

## 6532WA/6536WA/6540HDA Installation Guide

### Ceiling Mounted and Desktop

Rev 1.0

#### Contents

Product Description, Lens Specs, Notes and Formulas	Pg 1
Diagrams & Distance Charts	Pg 2-3
Cabinet Dimensions	Pg 4-5
Ceiling Mount Dimensions	Pg 6
Input Panel and Control Codes	Pg 7



#### Product Description

Type:	1 Chip DLP Projector	Dimensions:	14.5" (W) x 4.3" (H) x 11.5" (D)
	0.65" DMD	Weight:	6532WA/6536WA: 8.0 lbs
Resolution:	6532WA/6536WA: 1280 x 800	Weight:	6540HDA: 8.2 lbs
	6540HDA: 1920 x 1090		
Fan Noise:	6532WA: 33dB / 27dB @ 1 meter		6532WA: 3200 Lumens
	6536WA: 39dB / 33dB @ 1 meter		6536WA: 3600 Lumens
	6540HDA: 36dB / 30dB @ 1 meter		6540HDA: 4000 Lumens
Power Consumption:	6532WA: 283W (max)	BTU's:	6532WA: 965 BTU/hour
	6536WA: 316W (max)		6540HDA: 1153 BTU/hour
	6540HDA: 338W (max)		

#### Lens Specifications

Throw Ratio:	1.2 – 2.0:1 (for 100" diagonal)	Focal Length:	17.09mm – 29.05mm
Offset Angle:	6532WA/6536WA: 10.5° - 18.6° (for 100" diagonal)	F/#:	2.4 - 3.1
	6540HDA: 10.1° - 17.2° (for 100" diagonal)		
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 ±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)

## 6532WA/6536WA/6540HDA Installation Guide

### Ceiling Mounted and Desktop

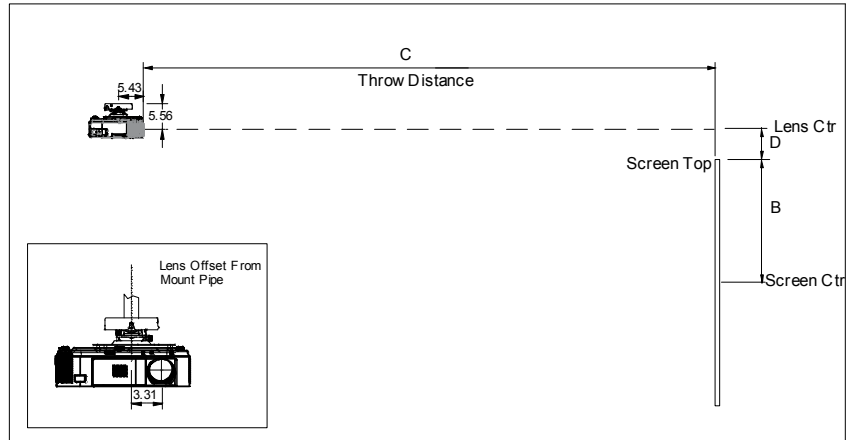
Rev 1.0

#### Diagrams and Distance Charts

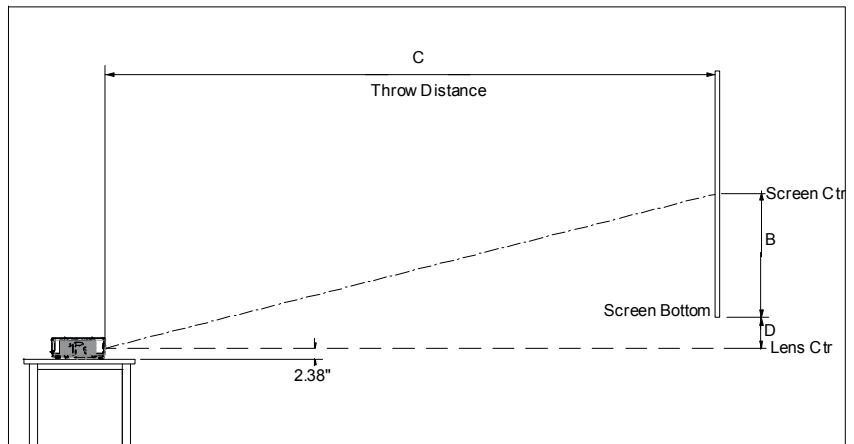
The following shows the proper relative positions of the projector and screen. Refer to the table to determine the position of installation.

Distances are in inches. For millimeters multiply by 25.4.

