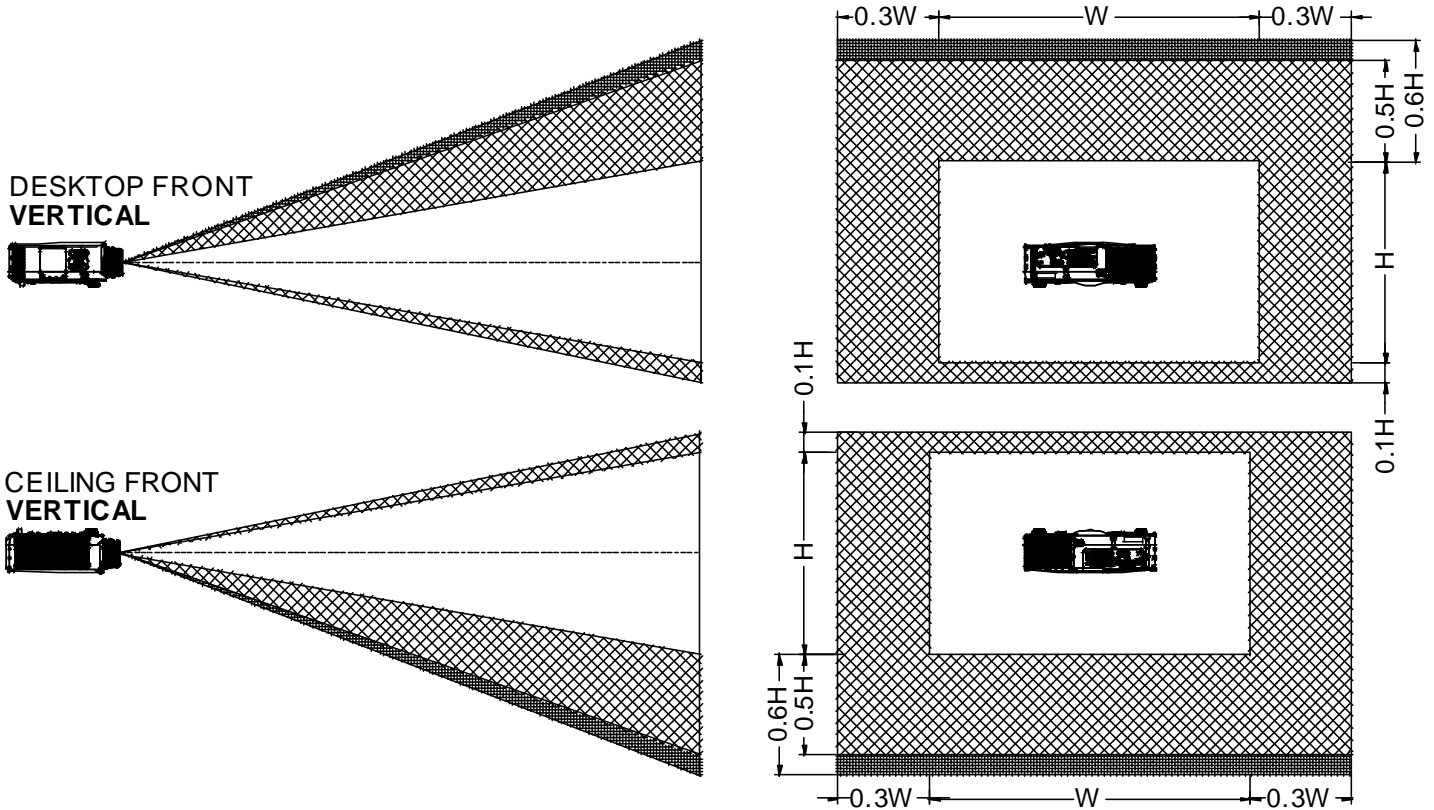


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### Lens Shift Adjustable Range



#### Lens Shift Range for Desktop and Ceiling Mount Application

The diagram below shows the location of the image position in the lens. The lens can be shifted within the shaded area as shown using the normal projection position as a starting point.

