

6537WC/6538WUC Installation Guide

Desktop and Ceiling Mount

Rev 1.0

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Product Description

Type:	3 panel LCD Projector 0.64" p-Si TFT w/MLA	Dimensions:	13.6" (W) x 4.1" (H) x 10.3" (D) 13.6" (W) x 4.3" (H) x 11.2" (D) (6538WUC)
Resolution:	6537WC: 1280x800 6538WUC: 1920x1200	Weight:	7.1 lbs 7.7 lbs (6538WUC)
Fan Noise:	37dB / 29dB @ 1 meter	Brightness:	6537WC: 3700 Lumens 6538WUC: 3800 Lumens
Power Consumption:	6537WC: 288W (max) 6538WUC: 295W (max)	BTU's:	6537WC: TBD BTU/hour 6538WUC: TBD BTU/hour

Lens Specifications

Throw Ratio:	6537WC: 1.2 – 2.1:1 (for 100" diagonal) 6538WUC: 1.2 – 2.0:1 (for 100" diagonal)	Focal Length:	6537WC: 17.4mm – 29.0mm 6538WUC: 17.2mm – 27.7mm
Offset Angle:	6537WC: 6.6° - 10.9° (for 100" diagonal) 6538WUC: 6.6° - 10.9° (for 100" diagonal)	F/#:	6537WC: 1.7 – 2.2 6538WUC: 1.5 – 2.08
Screen Sizes:	30" - 300" diagonal (16:10)	Manual Focus/Manual Zoom	

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.
- All calculations are based on a 16:10 aspect ratio.
- Distances are in inches, for millimeters multiply by 25.4.
- Distances may vary $\pm 5\%$.

Formulas

The Projection Formulas use the image width for calculation. For proper projection placement, determine the image width for the desired screen size. Use the Screen Formulas below to calculate all screen dimensions. Plug in the width for "W" in the Projection Formulas.

Refer to the diagrams and charts for popular screen sizes on page 2:

Definitions:

- W = Image Width
- H = Image Height (size)
- 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)

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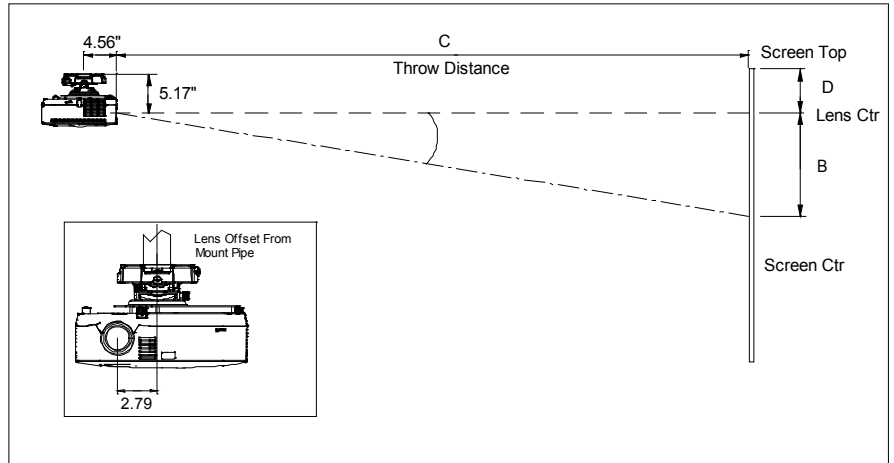
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Diagrams and Distance Charts for 6537WC

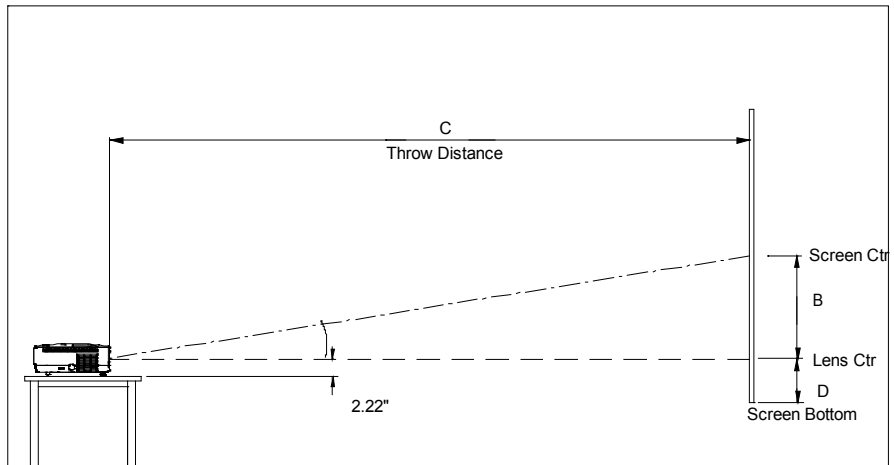
The following shows the proper relative positions of the projector and screen. Refer to the table to determine the position of installation.