#### Ceiling Mounted



#### Desktop



#### Distance Chart for popular 16:10 screens

##### 16:10 Screen Formulas:

$$W = H \times 16/10$$

$$H = W \times 10/16$$

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

##### Projection Formulas:

$$B = 0.39W$$

$$C \text{ (wide)} = 1.236W - 1.966$$

$$C \text{ (tele)} = 2.101W - 3.105$$

$$D = 0.078W + 0.2856$$

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

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

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

Screen Size (16:10)			B	C		D	$\alpha$	
Diagonal	Width(W)	Height (H)		wide - tele			wide - tele	
inches	inches	inches	inches	inches		inches	degrees	
57	48	30	19	57	- 98	4	18.1	- 10.8
66	56	35	22	67	- 115	5	18.0	- 10.8
68	58	36	22	69	- 118	5	18.0	- 10.8
75	64	40	25	77	- 131	5	17.9	- 10.8
79	67	42	26	81	- 138	6	17.9	- 10.7
85	72	45	28	87	- 148	6	17.9	- 10.7
92	78	49	31	95	- 162	6	17.9	- 10.7
98	83	52	32	101	- 172	7	17.8	- 10.7
102	86	54	34	105	- 178	7	17.8	- 10.7
111	94	59	37	115	- 195	8	17.8	- 10.7
113	96	60	37	117	- 199	8	17.8	- 10.7
123	104	65	41	127	- 215	8	17.8	- 10.7
125	106	66	41	129	- 219	9	17.8	- 10.7
147	125	78	49	152	- 259	10	17.7	- 10.6
149	126	79	49	154	- 262	10	17.7	- 10.6
213	181	113	71	222	- 377	14	17.7	- 10.6
255	216	135	84	265	- 451	17	17.6	- 10.6

## 6532WA/6536WA/6540HDA Installation Guide

### Ceiling Mounted and Desktop

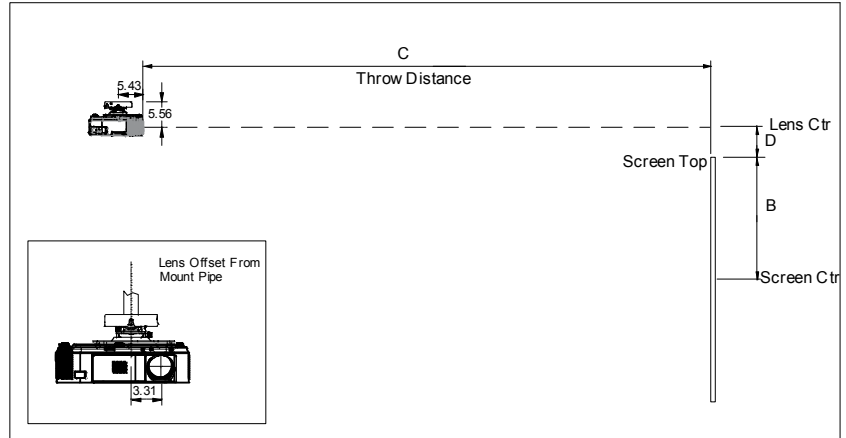
Rev 1.0

#### Diagrams and Distance Charts

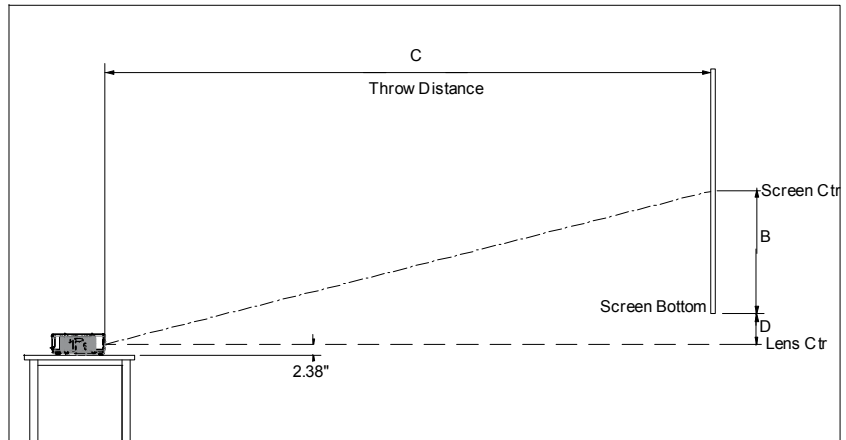
The following shows the proper relative positions of the projector and screen. Refer to the table to determine the position of installation.

Distances are in inches. For millimeters multiply by 25.4.

