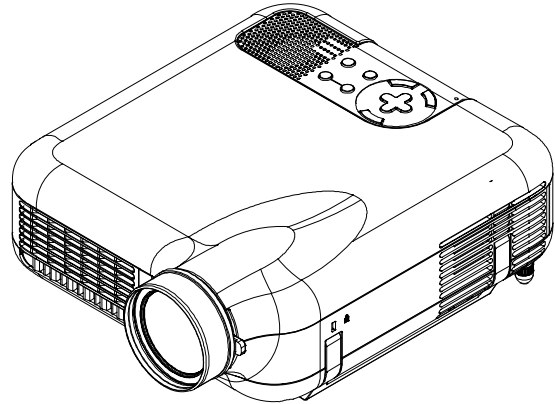


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Product Description

Type:	Single chip DLP™ projector	Color Wheel:	6 Segments
Resolution:	1024 x 768 (4:3 panel) 1024 x 576 (16:9 mode)	Dimensions:	10.24"(W) x 4.74"(H) x 12.56"(D)
Contrast Ratio:	3000:1 (2000:1 w/o variable IRIS)	Weight:	7.1 lbs
Brightness:	1000 ANSI Lumens (full 4:3) (800 ANSI Lumens with variable IRIS closed)		

Aspect Ratio Control

- When used with a 4:3 screen, all aspect ratios are supported. (4:3, 16:9, 1.85:1 and 2.35:1)
 - When used with a 16:9 screen, all aspect ratios are supported. (4:3, 16:9, 1.85:1 and 2.35:1)
- 4:3 sources can be viewed on a 16:9 screen best in the following two ways:
- Normal: The 4:3 source is windowed on the 16:9 screen without any distortion (black bars on the left and right sides)
 - Stadium: The 4:3 source is windowed down and stretched non-linearly to fill the 16:9 screen. (stretched on the left and right sides, not in the middle resulting in no black bars)

Note: Refer to user manual for all modes of aspect ratio control and a more detailed description.

Lens Specifications

Throw Ratio:	1.5-1.9:1 (for 100" diagonal)	Focal Length:	22.4mm – 27.0mm
Offset Angle:	15.8° -18.8° (for 100" diagonal)	F/#:	2.5 – 3.7
Screen Sizes:	30"-200" diagonal (4:3) 40"-200" diagonal (16:9)	Manual Focus/Manual Zoom/Manual IRIS	

Notes

- For screen sizes not indicated in the projection charts, use the formulas on page 2.
- If a value in a chart does not match the results of the formulas, use the values in the chart.
- The ceiling must be strong enough to support the projector and the installation must be in accordance with any local building codes.
- Distances are in inches, for millimeters multiply by 25.4.
- Distances may vary ±5%.

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Formulas when used with a 4:3 screen

units: inches (for millimeters multiply final number by 25.4)

Definitions:

H = Horizontal Screen Width (4:3)
V = Vertical Screen Height (4:3)
B = Vertical distance between lens center and screen center
C = Throw distance
D = Vertical distance between lens center and screen top (screen bottom for desktop application)
 α = Throw Angle

Calculate each value by plugging the screen width (H) into the projection formulas.

Projection Formulas:

$B = 0.5253H - 0.021$
 $C \text{ (wide)} = 1.5607H - 1.751$
 $C \text{ (tele)} = 1.8789H - 1.694$
 $D = 0.1503H - 0.021$
 $\alpha \text{ (wide)} = \tan^{-1} (B/C(\text{wide}))$
 $\alpha \text{ (tele)} = \tan^{-1} (B/C(\text{tele}))$

Screen Formulas (4:3):

$H = V \times 4/3$
 $V = H \times 3/4$
Screen Diagonal = $H \times 5/4$

Formulas when used with a 16:9 screen

units: inches (for millimeters multiply final number by 25.4)

Definitions:

H = Horizontal Screen Width (16:9)
V = Vertical Screen Height (16:9)
B = Vertical distance between lens center and screen center
C = Throw distance
D = Vertical distance between lens center and screen top (screen bottom for desktop application)
 α = Throw Angle

Calculate projection values by plugging the screen width (H) into the projection formulas.

