

A Delta Associate Company

E-Vision Laser 13000 WU

Important Information



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Full information about operating, connecting and setting up the projector can be found in the User Manual, located on the CD. Updates may be available online. Please visit the Digital Projection website for the latest documents.

Symbols used in the User Manual



LASER WARNING: this symbol indicates that there is a potential hazard of eye exposure to laser radiation unless the instructions are closely followed.



ELECTRICAL WARNING: this symbol indicates that there is a danger of electrical shock unless the instructions are closely followed.



WARNING: this symbol indicates that there is a danger of physical injury to yourself and/or damage to the equipment unless the instructions are closely followed.



NOTE: this symbol indicates that there is some important information that you should read.



Specifications are subject to change without notice.

Electrical and physical specifications

Main Voltage 200-240 VAC 7.8A 50/60Hz

100-130 VAC 11.5A 50/60Hz

Operating Temperature 0°C to 35°C (32°F to 95°F)

35°C to 40°C (95°F to 104°F) with reduced light output

Storage Temperature -10°C to 60°C (-14°F to 140°F)
Operating Humidity 10% to 85% non-condensing
Storage Humidity 5% to 95% non-condensing
Weight 31 kg (68.34 lb) without lens

Power Consumption (typical) at 110 Vac: 1060 W (Normal mode)

1050 W (Eco mode)

1110 W (High Altitude mode)

at 240 Vac: 1470 W (Normal mode)

1220 W (Eco mode)

Thermal Dissipation at 110 Vac: 1510 W (High Altitude mode) 3617 BTU/hr (Normal mode)

3583 BTU/hr (Eco mode)

3787 BTU/hr (High Altitude mode)

at 240 Vac 5016 BTU/hr (Normal mode)

4163 BTU/hr (Eco mode) 5152 BTU/hr (High Altitude mode)

Fan Noise 48 dBA Max, 46 dBA Typical (Normal mode)

44 dBA Max, 42 dBA Typical (Eco mode)

59 dBA Max, 57 dBA Typical (High Altitude mode)

Laser precautions



CLASS 3R LASER PRODUCT

This Laser Product is designated as Class 3R during all procedures of operation.

LASER LIGHT - AVOID DIRECT EYE EXPOSURE.

Do not point laser or allow laser light to be directed or reflected toward other people or reflective objects.

Direct or scattered light can be hazardous to eyes and skin.

There is a potential hazard of eye exposure to laser radiation if the included instructions are not followed.

Caution – use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Laser Parameters:

Wavelength (Blue) 450nm - 460nm

Mode of operation Pulsed, due to frame rate

Pulse duration 0.87ms Maximum pulse energy 0.45mJ

Wavelength (Red) 636nm - 646nm

Mode of operation Pulsed, due to frame rate

Pulse duration 1.6ms Maximum pulse energy 0.72mJ

Product labels

Manufacturer's ID Label and Explanatory Label



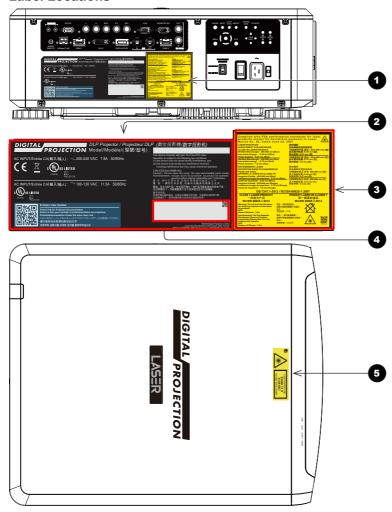
Certification Statement Label



Laser Hazard Warning Symbol and Aperture Label



Label Locations

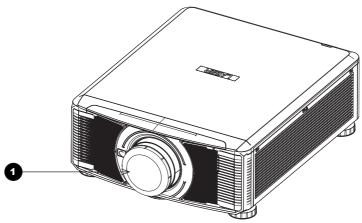


- Location of Manufacturer's ID Label, Certification Statement Label and Explanatory Label on the body of the projector
- Manufacturer's ID Label (manufacturer's name, address and projector model)
- Certification Statement Label and Explainatory Label

- A Serial number
- Location of Laser Hazard Warning Symbol and Aperture Label on the body of the projector

Location of laser aperture

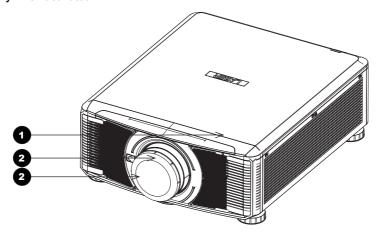
The laser aperture is located as indicated below.