#### Ceiling Mounted



#### Desktop



#### Distance Chart for popular 16:9 screens

##### 16:9 Screen Formulas:

$$W = H \times 16/9$$

$$H = W \times 9/16$$

$$\text{Screen Diagonal} = W \times 18.358/16$$

##### Projection Formulas:

$$B = 0.371W - 0.01$$

$$C \text{ (wide)} = 1.231W - 2.84$$

$$C \text{ (tele)} = 2.134W - 3.678$$

$$D = 0.09W + 0.01$$

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

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

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

Screen Size (16:9)			B inches	C		D inches	$\alpha$	
Diagonal inches	Width(W) inches	Height (H) inches		wide - tele inches	tele inches		wide - tele degrees	tele degrees
61	53	30	20	63	110	5	17.5	10.2
71	62	35	23	74	129	6	17.4	10.1
73	64	36	24	76	133	6	17.4	10.1
82	71	40	26	85	148	6	17.3	10.1
86	75	42	28	89	156	7	17.3	10.1
92	80	45	30	96	167	7	17.2	10.1
100	87	49	32	104	182	8	17.2	10.1
106	92	52	34	111	194	8	17.2	10.0
110	96	54	36	115	201	9	17.2	10.0
120	105	59	39	126	220	9	17.1	10.0
122	107	60	40	128	224	10	17.1	10.0
133	116	65	43	139	243	10	17.1	10.0
135	117	66	44	142	247	11	17.1	10.0
159	139	78	51	168	292	12	17.0	10.0
161	140	79	52	170	296	13	17.0	10.0
230	201	113	75	244	425	18	17.0	9.9
275	240	135	89	293	508	22	16.9	9.9

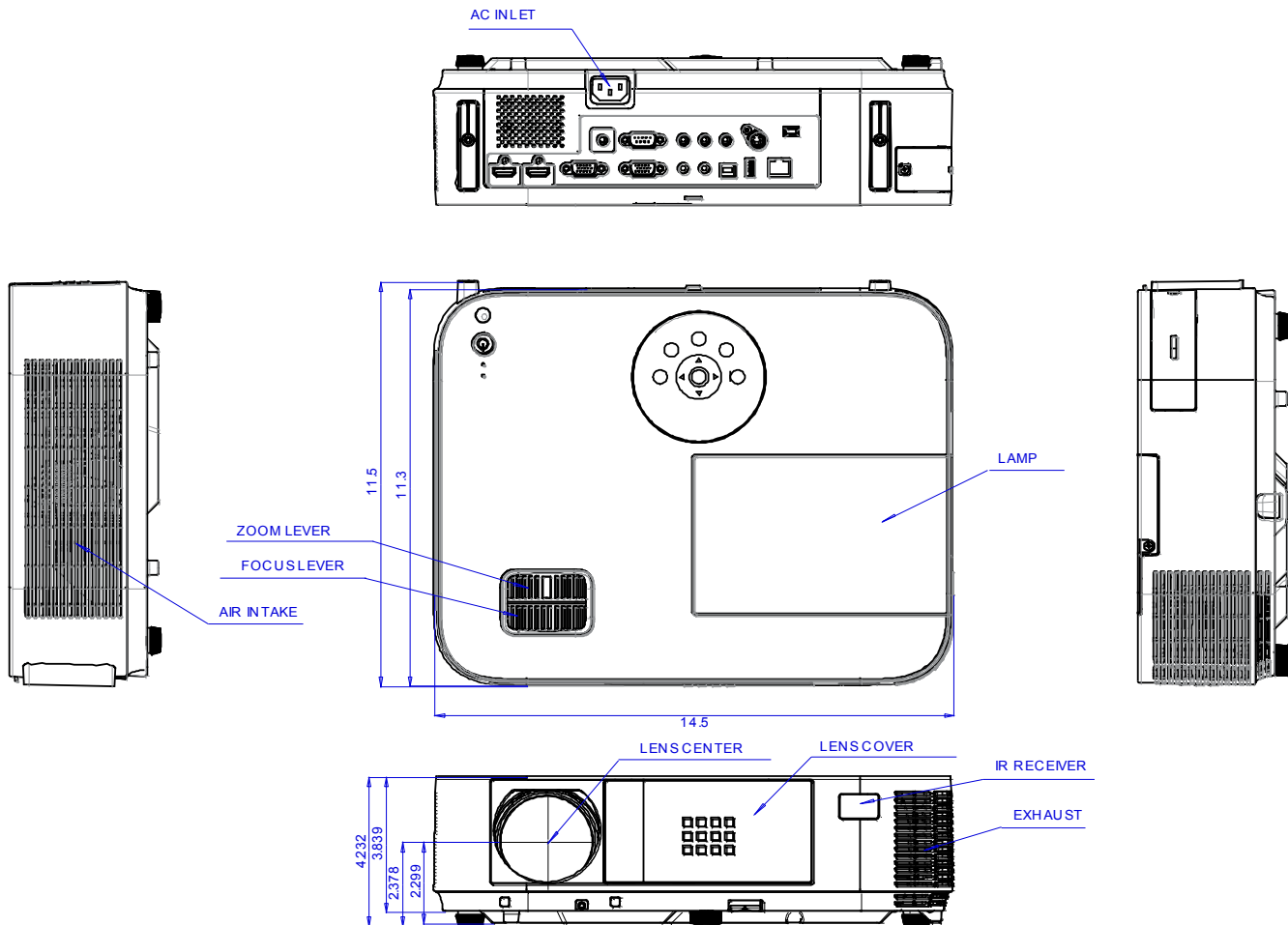
## 6532WA/6536WA/6540HDA Installation Guide

