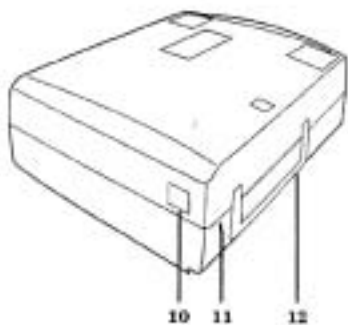
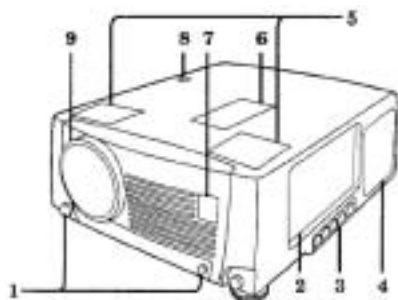


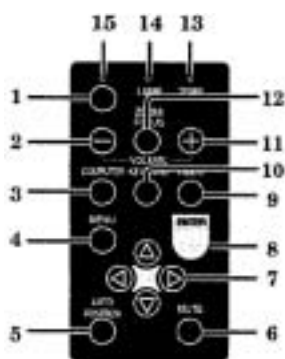
---

: LCD PROJECTOR  
: LVP-X490U

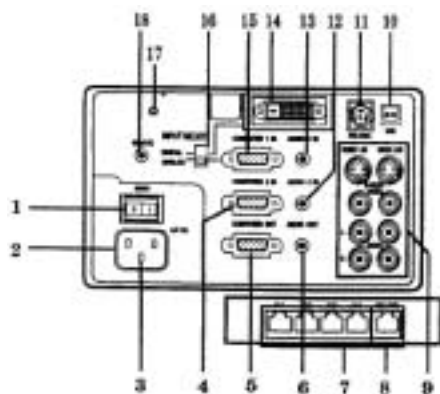
|   |        |
|---|--------|
|   |        |
| A | 가<br>. |



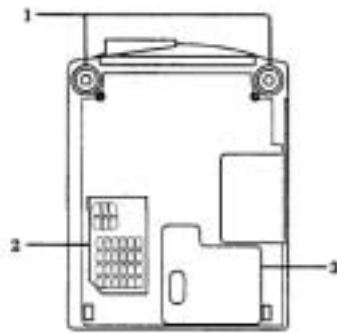
1. ( / )
- 2.
3. HUB
- 4.
5. ( / )
- 6.
7. ( )
8. IRIS
- 9.
10. ( )
11. Kensington Security Lock Standard
12. Easy-carry



1. Power  
I:ON  
O:OFF
2. -(VOLUME)
3. COMPUTER
4. MENU
5. AUTO POSITION
6. MUTE
7. Direction
8. Enter
9. VIDEO
10. KENSTONE
11. +(VOLUME)
12. ZOOM/FOCUS
13. TEMP( )
14. LAMP
15. Power



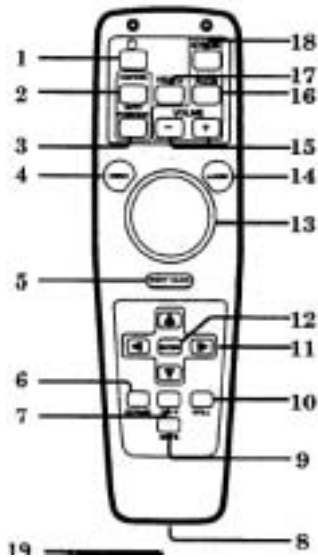
1. Main
2. Power
3. Ground
4. COMPUTER 2 IN (D-SUB mini 15P)
5. COMPUTER OUT (D-SUM mini 15P)
6. AUDIO OUT
7. LAN X1-X4
8. LAN II5(X5)
9. /
10. USB
11. RS-232C(DIN 8P)
12. COMPUTER 2 AUDIO IN
13. COMPUTER 1 AUDIO IN
14. COMPUTER 1 IN (DVI-D24P,X490 )
15. COMPUTER 1 IN (D-SUB mini 15P)
16. INPUT SELECT
- 17.
18. Wired (REMOTE)



1. ( / )
- 2.
- 3.

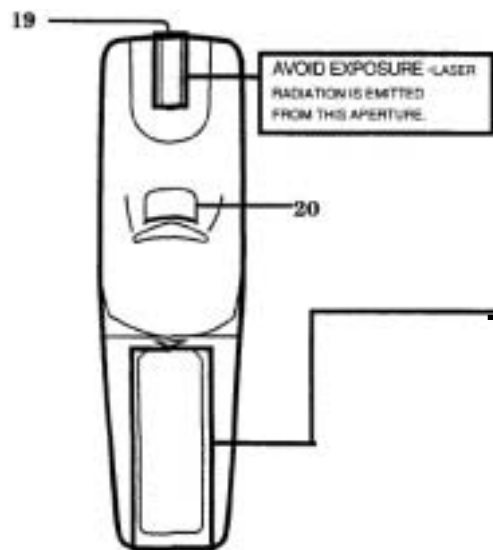
:

가

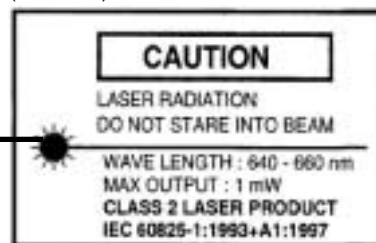


1. Power
2. COMPUTER
3. AUTO POSITION
4. MENU
5. ( )
6. EXPAND
7. PinP
8. Wired
9. MUTE( / )
10. STILL
11. Direction
12. ENTER
- 13.
14. LASER
15. +, -(VOLUME)
16. ZOOM/FOCUS
17. VIDEO
18. KEYSTONE
19. Laser aperture
20. ( )

• LASER 1 LASER



class 2( 1mW  
640-660nm)  
Beam Divergence: 10.0mm x 10.0mm 6m  
(±6.0mm)



• 가 LASER

가

- 1.
- 2.
- 3.

