NEC

MultiSync XG85
MultiSync XG135LC

Large Screen MultiSync Projection Monitor

Installation Manual

Model Number:

XG-852/XG-1352

XG-852G/XG-1352G

The projector must be installed by trained personnel

CONTENTS

Important

When installing the projector, follow the warnings and cautions in the manual. Failure to observe this precaution could result in electric shock or injury.

If installing the projector on the ceiling, use only optional ceiling kits (two types) supplied by the manufacturer. Refer to the manual included with the optional ceiling kit for ceiling installation. When ordering the kit, specify the part name, PG CMKIT-F.

Installation

The Installation Set-Up Instruction chapter covers how to install the projector and gives you the details about the relative position of the projector and the screen.

The Projection Configuration Change chapter gives you the procedures for adjustments such as image polarity change, proper adjustment of the focus rings and CRT angle adjustment. You must reconfigure the projector for your application when it differs from the factory setting.

INSTALLATION SET-UP INSTRUCTION

Before Installation

The installation procedure is different according to the projection system and screen size. From the factory the projector is set for ceiling mount, 100 inch diagonal screen size and a projection angle of 12.4 degrees (XG85)/12.2 degrees (XG135LC). Installation and preliminary adjustments are required as shown on table below.

Projection type	Adjustment items / Screen size (diagonal)	Various adjustments	H Polarity change	Focus ring and CRT angle change
Ceiling mounting Front projection	100 inch	None	None	None (Set the focus ring when changing projection angle)
	other than 100 inch	Yes	None	Yes
Desk top Front projection type	100 inch	Yes	Yes	None (Set the focus ring when changing projection angle)
	other than 100 inch	Yes	Yes	Yes
Ceiling mounting/Rear projection	100 inch	Yes	Yes	None (Set the focus ring when changing projection angle)
	other than 100 inch	Yes	Yes	Yes
Desk top Rear projection	100 inch	Yes	None	None (Set the focus ring when changing projection angle)
	other than 100 inch	Yes	None	Yes

NOTE: For XG85, the “100 inch” covers the range of screen size between 80 and 129 inches. For XG135LC, The ''100 inch'' covers the range of screen size between 90 and 109 inches.

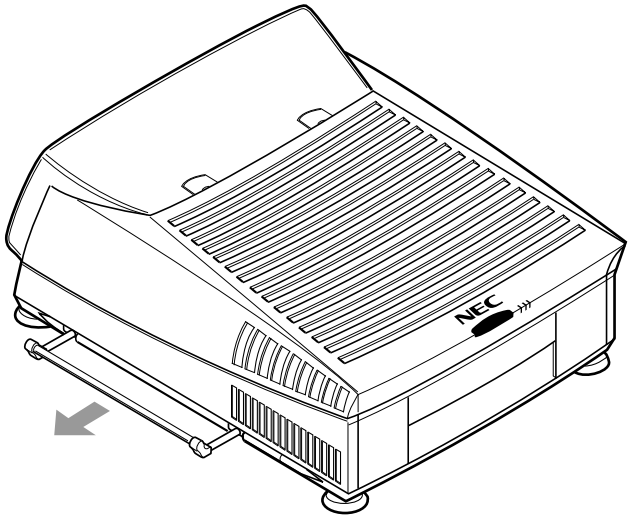
NOTE: Focus ring adjustment on pages 15 and 16 for XG85, and 17 and 18 for XG135LC.

Carrying the Projector

WARNING:
Be sure to use the handles when carrying the projector.

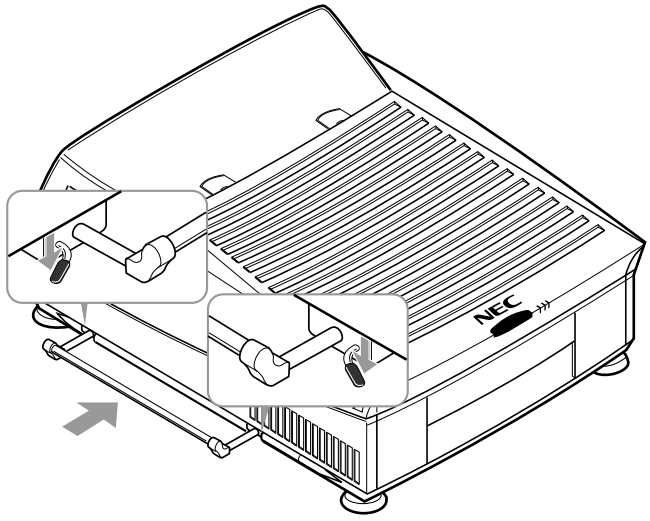
Pulling Out the Handle

Pull out the handle from the bottom side.



Retracting the Handle

Press down the two levers at the same time to retract the handle.



Note on Installation

CAUTION ON INSTALLATION

Position the projector according to the procedures specified in the following pages. Be sure to maintain the correct projection distance, direction and angle for optimum performance. Deviating from the correct installation could degrade the performance of the projector and may cause reliability problems.

WARNING:
Static displays that are left on for extended periods may cause CRT burns that are not covered under warranty.

For screen sizes other than 100", 120", and 180" diagonal, adjust the CRT angle using the threaded holes. See pages 16 and 18 for detailed procedures.

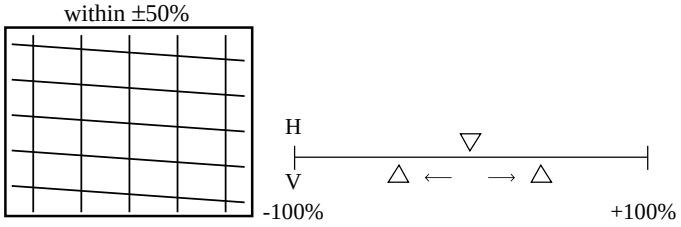
CAUTION ON ALIGNMENT ADJUSTMENT

The adjustment value of the items on the right must be within the recommended range of the values on the right. If it is hard or impossible to adjust the items on the right within the recommended range of values, the most probable cause of this is incorrect position of the projector. Check for correct projection distance, direction and angle, and reposition as recommended in this manual.