**Note:** Lens shift feature is not available with NP11FL (rear lens). NP11FL should be used only for "zero degree" / "no-offset" applications.

#### Maximum Possible Range for NP12ZL, NP13ZL, NP14ZL, NP15ZL:

Towards ceiling/floor: 0.5H (0.6H for PA550W)

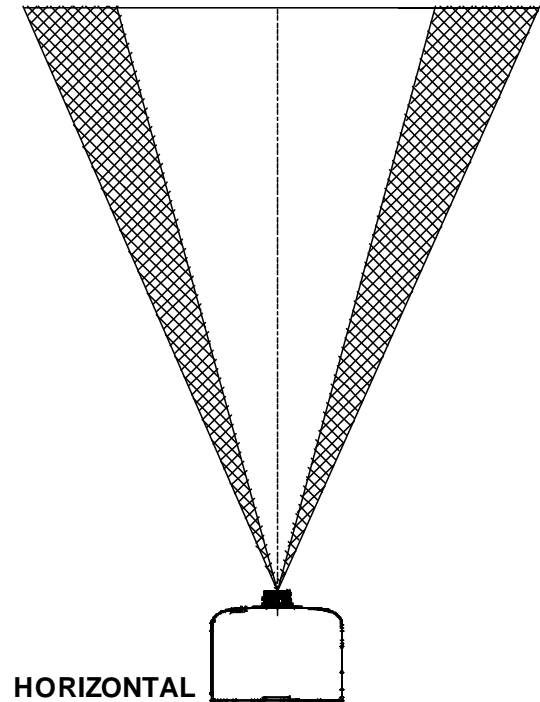
Away from ceiling/floor: 0.1H

Right: 0.3W

Left: 0.3W

(W: width of projected image, H: height of projected image)

**Note:** Horizontal lens shift range for the PA500U is 0.15W at a 200" projected image with NP13ZL



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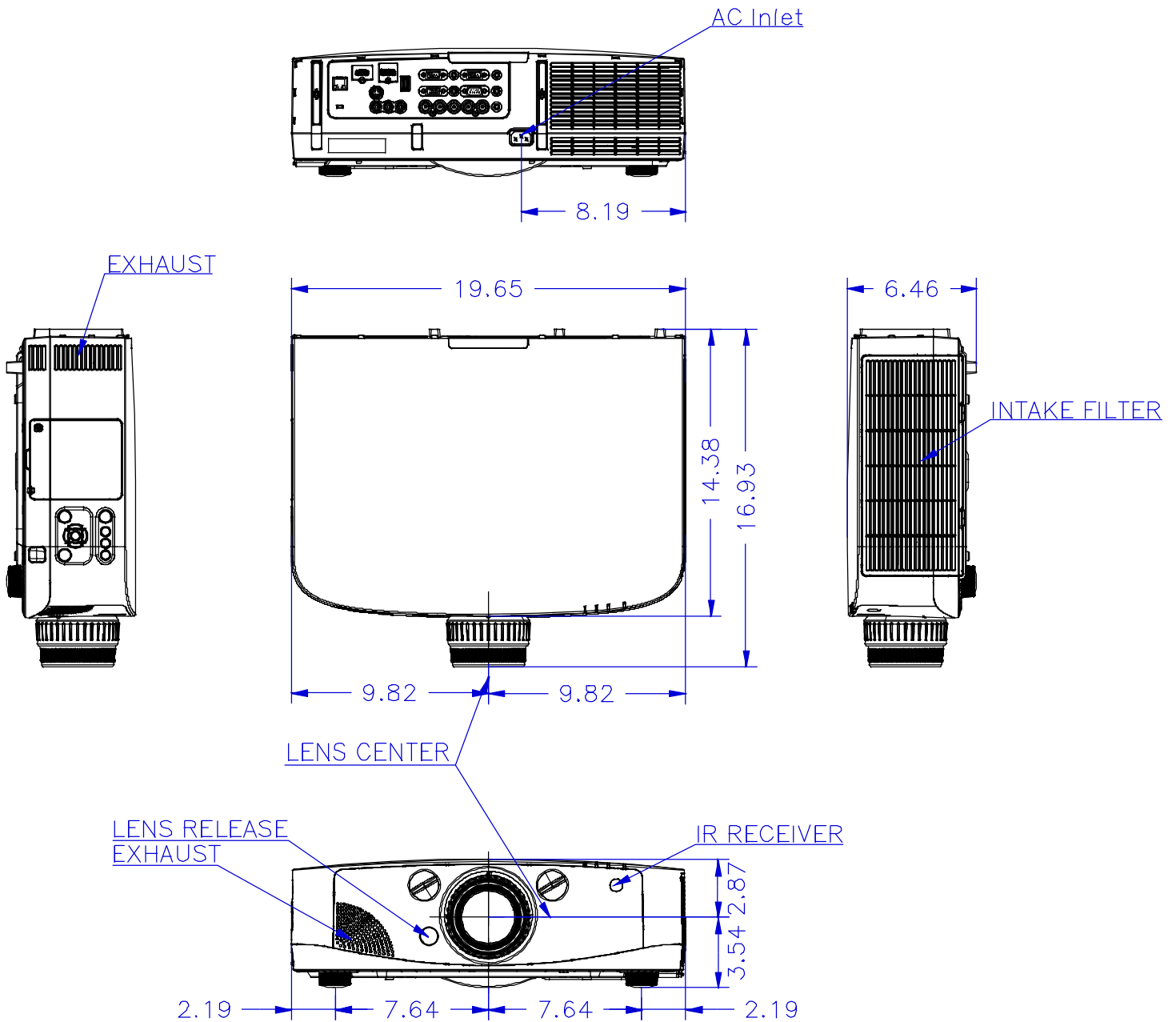
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### Cabinet Dimensions