가

.(+ +, - -)

1



2



3



:

•  
•  
•

(

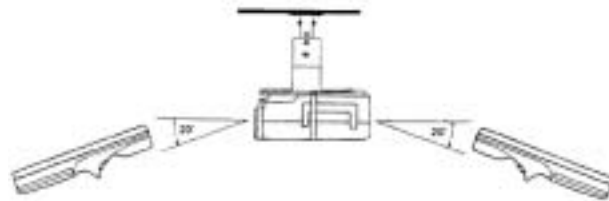
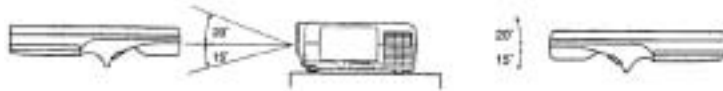
)

가

가

10m

7m( 23 )



:

2m(6.5 )

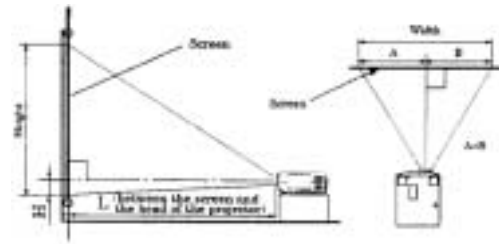


가

, pin-pin

1.8(min)

2.4( )



| Screen                  |                  |                 | Distance from screen (L)/(approximate) |        |                        |        | Height projected image (H) |        |
|-------------------------|------------------|-----------------|----------------------------------------|--------|------------------------|--------|----------------------------|--------|
| Diagonal size<br>(inch) | Height<br>(inch) | Width<br>(inch) | Maximum<br>zoom (WIDE)                 |        | Minimum<br>zoom (TELE) |        |                            |        |
|                         |                  |                 | (m)                                    | (inch) | (m)                    | (inch) | (cm)                       | (inch) |
| 40 "                    | 24 "             | 32 "            | 1.5                                    | 58 "   | 1.9                    | 75 "   | 3.0                        | 1.2 "  |
| 60 "                    | 36 "             | 48 "            | 2.3                                    | 89 "   | 2.9                    | 114 "  | 4.6                        | 1.8 "  |
| 80 "                    | 48 "             | 64 "            | 3.0                                    | 120 "  | 3.9                    | 152 "  | 6.1                        | 2.4 "  |
| 100 "                   | 60 "             | 80 "            | 3.8                                    | 150 "  | 4.9                    | 191 "  | 7.6                        | 3.0 "  |
| 150 "                   | 90 "             | 120 "           | 5.8                                    | 227 "  | 7.3                    | 289 "  | 11.4                       | 4.5 "  |
| 200 "                   | 120 "            | 160 "           | 7.7                                    | 304 "  | 9.8                    | 386 "  | 15.2                       | 6.0 "  |
| 250 "                   | 150 "            | 200 "           | 9.7                                    | 381 "  | 12.3                   | 483 "  | 19.1                       | 7.5 "  |
| 300 "                   | 180 "            | 240 "           | 11.6                                   | 458 "  | -                      | -      | 22.9                       | 9.0 "  |

가

가

가

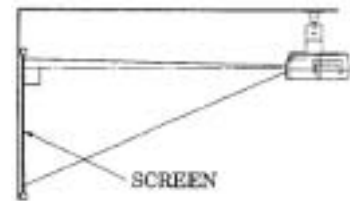
, INSTALLATION

IMAGE REVERSE

MIRROR INVERT

가

가



가



50

가

가

가

가

가

가

가 41 (+5 )

104 (40 )

:

가

RGB 가 PC, VCRs,

- 
- 
- 
- 

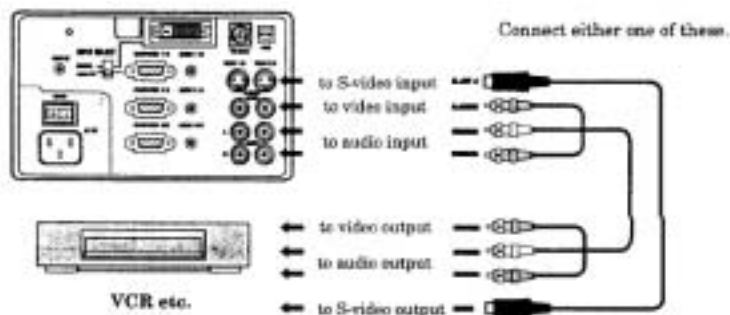
가 가

+AV

- 
- 
- S-

AV

S-

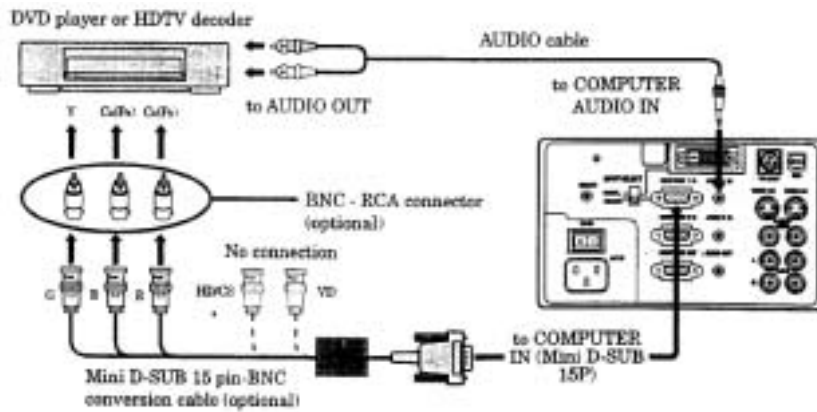


+DVD

HDTV

DVD 3 (Y, C<sub>B</sub>, C<sub>R</sub>)