Projection Formulas:

$B = 0.5253H - 0.021$
 $C \text{ (wide)} = 1.5607H - 1.751$
 $C \text{ (tele)} = 1.8789H - 1.694$
 $D = 0.0.24405H - 0.021$
 $\alpha \text{ (wide)} = \tan^{-1} (B/C(\text{wide}))$
 $\alpha \text{ (tele)} = \tan^{-1} (B/C(\text{tele}))$

Screen Formulas (16:9):

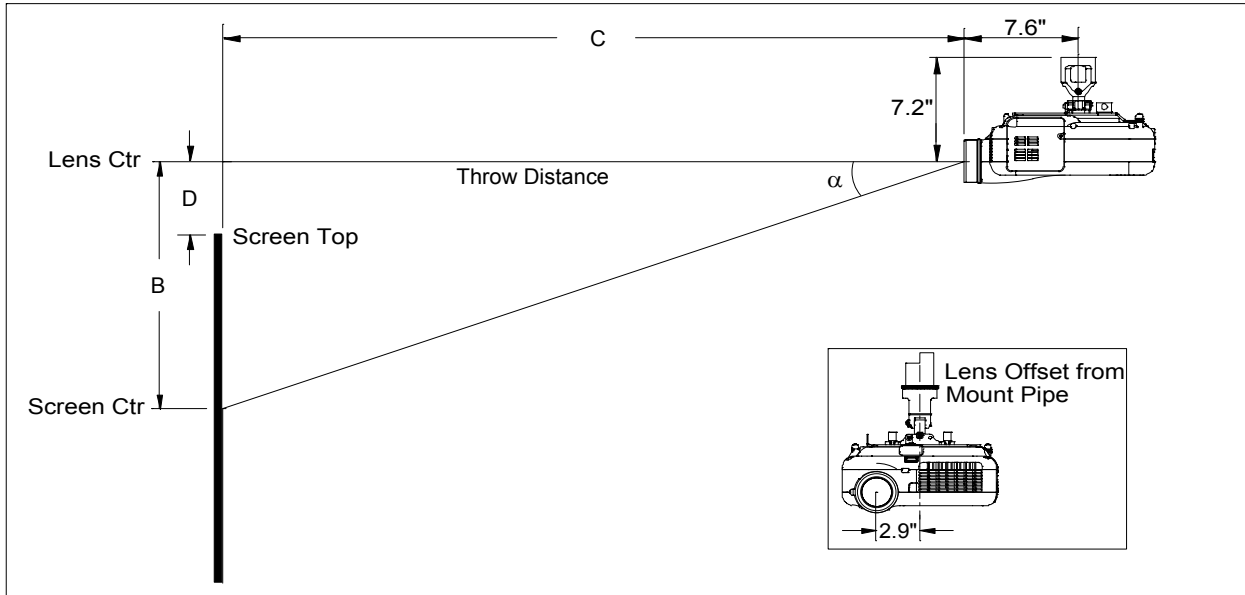
$H = V \times 16/9$
 $V = H \times 9/16$
Screen Diagonal = $H \times 18.358/16$

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Ceiling Mounted Installation using a 4:3 screen

The following diagram shows the relationship between projector position and the screen. Refer to the chart below for data. Distances are in inches. For millimeters multiply by 25.4.



Distance chart for popular 4:3 screen sizes

Screen Size (4:3)			B	C	D	α
Diagonal	Width(H)	Height(V)				
inches	inches	inches	inches	wide - tele inches	inches	wide - tele degrees
30	24	18	12.6	35.7 - 43.4	3.6	19.4 - 16.2
40	32	24	16.8	48.2 - 58.4	4.8	19.2 - 16.0
60	48	36	25.2	73.2 - 88.5	7.2	19.0 - 15.9
67	53.6	40.2	28.1	81.9 - 99.0	8.0	19.0 - 15.9
72	57.6	43.2	30.2	88.1 - 106.5	8.6	18.9 - 15.8
84	67.2	50.4	35.3	103.1 - 124.6	10.1	18.9 - 15.8
90	72	54	37.8	110.6 - 133.6	10.8	18.9 - 15.8
100	80	60	42.0	123.1 - 148.6	12.0	18.8 - 15.8
120	96	72	50.4	148.1 - 178.7	14.4	18.8 - 15.8
150	120	90	63.0	185.5 - 223.8	18.0	18.8 - 15.7
180	144	108	75.6	223.0 - 268.9	21.6	18.7 - 15.7
200	160	120	84.0	248.0 - 298.9	24.0	18.7 - 15.7