Value Recommendation

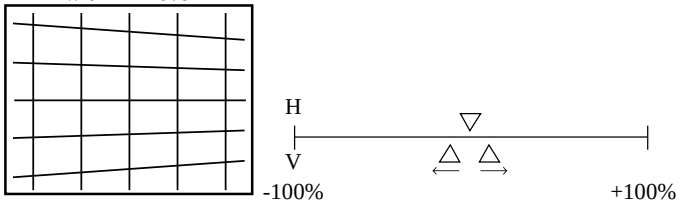
• TILT

within ±50%



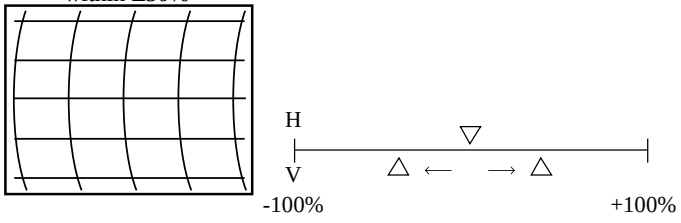
• V-KEY

within ±10%



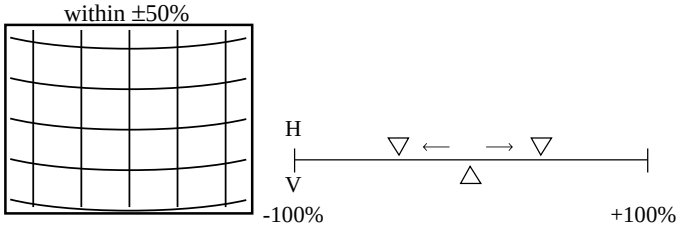
• H-BOW

within ±50%



• V-BOW

within ±50%

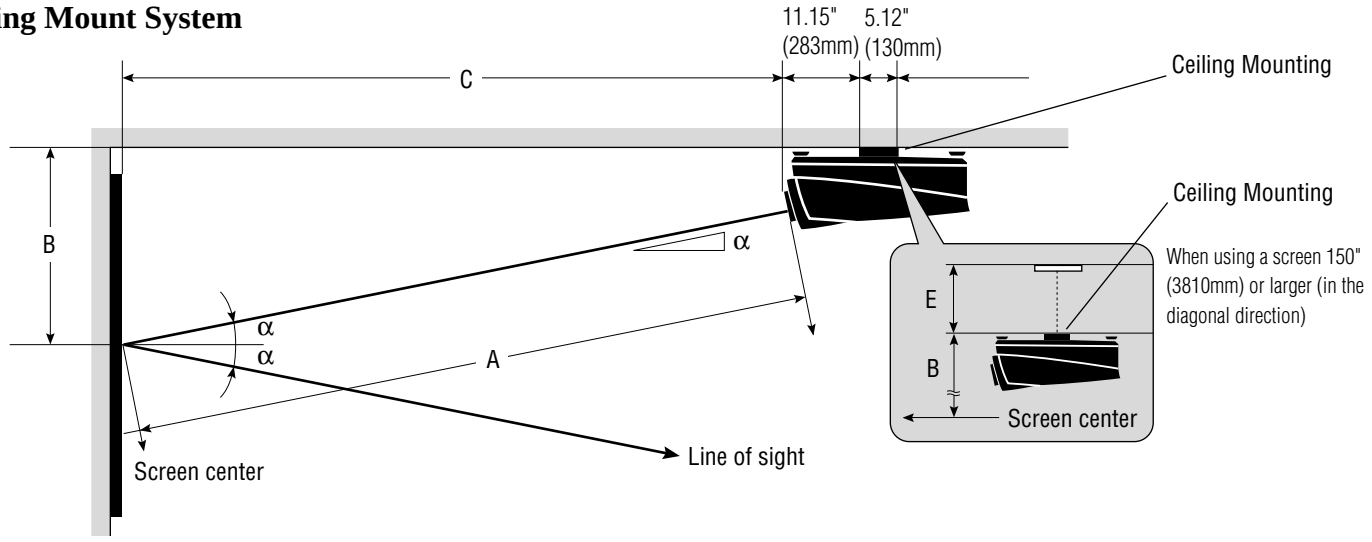


Ceiling Mount Projection Distance and Screen Size for XG85

• Install in such a way that the projector and screen are positioned in the proper direction and at the proper angle. If not, the projector's performance will be affected and its reliability will decrease. Be sure to position the projector properly.
The manufacturer will not be held responsible for any problems occurring when the projector is not installed in the proper position.

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

Ceiling Mount System



α		12.1°		12.4°				12.6°	12.7°				
β (=sinα)		0.210		0.215				0.218	0.220				
γ (=cosα)		0.978		0.977				0.976					
Screen size H-Width (4:3 Diagonal)		48" (60")	56" (70")	64" (80")	72" (90")	80" (100")	96" (120")	120" (150")	144" (180")	160" (200")	192" (240")	216" (270")	240" (300")
A	inch	70.28	81.54	91.6	101.74	112.68	133.43	164.69	196.11	214.02	258.51	290.48	315.67
	mm	1785	2071	2318	2584	2862	3389	4183	4981	5436	6566	7378	8018
B	inch	26.00	28.36	30.86	33.11	35.46	39.91	47.19	54.38	58.31	68.10	75.12	80.66
	mm	661	721	784	841	901	1014	1199	1381	1481	1730	1908	2049
C	inch	68.72	79.73	89.13	99.36	110.05	130.32	160.72	191.31	208.78	252.18	283.37	307.95
	mm	1746	2025	2264	2524	2796	3310	4083	4860	5303	6406	7198	7822
E	inch	–	–	–	–	–	–	–	–	1.69	3.91	5.88	9.35
	mm	–	–	–	–	–	–	–	–	43	100	150	238

NOTE:

- For screens 150 inches (3810mm) or larger (in the diagonal direction), set so that the distance between the surface of installation of the mounting A and the ceiling is E.
- Set the projection distance based on the width of the screen.
- If the figures on the table do not match the figures in the formulae, use the figures on the table.
- For screen sizes of 60 to 300 inches not indicated on the table, use the following proportional formulae:

Units=inches W"=Screen H-Width
$A = (25/96 \times W" - 12.5) \times 4.99 + 70.28$
$B = (\beta \times A) + 11.26$
$C = \gamma \times A$
$E = (1/2 \times \text{Screen Height}) - B$

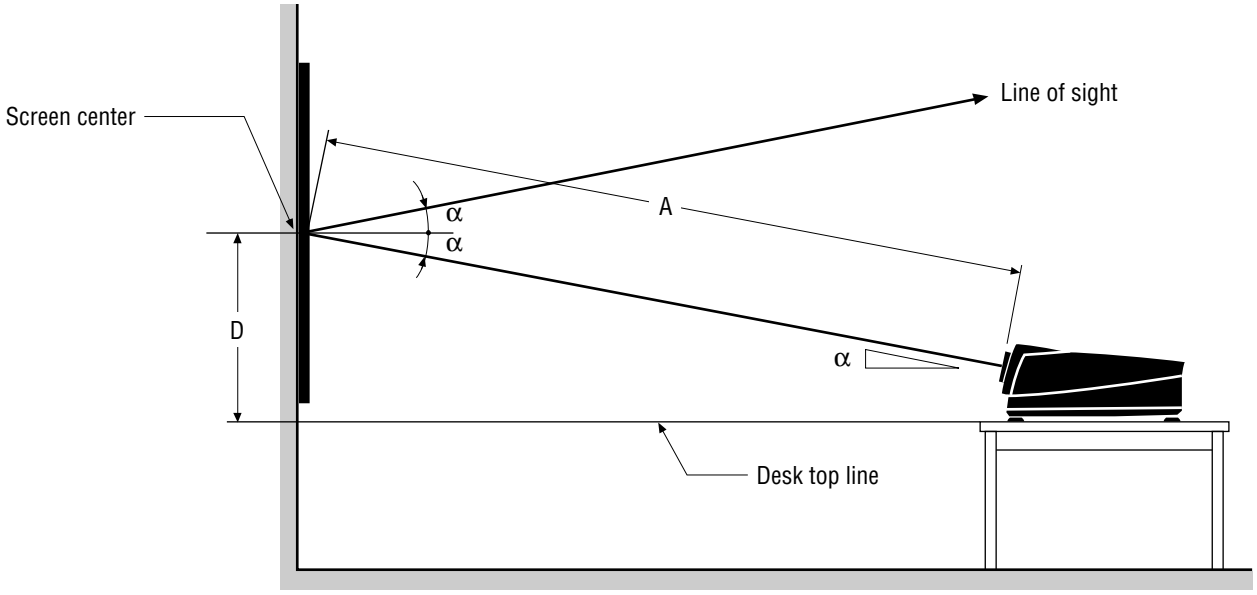
Units=mm W"=Screen H-Width
$A = (25/96 \times W" - 12.5) \times 126.64 + 1785$
$B = (\beta \times A) + 286$
$C = \gamma \times A$
$E = (1/2 \times \text{Screen Height}) - B$

- The margin of error for projection distance (A) is ± 3%.

Desk Top Projection Distance and Screen Size for XG85

• The following shows the relative position relationship of the projector with the screen. See table below.