The following diagrams show the cabinet dimensions for the PA622U/ PA672W/PA722X.

Dimensions are in inches. For millimeters multiply by 25.4.

Note: Dimensions below shown with the NP13ZL lens

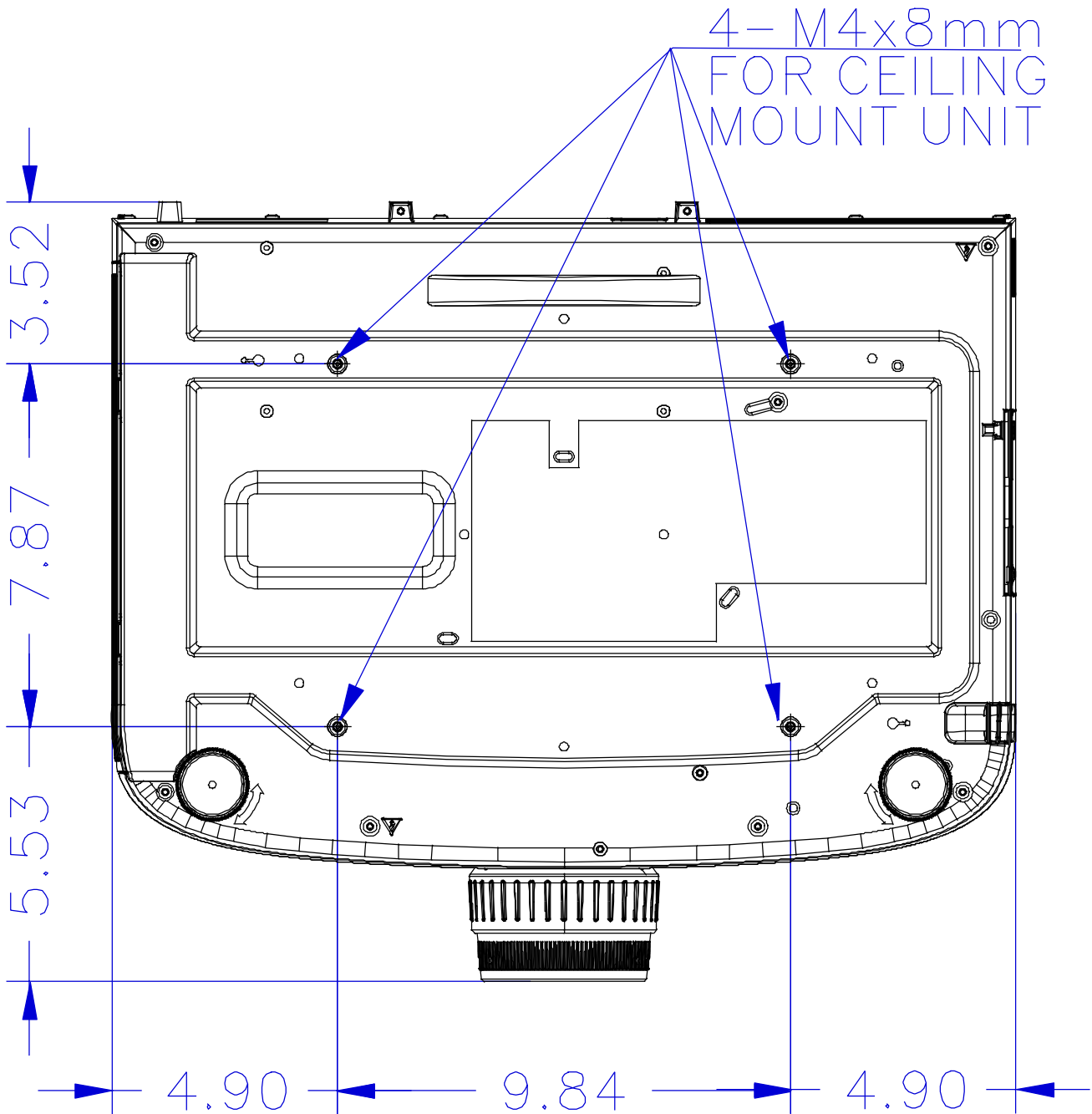


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### Cabinet Dimensions

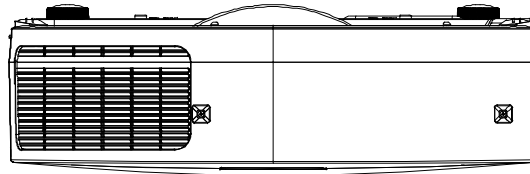