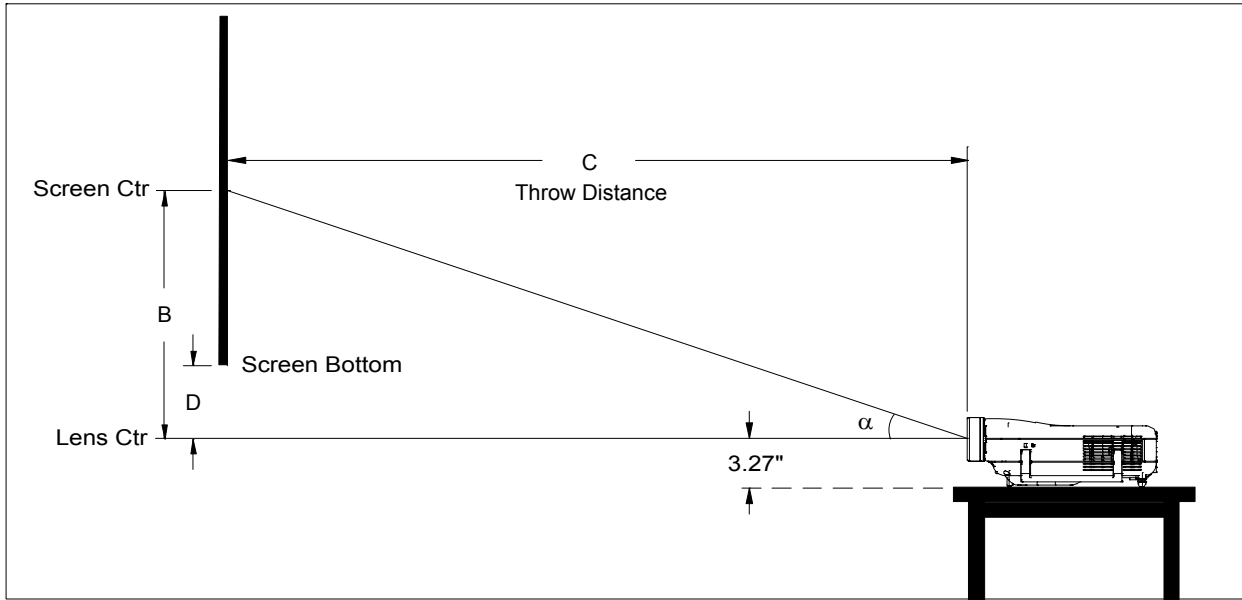
Note: For screen sizes not indicated on the chart, use the formulas on page 2.

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Desktop Setup using a 4:3 screen

The following diagram shows the relationship between projector position and the screen. Refer to the chart below for data. Distances are in inches. For millimeters multiply by 25.4.



Distance chart for popular 4:3 screen sizes

Screen Size (4:3)			B inches	C wide - tele inches	D inches	α wide - tele degrees
Diagonal inches	Width(H) inches	Height(V) inches				
30	24	18	12.6	35.7 - 43.4	3.6	19.4 - 16.2
40	32	24	16.8	48.2 - 58.4	4.8	19.2 - 16.0
60	48	36	25.2	73.2 - 88.5	7.2	19.0 - 15.9
67	53.6	40.2	28.1	81.9 - 99.0	8.0	19.0 - 15.9
72	57.6	43.2	30.2	88.1 - 106.5	8.6	18.9 - 15.8
84	67.2	50.4	35.3	103.1 - 124.6	10.1	18.9 - 15.8
90	72	54	37.8	110.6 - 133.6	10.8	18.9 - 15.8
100	80	60	42.0	123.1 - 148.6	12.0	18.8 - 15.8
120	96	72	50.4	148.1 - 178.7	14.4	18.8 - 15.8
150	120	90	63.0	185.5 - 223.8	18.0	18.8 - 15.7
180	144	108	75.6	223.0 - 268.9	21.6	18.7 - 15.7
200	160	120	84.0	248.0 - 298.9	24.0	18.7 - 15.7