Desk Top System



A:Distance between the lens and the screen center
D:Distance between the desk top and the screen center

α		12.1°		12.4°				12.6°	12.7°				
Screen size H-Width (4:3 Diagonal)		48" (60")	56" (70")	64" (80")	72" (90")	80" (100")	96" (120")	120" (150")	144" (180")	160" (200")	192" (240")	216" (270")	240" (300")
A	inch	70.28	81.54	91.26	101.74	112.68	133.43	164.69	196.11	214.02	258.51	290.48	315.67
	mm	1785	2071	2318	2584	2862	3389	4183	4981	5436	6566	7378	8018
D	inch	24.81	27.17	29.68	31.93	34.28	38.73	46.01	53.20	57.13	66.91	73.94	79.48
	mm	631	691	754	811	871	984	1169	1351	1451	1700	1878	2019

NOTE:

• The projection distance is based on the screen width.

• Sizes not found between 48 (60) and 240 (300) inches are determined by the following formulae:

Units=inches W"=Screen H-Width

$A = (25/96 \times W" - 12.5) \times 4.99 + 70.28$

$D = (\beta \times A) + 10.08$

Units=mm W"=Screen H-Width

$A = (25/96 \times W" - 12.5) \times 126.64 + 1785$

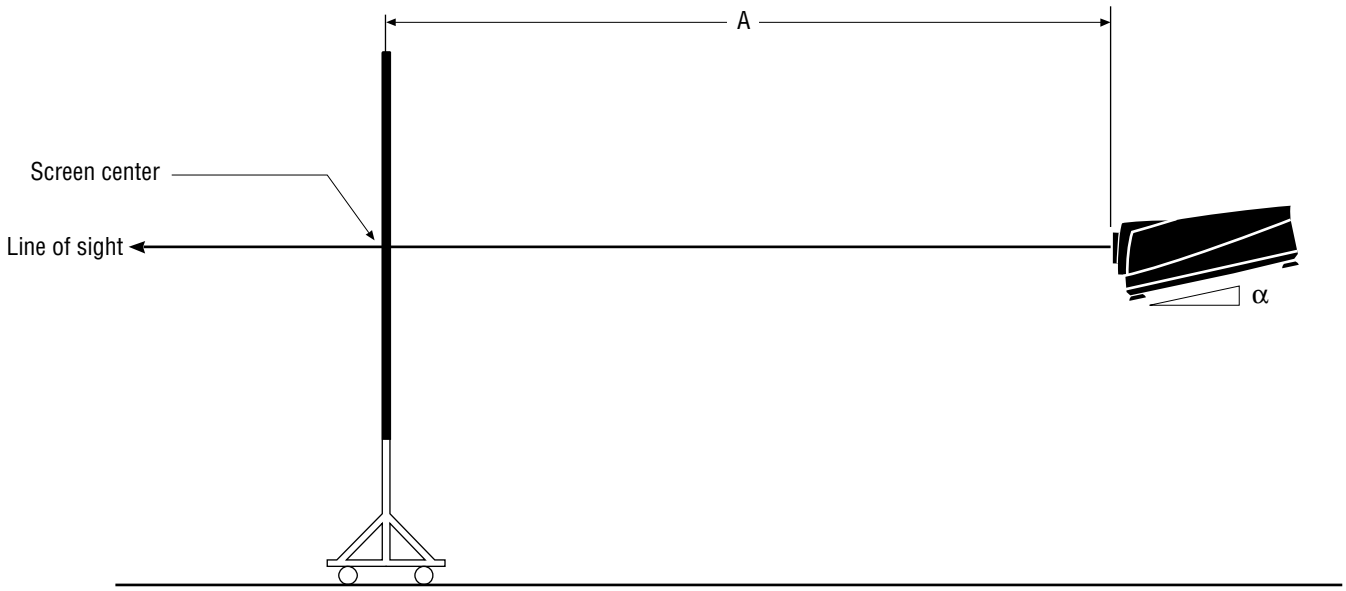
$D = (\beta \times A) + 256$

Screen size (Diagonal)	α	β
60–79"	12.1°	0.210
80–129"	12.4°	0.215
130–179"	12.6°	0.218
180–300"	12.7°	0.220

Rear Screen Projection Distance and Screen Size for XG85

The following shows the relative position relationship of the projector with the screen. See table below.

Rear Projection System



A:Distance between the lens and the screen center

α		12.1°		12.4°				12.6°	12.7°				
Screen size H-Width (4:3 Diagonal)		48" (60")	56" (70")	64" (80")	72" (90")	80" (100")	96" (120")	120" (150")	144" (180")	160" (200")	192" (240")	216" (270")	240" (300")
A	inch	70.28	81.54	91.26	101.74	112.68	133.43	164.69	196.11	214.02	258.51	290.48	315.67
	mm	1785	2071	2318	2584	2862	3389	4183	4981	5436	6566	7378	8018

NOTE:

- The projection distance is based on the screen width.
- Sizes not found between 48(60)and 240(300)inches are determined by the following formulae:

Units=inches W"=Screen H-Width

$A = (25/96 \times W" - 12.5) \times 4.99 + 70.28$

Units=mm W"=Screen H-Width

$A = (25/96 \times W" - 12.5) \times 126.64 + 1785$

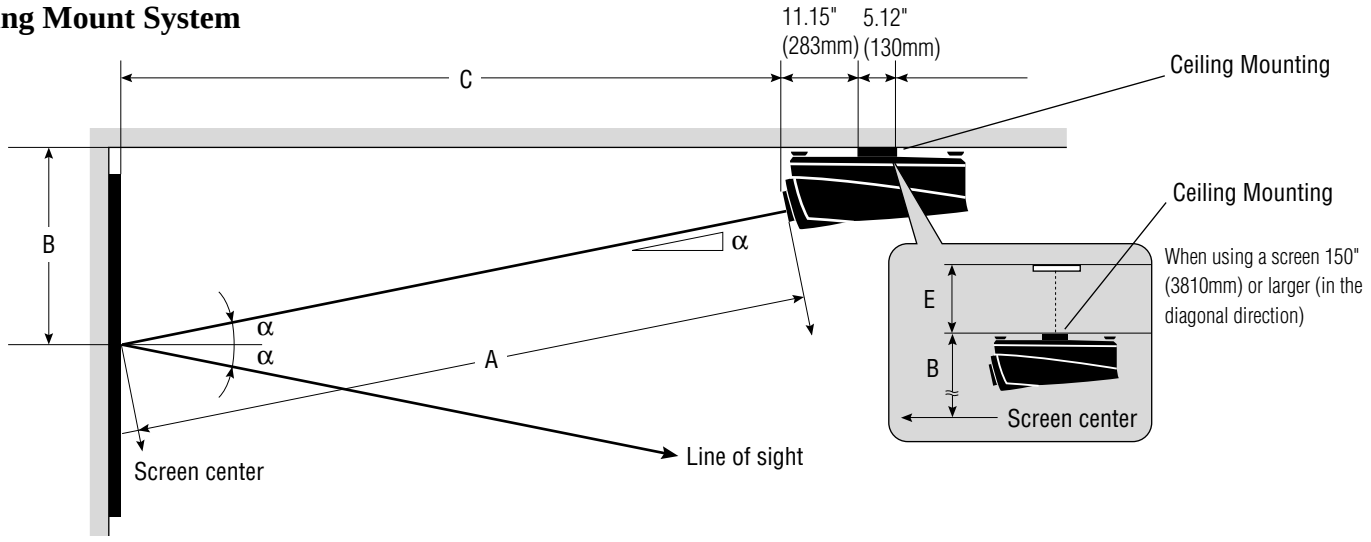
Screen size (Diagonal)	α
60–79"	12.1°
80–129"	12.4°
130–179"	12.6°
180–300"	12.7°

Ceiling Mount Projection Distance and Screen Size or XG135LC

• Install in such a way that the projector and screen are positioned in the proper direction and at the proper angle. If not, the projector's performance will be affected and its reliability will decrease. Be sure to position the projector properly.
The manufacturer will not be held responsible for any problems occurring when the projector is not installed in the proper position.