1 Laser aperture

Interlock switches

Three interlock switches installed at the main frame, inside the cover, will power-off the system individually when activated.



- 1 Will be activated when the top cover is removed.
- 2 x2. Will be activated when the projection lens is removed.

General precautions



The unit is never to be operated if the unit is defective or the cover or seal is damaged.

No maintenance allowed by end user.

Do not open the cabinet. There are no user serviceable parts inside.

No service is allowed except by authorized personnel.

Use only the power cable provided.

Ensure that the power outlet includes a Ground connection, as this equipment MUST be earthed.

Take care to prevent small objects such as paper or wire from falling into the projector. If this does happen, switch off immediately, and have the objects removed by authorised service personnel.

Do not expose the projector to rain or moisture, and do not place any liquids on top of the projector.

Unplug before cleaning, and use a damp, not wet, cloth.

Do not touch the power plug with wet hands.

Do not touch the power plug during a thunder storm.

Handle the power cable carefully and avoid sharp bends. Do not use a damaged power cable.



Do not touch the ventilation outlets, as they will become hot in use.

Do not cover or obstruct the ventilation outlets or inlets.

Do not cover the lens whilst the projector is switched on. This could cause a fire

Always allow the projector to cool for 5 minutes before disconnecting the power or moving the projector.

Never use strong detergents or solvents such as alcohol or thinners to clean the projector and lens.

RISK GROUP 3 CAUTION. Possibly hazardous optical radiation emitted from this product. Do not stare at operating light source. May be harmful to the eyes.

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Installation precautions



Connect the LAN cable only to a computer LAN connection. Other similar connectors may have a dangerously high voltage source.

The projector must be installed only by suitably qualified personnel, in accordance with local building codes.

The projector should be installed as close to the power outlet as possible.

The power connection should be easily accessible, so that it can be disconnected in an emergency.

Ensure that there is at least 50cm (19.7in) of space between the ventilation outlets and any wall, and 30cm (11.8in) on all other sides.

Do not install the projector close to anything that might be affected by its operational heat, for instance, polystyrene ceiling tiles, curtains etc.

Place the projector in a dry area away from sources of dust, moisture, steam, smoke, sunlight or heat.

The projector is heavy. Use safe handling techniques when lifting the projector.

Do not drop or knock the projector.

Before installation, make sure that the surface, ceiling or rigging that is to support the projector is capable of supporting the combined weight of the projector and lens.

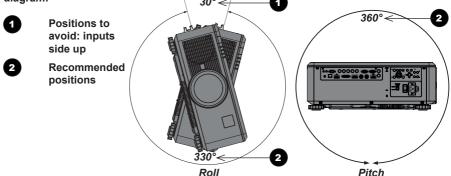
When stacking projectors, the stack MUST be vertical, to ensure that the stresses are distributed to all four chassis corners.

Do not stack more than 3 projectors.

Do not place heavy objects on top of the projector chassis. Only the chassis corners and the optional rigging frame are capable of withstanding the weight of another projector.

Backup safety chains or wires should always be used with ceiling mount installations.

The projector can be operated in any position. However, it is not recommended to position the projector in portrait mode with inputs facing upward, as shown in the diagram:



FDA regulations require that a lens Hood is permanently fitted when using the 3.58-5.38:1 lens with the projector in the United States of America. Fitting can be provided by your reseller or System Integrator.



When using projectors in environments with third party high power laser systems avoid direct laser beams pointing towards the projection lens. This may cause incident light to converge into the optical engine and cause damage to the DLP DMD.

Please pay attention to projector installation with respect to other staging laser light equipment set-up. These systems can cause permanent damage to the DMD imaging devices used in our projectors. This damage is not covered by our warranty.

Make sure the lens cap is removed from the rear of the lens before it is inserted into the projector.

Make sure the lens caps are removed from the lens before operating the projector. Light energy levels have been known to cause damage to both the lens and projector optics. This damage is not covered by our warranty.