Distances are in inches. For millimeters multiply by 25.4.

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Desktop



Distance Chart for popular 16:10 screens

16:10 Screen Formulas:

$$W = \text{Image Width} = H \times 16/10$$

$$H = \text{Image Height} = W \times 10/16$$

$$\text{Screen Diagonal} = W \times 18.868/16$$

Projection Formulas:

$$B = 0.2387W$$

$$C (\text{wide}) = 1.254W - 1.82$$

$$C (\text{tele}) = 2.084W - 1.82$$

$$D = -0.074W$$

$$\alpha (\text{wide}) = \tan^{-1} (B/C(\text{wide}))$$

$$\alpha (\text{tele}) = \tan^{-1} (B/C(\text{tele}))$$

Note: For screen sizes not indicated on the projection tables, use the formulas on page 1.

Screen Size (16:10)			B	C	D	α
Diagonal	Width(W)	Height (H)		wide - tele		wide - tele
inches	inches	inches	inches	inches	inches	degrees
57	48	30	12	59 - 99	-4	11.1 - 6.7
66	56	35	13	68 - 115	-4	11.1 - 6.6
68	58	36	14	70 - 118	-4	11.0 - 6.6
75	64	40	15	78 - 131	-5	11.0 - 6.6
79	67	42	16	82 - 138	-5	11.0 - 6.6
85	72	45	17	89 - 148	-5	11.0 - 6.6
92	78	49	19	96 - 161	-6	11.0 - 6.6
98	83	52	20	102 - 171	-6	11.0 - 6.6
102	86	54	21	107 - 178	-6	11.0 - 6.6
111	94	59	22	116 - 194	-7	10.9 - 6.6
113	96	60	23	118 - 198	-7	10.9 - 6.6
123	104	65	25	129 - 216	-8	10.9 - 6.6
125	106	66	25	131 - 219	-8	10.9 - 6.6
147	125	78	30	154 - 258	-9	10.9 - 6.6
149	126	79	30	157 - 261	-9	10.9 - 6.6
213	181	113	43	225 - 375	-13	10.9 - 6.6
255	216	135	52	269 - 449	-16	10.8 - 6.6

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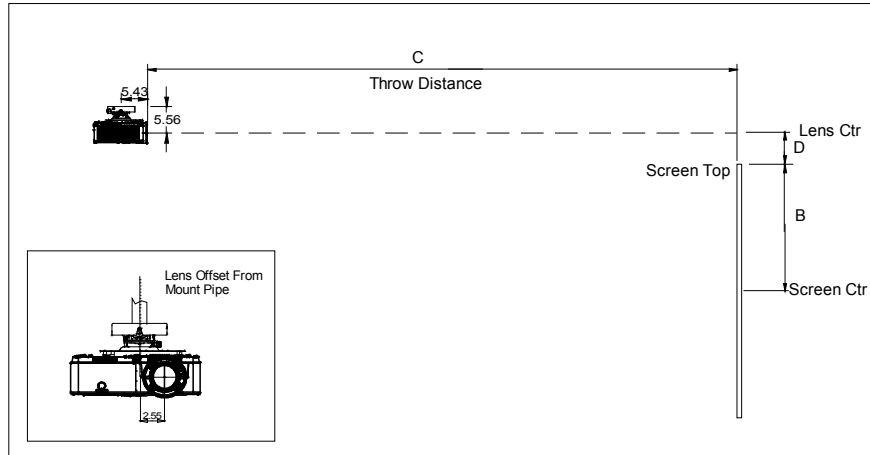
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Diagrams and Distance Charts for 6538WUC