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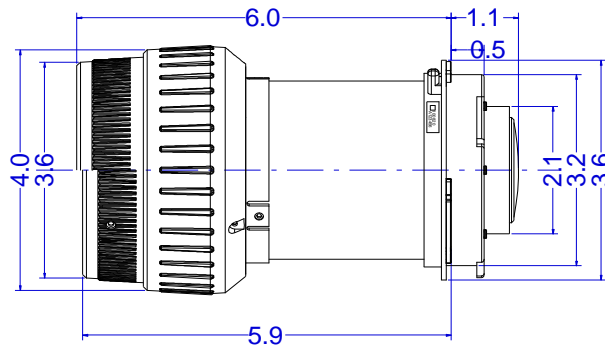
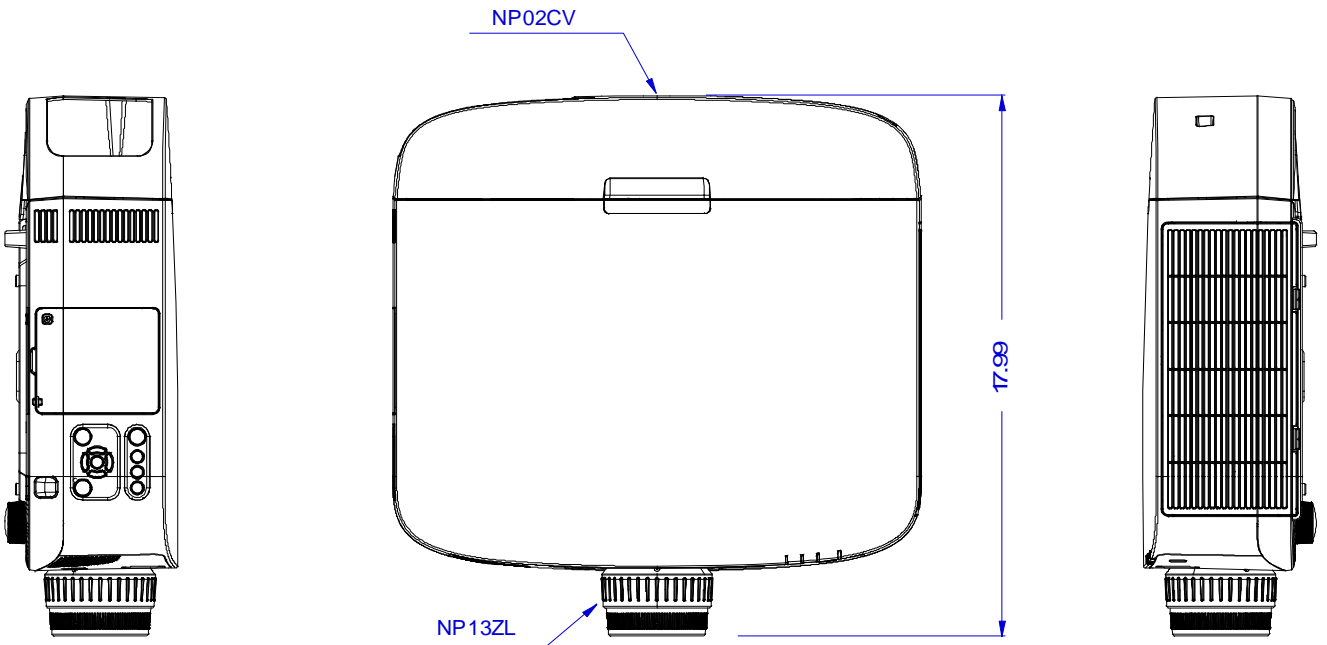
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### Optional Terminal Cover (Part #: NP04CV)



NP13ZL & NP02CV

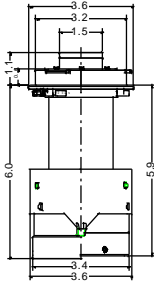


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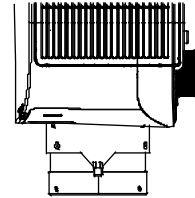