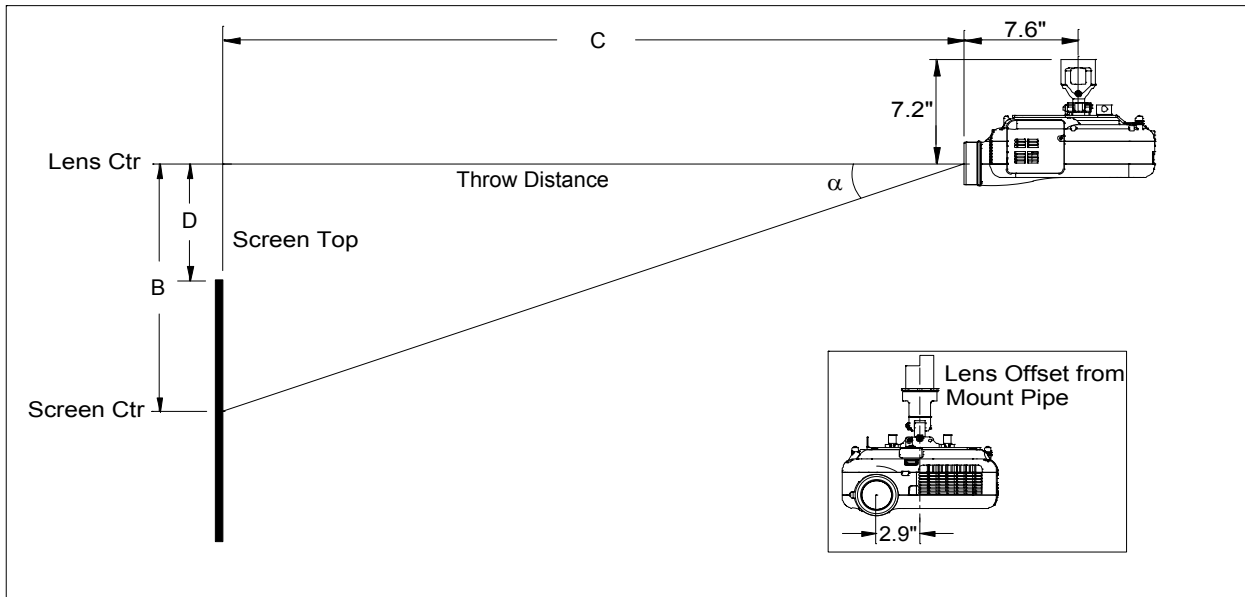
Note: For screen sizes not indicated on the chart, use the formulas on page 2.

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Ceiling Mounted Installation using a 16:9 screen

The following diagram shows the relationship between projector position and the screen. Refer to the chart below for data. Distances are in inches. For millimeters multiply by 25.4.



Distance chart for popular 16:9 screen sizes

Screen Size (16:9)			B	C wide - tele inches	D	α wide - tele degrees
Diagonal inches	Width(H) inches	Height(V) inches				
40	35	20	18.4	52.9 - 64.1	8.5	19.2 - 16.0
83	72	40.5	37.8	110.6 - 133.6	17.6	18.9 - 15.8
92	80	45	42.0	123.1 - 148.6	19.5	18.8 - 15.8
100	87	49	45.7	134.0 - 161.8	21.2	18.8 - 15.8
106	92	52	48.3	141.8 - 171.2	22.4	18.8 - 15.8
110	96	54	50.4	148.1 - 178.7	23.4	18.8 - 15.8
123	107	60	56.2	165.2 - 199.3	26.1	18.8 - 15.7
133	116	65	60.9	179.3 - 216.3	28.3	18.8 - 15.7
135	118	66	62.0	182.4 - 220.0	28.8	18.8 - 15.7
165	144	81	75.6	223.0 - 268.9	35.1	18.7 - 15.7
188	164	92	86.1	254.2 - 306.4	40.0	18.7 - 15.7
200	174	98	91.4	269.8 - 325.2	42.4	18.7 - 15.7

Note: For screen sizes not indicated on the chart, use the formulas on page 2.