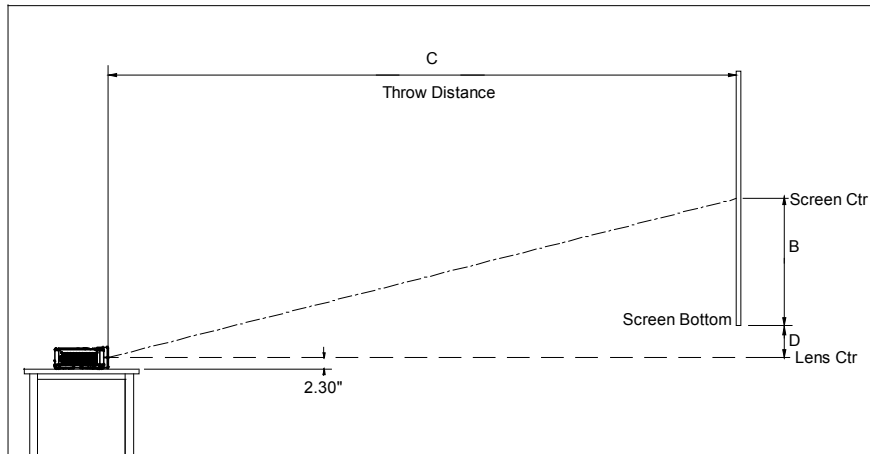
The following shows the proper relative positions of the projector and screen. Refer to the table to determine the position of installation.

Distances are in inches. For millimeters multiply by 25.4.

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Desktop



Distance Chart for popular 16:10 screens

16:10 Screen Formulas:

$W = \text{Image Width} = H \times 16/10$

$H = \text{Image Height} = W \times 10/16$

$\text{Screen Diagonal} = W \times 18.868/16$

Projection Formulas:

$B = 0.239W$

$C \text{ (wide)} = 1.238W - 1.82$

$C \text{ (tele)} = 1.999W - 1.73$

$D = -0.07W$

$\alpha \text{ (wide)} = \tan^{-1} (B/C \text{ (wide)})$

$\alpha \text{ (tele)} = \tan^{-1} (B/C \text{ (tele)})$

Note: For screen sizes not indicated on the projection tables, use the formulas on page 1.

Screen Size (16:10)			B	C	D	α
Diagonal	Width(W)	Height (H)	inches	wide - tele	inches	wide - tele
inches	inches	inches	inches	inches	inches	degrees
58	49	31	12	59 - 97	-3	11.3 - 6.9
66	56	35	13	67 - 110	-4	11.2 - 6.9
68	58	36	14	70 - 114	-4	11.2 - 6.9
75	64	40	15	77 - 125	-4	11.2 - 6.9
79	67	42	16	81 - 132	-5	11.2 - 6.9
85	72	45	17	87 - 142	-5	11.1 - 6.9
92	78	49	19	95 - 154	-5	11.1 - 6.9
98	83	52	20	101 - 164	-6	11.1 - 6.9
102	86	54	21	105 - 171	-6	11.1 - 6.9
111	94	59	22	115 - 186	-7	11.1 - 6.9
113	96	60	23	117 - 190	-7	11.1 - 6.9
123	104	65	25	127 - 207	-7	11.1 - 6.9
125	106	66	25	129 - 210	-7	11.1 - 6.9
147	125	78	30	153 - 247	-9	11.1 - 6.9
149	126	79	30	155 - 251	-9	11.1 - 6.9
213	181	113	43	222 - 359	-13	11.0 - 6.9