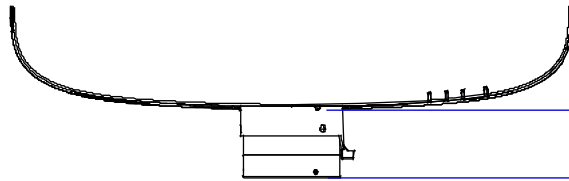
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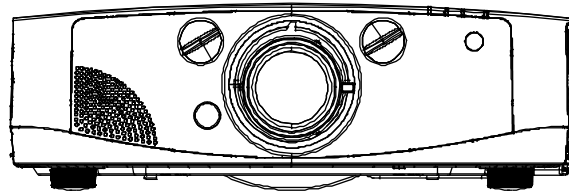
### Optional Lens Dimensions (NP11FL and NP12ZL)



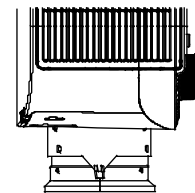
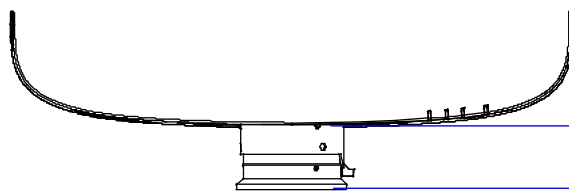
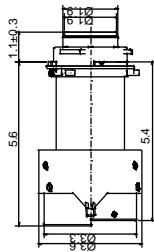
NP11FL