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

Ceiling Mount System



α		11.8°			12.2°			12.4°	12.6°				
β (=sinα)		0.204			0.211			0.215	0.218				
γ (=cosα)		0.979			0.977				0.976				
Screen size H-Width (4:3 Diagonal)		48" (60")	56" (70")	64" (80")	72" (90")	80" (100")	96" (120")	120" (150")	144" (180")	160" (200")	192" (240")	216" (270")	240" (300")
A	inch	71.10	82.83	94.61	106.34	118.07	140.91	175.16	209.57	232.48	278.15	309.17	338.62
	mm	1806	2104	2403	2701	2999	3579	4449	5323	5905	7065	7853	8601
B	inch	25.38	27.78	30.18	33.31	35.79	40.61	48.45	56.55	61.55	71.51	78.28	84.70
	mm	645	705	767	846	909	1032	1231	1436	1563	1816	1988	2151
C	inch	69.61	81.10	92.62	103.89	115.36	137.66	171.13	204.54	226.90	271.47	301.75	330.50
	mm	1768	2060	2353	2639	2930	3497	4347	5195	5763	6895	7665	8395
E	inch	–	–	–	–	–	–	–	–	–	0.47	2.72	5.28
	mm	–	–	–	–	–	–	–	–	–	12	69	134

NOTE:

- For screens 150 inches (3810mm) or larger (in the diagonal direction), set so that the distance between the surface of installation of the mounting A and the ceiling is E.
- Set the projection distance based on the width of the screen.
- If the figures on the table do not match the figures in the formulae, use the figures on the table.
- For screen sizes of 60 to 300 inches not indicated on the table, use the following proportional formulae:

Units=inches W"=Screen H-Width
$A = (25/96 \times W" - 12.5) \times 5.47 + 71.85$
$B = (\beta \times A) + 10.83$
$C = \gamma \times A$
$E = (1/2 \times \text{Screen Height}) - B$

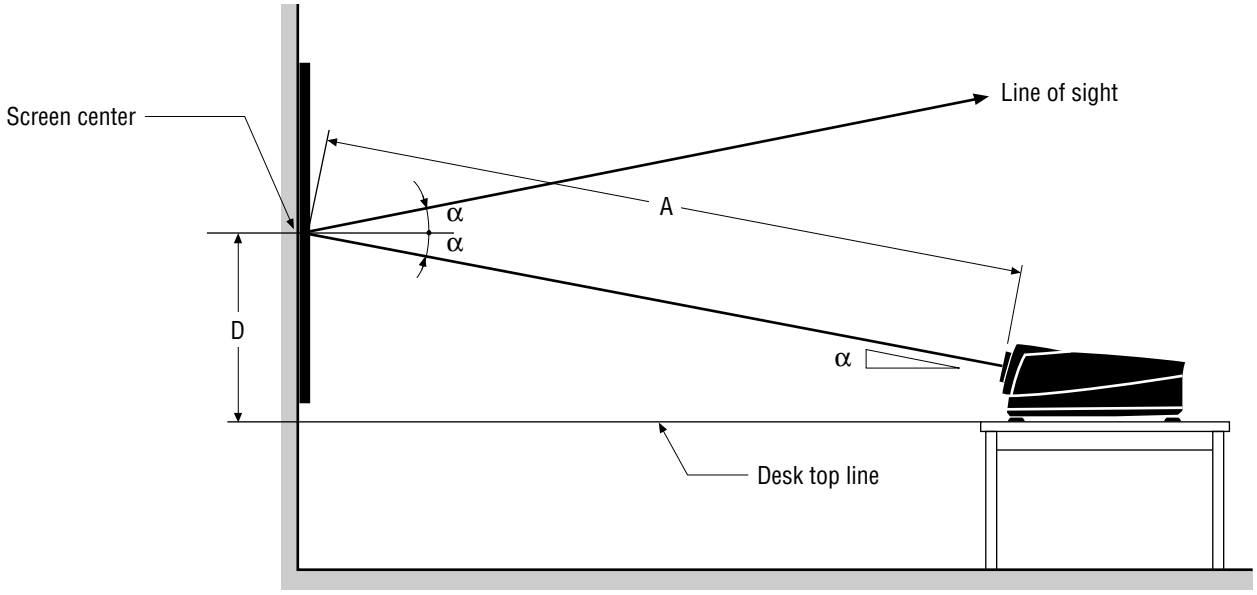
Units=mm W"=Screen H-Width
$A = (25/96 \times W" - 12.5) \times 141 + 1825$
$B = (\beta \times A) + 275$
$C = \gamma \times A$
$E = (1/2 \times \text{Screen Height}) - B$

- The margin of error for projection distance (A) is ±3%.

Desk Top Projection Distance and Screen Size for XG135LC

• The following shows the relative position relationship of the projector with the screen. See table below.

Desk Top System



A:Distance between the lens and the screen center
D:Distance between the desk top and the screen center

α		11.8°			12.2°			12.4°	12.6°				
Screen size H-Width (4:3 Diagonal)		48" (60")	56" (70")	64" (80")	72" (90")	80" (100")	96" (120")	120" (150")	144" (180")	160" (200")	192" (240")	216" (270")	240" (300")
A	inch	71.10	82.83	94.61	106.34	118.07	140.91	175.16	209.57	232.48	278.15	309.17	338.62
	mm	1806	2104	2403	2701	2999	3579	4449	5323	5905	7065	7853	8601
D	inch	24.20	26.59	29.00	32.13	34.61	39.43	47.27	55.37	60.37	70.33	77.10	83.52
	mm	615	675	737	816	879	1002	1201	1406	1533	1786	1958	2121

NOTE:

• The projection distance is based on the screen width.

• Sizes not found between 48 (60) and 240 (300) inches are determined by the following formulae:

Units=inches W"=Screen H-Width

$A = (25/96 \times W" - 12.5) \times 5.47 + 71.85$

$D = (\beta \times A) + 10.04$

Units=mm W"=Screen H-Width

$A = (25/96 \times W" - 12.5) \times 141 + 1825$

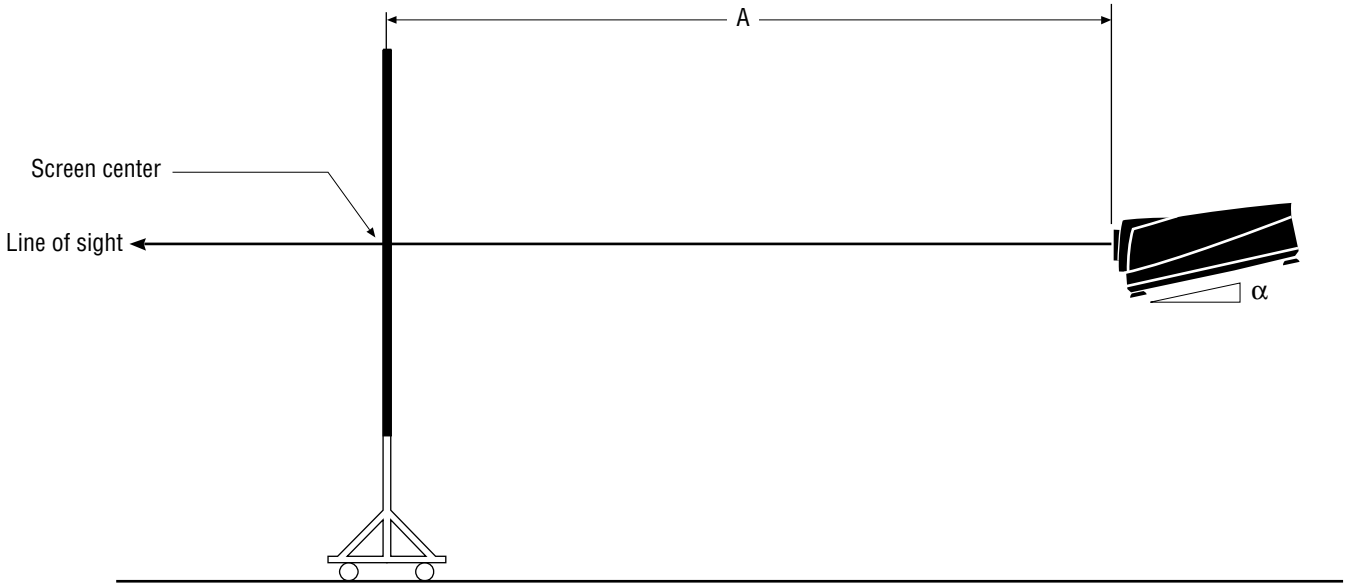
$D = (\beta \times A) + 245$

Screen size (Diagonal)	α	β
60–89"	11.8°	0.204
90–129"	12.2°	0.211
130–179"	12.4°	0.215
180–300"	12.6°	0.218

Rear Screen Projection Distance and Screen Size for XG135LC

The following shows the relative position relationship of the projector with the screen. See table below.

Rear Projection System



A:Distance between the lens and the screen center

α		11.8°			12.2°			12.4°	12.6°				
Screen size H-Width (4:3 Diagonal)		48" (60")	56" (70")	64" (80")	72" (90")	80" (100")	96" (120")	120" (150")	144" (180")	160" (200")	192" (240")	216" (270")	240" (300")
A	inch	71.10	82.83	94.61	106.34	118.07	140.91	175.16	209.57	232.48	278.15	309.17	338.62
	mm	1806	2104	2403	2701	2999	3579	4449	5323	5905	7065	7853	8601

NOTE:

- The projection distance is based on the screen width.
- Sizes not found between 48(60)and 240(300)inches are determined by the following formulae:

Units=inches W"=Screen H-Width

$A = (25/96 \times W" - 12.5) \times 5.47 + 71.85$

Units=mm W"=Screen H-Width

$A = (25/96 \times W" - 12.5) \times 141 + 1825$

Screen size (Diagonal)	α
60–89"	11.8°
90–129"	12.2°
130–179"	12.4°
180–300"	12.6°

PROJECTION CONFIGURATION CHANGE

Before Installation Change

The projector is electrically and mechanically set for 100 inch diagonal screen, front throw ceiling mount and a projection angle of 12.4˚ (XG85)/12.2˚(XG135LC). If your application is different from the factory setting(for example, ceiling to floor and screen size between 60 and 300 inch), you will have to reconfigure the projector for your application. Follow the change procedures according to the instructions below.

For XG85

To change screen size only:

1) Set the focus ring to the proper position. (See pages15 and 16.)

For 100" screen size	For 120" screen size	For 180" screen size
R – A-3, B-3 G – A-1, B-3 B – A-3, B-3	R – A-3, B-3 G – A-1, B-3 B – A-3, B-3	R – A-5, B-5 G – A-1, B-5 B – A-5, B-5

2) Adjust the angle of the CRT's. (See page 16.)

For 100" screen size	For 120–180" screen size and the other screen sizes
Move the CRT to the 100 position	Move the CRT to the 120, 180, or 60–300 position

To change to the desk top system (front)

1) Reverse the scan. (See page 14.)

2) Set the focus ring to the proper position. (See pages 15 and 16.)

For 100" screen size	For 120" screen size	For 180" screen size
R – A-3, B-3 G – A-1, B-3 B – A-3, B-3	R – A-3, B-3 G – A-1, B-3 B – A-3, B-3	R – A-5, B-5 G – A-1, B-5 B – A-5, B-5

3) Adjust the angle of the CRT's. (See page 16.)

For 100" screen size	For 120–180" screen size and the other screen sizes
Move the CRT to the 100 position	Move the CRT to the 120, 180, or 60–300 position

4) Select an installation from the PJ ORIENTATION menu in the SETTING menu. (See “Projection Type Selection” in the setup manual.)

To change to the ceiling mount system (rear)

1) Reverse the scan. (See page 14.)

2) Set the focus ring to the proper position. (See pages 16 and 17.)

For 100" screen size	For 120" screen size	For 180" screen size
R – A-3, B-3 G – A-1, B-3 B – A-3, B-3	R – A-3, B-3 G – A-1, B-3 B – A-3, B-3	R – A-5, B-5 G – A-1, B-5 B – A-5, B-5

3) Adjust the angle of the CRT's. (See page 17.)

For 100" screen size	For 120–180" screen size and the other screen sizes
Move the CRT to the 100 position	Move the CRT to the 120, 180, or 60–300 position

4) Select an installation from the PJ ORIENTATION menu in the SETTING menu. (See “Projection Type Selection” in the setup manual.)

To change to the desk top system (rear, 0 projection angle)

1) Set the focus ring to the proper position. (See pages 16 and 17.)

For 100" screen size	For 120" screen size	For 180" screen size
R – A-3, B-3 G – A-1, B-3 B – A-3, B-3	R – A-3, B-3 G – A-1, B-3 B – A-3, B-3	R – A-5, B-5 G – A-1, B-5 B – A-5, B-5

2) Adjust the angle of the CRT's (See page 17.)

For 100" screen size	For 120–180" screen size and the other screen sizes
Move the CRT to the 100 position	Move the CRT to the 120, 180, or 60–300 position

3) Select an installation from the PJ ORIENTATION menu in the SETTING menu. (See “Projection Type Selection” in the setup manual.)

For XG135LC

To change screen size only:

1) Set the focus ring to the proper position. (See page 17.)

For 100" screen size	For 120" screen size	For 180" screen size
R – H-3, V-3	R – H-3.5, V-2.5	R – H-3.5, V-2.5
G – H-5, V-3	G – H-5, V-2.5	G – H-5, V-2.5
B – H-3, V-3	B – H-3.5, V-2.5	B – H-3.5, V-2.5

2) Adjust the angle of the CRT's. (See page 18.)

For 100" screen size	For 120–180" screen size and the other screen sizes
Move the CRT to the 100 position	Move the CRT to the 120, 180, or 60–300 position

To change to the desk top system (front)

1) Reverse the scan. (See page 14.)

2) Set the focus ring to the proper position. (See page 17.)

For 100" screen size	For 120" screen size	For 180" screen size
R – H-3, V-3	R – H-3.5, V-2.5	R – H-3.5, V-2.5
G – H-5, V-3	G – H-5, V-2.5	G – H-5, V-2.5
B – H-3, V-3	B – H-3.5, V-2.5	B – H-3.5, V-2.5

3) Adjust the angle of the CRT's. (See page 18.)

For 100" screen size	For 120–180" screen size and the other screen sizes
Move the CRT to the 100 position	Move the CRT to the 120, 180, or 60–300 position

4) Select an installation from the PJ ORIENTATION menu in the SETTING menu. (See “Projection Type Selection” in the setup manual.)

To change to the ceiling mount system (rear)

1) Reverse the scan. (See page 14.)

2) Set the focus ring to the proper position. (See page 17.)

For 100" screen size	For 120" screen size	For 180" screen size
R – H-3, V-3	R – H-3.5, V-2.5	R – H-3.5, V-2.5
G – H-5, V-3	G – H-5, V-2.5	G – H-5, V-2.5
B – H-3, V-3	B – H-3.5, V-2.5	B – H-3.5, V-2.5

3) Adjust the angle of the CRT's. (See page 18.)

For 100" screen size	For 120–180" screen size
Move the CRT to the 100 position	Move the CRT to the 120, or 180.

