

VT48 Installation Guide

Ceiling Mounted and Desktop

Rev 1.0

Contents

| | |
|---|--------|
| Product Description, Lens Specs, Notes and Formulas | Pg 1 |
| Diagrams & Distance Charts | Pg 2 |
| Cabinet Dimensions | Pg 3-4 |
| Ceiling Mount Dimensions | Pg 5 |
| Input Panel and Control Codes | Pg 6 |



Product Description

| | | | |
|-------------|---|-------------|-------------------------------|
| Type: | 3 panel LCD projector, 0.6" p-Si TFT w/MLA | Brightness: | 1600 ANSI Lumens |
| Resolution: | 800 x 600 | Dimensions: | 12.1"(W) x 10.2"(H) x 4.4"(D) |
| | | Weight: | 6.17 lbs |

Lens Specifications

| | | | |
|---------------|---------------------------------|---------------|------------------------------|
| Throw Ratio: | 1.8:1 (for 100" diagonal) | Focal Length: | 22.4 mm |
| Offset Angle: | 8.4° - 8.7° (for 100" diagonal) | F/#: | 1.70 |
| Screen Sizes: | 25" - 300" diagonal (4:3) | | Manual Focus/Electronic 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 4:3 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)

4:3 Screen Formulas:

W = H x 4/3
 H = W x 3/4
 Screen Diagonal = W x 5/4

Projection Formulas:

B = 0.2954W
 C = 1.813W-0.919
 D = 1.083W
 $\alpha = \tan^{-1} (B/C)$

VT48 Installation Guide

Ceiling Mounted and Desktop

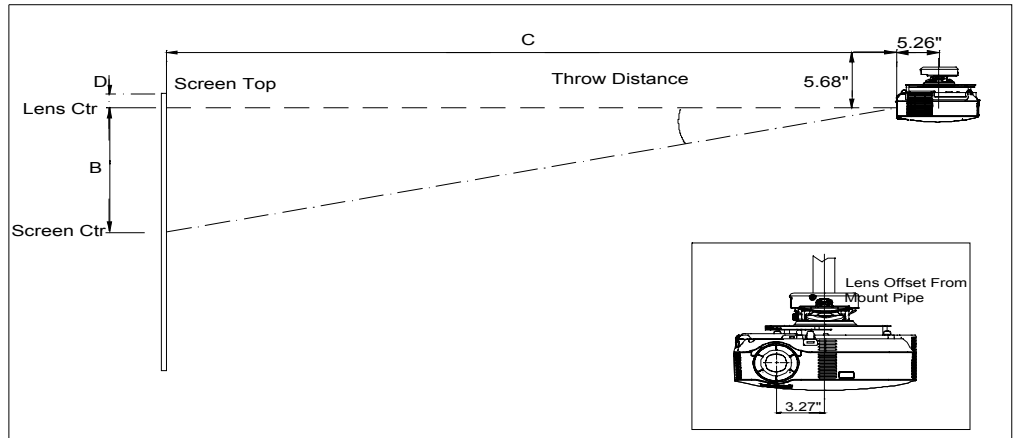
Rev 1.0

Diagrams and Distance Charts

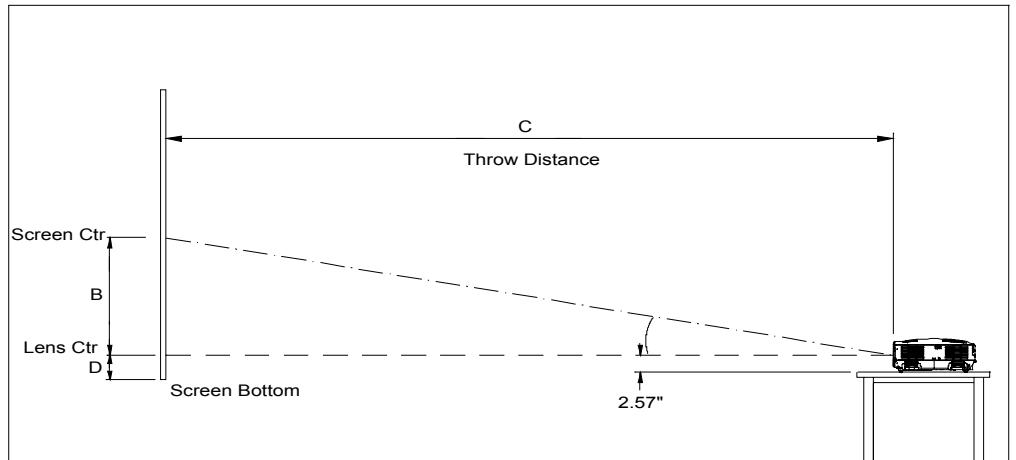
The following shows the proper relative positions of the projector and screen. Refer to the table to determine the position of installation.