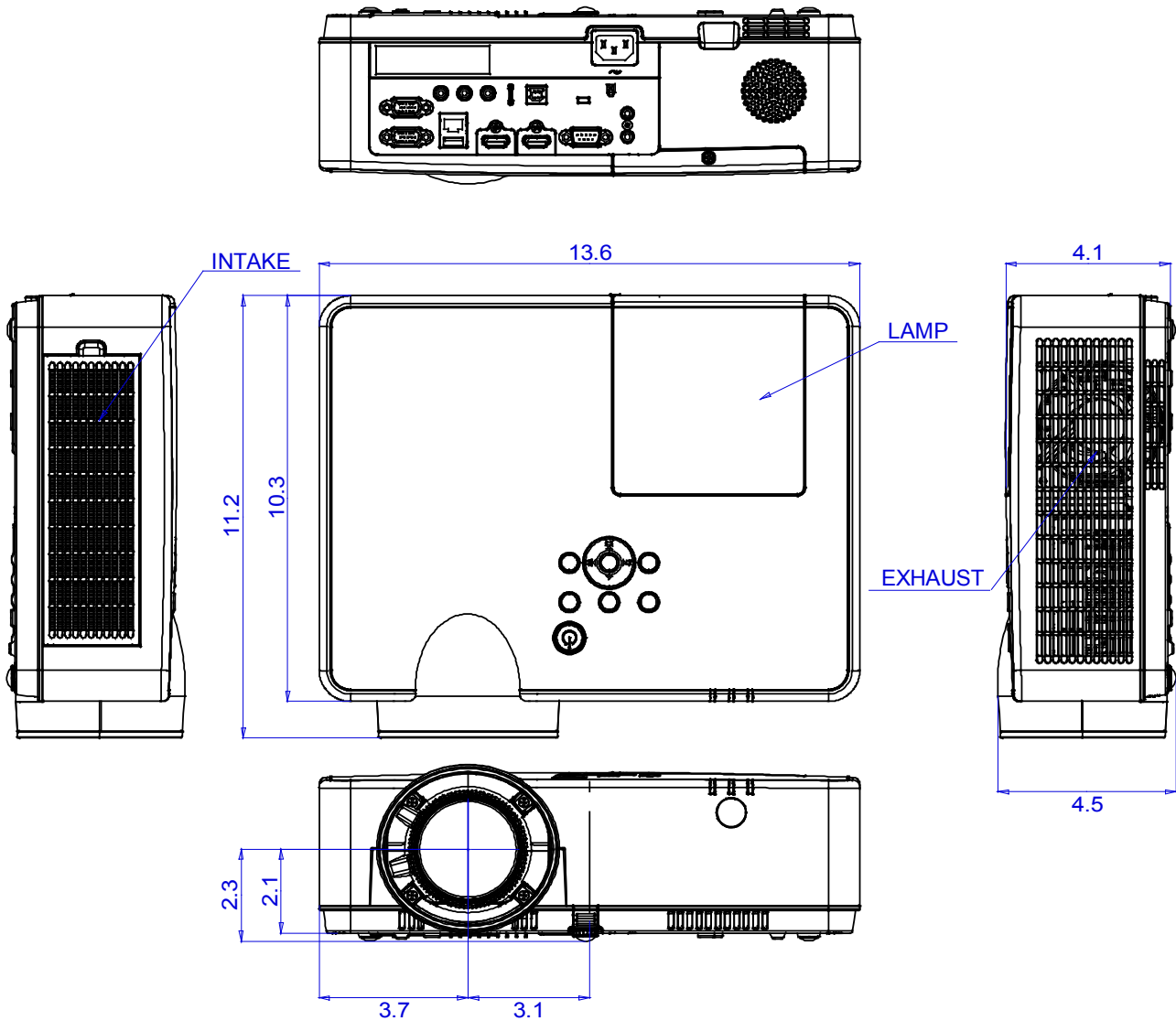
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Cabinet Dimensions