4) Select an installation from the PJ ORIENTATION menu in the SETTING menu. (See “Projection Type Selection” in the setup manual.)

To change to the desk top system (rear, 0 projection angle)

1) Set the focus ring to the proper position. (See page 17.)

For 100" screen size	For 120" screen size	For 180" screen size
R – H-3, V-1	R – H-3.5, V-1	R – H-3.5, V-1
G – H-5, V-1	G – H-5, V-1	G – H-5, V-1
B – H-3, V-1	B – H-3.5, V-1	B – H-3.5, V-1

2) Adjust the angle of the CRT's (See page 18.)

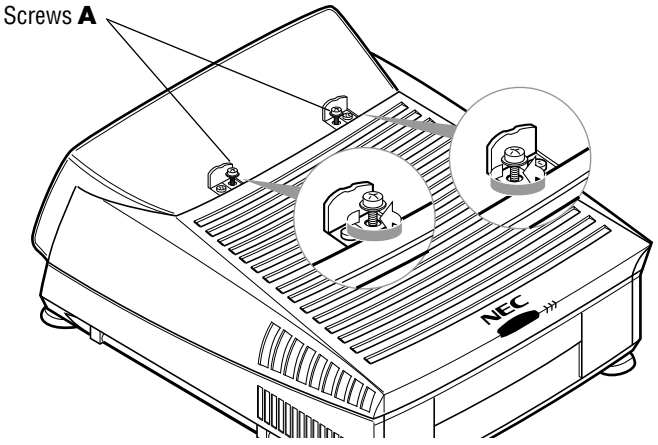
For 100" screen size	For 120–180" screen size and the other screen sizes
Move the CRT to the 100 position	Move the CRT to the 120, 180, or 60–300 position

3) Select an installation from the PJ ORIENTATION menu in the SETTING menu. (See “Projection Type Selection” in the setup manual.)

Removing and Reinstalling Top Cover

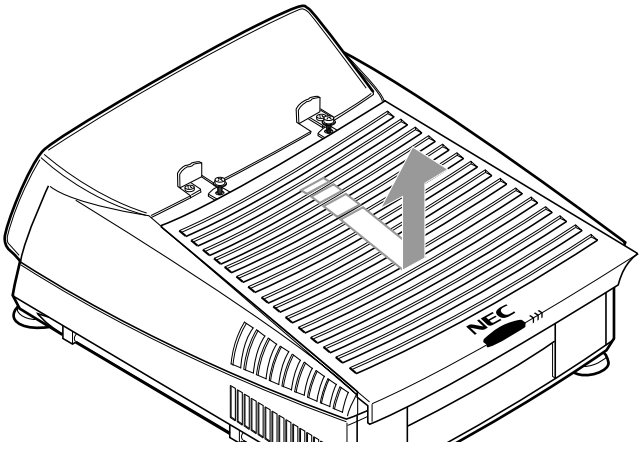
CAUTION:
- Be sure to turn off the projector and unplug the power cord before opening the top cover.

To remove the top cover:



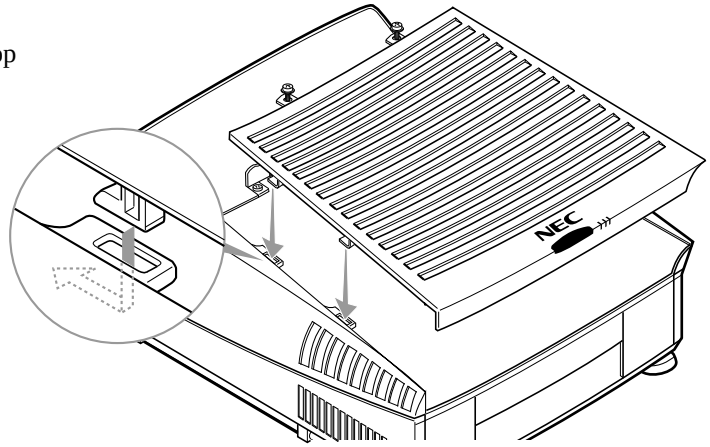
① Loosen four screws **A**.
- These are retaining screws.
- There are two lids on the top cover. Open the lid to access the two screws each.
- The other two screws hold the front panel.

② Slide and open the top cover in the direction of the arrow.



③ To reinstall it, aligning the catches with the hole and slide the top cover in the direction of the arrow.

④ Tighten the two **A** screws.



Scan Reversal

You will have to reverse the horizontal polarity when changing the projector's configuration.

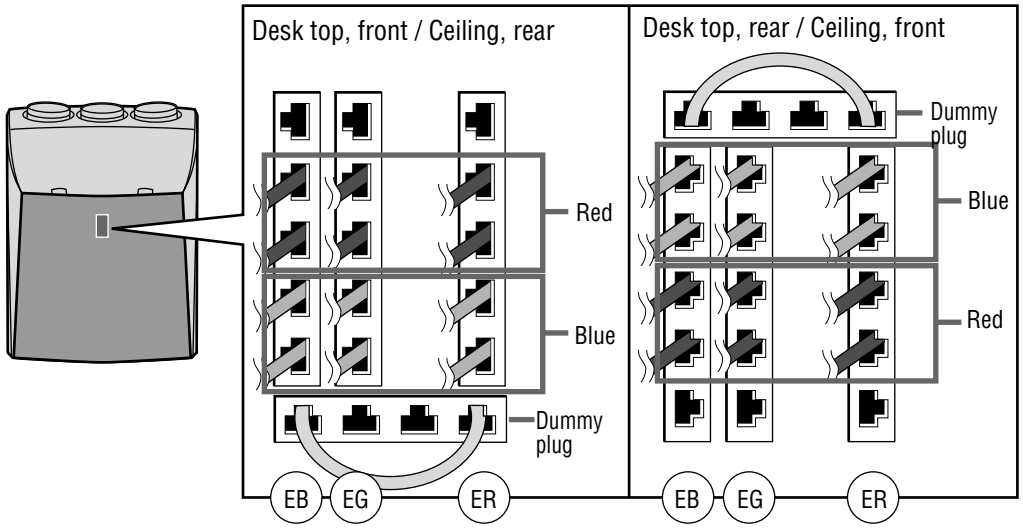
NOTE: For vertical polarity , scan reversal can be changed using the PROJECTION feature in the SETTING MODE menu.

To reverse the scan, proceed as follows:

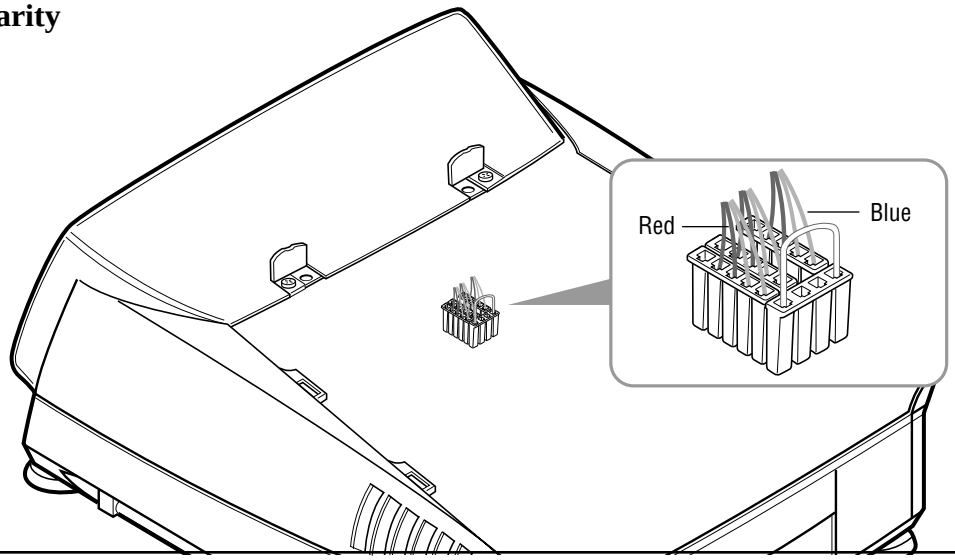
CAUTION: Always disconnect the projector from the AC source before reversing the plug. Failure to observe this precaution may result in electric shock or damage to the projector.