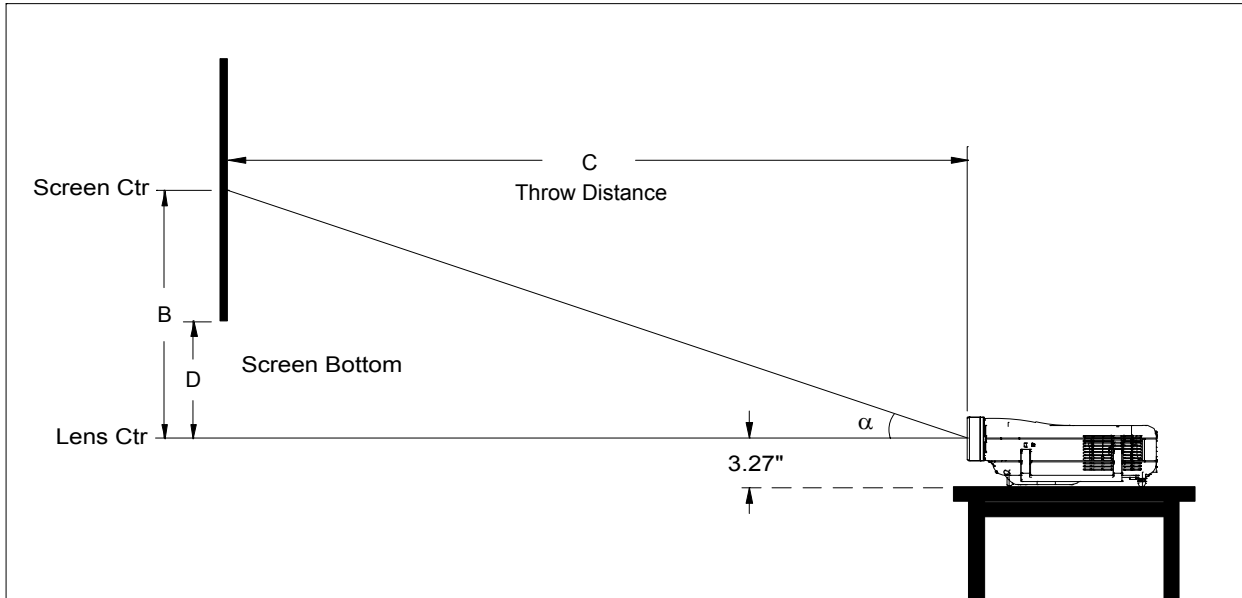
Note: There is a vertical position adjustment when the projector is set for 16:9 in the "Screen" menu. The range of vertical position is dependent on aspect ratio and 3D Reform used.

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Desktop Setup using a 16:9 screen

The following diagram shows the relationship between projector position and the screen. Refer to the chart below for data. Distances are in inches. For millimeters multiply by 25.4.



Distance chart for popular 16:9 screen sizes

Screen Size (16:9)			B	C wide - tele inches	D	α wide - tele degrees
Diagonal inches	Width(H) inches	Height(V) inches				
40	35	20	18.4	52.9 - 64.1	8.5	19.2 - 16.0
83	72	40.5	37.8	110.6 - 133.6	17.6	18.9 - 15.8
92	80	45	42.0	123.1 - 148.6	19.5	18.8 - 15.8
100	87	49	45.7	134.0 - 161.8	21.2	18.8 - 15.8
106	92	52	48.3	141.8 - 171.2	22.4	18.8 - 15.8
110	96	54	50.4	148.1 - 178.7	23.4	18.8 - 15.8
123	107	60	56.2	165.2 - 199.3	26.1	18.8 - 15.7
133	116	65	60.9	179.3 - 216.3	28.3	18.8 - 15.7
135	118	66	62.0	182.4 - 220.0	28.8	18.8 - 15.7
165	144	81	75.6	223.0 - 268.9	35.1	18.7 - 15.7
188	164	92	86.1	254.2 - 306.4	40.0	18.7 - 15.7
200	174	98	91.4	269.8 - 325.2	42.4	18.7 - 15.7

Note: For screen sizes not indicated on the chart, use the formulas on page 2.

