# LCD PROJECTOR LENS
# MODEL LNS-T31A/W31A/T32
# LENS REPLACEMENT PROCEDURE

NOTE; Lens installation is different in cabinet design and lens attachment method (Type A, B and C). Before installation the lens, check cabinet design and proper installation should be made.

## NOTES ON LENS REPLACEMENT

Lens replacement should be performed by the qualified service personnel.

It should be followed by this procedure precisely.

Before attempt to replace the lens, confirm the model number (both the LCD projector and the lens) and use the proper lens.

The lens cover is on the lens for protection. Be sure to remove the lens cover before installation.

When installing or removing the lens, be careful not to stain, scratch or damage the lens.

If you have any questions, contact the dealers.

## PARTS LIST

Following parts are contained in the packing.

● LENS                            1 piece
● LIGHT-BLOCK SHEET BASE          1 piece (Part No. 610 310 8001)
● DRIVER (3 mm, Green)            1 piece (Part No. 610 287 7328)
● DRIVER (4 mm, Yellow)           1 piece (Part No. 610 275 6029)
● LIGHT-BLOCK SHEET   For LNS-T31A   1 piece Type PB1 (Part No. 610 310 7950)
                      For LNS-W31A   1 piece Type PC1 (Part No. 610 310 7967)
                      For LNS-T32    1 piece Type PF1 (Part No. 610 310 7974)

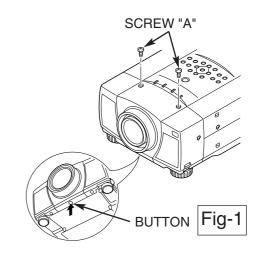## Following checks and confirmations should be taken for safety.

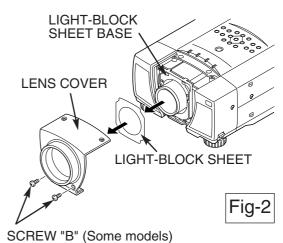Check the following things by the time of the cabinet assembly after the lens replacement.

1. Check the lens is securely fixed.
2. Check the proper wiring and the wires are fixed properly.
3. Check each connector is connected properly.
4. Check no wiring is tangled on the gear of lens motor or the other mechanical parts.
5. Check no parts is missing, or no mounting part is loose.

# LENS REPLACEMENT PROCEDURE (FOR "A" TYPE )

Perform the steps 1 to 6 for lens replacement.

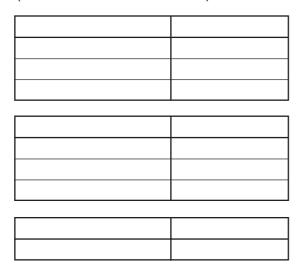First set the lens at the center position with lens shift adjustment.

1 REMOVE THE LENS COVER AND LIGHT-BLOCK SHEET (See Figure-1 and 2)

1. Remove 2 screws-A.
2. Press the button (or remove 2 screws-B) on the lower of the lens cover and remove the lens cover.
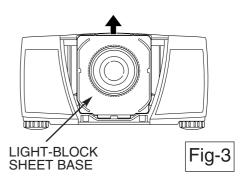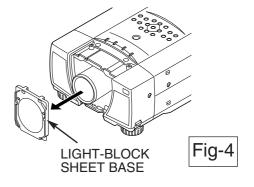3. Remove the light-block sheet from the light-block sheet base.

SCREW "A"

BUTTON   Fig-1

LIGHT-BLOCK SHEET BASE

LENS COVER

LIGHT-BLOCK SHEET

SCREW "B" (Some models)

Fig-2

2 REMOVE THE LIGHT-BLOCK SHEET BASE (See Figure-3 and 4)

1. Slide the light-block sheet base upward.
2. Remove the light-block sheet base.

LENS MOTOR PARTS NO.
(LOCATED ON THE LENS)

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LIGHT-BLOCK SHEET BASE   Fig-3

LIGHT-BLOCK SHEET BASE   Fig-4

-2-

## 3 REMOVE THE LENS (See Figure-5 and 6)

1. Remove the connector "K16J" of the circuit board. Remove the lens motor lead from lead holder.

2. Remove screws-C (4 screws) which fastens the lens and remove the lens. Use the driver (3 mm, Green) included with the lens to remove the screws.

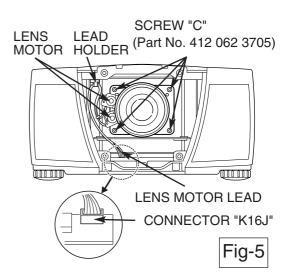Be careful not to drop the lens when removing the screws.

After using, save the driver for latter use.