① Remove the top cover.
- See Removing and reinstalling Top Cover section.

② Reverse the horizontal scan.
- To reverse the scan there are three plugs on the sweep board. EB, EG and ER are the horizontal connectors.
  First remove the dummy plug.
  Secondly remove the plug and turn it 180 degrees, then reinstall. Do this for all three of horizontal connectors depending upon your application (See Table below). Third, install the dummy plug on the opposite side.

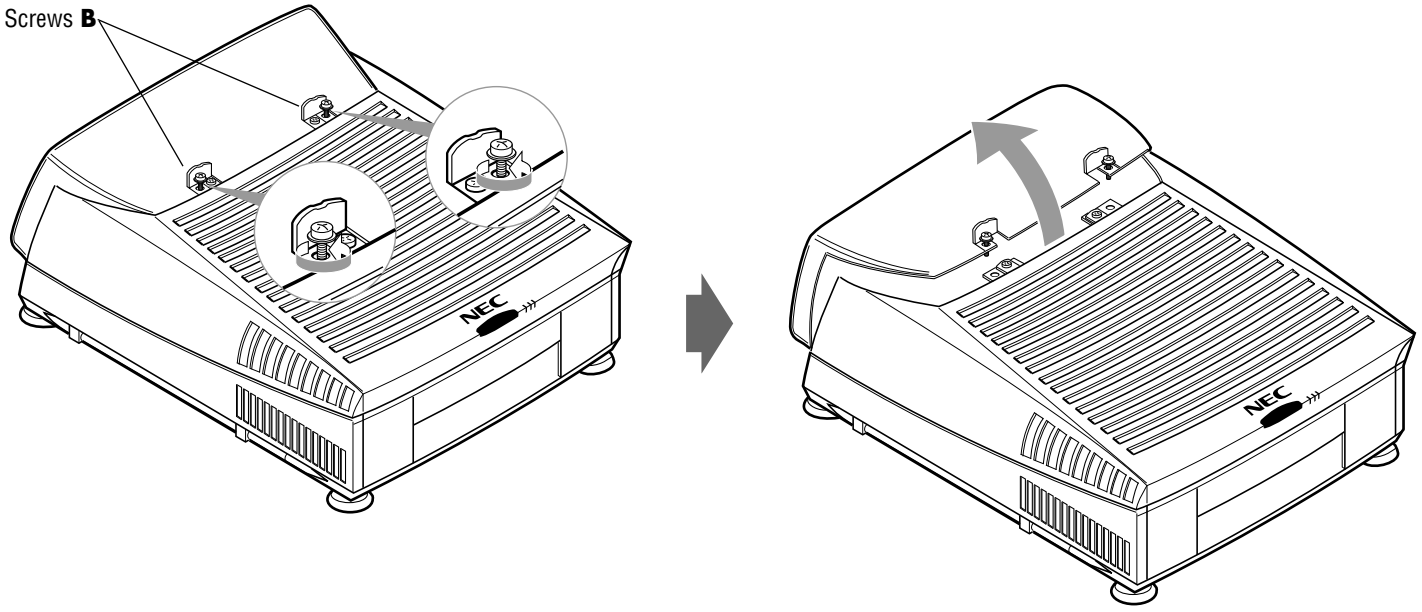


Horizontal polarity



Removing and Reinstalling Front Panel

The projector can project an image from 60 to 300 inches diagonal. From the factory the projector is set for ceiling mount, 100 inch diagonal screen size and a projection angle of 12.4 degrees. The projector can be used in three other degree applications.
Before the following procedures, remove the front panel by loosening the two screws **B** which hold the front panel. There are two screws on each side.



• Reverse the preceding steps to reinstall the front panel.

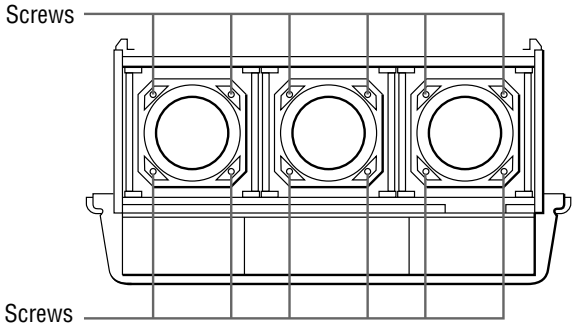
Screen Size Change(Adjusting Focus Rings and CRT Angle) for XG85

• Adjusting Focus Rings for the XG85

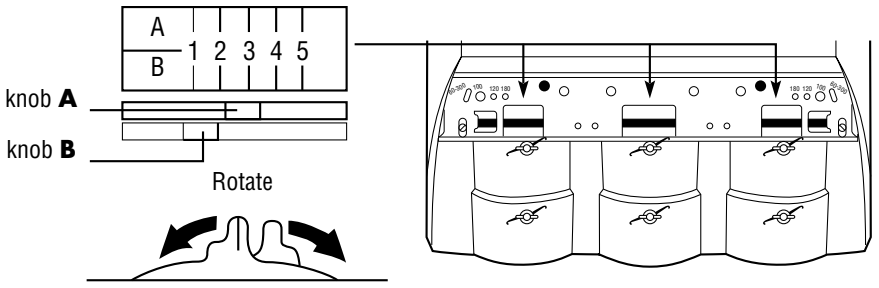
There are three sets of adjusting focus rings, two between each CRT and lens.
These focus rings are used for maintaining optimum edge focus for the various screen sizes and projection angles.
*When setting the focus rings or changing CRT angle, you must first remove the front panel.

① Loosen the four screws at the lens.

CAUTION: Be careful not to remove any of the four screws completely. The falling lens can cause serious injury especially when the projector is installed on the ceiling.



② Rotate and set the knobs (**A** and **B**) to the right position. The table below lists which position the knob should be set to for any given screen size and angle. The similar table is also on the back of the front panel.



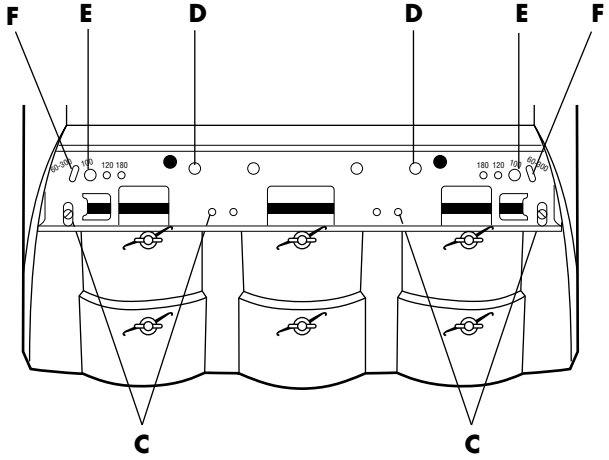
③ Tighten the four screws at the lens.

Position of Knobs for the XG85

Projection angle and screen size (Diagonal) \ CRT		R		G		B	
		Knob		Knob		Knob	
		A	B	A	B	A	B
12.1°	60" – 79"	2	2	1	2	2	2
12.4°(Factory preset)	80" – 129"	3	3	1	3	3	3
12.6°	130" – 179"	4	4	1	4	4	4
12.7°	180" – 300"	5	5	1	5	5	5
0°	60" – 79"	2	1	1	1	2	1
	80" – 129"	3	1	1	1	3	1
	130" – 179"	4	1	1	1	4	1
	180" – 300"	5	1	1	1	5	1

• Adjusting Angle of CRTs for the XG85

To adjust the angle of the CRTs, remove screws **E** and loosen screws **C** and **D**.