COMPUTER 1 IN  
COMPUTER 2 IN



• Y, P<sub>B</sub>, P<sub>R</sub> HDTV

• Mini D-SUB 15  
pin-BNC

• DVD

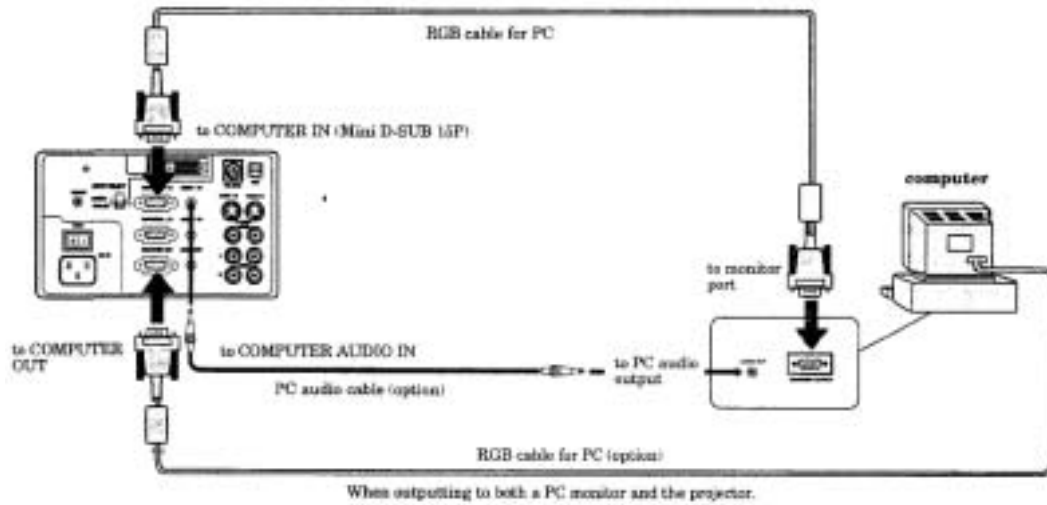
• R, G, B HDTV  
SIGNAL  
COMPUTER INPUT  
RGB

- 525p 가 SIGNAL INPUT SELECT
- 

ANALOG

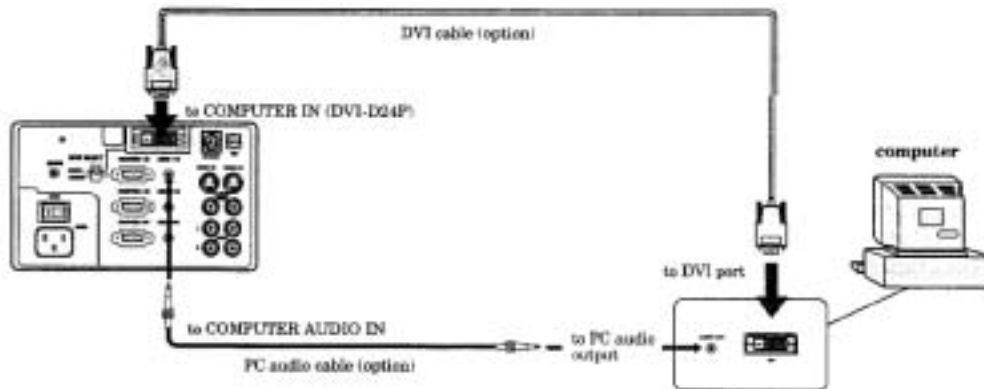
## + PC

Mini D-SUB 15P 가 (IBM PC IBM PC 가 )



- INPUT SELECT ANALOG

DVI 가 (X490 )



- INPUT SELECT DIGITAL
- COMPUTER 1 IN (DVI) COMPUTER OUT
- DVI DVI

:  
 • RGB  
 • RGB PC  
 • 가

## Macintosh

- 가 Macintosh
- RGB MAC PC

DDC™ (DVI )

VESA™ DDC™ 2B(EDID) 가 DDC™ 2B(EDID)

Windows 98

Windows 96

Mitsubishi

- 1.
- 2.
- 3.

90

- 가 “ON”
- 

- 가

- 3- 가

, A/C

- 가

120V

- 가

가

- 100-240V AC 50/60Hz

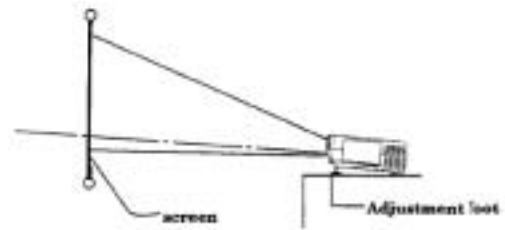
- 가

- 가

가

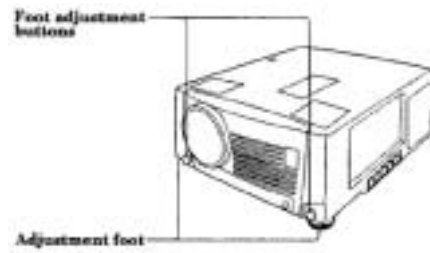
- 

- 



- 1.
- 2.
- 3.
- 4.

가



- 5.

- 

가

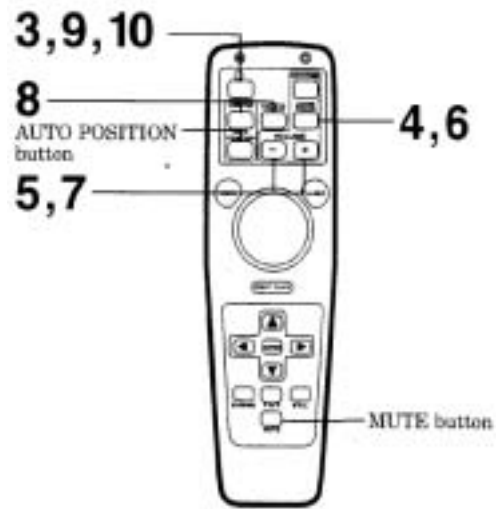
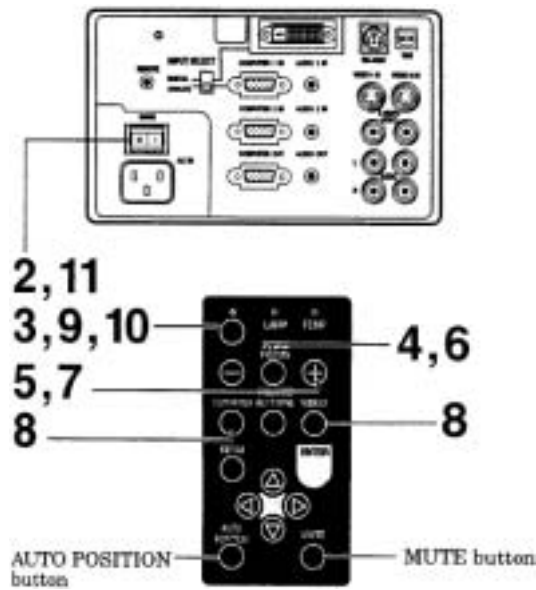
KEYSTONE

+ -

- 
- 
- 

90 가





1.