### 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.



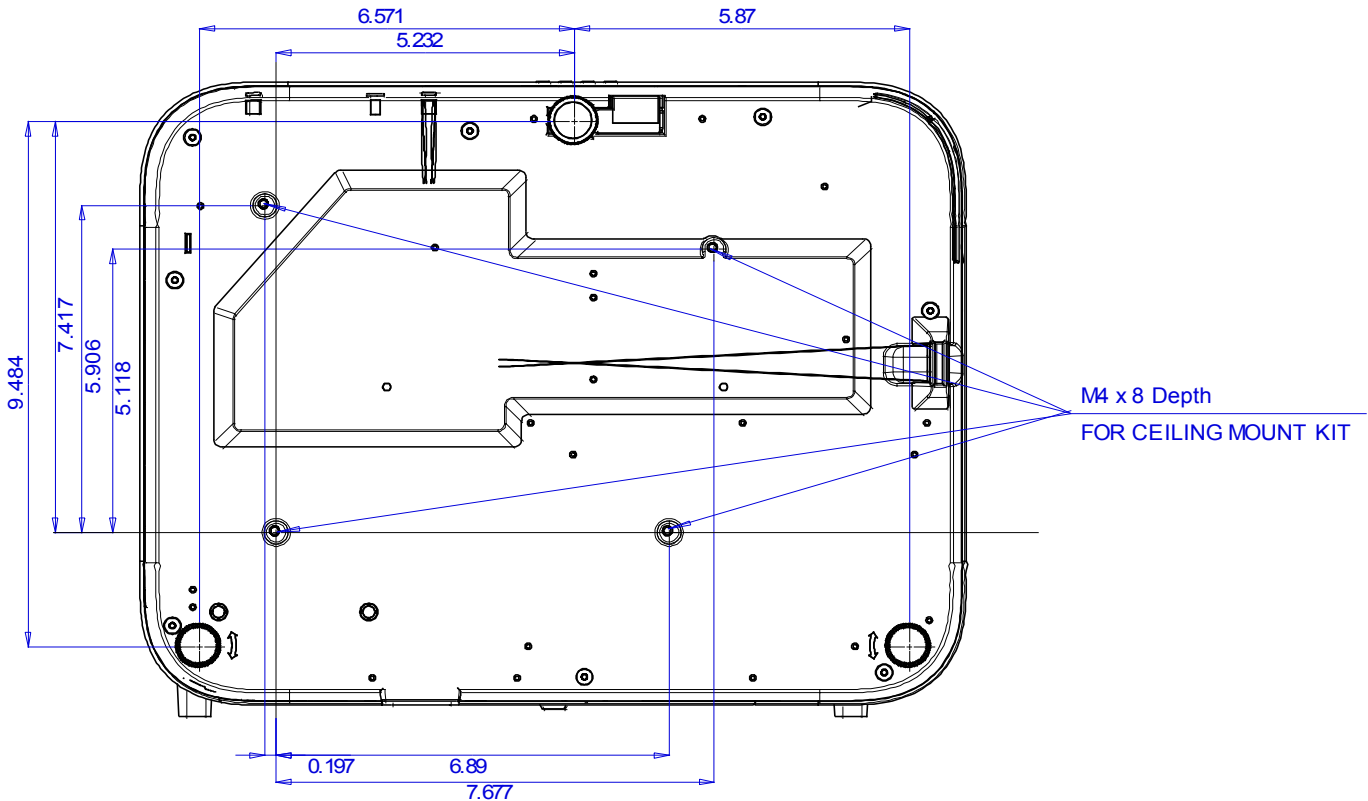
## 6532WA/6536WA/6540HDA Installation Guide