Distances are in inches. For millimeters multiply by 25.4.

Ceiling Mounted



Desktop



Distance Chart for popular 4:3 screens

| Screen Size (4:3) | | | B | C | D | α |
|-------------------|--------|--------|--------|--------|--------|---------|
| Diag | W | H | | | | |
| inches | inches | inches | inches | inches | inches | degrees |
| 30 | 24 | 18 | 6 | 43 | -3 | 8.6 |
| 60 | 48 | 36 | 13 | 86 | -5 | 8.5 |
| 72 | 57.6 | 43.2 | 15 | 104 | -6 | 8.4 |
| 84 | 67.2 | 50.4 | 18 | 121 | -7 | 8.4 |
| 90 | 72 | 54 | 19 | 130 | -8 | 8.4 |
| 100 | 80 | 60 | 21 | 144 | -9 | 8.4 |
| 120 | 96 | 72 | 26 | 173 | -10 | 8.4 |
| 150 | 120 | 90 | 32 | 217 | -13 | 8.4 |
| 180 | 144 | 108 | 38 | 260 | -16 | 8.4 |
| 200 | 160 | 120 | 43 | 289 | -17 | 8.4 |
| 250 | 200 | 150 | 53 | 362 | -22 | 8.4 |
| 300 | 240 | 180 | 64 | 434 | -26 | 8.4 |