2. standby

POWER

3. POWER  
가

• , LAMP  
POWER

• 가  
2  
1

|          | LAMP | POWER |
|----------|------|-------|
| stand-by | -    |       |
| 가        | -    |       |

:

• 가  
POWER

•

• 가

• 가

4. ZOOM/FOCUS FOCUS “FOCUS”가

5. + -

6. ZOOM/FOCUS ZOOM “ZOOM”

7. + -

• 가  
PinP EXPAND

8. COMPUTER VIDEO

•

• COMPUTER VIDEO MENU가  
( )가

• COMPUTER 가

• , COMPUTER 1  
INPUT SELECT

DIGITAL

• LAMP MODE  
1 STANDARD가

## AV mute

MUTE 가

### 9. POWER

“POWER OFF?YES:PRESS AGAIN” 가

- 가 , POWER, LASER, R/L- , STILL, VOLUME + -

### 10. POWER

POWER

120

LCD

### 11.

, POWER

- Intake/exhaust

가

10

3

가

가

## AUTO POSITION

가 COMPUTER

가

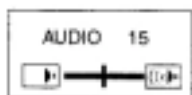
1. 가 가

2. Screen saver가 , screen saver

### 3. AUTO POSITION

- 가 , SIGNAL

+ - 가

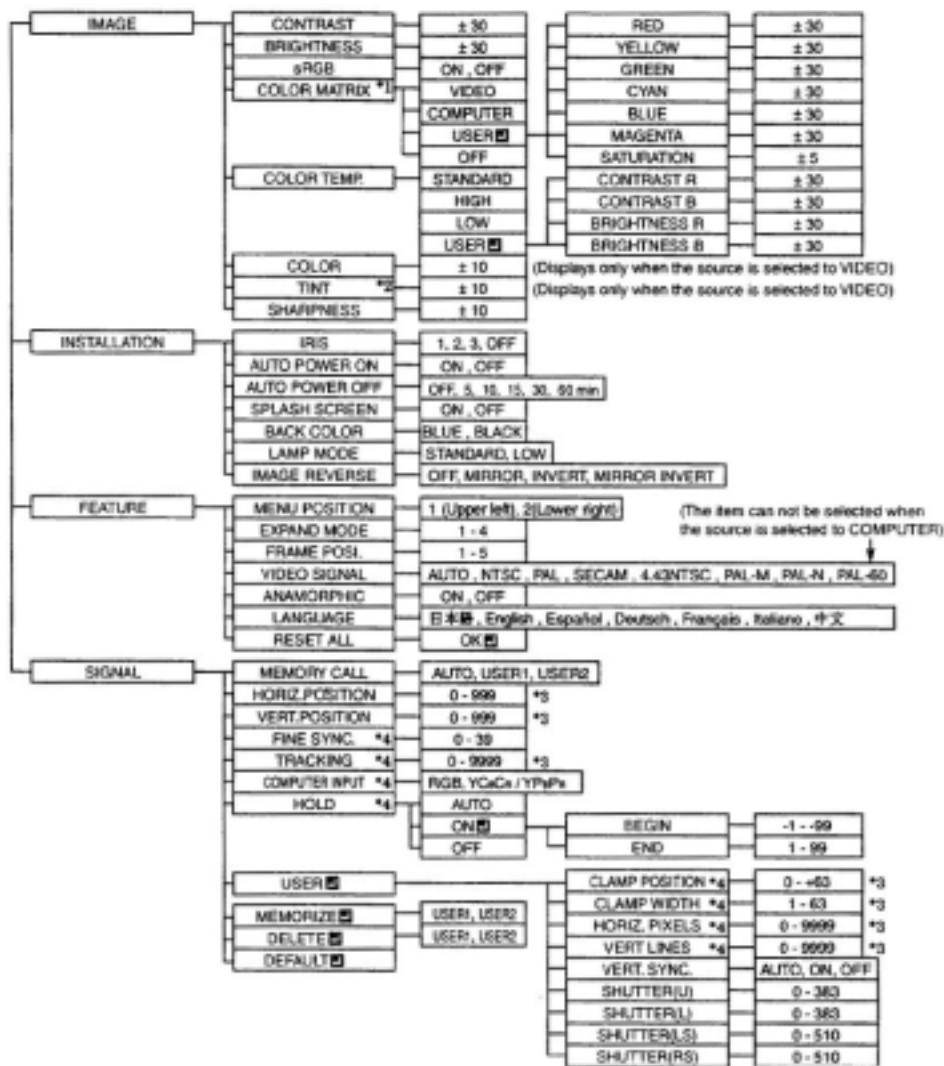


10

MENU

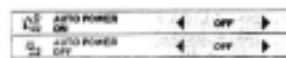
MENU가

- COMPUTER AUDIO IN DVD가

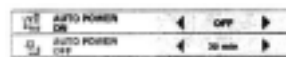


가 Menu  
: Auto power off

4. AUTO POWER OFF



5. auto power off



6. MENU

1. MENU



2. INSTALLATION



3. ENTER .( )



RESET

ENTER

## ①

CONTRAST.....가 가  
BRIGHTNESS.....가 가  
sRGB.....ON

- sRGB가 ON , COLOR MATRIX
- sRGB가 OFF , 가
- sRGB가 ON COLOR TEMP가 STANDARD sRGB

- 가 VIDEO-IN S-VIDEO IN , sRGB

COLOR MATRIX.....

COLOR TEMP.....

COLOR.....(VIDEO가 가 )

TINT.....가 가 가 )

- TV50(PAL, SECAM) 가 , TINT

SHARPNESS.....가 가



## ②

IRIS.....가

1

, 2

가

, 3 . OFF , IRIS

- 가 , 가

가

AUTO POWER ON....ON

가 off

가

- 가 off stand-by

AUTO POWER OFF..

가

stand-by

SPLASH SCREEN.....ON splash

BACK COLOR.....가

LAMP MODE.....LOW가 , ,

- LAMP MODE 1 STANDARD

IMAGE REVERSE.....

MIRROR, INVERT

MIRROR



## ③

### FEATURE

MENU POSITION.....

EXPAND MODE.....

FRAME POSI.....