### 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.



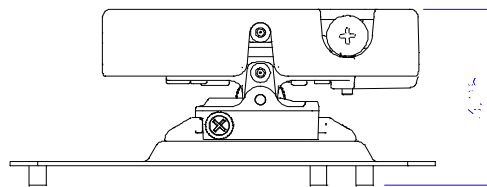
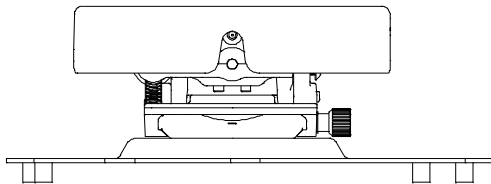
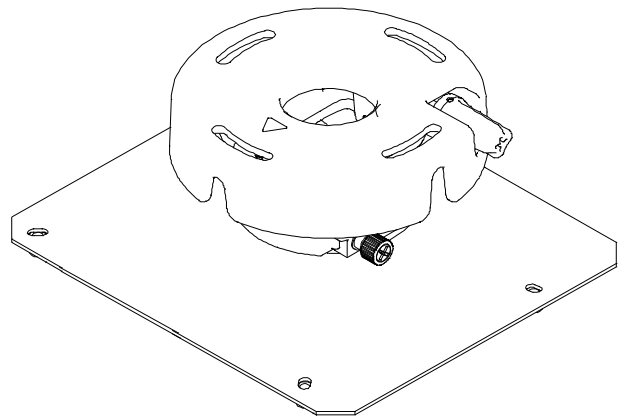
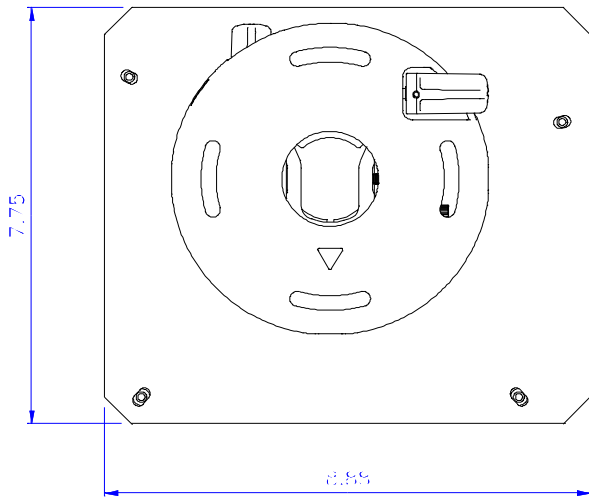
## 6532WA/6536WA/6540HDA Installation Guide

### Ceiling Mounted and Desktop

Rev 1.0

#### Optional Ceiling Mount Dimensions (Model #: MP300CM) or use universal mount PRG-UNV.

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



## 6532WA/6536WA/6540HDA Installation Guide

Ceiling Mounted and Desktop

Rev 1.0

### Input / Output Panel



### PC Control Codes

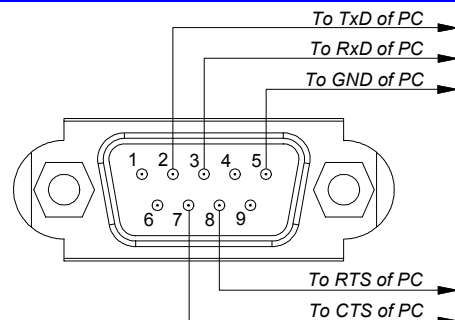
Function	Code Data
POWER ON	02H 00H 00H 00H 00H 02H
POWER OFF	02H 01H 00H 00H 00H 03H
INPUT SELECT COMPUTER1	02H 03H 00H 00H 02H 01H 01H 09H
INPUT SELECT HDMI 1	02H 03H 00H 00H 02H 01H 1AH 22H
INPUT SELECT HDMI 2	02H 03H 00H 00H 02H 01H 12H AAH
INPUT SELECT VIDEO	02H 03H 00H 00H 02H 01H 06H 0EH
INPUT SELECT VIEWER	02H 03H 00H 00H 02H 01H 1FH 27H
INPUT SELECT NETWORK	02H 03H 00H 00H 02H 01H 20H 28H
INPUT SELECT USB DISPLAY	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 Dukane 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.