LENS MOTOR    LEAD HOLDER    SCREW "C" (Part No. 412 062 3705)

LENS MOTOR LEAD

CONNECTOR "K16J"

Fig-5

## 4 MOUNT THE LENS (See Figure-5 and 6)

1. Remove protective caps (front and back) on the lens.

2. Mount the lens on lens mounting bracket with 4 screws. (locate motor on left side).
Use the driver (4 mm, Yellow) included with the lens to fasten the screws.

After using, save the driver for latter use.

3. Connect the lens motor lead to the connector "K16J" of the circuit board.

4. Connect the lens motor lead to the lead holder.



DRIVER IN THE LENS

LENS MOUNTING BRACKET

Fig-6

## 5 MOUNT THE LIGHT-BLOCK SHEET BASE (See Figure-7)

1. Mount the light-block sheet base to the projector.



LIGHT-BLOCK SHEET BASE

Fig-7

## 6 MOUNT THE LIGHT-BLOCK SHEET AND LENS COVER (See Figure-8)

1. Mount the light-block sheet to the light-block sheet base as shown in the Figure-8. (In the same position as the removed sheet has been placed). Use the sheet included with the lens.

2. Make sure the part no. and mark (TOP and BACK) on Light-Block Sheet and set them properly.
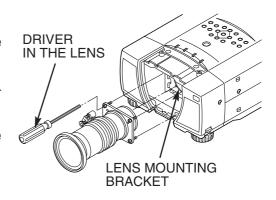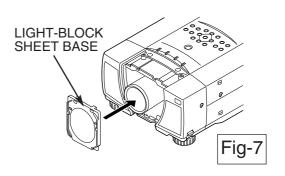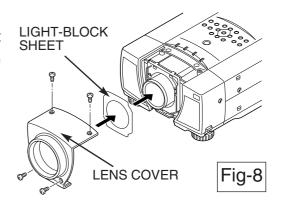
3. Mount the lens cover with the screws.



LIGHT-BLOCK SHEET

LENS COVER

Fig-8

# LENS REPLACEMENT PROCEDURE (FOR "B" TYPE)

Perform the steps 1 to 6 for lens replacement.

First set the lens at the fully lower position with lens shift adjustment.

## 1 REMOVE THE LENS COVER AND FRONT CABINET

1. Turn the lens cover to counter-clockwise and pull it toward front and remove the Lens Cover.
2. Remove 2 Screws-A.
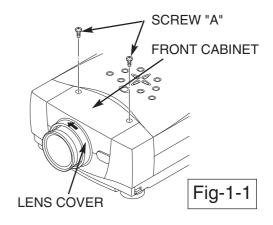3. Remove the front cabinet

   See Figure-1-1 and 2.

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1. Remove 2 Screws-A.
2. Remove the front cabinet
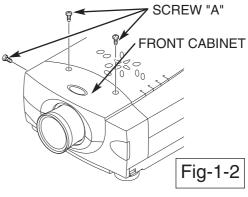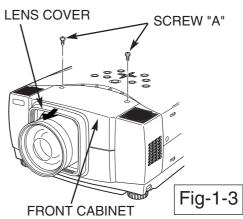
   See Figure-1-2 and 2.

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1. Pull Lens Cover toward front and remove it.
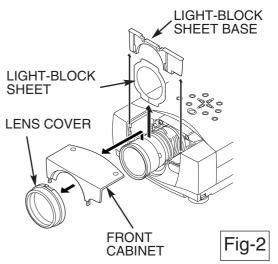2. Remove 2 Screws-A.
3. Remove the front cabinet

   See Figure-1-3 and 2.

## 2 REMOVE THE LIGHT-BLOCK SHEET BASE AND LIGHT-BLOCK SHEET (See Figure-2)

1. Slide the light-block sheet base upward and remove it.
2. Remove the light-block sheet from lens.



SCREW "A"
FRONT CABINET
LENS COVER
Fig-1-1



SCREW "A"
FRONT CABINET
Fig-1-2



LENS COVER
SCREW "A"
FRONT CABINET
Fig-1-3



LIGHT-BLOCK SHEET BASE
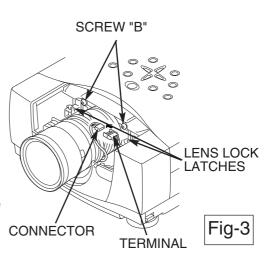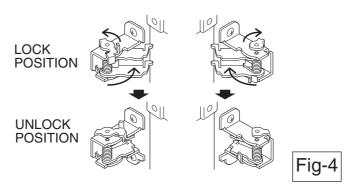LIGHT-BLOCK SHEET
LENS COVER
FRONT CABINET
Fig-2

**3** REMOVE THE LENS (See Figure-3 and 4)

1. Remove the lens motor connector from terminal.
2. Loosen the screws-B (2 screws) which fastens the lens. {Use the driver (4 mm, Yellow) included with the lens to loosen the screws.}
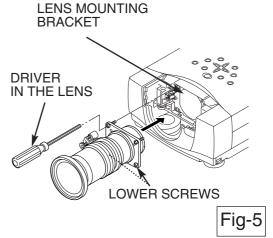3. Slide the lens lock latches to "UNLOCK" position and remove the lens.