VIDEO SIGNAL.....AUTO가

가

ANAMORPHIC.....DVD ON

LANGUAGE.....(日本語

/English/Deutsch/Francais/Italiano/中文)

RESET ALL.....MENU

.(LANGUAGE )



- FEATURE 15 LANGUAGE가 English NTSC . ( . )

#### ④ SIGNAL

MEMORY CALL.....AUTO, USER 1, USER 2

HORIZ.POSITION.....

VERT.POSITION.....

FINE SYNC.....가 PC 가



#### ⑤ SIGNAL-USER

CLAMP POSITION/

CLAMP WIDTH.....

CLAMP POSITION CLAMP

WIDTH

HORIZ.PIXELS.....

가 가

VERT.LINES.....

가 가

VERT.SYNC.....

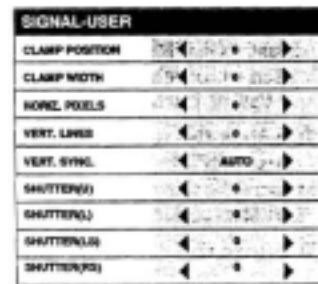
AUTO

SHUTTER(U).....

SHUTTER(L).....

SHUTTER(LS).....

SHUTTER(RS).....



2

1. SIGNAL MEMORY ENTER .(USER1 USER2)
  - 2.
  3. ENTER
- 3 가 .

SIGNAL RESET ENTER

SIGNAL MEMORY CALL .(USER 1 USER 2)

1. SIGNAL DELETE ENTER .(USER 1 USER 2)
  - 2.
  3. ENTER
- 3 가 .

IMAGE



IMAGE CONTRAST  
가

IMAGE BRIGHTNESS

IMAGE COLOR  
가

IMAGE TINT

IMAGE SHARPNESS  
가

Color ( , ) RGB  
Color

1. IMAGE COLOR MATRIX  
2. USER  
3. ENTER



4. SATURATION

5.  
6. 4 5

7. MENU

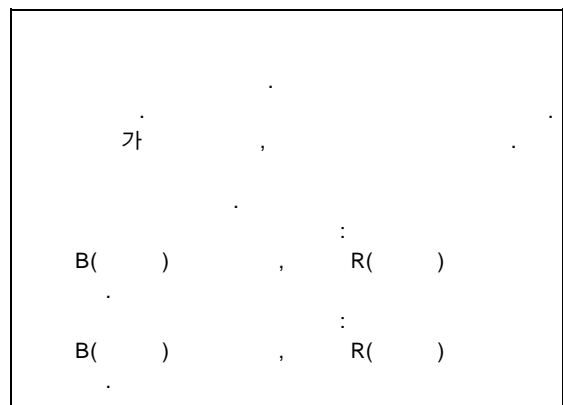
- COMPUTER 2 VIDEO 가  
VIDEO S-VIDEO , VIDEO  
가 COMPUTER  
COMPUTER  
• Color matrix , 2  
OFF

1. IMAGE COLOR TEMP  
2. USER  
3. ENTER



4.  
5.  
6. 4 5

7. MENU



## PC

가 PC  
PC  
가 , MENU



SIGNAL HORIZ.POSITION

SIGNAL VERT.POSITION

/ 가  
SIGNAL FINE SYNC.



가 .:  
SIGNAL - USER CLAMP  
POSITION CLAMP WIDTH

SIGNAL - USER SHUTTER(LS),  
SHUTTER(RS), HORIZ.PIXELS

SIGNAL - USER SHUTTER(U), SHUTTER(L),  
VERT.LINES

SIGNAL HOLD . ON  
ENTER 가  
BEGIN END

가 .:  
SIGNAL - USER VERT.SYNC  
AUTO  
USER

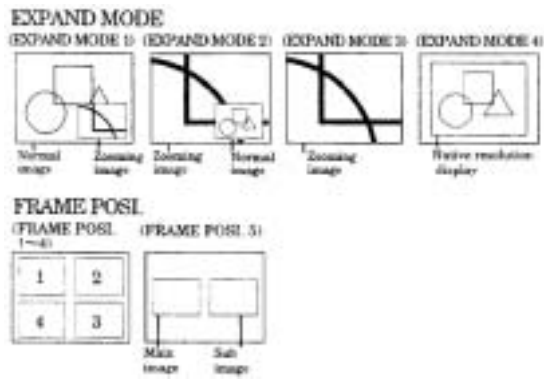
1. SIGNAL HORIZ.POSITION
- 2.
3. SIGNAL TRACKING
- 4.
5. 1 4
6. SIGNAL VERT.POSITION
- 7.