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

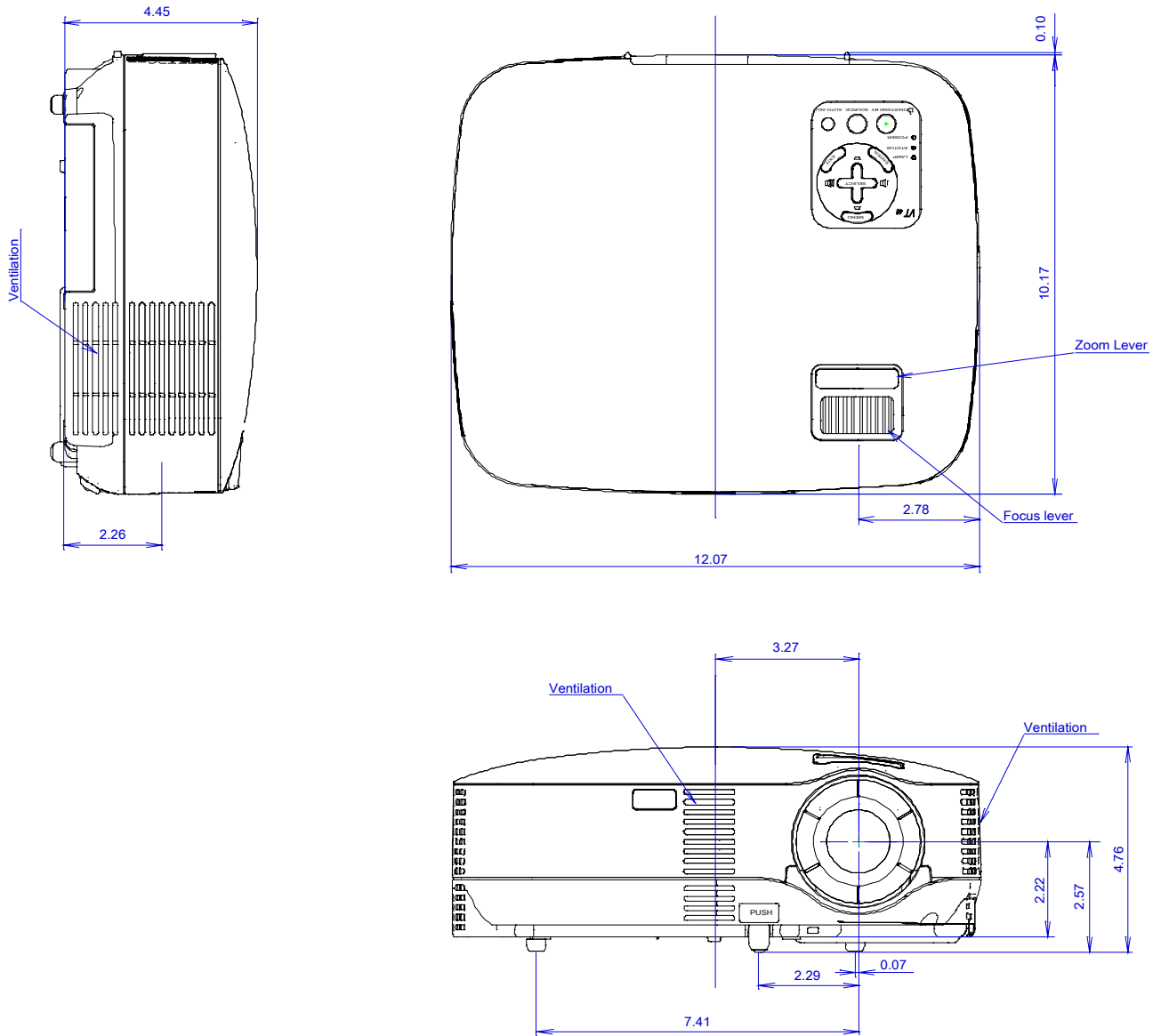
VT48 Installation Guide

Ceiling Mounted and Desktop

Rev 1.0

Cabinet Dimensions

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



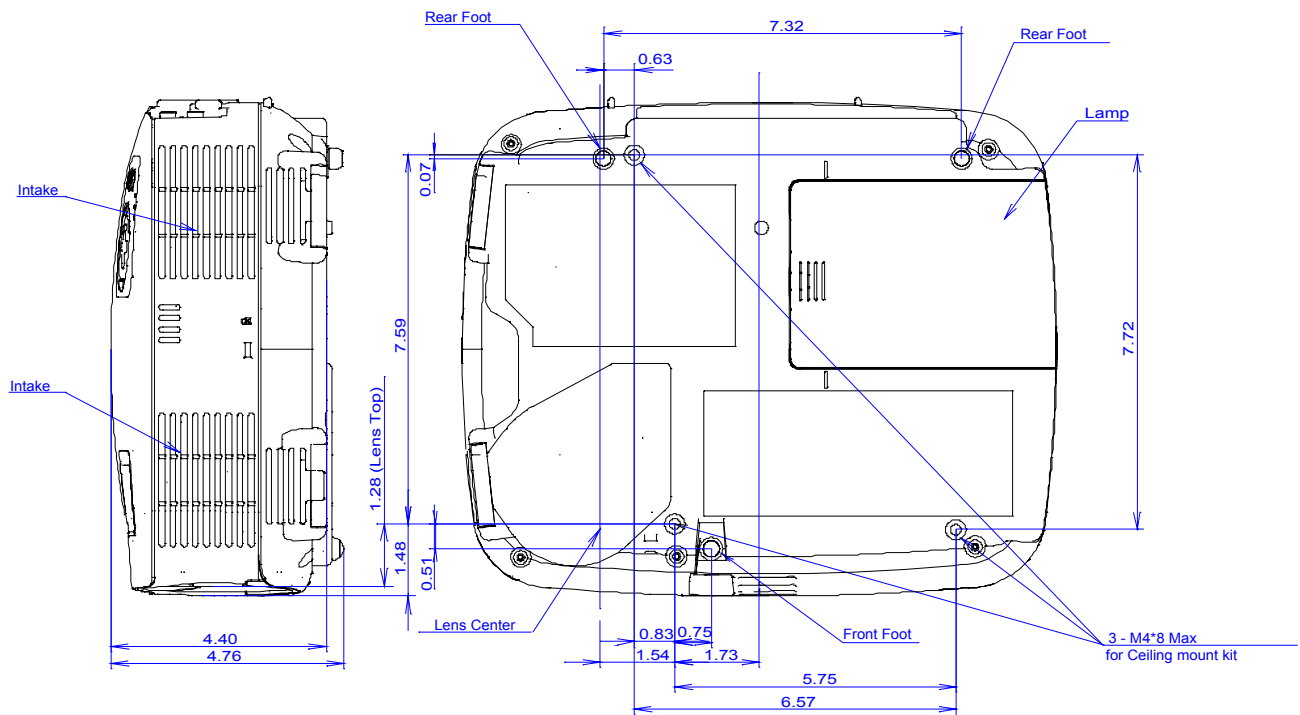
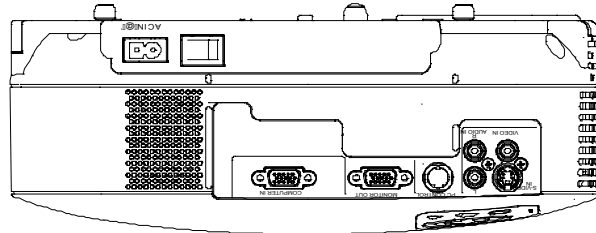
VT48 Installation Guide

Ceiling Mounted and Desktop

Rev 1.0

Cabinet Dimensions (continued)