Be careful not to drop the lens when removing the screws. After using, save the driver for latter use.

SCREW "B"

LENS LOCK LATCHES

CONNECTOR

TERMINAL

Fig-3

## LENS LOCK LATCHES

LOCK POSITION

UNLOCK POSITION

Fig-4

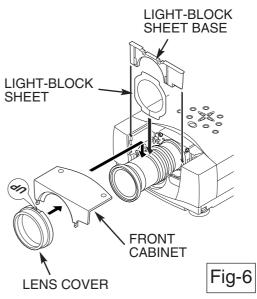**4** MOUNT THE LENS (See Figure-5)

1. Remove protective caps (front and back) on the lens.
2. Mount the lens on lens mounting bracket with Upper 2 screws. (locate motor on left side).
   Use the driver (4 mm, Yellow) included with the lens to fasten the screws.
3. Remove the lower 2 screws on the Lens. (Lower 2 screws are not used.)
   Slide the lens lock latches to "LOCK" position and lock the lens. (See Figure-4)
4. Connect the lens motor connector to terminal. (See Figure-3)

LENS MOUNTING BRACKET

DRIVER IN THE LENS

LOWER SCREWS

Fig-5

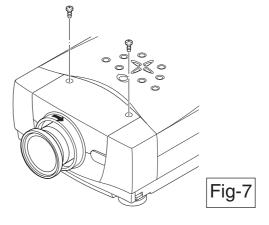## 5 MOUNT THE LIGHT-BLOCK SHEET AND LIGHT-BLOCK SHEET BASE (See Figure-6)

1. Mount the light-block sheet on the lens as shown in the Figure-6. (In the same position as the removed sheet has been placed). Use the sheet included with the lens.

2. Make sure the part no. and mark (TOP and BACK) on Light-Block Sheet and set them properly.

3. Mount the light-block sheet base included with the lens.

LIGHT-BLOCK SHEET BASE

LIGHT-BLOCK SHEET

FRONT CABINET

LENS COVER

Fig-6

## 6 MOUNT THE FRONT CABINET AND LENS COVER (See Figure-6 and 7)

1. Mount the front cabinet with 2 screws.

2. Mount the lens cover.

   For the cabinet Fig. 1-1, position the marked UP of Lens Cover on top and push in to the front cabinet and turn the Lens Cover fully clockwise until it is properly locked.

   For the cabinet Fig. 1-3, push the Lens Cover onto the cabinet

Fig-7

# LENS REPLACEMENT PROCEDURE (FOR "C" TYPE )

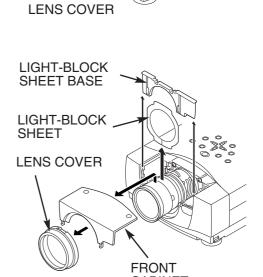Perform the steps ⬚1 to ⬚6 for lens replacement.

First set the lens at the fully lower position with lens shift adjustment.

## ⬚1 REMOVE THE LENS COVER AND FRONT CABINET

1. Turn the lens cover to counter-clockwise and pull it toward front and remove the Lens Cover.
2. Remove 2 Screws-A.
3. Remove the front cabinet

## ⬚2 REMOVE THE LIGHT-BLOCK SHEET BASE AND LIGHT-BLOCK SHEET

1. Slide the light-block sheet base upward and remove it.
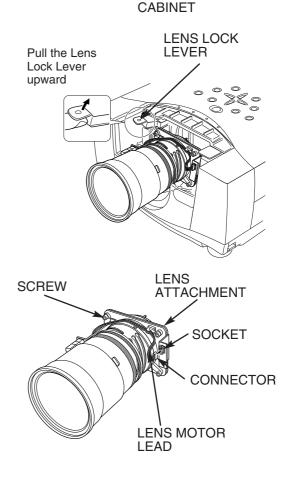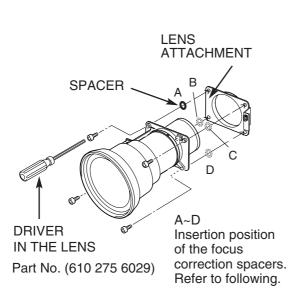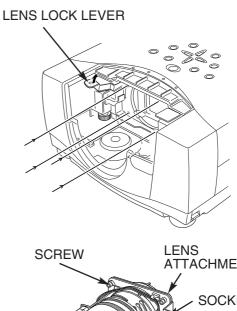2. Remove the light-block sheet from lens.