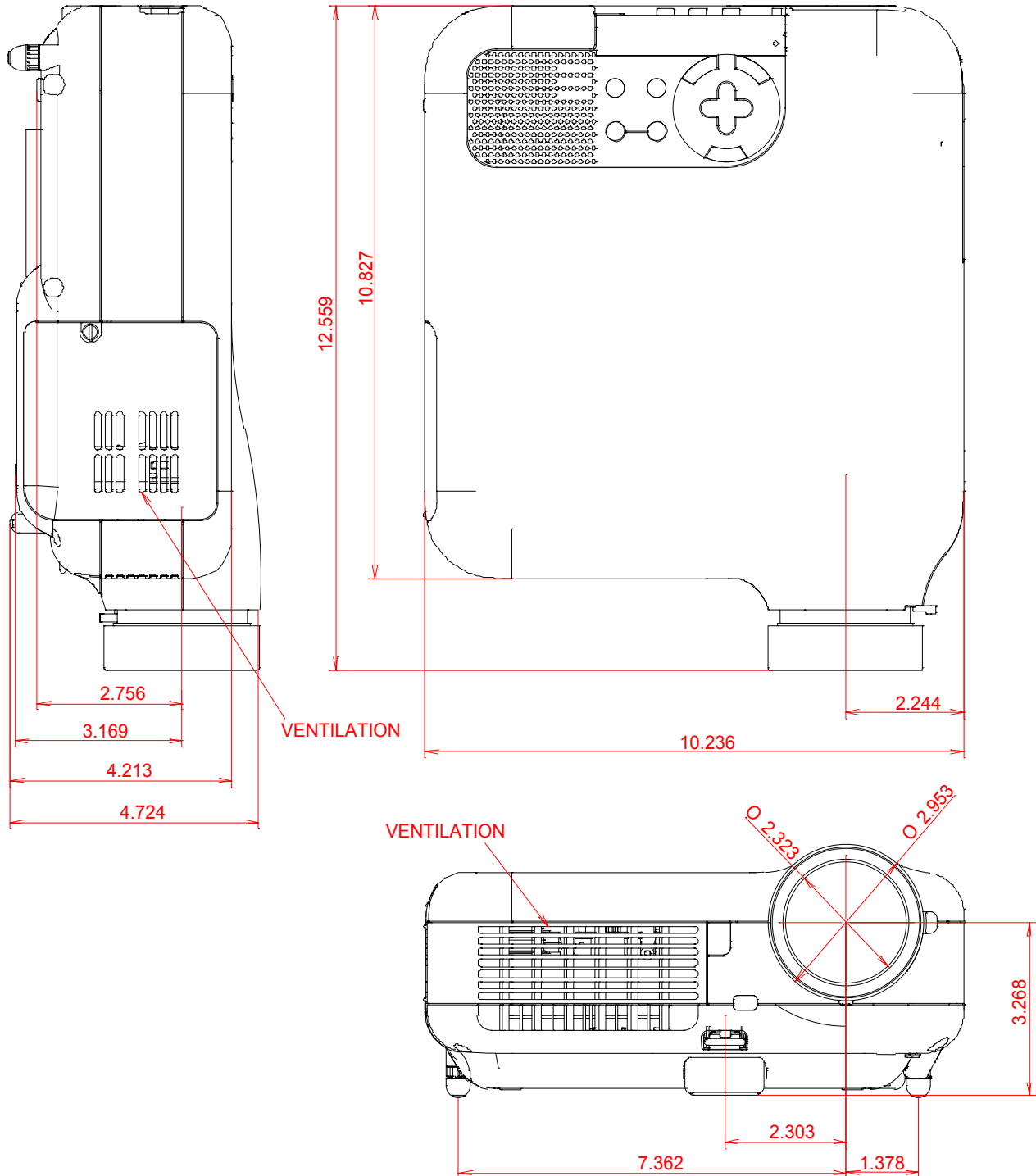
Note: There is a vertical position adjustment when the projector is set for 16:9 in the "Screen" menu. The range of vertical position is dependent on aspect ratio and 3D Reform used.

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Cabinet Dimensions

The following drawings show the cabinet dimensions for the HT1000.
Dimensions are in inches. For millimeters multiply by 25.4.