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



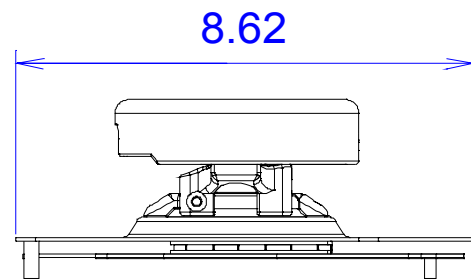
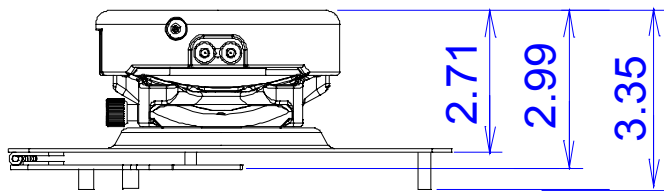
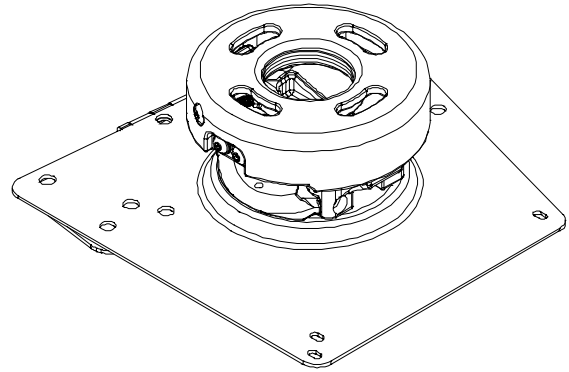
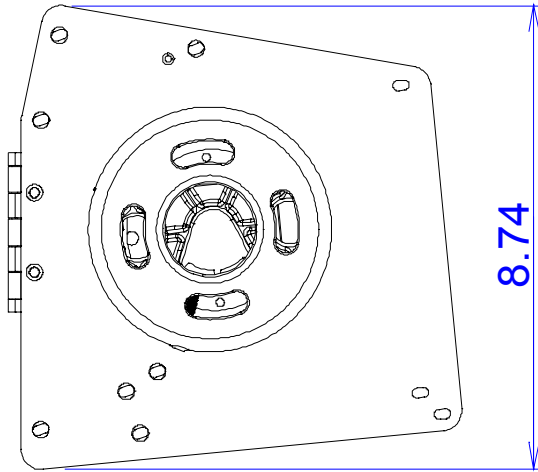
VT48 Installation Guide

Ceiling Mounted and Desktop

Rev 1.0

Optional Ceiling Mount Dimensions (Model #: VL80CM)

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



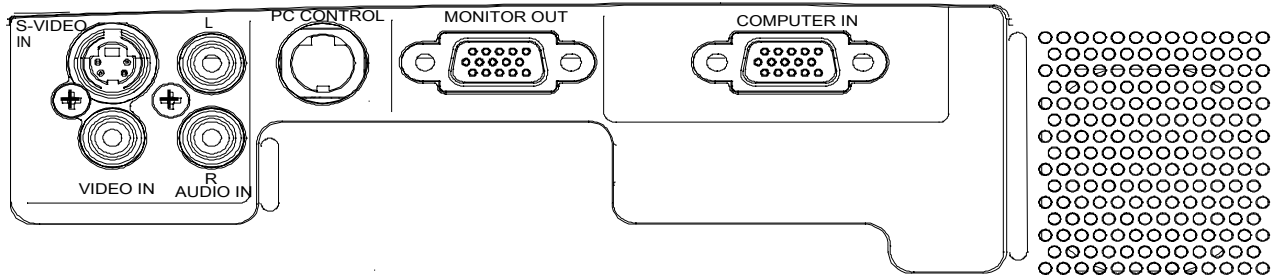
VT48 Installation Guide

Ceiling Mounted and Desktop

Rev 1.0

Input Panel

VT48 Only



PC Control Codes

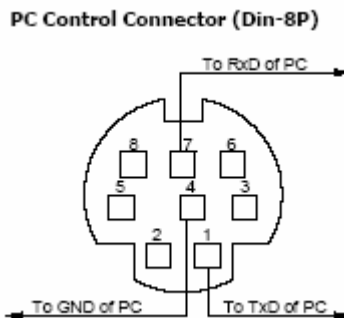
| Function | Code Data |
|----------------------------|---------------------------------|
| POWER ON | 02H 00H 00H 00H 00H 02H |
| POWER OFF | 02H 01H 00H 00H 00H 03H |
| INPUT SELECT CCOMPUTER | 02H 03H 00H 00H 02H 01H 01H 09H |
| INPUT SELECT VIDEO | 02H 03H 00H 00H 02H 01H 06H 0EH |
| INPUT SELECT S-VIDEO | 02H 03H 00H 00H 02H 01H 0BH 13H |
| INPUT SELECT DVI (DIGITAL) | 02H 03H 00H 00H 02H 01H 1AH 22H |
| 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 |

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



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

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