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



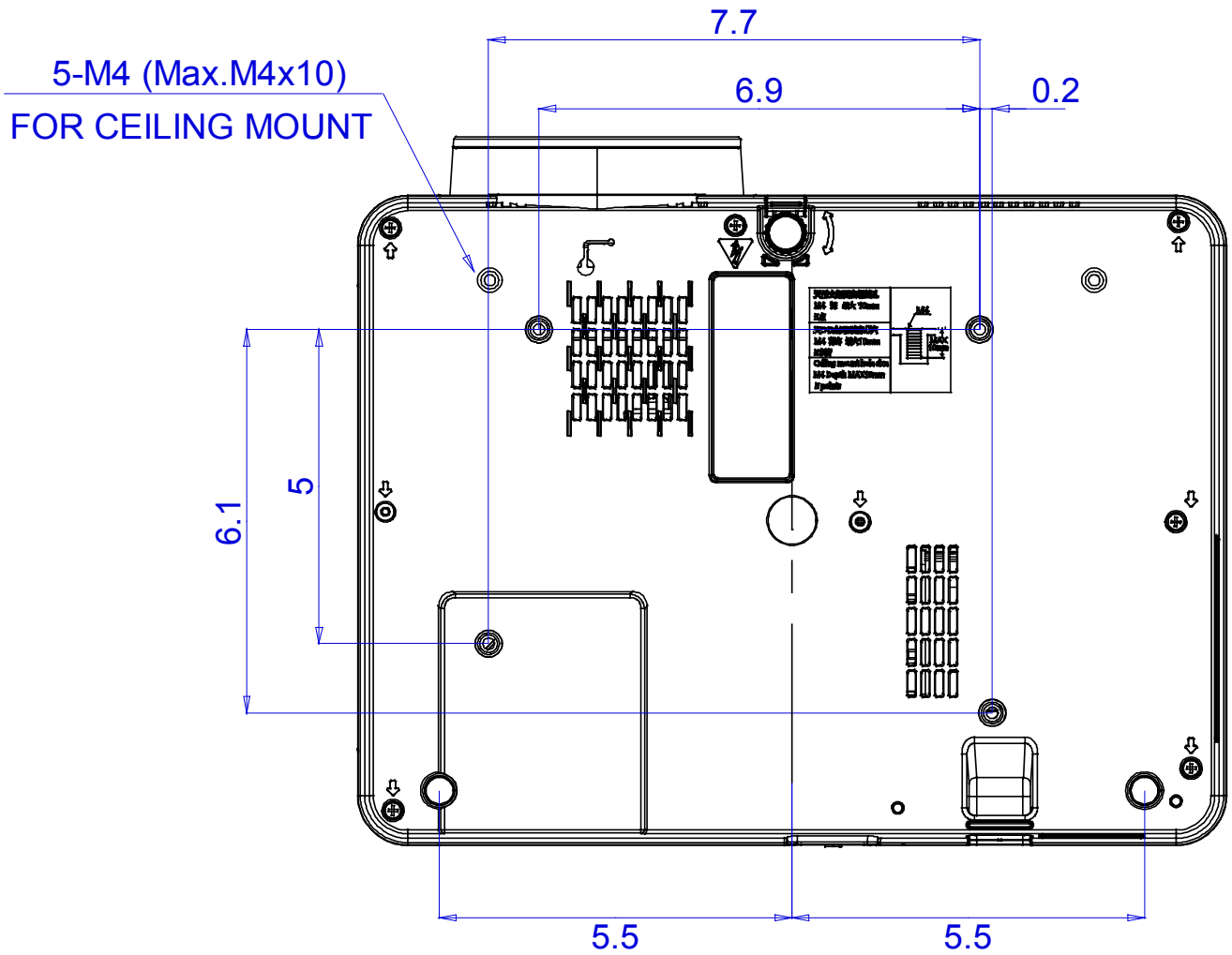
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Cabinet Dimensions (continued)

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



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Optional Ceiling Mount Dimensions (Model #: PRG-UNV)

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

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Input / Output Panel



PC Control Codes

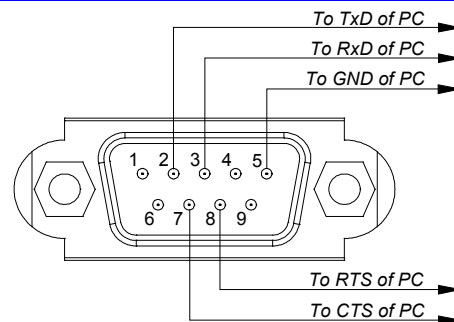
Function	Code Data
POWER ON	02H 00H 00H 00H 00H 02H
POWER OFF	02H 01H 00H 00H 00H 03H
INPUT SELECT COMPUTER1	02H 03H 00H 00H 02H 01H 01H 09H
INPUT SELECT HDMI 1	02H 03H 00H 00H 02H 01H 1AH 22H
INPUT SELECT HDMI 2	02H 03H 00H 00H 02H 01H 1BH 23H
INPUT SELECT VIDEO	02H 03H 00H 00H 02H 01H 06H 0EH
INPUT SELECT VIEWER (USB-A)	02H 03H 00H 00H 02H 01H 1FH 27H
INPUT SELECT NETWORK	02H 03H 00H 00H 02H 01H 20H 28H
INPUT SELECT USB DISPLAY (USB-B)	02H 03H 00H 00H 02H 01H 22H 2AH
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
PROJECTOR INFORMATION REQUEST	00H BFH 00H 00H 01H 02H C2H
ERROR STATUS REQUEST	00H 88H 00H 00H 00H 88H
INFORMATION REQUEST	03H 8AH 00H 00H 00H 8DH

Note: Contact your NEC rep for codes not listed.

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 (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.