## Expand

EXPAND

## Expand

1. MENU
2. FEATURE
3. ENTER
4. EXPAND MODE FRAME POSI
5. EXPAND FRAME POSI
6. MENU



## Expand

1. EXPAND
  2. EXPAND
  - EXPAND
  - EXPAND
- zoom/focus

## REAL

- REAL
- REAL
- REAL

## Picture in Picture(PinP)

PinP PinP

## PinP

1. PinP  
 • VIDEO IN S-VIDEO IN  
 • COMPUTER IN  
 • VIDEO IN S-VIDEO IN
2. VIDEO COMPUTER

Main Sun

- 3.
  - 4.
  5. PinP
- PinP
- Main image Sub image

- PinP Main Sub
- PinP Main
- PinP

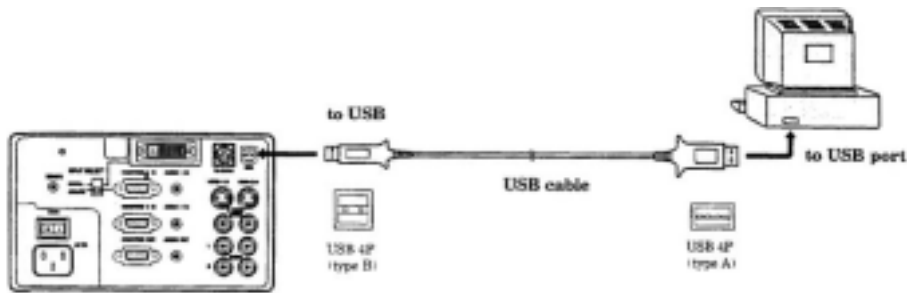
1. STILL

2. STILL



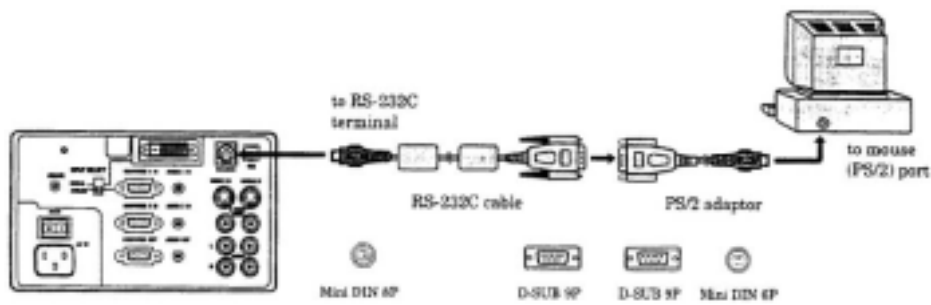
USB PS/2 PC

+USB 가

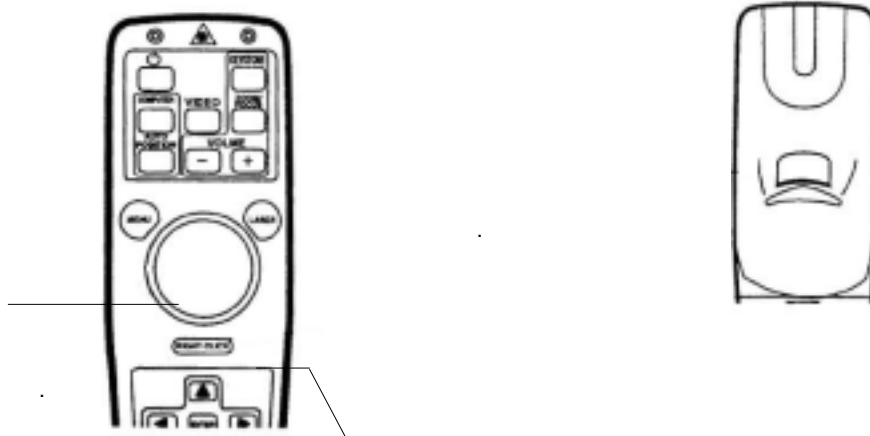


- 가 USB Windows 98 , Windows 95 , 가 USB 가
- Macintosh , Windows 95 , Windows 98 , 가 USB 가
- ON , USB , ON USB

+PS/2 가



- PS/2 가 , PC가 on
- 가 USB RS-232C , PC
- RS-232



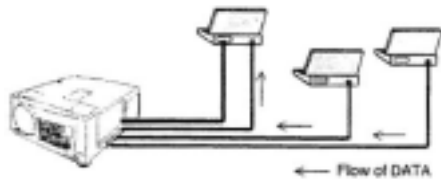
(HUB )

HUB

HUB

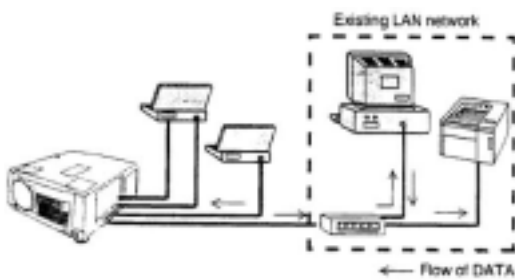
1) HUB

RGB



2) HUB  
LAN

LAN  
Network

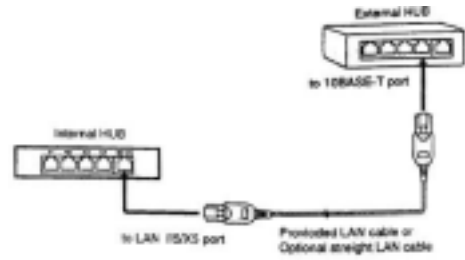


LAN IP 가

•

HUB LAN X1-X4

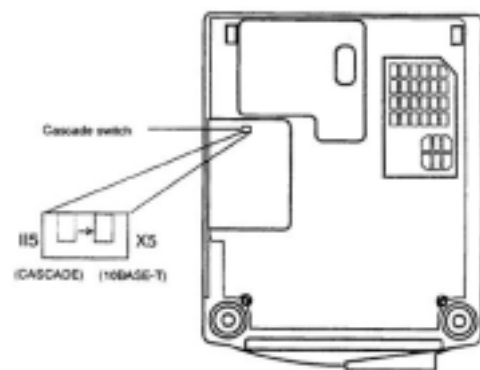
HUB



HUB HUB LAN 115/X5

5 HUB

X5(10BASE-T) LAN 115/X5





□

가

가

$$\vdots$$

•  
•  
•

.( )

가

가

•

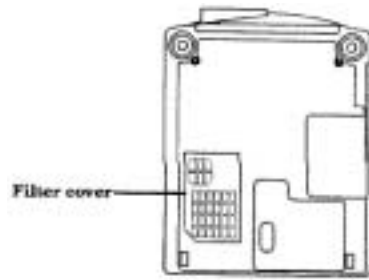
가

, TEMP  
LAMP

가

가

가



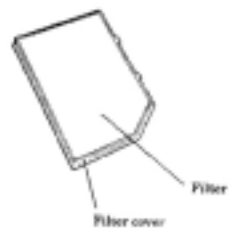
1.

Ridged area



2.

3.



4.

5.