Light hazard warning



Failure to comply with the following may result in serious injury:

- No direct exposure to the beam is permitted, RG3 IEC 62471-5:2015.
- Operators control access to the beam within the hazard distance or install the projector at sufficient height to prevent exposures of spectators' eyes within the hazard distance.

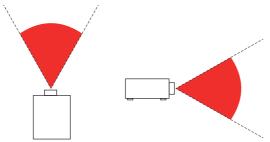


Fig. 1: hazard distance

The **hazard distance (Fig. 1)** is the distance measured from the projection lens at which the intensity or energy per unit of surface is lower than the applicable exposure limit on the cornea or skin. If the person is within the hazard distance, the beam is considered unsafe for exposure.

Light hazard distances

The hazard distance for this projector is 3.5m

Operation and configuration precautions



Do not make changes to the networking configuration unless you understand what you are doing, or have taken advice from your Network Manager. If you make a mistake, it is possible that you will lose contact with the projector. Always double-check your settings before pressing the APPLY button. Always keep a written note of the original settings, and any changes you have made.

Software update should NOT be carried out except by, or with the supervision of, Digital Projection Service personnel.

Compliance with international standards



RF Interference

FCC

The Federal Communications Commission does not allow any modifications or changes to the unit EXCEPT those specified by Digital Projection in this manual. Failure to comply with this government regulation could void your right to operate this equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant with Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area may cause harmful interference, in which case the user will be responsible for correcting any interference.

Noise

GSGV Acoustic Noise Information Ordinance

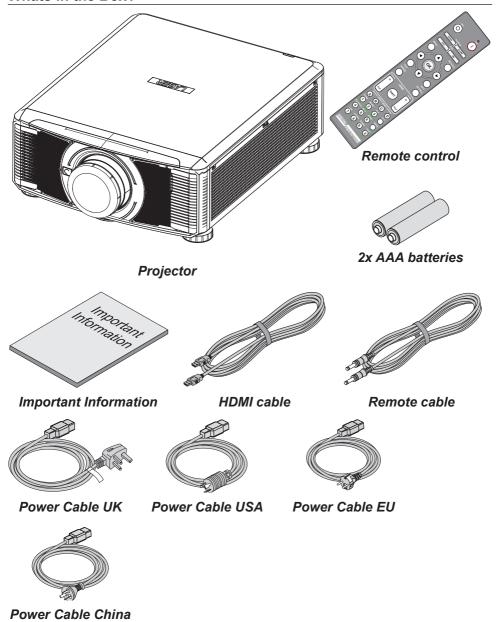
The sound pressure level is less than 48 dB (A) in normal usage according to ISO 3744 or ISO 7779.

European Waste Electrical and Electronic Equipment (WEEE) Directive



Digital Projection Ltd is fully committed to minimising Waste Electrical and Electronic Equipment. Our products are designed with reuse, recycling and recovery of all components in mind. To this end, at end of life, your projector may be returned to Digital Projection Ltd or its agent so that the environmental impact can be minimised.

Whats in the Box?



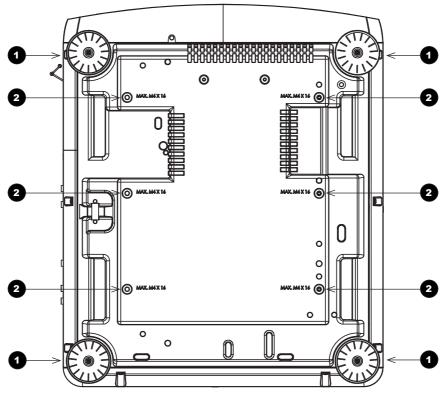
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Basic Operation Instructions

Positioning the screen and projector

- 1. Install the screen, ensuring that it is in the best position for viewing by your audience.
- 2. Mount the projector, ensuring that it is at a suitable distance from the screen for the image to fill the screen. Set the adjustable feet so that the projector is level, and perpendicular to the screen.

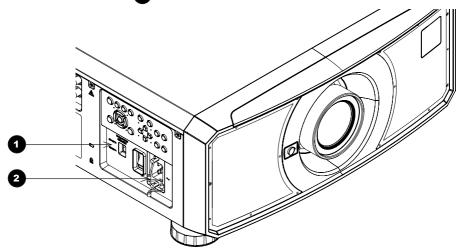
The drawing below shows the positions of the feet for table mounting, and the fixing holes for ceiling mounting.