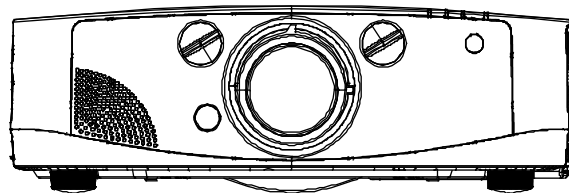
2.35 ~ 2.46



NP12ZL



2.13 ~ 2.18



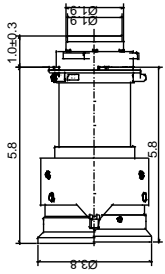


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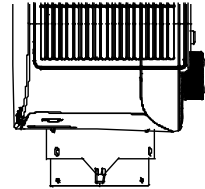
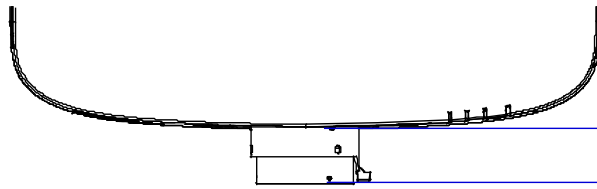
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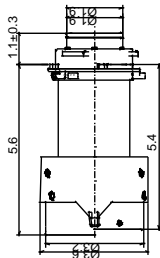
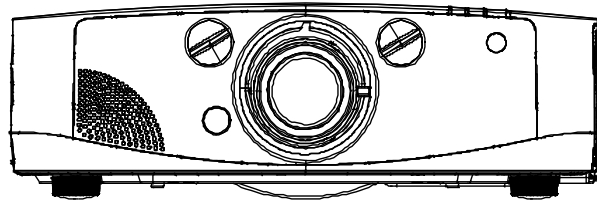
### Optional Lens Dimensions (NP14ZL and NP15ZL)



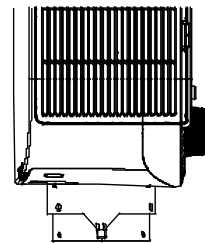
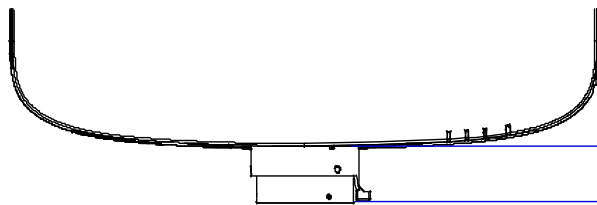
NP14ZL