■

■

•

가

•

가

□

가

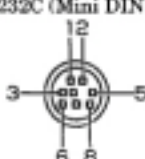
, 가

가

|                           |                                                                                                                                                             |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           | LCD                                                                                                                                                         |
|                           | X490U                                                                                                                                                       |
|                           | AC100 - 240V, 50 - 60Hz                                                                                                                                     |
|                           | 4.3A                                                                                                                                                        |
| LCD                       | 1.3- LCD : 3 (R, G, B )<br>1024 x 768 = 786,432<br>2,359,296<br>: 99.99%                                                                                    |
|                           | 16,770,000                                                                                                                                                  |
|                           | F 1.8 - 2.1 f=51 - 64mm                                                                                                                                     |
|                           | 300W SHP                                                                                                                                                    |
|                           | 40 - 300 ( 4:3)                                                                                                                                             |
| PC                        | : 640 x 400 - 1024 x 768 + Compressed 1280 x 1024<br>Sync on Green 가                                                                                        |
|                           | NTSC/NTSC 4.43/PAL(PAL - M,N)/SECAM, PAL - 60<br>DVD( )/HDTV(1080i)/720p/(525p)                                                                             |
|                           | 3W                                                                                                                                                          |
|                           | 6cm (8 3W) x 2                                                                                                                                              |
| S-                        | Luminance : 1.0Vp - p 75 (negative sync.)<br>Chroma : 0.286Vp - p 75 (burst )                                                                               |
|                           | 1.0Vp - p 75 (negative sync.)                                                                                                                               |
|                           | 350mVrms, 10k                                                                                                                                               |
| RGB<br>(mini D - SUB 15P) | RGB: 0.7Vp - p 75 (negative sync.)<br>YCbCr: Y: 1.0Vp - p (negative sync.) CbCr: 0.7Vp - p<br>HD/CS: TTL (positive negative)<br>VD: TTL (positive negative) |
| PC                        | 350mVrms, 10k , 3.5mm                                                                                                                                       |
|                           | (Mini DIN 8 female ) RS - 232C<br>Mouse, Wired USB                                                                                                          |
| HUB                       | 10BASE - T 5 (CASCADE 1 )<br>LAN : IEEE 802.3                                                                                                               |
|                           | 305 x 148 x 385 mm<br>( x x )                                                                                                                               |
|                           | 6.9kg                                                                                                                                                       |
|                           | 114 (2.9m)                                                                                                                                                  |
|                           | +41 (+5 ) 104 (+40 ), 30 - 90%                                                                                                                              |

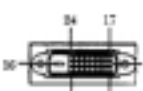
(X490 DVI-D24P가 )

RS-232C (Mini DIN 8P)



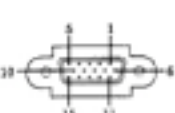
| PIN No. | NAME        | IO     |
|---------|-------------|--------|
| 1       | TXD         | IN     |
| 2       | RTS         | IN     |
| 3       | DTX         | IN     |
| 4       | GND         | -      |
| 5       | CTS / RV    | IN/OUT |
| 6       | RXD / CLOCK | OUT    |
| 7       | RKD         | OUT    |
| 8       | RI / DATA   | OUT    |

COMPUTER IN (DVI-D24P)

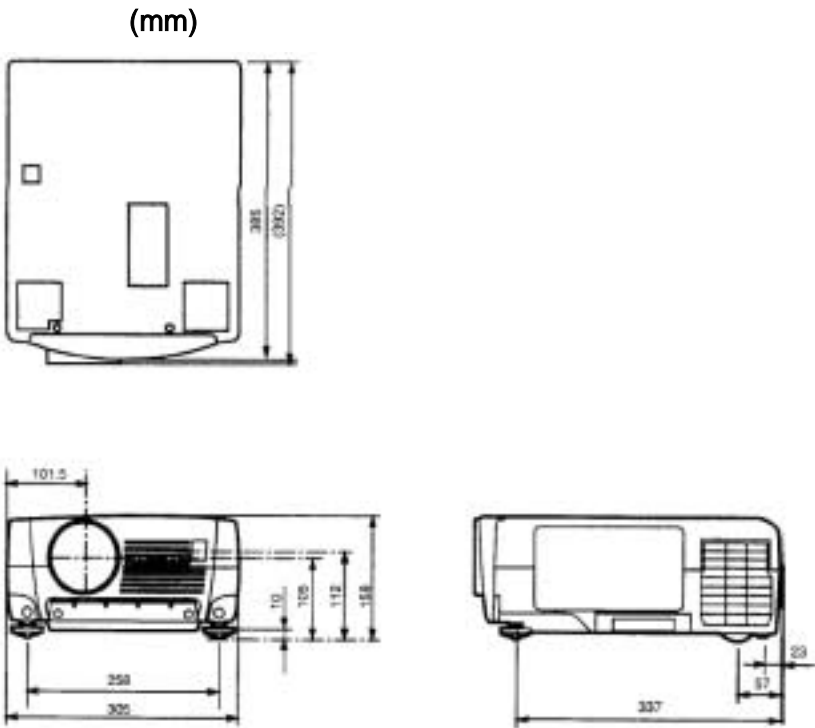


| PIN No. | SPEC          | PIN No. | SPEC            |
|---------|---------------|---------|-----------------|
| 1       | DATA 2-       | 13      | -               |
| 2       | DATA 2+       | 14      | +5V Power       |
| 3       | DATA 2 Shield | 15      | Ground          |
| 4       | -             | 16      | Hot Plug Detect |
| 5       | -             | 17      | DATA 5-         |
| 6       | DDC Clock     | 18      | DATA 5+         |
| 7       | DDC Data      | 19      | DATA 6 Shield   |
| 8       | -             | 20      | -               |
| 9       | DATA 1-       | 21      | -               |
| 10      | DATA 1+       | 22      | Clock Shield    |
| 11      | DATA 1 Shield | 23      | Clock+          |
| 12      | -             | 24      | Clock-          |

COMPUTER IN/OUT (Mini D-SUB 15P)



| PIN No. | SPEC    |
|---------|---------|
| 1       | RED+Vc  |
| 2       | GREEN+V |
| 3       | BLUE+Vc |
| 4       | GND     |
| 5       | GND     |
| 6       | GND     |
| 7       | GND     |
| 8       | GND     |
| 9       | -       |
| 10      | GND     |
| 11      | GND     |
| 12      | -       |
| 13      | HDCS    |
| 14      | VD      |
| 15      | -       |



|               |            |                   |            |
|---------------|------------|-------------------|------------|
| 2 AC          | 246C383-10 | 2 LAN             | 246C417-10 |
|               | 246C383-20 | 1                 | 939P878-10 |
| 1 Audio/Video | 246C381-10 | 1                 | 246C424-10 |
| 1 PC RGB      | 246C394-10 | 1                 | 871D340-10 |
| 1 RS-232C     | 246C366-10 | 1 Quick reference | 857D033-10 |
| 1 PS/2        | 246C367-10 | 1 HUB             | 871D350-10 |
| 1 USB         | 246C413-10 | 2                 | -          |

( / .)  
Spare mercury lamp 499B028-10(VLT -X500LP)