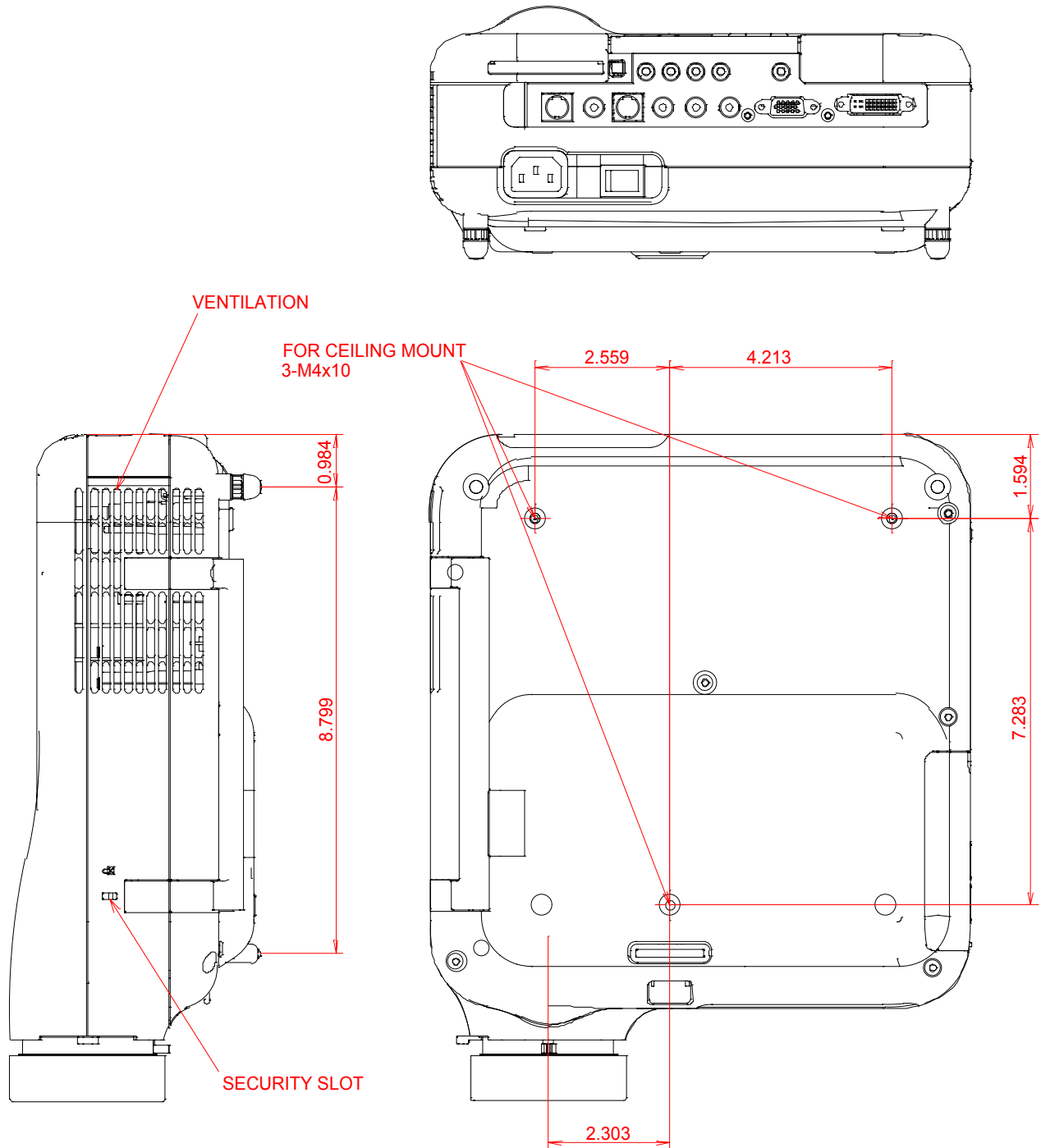


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Cabinet Dimensions (continued)

The following drawings show the cabinet dimensions for the HT1000.
Dimensions are in inches. For millimeters multiply by 25.4.