- Four adjustable feet
- Six M4 holes for ceiling mount
 The screws should not penetrate more than 15 mm into the body of the projector.
 - Do not use the threaded holes for the adjustable feet to hang or mount the projector.

Connecting the power supply

Adjust the **VOLTAGE SELECT switch** 1 to the required voltage, then firmly push the mains connector into the **socket** 2.



Voltage selection

The VOLTAGE SELECT switch must be set to match the power supply you are using:

Voltage of power supply used	Position of VOLTAGE SELECT switch
100-130VAC outlet	200 240V~
	100 130V~
200-240VAC (single phase) outlet	200 240V~
	100 130V~



Use only the power cable provided.

Ensure that the power outlet includes a ground connection as this equipment MUST be earthed.

Handle the power cable carefully and avoid sharp bends. Do not use a damaged power cable.

Inserting a new lens



Before changing the lens, always make sure the projector is switched off and fully disconnected from its power supply.



When changing the lens, avoid using excessive force as this may damage the equipment.



Avoid touching the surface of the lens as this may result in image impairment.



The lens is shipped separately.

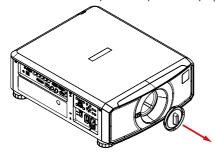


Take care to preserve the original lens packaging and protective caps for future use.

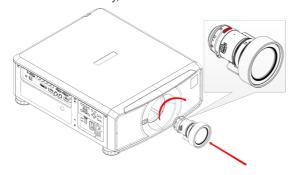


The projector will not power on without the lens fitted.

1. Remove the lens aperture cap from the projector.



- 2. Remove the front and rear lens caps from the lens.
- Position the lens so that the labels are at the top, and gently insert it all the way into the lens mount.
- 4. Push the lens in firmly, and turn it clockwise until it clicks into place.



Removing the lens



Before changing the lens, always make sure the projector is switched off and fully disconnected from its power supply.



When changing the lens, avoid using excessive force as this may damage the equipment.



The lens is shipped separately.

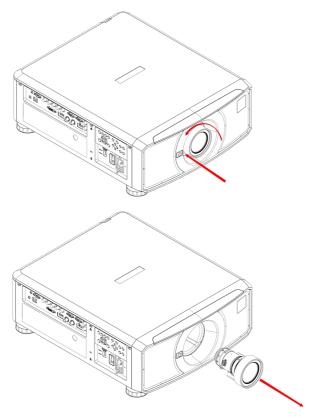


Take care to preserve the original lens packaging and protective caps for future use.



The projector will not power on without the lens fitted.

- 1. Push in the lens release button, and turn the lens anti-clockwise.
- 2. Remove the lens.



Fitting a lens hood



FDA regulations require that a lens Hood is permanently fitted when using the 3.58-5.38:1 lens with the projector in the United States of America. Fitting can be provided by your reseller or System Integrator.

1. Push-fit the lens hood onto the lens.

Switching the projector on

- Connect the power cable between the mains supply and the projector. (See Connecting the power supply above.) Switch on at the switch next to the power connector.
- The **POWER** indicator lights red to signal that the projector is in STANDBY mode. Press one of the following buttons:
 - On the remote control, the ON button
 - On the projector control panel, the POWER button.

The fans begin working, then the **POWER** indicator begins flashing green. When the flashing stops, the **POWER** and **LIGHT** indicators both light steady green. The projector is switched on.

Switching the projector off

 Press OFF on the remote control or POWER on the control panel, then press again to confirm your choice.

The **POWER** indicator on the control panel will start flashing amber, the system will go out and the cooling fans will run for a short time until the **POWER** indicator goes stready red to indicate that the projector has entered STANDBY mode.

2. If you need to switch the projector off completely, switch off at the mains power switch next to the power connector and then disconnect the power cable from the projector.

Selecting an input signal

- 1. Connect one or more image sources to the projector.
- 2. Select the input you want to display:
 - Press one of the input buttons on the remote control.
 - Alternatively, open the On-screen display (OSD) by pressing MENU. Highlight Input from the main menu, press ENTER/OK and then select an input signal using the UP and DOWN arrow buttons. Press ENTER/OK to confirm your choice.