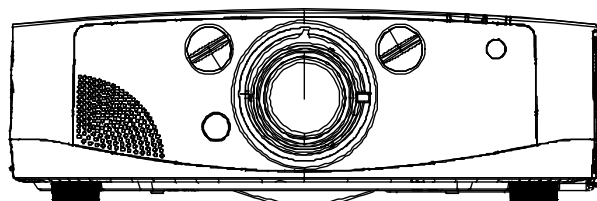
1.80 ~ 1.98



NP15ZL



1.77 ~ 1.95



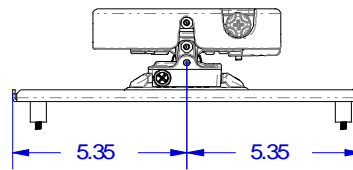
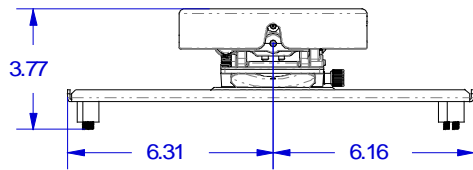
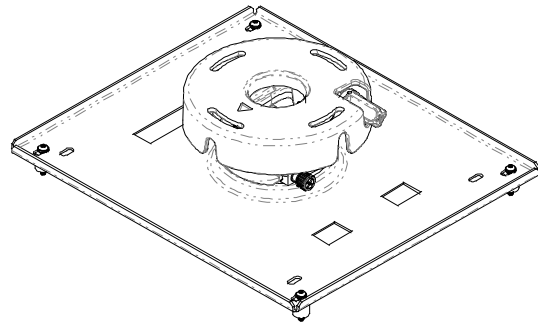
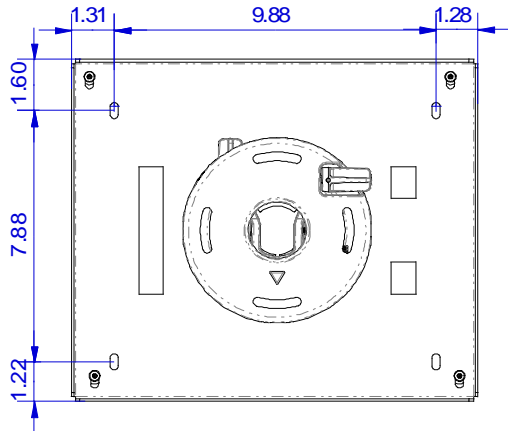
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#### Optional Ceiling Mount Dimensions (Part #: NP3250CM)

The following diagrams show ceiling mount dimensions for the NP3250CM. Dimensions are in inches. For millimeters multiply by 25.4.



#### Input Panel



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### PC Control Codes

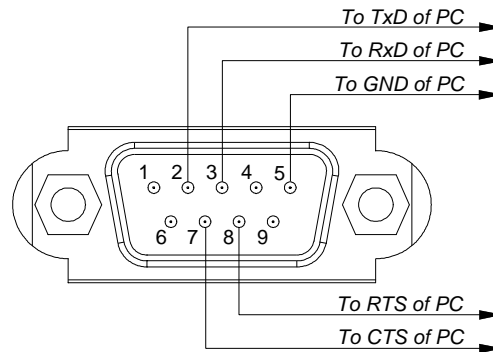
Function	Code Data										
POWER ON	02H	00H	00H	00H	00H	02H					
POWER OFF	02H	01H	00H	00H	00H	03H					
INPUT SELECT HDMI 1	02H	03H	00H	00H	02H	01H	A1H	A9H			
INPUT SELECT HDMI 2	02H	03H	00H	00H	02H	01H	A2H	AAH			
INPUT SELECT DisplayPort	02H	03H	00H	00H	02H	01H	A6H	AEH			
INPUT SELECT BNC	02H	03H	00H	00H	02H	01H	02H	0AH			
INPUT SELECT BNC (C/V)	02H	03H	00H	00H	02H	01H	06H	0EH			
INPUT SELECT BNC (Y/C)	02H	03H	00H	00H	02H	01H	0BH	13H			
INPUT SELECT COMPUTER	02H	03H	00H	00H	02H	01H	01H	09H			
INPUT SELECT HDBaseT	02H	03H	00H	00H	02H	01H	20H	28H			
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					
ASPECT RATIO (4:3 Screen)											
4:3	03H	10H	00H	00H	05H	18H	00H	00H	00H	00H	30H
LETTERBOX	03H	10H	00H	00H	05H	18H	00H	00H	01H	00H	31H
WIDESCREEN	03H	10H	00H	00H	05H	18H	00H	00H	02H	00H	32H
ZOOM	03H	10H	00H	00H	05H	18H	00H	00H	03H	00H	33H
ASPECT RATIO (RGB)											
4:3 WINDOW	03H	10H	00H	00H	05H	18H	00H	00H	00H	00H	30H
16:9	03H	10H	00H	00H	05H	18H	00H	00H	02H	00H	32H
5:4	03H	10H	00H	00H	05H	18H	00H	00H	0BH	00H	3BH
16:10	03H	10H	00H	00H	05H	18H	00H	00H	0CH	00H	3CH
15:9	03H	10H	00H	00H	05H	18H	00H	00H	0DH	00H	3DH
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: One 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.