## RGB

| Signal mode | resolution<br>(H x V) | horizontal<br>frequency (kHz) | Vertical<br>frequency (Hz) | Normal mode<br>(H x V) | Real mode<br>(H x V) |
|-------------|-----------------------|-------------------------------|----------------------------|------------------------|----------------------|
| TV60        | -                     | 15.73                         | 59.94                      | 1024 x 768             | -                    |
| TV50        | -                     | 15.63                         | 50.00                      | 1024 x 768             | -                    |
| 1080i       | -                     | 33.75                         | 60.00                      | 1024 x 576             | -                    |
| 720p        | -                     | 45.00                         | 60.00                      | 1024 x 576             | -                    |
| PC98        | 640 x 400             | 24.82                         | 56.42                      | 1024 x 640             | 640 x 400            |
| CGA70       | 640 x 400             | 31.47                         | 70.09                      | 1024 x 640             | 640 x 400            |
| CGA84       | 640 x 400             | 37.86                         | 84.14                      | 1024 x 640             | 640 x 400            |
| CGA85       | 640 x 400             | 37.86                         | 85.08                      | 1024 x 640             | 640 x 400            |
| VGA60       | 640 x 480             | 31.47                         | 59.94                      | 1024 x 768             | 640 x 480            |
| VGA72       | 640 x 480             | 37.86                         | 72.81                      | 1024 x 768             | 640 x 480            |
| VGA75       | 640 x 480             | 37.50                         | 75.00                      | 1024 x 768             | 640 x 480            |
| VGA85       | 640 x 480             | 43.27                         | 85.01                      | 1024 x 768             | 640 x 480            |
| SVGA56      | 800 x 600             | 35.16                         | 56.25                      | 1024 x 768             | 800 x 600            |
| SVGA60      | 800 x 600             | 37.88                         | 60.32                      | 1024 x 768             | 800 x 600            |
| SVGA72      | 800 x 600             | 48.08                         | 72.19                      | 1024 x 768             | 800 x 600            |
| SVGA75      | 800 x 600             | 46.88                         | 75.00                      | 1024 x 768             | 800 x 600            |
| SVGA85      | 800 x 600             | 53.67                         | 85.06                      | 1024 x 768             | 800 x 600            |
| XGA43i      | 1024 x 768            | 35.52                         | 86.96                      | 1024 x 768             | 1024 x 768           |
| XGA60       | 1024 x 768            | 48.36                         | 60.00                      | 1024 x 768             | 1024 x 768           |
| XGA70       | 1024 x 768            | 56.48                         | 70.07                      | 1024 x 768             | 1024 x 768           |
| XGA75       | 1024 x 768            | 60.02                         | 75.03                      | 1024 x 768             | 1024 x 768           |
| XGA85       | 1024 x 768            | 68.68                         | 85.00                      | 1024 x 768             | 1024 x 768           |
| SXGA70a     | 1152 x 864            | 63.85                         | 70.01                      | 1024 x 768             | 1024 x 768           |
| SXGA75a     | 1152 x 864            | 67.50                         | 75.00                      | 1024 x 768             | 1024 x 768           |
| SXGA85a     | 1152 x 864            | 77.49                         | 85.06                      | 1024 x 768             | 1024 x 768           |
| SXGA60b     | 1280 x 960            | 60.00                         | 60.00                      | 1024 x 768             | 1024 x 768           |
| SXGA75b     | 1280 x 960            | 75.00                         | 75.00                      | 1024 x 768             | 1024 x 768           |
| SXGA43i     | 1280 x 1024           | 46.43                         | 86.87                      | 1024 x 768             | 1024 x 768           |
| SXGA60      | 1280 x 1024           | 63.98                         | 60.02                      | 1024 x 768             | 1024 x 768           |
| SXGA75      | 1280 x 1024           | 79.98                         | 75.03                      | 1024 x 768             | 1024 x 768           |
| SXGA85      | 1280 x 1024           | 91.15                         | 85.02                      | 1024 x 768             | 1024 x 768           |
| MAC13       | 640 x 480             | 35.00                         | 66.67                      | 1024 x 768             | 640 x 480            |
| MAC16       | 832 x 624             | 49.72                         | 74.55                      | 1024 x 768             | 832 x 624            |
| MAC19       | 1024 x 768            | 60.24                         | 75.02                      | 1024 x 768             | 1024 x 768           |
| MAC21       | 1152 x 870            | 68.59                         | 74.96                      | 1024 x 768             | 1024 x 768           |
| HP75        | 1024 x 768            | 62.94                         | 74.92                      | 1024 x 768             | 1024 x 768           |
| HP72        | 1280 x 1024           | 78.13                         | 72.00                      | 1024 x 768             | 1024 x 768           |
| SUN66a      | 1152 x 900            | 61.85                         | 66.00                      | 1024 x 768             | 1024 x 768           |
| SUN76a      | 1152 x 900            | 71.81                         | 76.63                      | 1024 x 768             | 1024 x 768           |
| SUN66       | 1280 x 1024           | 71.68                         | 66.68                      | 1024 x 768             | 1024 x 768           |
| SUN76       | 1280 x 1024           | 81.13                         | 76.11                      | 1024 x 768             | 1024 x 768           |
| SGI72       | 1280 x 1024           | 76.92                         | 72.30                      | 1024 x 768             | 1024 x 768           |
| SGI76       | 1280 x 1024           | 82.00                         | 76.00                      | 1024 x 768             | 1024 x 768           |
| IBM60       | 1280 x 1024           | 63.42                         | 60.00                      | 1024 x 768             | 1024 x 768           |

• FEATURE EXPAND MODE가

EXPAND

가 1024x768

:

• 가  
• 1024x768

• G(Green) SYNC가  
• G(Green) SYNC가

• 가  
가

• RGB HDTV , SIGNAL  
COMPUTER INPUT RGB

• SXGA , SIGNAL TRACKING

• 525p 가 , SIGNAL  
USER TRACKING  
HORIZ.POSITION.....139  
VERT.POSITION.....48  
TRACKING.....800  
COMPUTER INPUT.....YCbCr/YPbPr  
CLAMP POSITION.....+9  
CLAMP WIDTH.....3  
HORIZ.PIXELS.....624  
VERT.LINES.....456  
VERT.SYNC.....ON  
HOLD.....ON  
BEGIN -1

END 8