Selecting a test pattern

To display a test pattern:

Press TEST on the remote control. If necessary, press again to change the test pattern. Test
patterns are displayed in the following order:

White, Black, Red, Green, Blue, CheckerBoard, CrossHatch, V Burst, H Burst, ColorBar, Screen Layout, Off

After the final test pattern, the projector exits test pattern mode and returns to the main image. To view test patterns again, you need to press **TEST** again.

 Alternatively, open the OSD by pressing MENU. Highlight Test Patterns from the main menu, then select a test pattern using the LEFT and RIGHT arrow buttons.

Adjusting the lens

The lens can be adjusted using the **Lens** menu, or using the lens buttons on the remote control.

Lens menu

The Lens menu provides access to the Lens Control setting and the Lens Center command.

Lens Control allows **Zoom**, **Focus** and **Shift** adjustment using the arrow buttons. The setting operates in **Zoom/Focus Adjustment** and **Shift Adjustment** mode.

Press **ENTER/SELECT** to switch between the two modes.

Remote control

Use the remote control to adjust zoom, focus and shift directly, without opening a menu:

- OK enters lens control, then switches between Zoom/Focus Adjustment and Shift Adjustment.
- EXIT exits lens control and opens the Lens menu.
- MENU exits lens control and returns to the main image.
- The arrow buttons adjust zoom, focus and shift as indicated on the screen.

Adjusting the image

Orientation

This can be set from the Setup menu.

Highlight Projector Mode and choose from Front Tabletop, Front Ceiling, Rear Tabletop and Rear Ceiling.

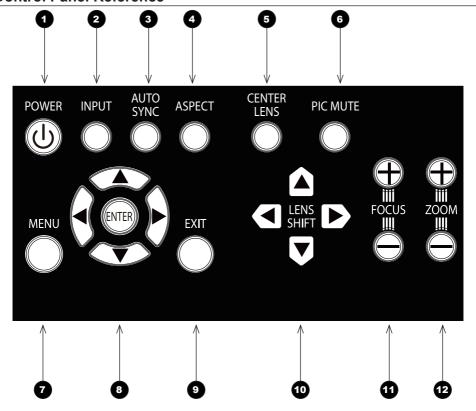
Kevstone

This can be set from the Geometry menu.

Picture

 Settings such as Gamma, Brightness, Contrast, Saturation, Hue and Sharpness can be set from the Image menu.

Control Panel Reference



- 1 POWER
- Switches the projector on and off (STANDBY).
- 2 INPUT
 Switches to the next input source.
- **AUTO SYNC**Re-synchronises with the current input signal.
- ASPECT
 Changes the aspect ratio.
- 5 CENTER LENS
 Centers the lens.
- 6 PIC MUTE
 Switches the laser off/on.

7 MENU

Displays and exits the OSD.

8 Arrow buttons & ENTER

Navigation buttons used to highlight menu entries in the OSD. Press **ENTER** to open or execute the highlighted menu entry.

9 EXIT

Exits the current OSD page and enters the level above.

- LENS SHIFT arrow buttons

 Each of these buttons moves the lens in the specified direction.
- FOCUS plus and minus buttons
 Used to move the focus in and out.
- ZOOM plus and minus buttons
 Used to zoom in and out.

Projector indicators

TEMP. Off = no problem

Flashing red = temperature error

LIGHT Off = light is switched off

Flashing green = light is preparign to switch on

Flashing red (cycles of six flashes) = light module failure

On, red = light module has reached end of life

On, green = light is switched on

STATUS Off = no problem

Flashing red (continuously) = cover error Flashing red (cycles of four flashes) = fan error

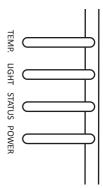
On, red = system error

POWER Off = the projector is switched off

Flashing green = the projector is warming up Flashing amber = the projector is cooling down

On, red = STANDBY mode

On, green = the projector is switched on



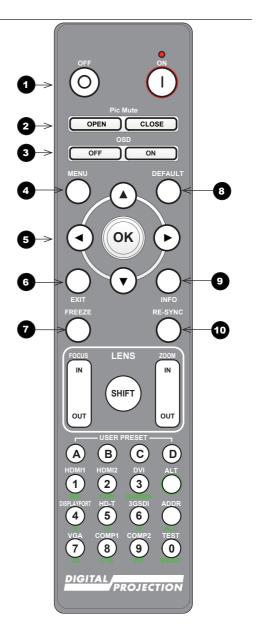
Remote Control Reference

Power ON/OFF

Turns the projector on and off.