Now you can move the tube and lens assembly to one of the three other positions. Then replace screws E and tighten screws C and D. This process needs to be done for the red and blue CRTs. The green CRT is never repositioned. Use the table below to select the proper setting for your screen size.

NOTE: The threaded hole marked "60-300" **F** is drilled lengthwise so you can move the CRT assembly to any screen size. Adjust the red and blue lens so that the red or blue beam is aligned with the green beam. After doing this, adjust the lens focus (see the next page).

Then tighten the screws **E**.

Metal impression stamp screen size	60-300	100	120	180
Range of screen size (diagonal)	60"-300"	100"	120"	180"

Screen Size Change(Adjusting Focus Rings and CRT Angle) for XG135LC

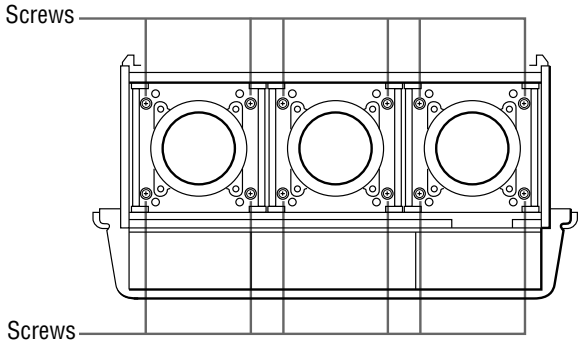
• Adjusting Focus Rings for the XG135LC

There are three sets of adjusting focus rings, two between each CRT and lens.

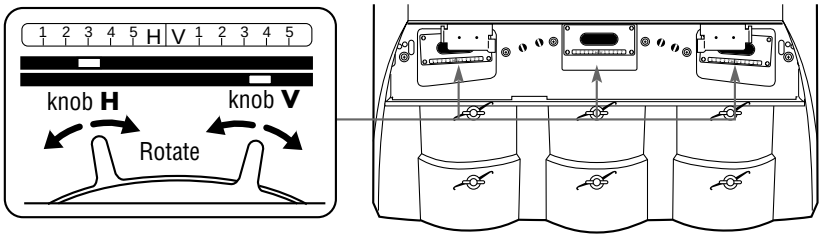
These focus rings are used for maintaining optimum edge focus for the various screen sizes and projection angles.

*When setting the focus rings or changing CRT angle, you must first remove the front panel.

① Loosen the four screws.



② Rotate and set the knobs (**H** and **V**) to the right position. The table below lists which position the knob should be set to for any given screen size and angle. The similar table is also on the back of the front panel.



③ Tighten the four screws.

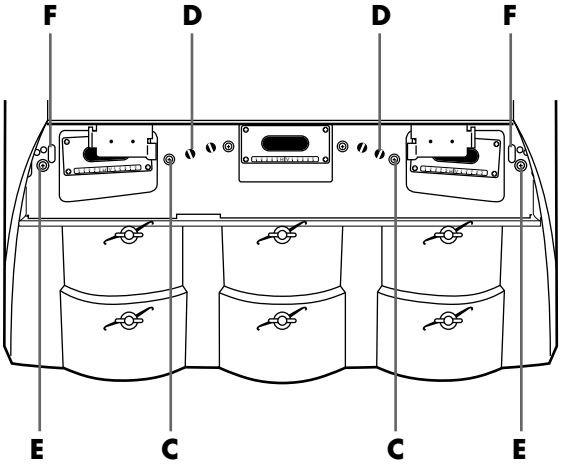
Position of Knobs for the XG135LC

Projection angle and screen size (Diagonal) \ CRT		R		G		B	
		Knob		Knob		Knob	
		H	V	H	V	H	V
11.8°	60" – 69"	1	5	5	5	1	5
	70" – 89"	2	4	5	4	2	4
12.2° (Factory preset)	90" – 109"	3	3	5	3	3	3
	110" – 129"	3.5	2.5	5	2.5	3.5	2.5
12.4°	130" – 169"	3.5	2.5	5	2.5	3.5	2.5
12.6°	170" – 209"	3.5	2.5	5	2.5	3.5	2.5
	210" – 300"	4	2	5	2	4	2
0°	60" – 69"	1	1	5	1	1	1
	70" – 89"	2	1	5	1	2	1
	90" – 109"	3	1	5	1	3	1
	110" – 209"	3.5	1	5	1	3.5	1
	210" –300"	4	1	5	1	4	1

PROJECTION CONFIGURATION CHANGE

• Adjusting Angle of CRTs for the XG135LC

To adjust the angle of the CRTs, remove screws E and loosen screws C and D.



Now you can move the tube and lens assembly to one of the three other positions. Then replace screws E and tighten screws C and D. This process needs to be done for the red and blue CRTs. The green CRT is never repositioned. Use the table below to select the proper setting for your screen size.

NOTE: The threaded hole **F** is drilled lengthwise so you can move the CRT assembly to any screen size. Adjust the red and blue lens so that the red or blue beam is aligned with the green beam. After doing this, adjust the lens focus (see the next page).

Then tighten the screws **E**.

Metal impression stamp screen size	60-300	100	120	180
Range of screen size (diagonal)	60"-300"	100"	120"	180"

Lens Focus Adjustment

Adjust the center focus and edge focus mechanically to obtain the best screen focus.

NOTE:
- Plug the power cord and turn on the projector before adjustment.
- The lens focus adjustment must be performed for each lens.
- Select the FOCUS test pattern using the TEST button on the full function remote control.

Proceed as follows:

① Press the R, G, or B button on the full function remote control to project the CRT beam to be adjusted.
- You can turn on or off each CRT beam(R, G and B)separately.

② Adjust the center focus.
- Loosen the wing nut A. Rotate the lens using the wing nut **A** until the center of the screen is in focus.
  When you get the best center focus, tighten the wing nut **A**.

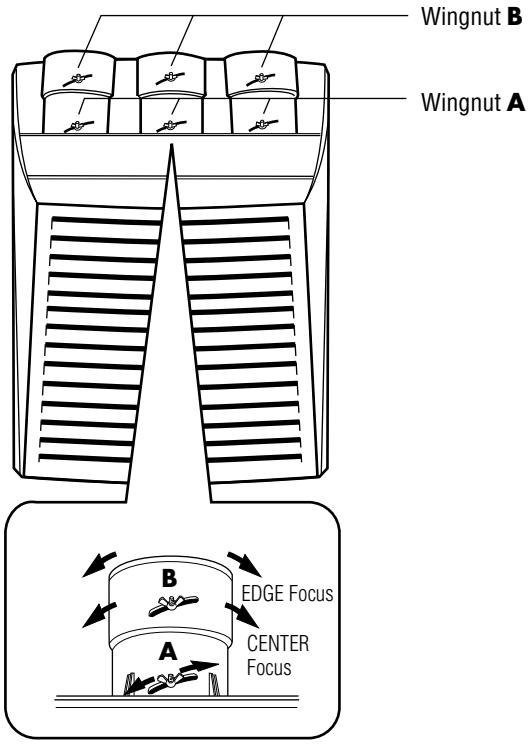
NOTE: Do not over-tighten the wing nut.

③ Adjust the edge focus.
- Loosen the wing nut B. Rotate the lens barrel until the edge area of the screen is focused. Tighten the wing nut **B**.

④ Recheck center focus.
- If it is out of focus, repeat steps ② and ③.

⑤ Repeat steps ① to ④ for the other CRTs.

⑥ Reinstall the front panel.



NEC Corporation

Printed in Japan
78409141