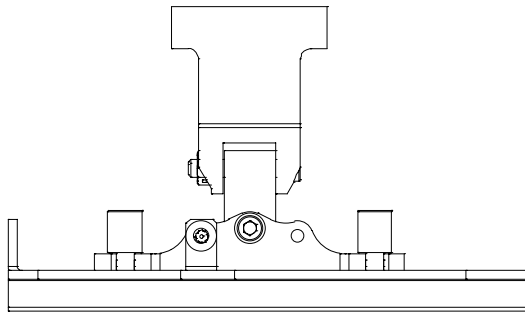
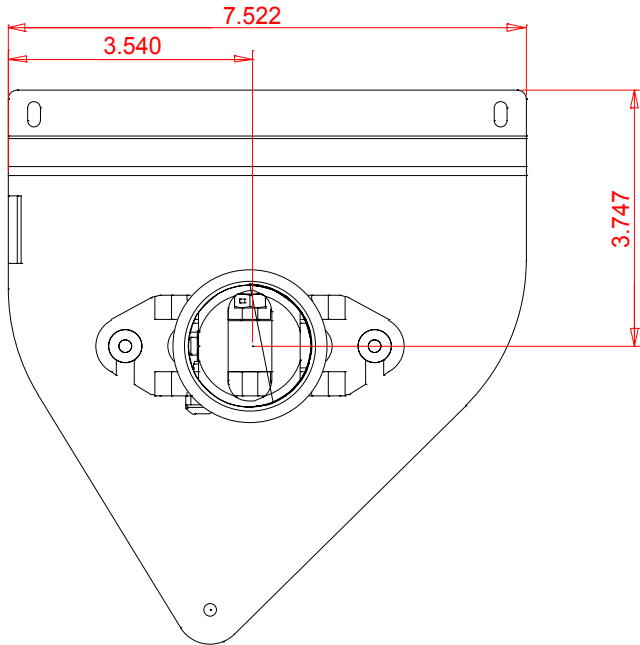


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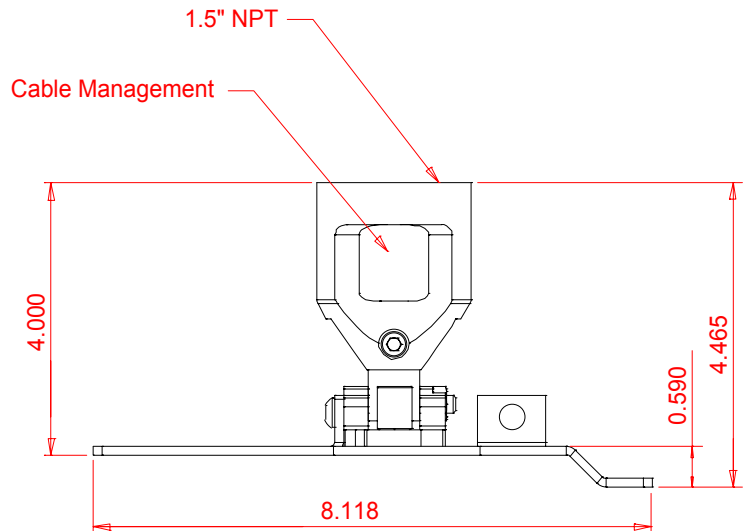
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Optional Ceiling Mount Dimensions (Model #: LT60CM)

The following drawings show ceiling mount dimensions for the HT1000.
Dimensions are in inches. For millimeters multiply by 25.4.



Color: Silver



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Control Codes

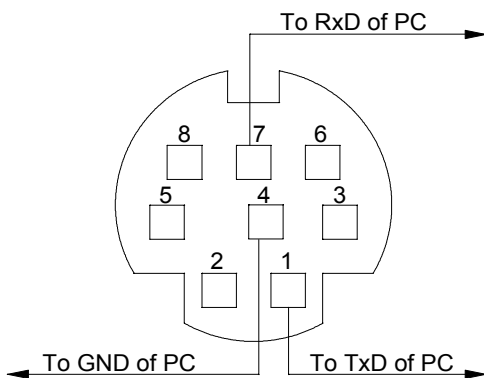
Function	Code Data
POWER ON	02H 00H 00H 00H 00H 02H
POWER OFF	02H 01H 00H 00H 00H 03H
INPUT SELECT RGB	02H 03H 00H 00H 02H 01H 01H 09H
INPUT SELECT COMPONENT	02H 03H 00H 00H 02H 01H 10H 18H
INPUT SELECT VIDEO	02H 03H 00H 00H 02H 01H 06H 0EH
INPUT SELECT S-VIDEO	02H 03H 00H 00H 02H 01H 0BH 13H
INPUT SELECT DVI (DIGITAL)	02H 03H 00H 00H 02H 01H 1AH 22H
INPUT SELECT VIEWER	02H 03H 00H 00H 02H 01H 1FH 27H
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

Cable Connection

Communication Protocol:

Baud Rate: 38400 bps
 Data Length: 8 bits
 Parity: No Parity
 Stop Bit: One bit
 X on/off: None
 Communications: Full duplex

PC Control Connector (DIN-8P)



NOTE 1: Pins 2, 3, 5, 6 and 8 are used inside the projector.

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