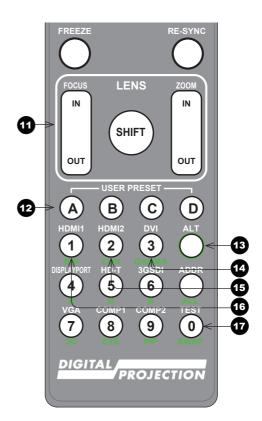
To turn the projector off, press the OFF button twice within five seconds.

- Pic Mute OPEN / CLOSE
 Shows and hides the projected image.
- OSD ON / OFF Enables and disables screen timeout messages and showing the OSD during projection.
- 4 MENU
 Access the projector OSD (on-screen display). If the OSD is open, press this button to go back to the previous menu.
- Navigation (arrows and OK)
 Navigate through the menus with the arrows, confirm your choice with OK.
 In lens adjustment modes, the arrows are used to move, zoom or focus the lens. See 11 below.
 In lens adjustment modes, or when the OSD is not showing, the OK button switches between modes:
 Shift Adjustment and Zoom / Focus Adjustment.
- 6 EXIT
 Close the current OSD page and return to the level above.
- **FREEZE**Freeze the current frame.
- 8 DEFAULT
 Restore default settings.
- 9 INFO Access information about the projector.
- RE-SYNC
 Re-synchronise with the current input signal.



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- LENS adjustment
 FOCUS IN / OUT: adjust focus.
 SHIFT: press and hold this button,
 then use the Navigation arrow
 buttons to move the lens.
 ZOOM IN / OUT: adjust zoom.
- USER PRESET A, B, C, D
 Load user presets.
- Press and hold this button to access alternative functions for all buttons with a green label.
- DVI / GAMMA / numeric input 3
 Select the DVI input.
 Use with ALT to switch to the next
 Gamma value:
 ...1.0, 1.8, 2.0, 2.2, 2.35, 2.5,
 S-curve, DICOM...
- B HDMI 2 / CON / numeric input 2
 Select the HDMI 1 input.
 Use with ALT to bring up the
 Contrast control, then adjust the
 value with the LEFT and RIGHT
 arrow buttons.
- 16 HDMI 1 / BRI / numeric input 1
 Select the HDMI 1 input.
 Use with ALT to bring up the
 Brightness control, then adjust the
 value with the LEFT and RIGHT
 arrow buttons.
- TEST / SWAP / numeric input 0
 Show a test pattern. Press again to show the next test pattern:
 ...Off, White, Black, Red,
 Green, Blue, CheckerBoard,
 CrossHatch, V Burst, H Burst,
 ColorBar, Screen Layout...



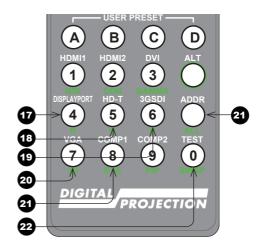
- DISPLAYPORT / R / numeric input 4
 Select DisplayPort input.
- HD-T / G / numeric input 5
 Select the HDBaseT input.
- 3GSDI / B / numeric input 6 Select the 3G-SDI input.
- VGA / 3D / numeric input 7
 Select the VGA input.
 Use with ALT to toggle the 3D
 Format setting between Off and
 Auto.
- COMP1 / EYE / numeric input 8
 Select the Component 1 input.
 Use with ALT to switch between left and right eye 3D dominance.
- 22 COMP2 / PIP / numeric input 9
 Select the Component 2 input.
- ADDR / ALL
 Assign and unassign an IR remote address.

To assign an address:

- Press and hold this button until the indicator starts flashing.
- Release this button and while the indicator is still flashing, enter a two-digit address using the numeric input buttons. The indicator will flash three times quickly to confirm the change.

To unassign an address and return to the default address 00,

 Press and hold ALT and this button simultaneously until the indicator flashes to confirm the change.



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