## ⬚3 REMOVE THE LENS

1. Grasp the Lens Lock Lever and turn it fully upward. Remove the Lens into the projector.
2. Disconnect the lens motor lead connector to the socket on the lens attachment.
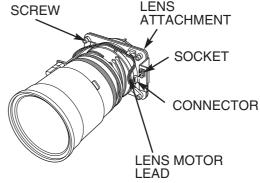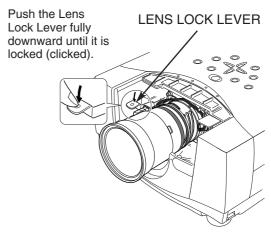3. Remove 4 Screws and remove lens attachment.

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## 4 MOUNT THE LENS

1. Remove protective caps (front and back) on the optional lens.
2. Mount the lens on the lens attachment with 4 Screws.
3. Connect the lens motor lead connector to the socket on the lens attachment. (Motor Driven Lens only.)
4. Grasp the Lens Lock Lever and turn it fully upward. Install the Lens into the projector. Turn the Lens Lock Lever fully downward until lever is Locked (clicked position) properly.
   When installing the Motor Driven Lens, be sure to mount Lens Motor on left-side.
   After installing the lens, make sure the Lens is not loose and properly installed.

LENS LOCK LEVER

LENS ATTACHMENT

SPACER

B

A

DRIVER IN THE LENS

Part No. (610 275 6029)

A~D Insertion position of the focus correction spacers. Refer to following.

C

D

SCREW

LENS ATTACHMENT

SOCKET

CONNECTOR

LENS MOTOR LEAD

Push the Lens Lock Lever fully downward until it is locked (clicked).
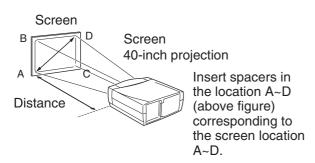
LENS LOCK LEVER

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### Correcting the focus

When the lens is attached to the projector and images are being projected onto the screen, the peripheral focus may be out of focus in some localized areas. If this happens, insert the spacer in between the lens attachment and the lens to correct the focus.

Inserting the spacers corrects the distance for best diagonal focus at the screen.
The corrected distance is determined by the thickness of the spacers that are used. As a guide, the distance is adjusted by approximately 30 mm for each 0.1-mm thickness of the spacers.
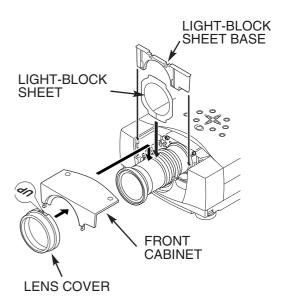There are three types of spacers provided, and there are four of each spacer type. Use these spacers to correct the distance as required.

Screen

B        D

A        C

Distance

Screen 40-inch projection

Insert spacers in the location A~D (above figure) corresponding to the screen location A~D.

| | | |
|---|---|---|
| ⊙⊙⊙⊙ | Spacer "1" Color; Clear Thickness; 0.1 mm | Correction distance 30 mm/for 40-inch projection |
| ⊙⊙⊙⊙ | Spacer "2" Color; Black Thickness; 0.2 mm | Correction distance 55 mm/for 40-inch projection |
| ⊙⊙⊙⊙ | Spacer "1" Color; Cream Thickness; 0.3 mm | Correction distance 80 mm/for 40-inch projection |

## 5 MOUNT THE LIGHT-BLOCK SHEET AND LIGHT-BLOCK SHEET BASE

1. Mount the light-block sheet on the lens. (In the same position as the removed sheet has been placed). Use the sheet included with the lens.
   Make sure the mark (TOP and BACK) on Light-Block Sheet and set them properly.
2. Mount the light-block sheet base included with the lens.

LIGHT-BLOCK SHEET BASE

LIGHT-BLOCK SHEET

FRONT CABINET

LENS COVER

## 6 MOUNT THE FRONT CABINET AND LENS COVER

1. Mount the front cabinet with 2 screws.
2. Mount the lens cover.
   Position the marked UP of Lens Cover on top and push in to the front cabinet and turn the Lens Cover fully clockwise until it is properly locked.