LCD Projector
8970WUSS/8970WUSSB
8980WUSS/8980WUSSB
User's Manual (concise)

DUKANE

Thank you for purchasing this product.

This product is supplied without a lens unit. You can select some optional lense units to meet your requirements.

This is the basic manual on the product. Visit our website to get the detailed manuals (**Safety Guide**, **Operating Guide**, **Network Guide**, **Instant Stack Guide**) and the latest information on the product.

Check them before using the product, for safe use and utilization of the product.

For our website, see the attached sheet.

⚠WARNING

►Before using this product be sure to read all manuals for this product. After reading them, store them in a safe place for future reference.

►Heed all the warnings and cautions in the manuals or on the product.

►Follow all the instructions in the manuals or on the product.

NOTE • In this manual, unless any comments are accompanied, "the manuals" means all the documents provided with this product, and "the product" means this projector and all the accessories came with the projector.

Contents 📖

First of all

Graphical symbols explanation

The following entries and graphical symbols are used for the manuals and the product as follows, for safety purpose. Know their meanings beforehand and heed them.

⚠**WARNING**	This entry warns of a risk of serious personal injury or even death.
⚠**CAUTION**	This entry warns of a risk of personal injury or physical damage.
NOTICE	This entry notices of fear of causing trouble.

⚠	WARNING/ CAUTION		High pressure		High voltage		High temperature
	Do not shade the light			Projector not for consumer use			
	Laser warning		RG2 caution				Kensington lock
∿	Alternating current		Standby (Power)		On (Power)		Video input switching

Important safety instructions

The followings are important instructions for safely using this product. Be sure to follow them always when handling the product. The manufacturer assumes no responsibility for any damage caused by mishandling that is beyond normal usage defined in these manuals of this projector.

⚠**WARNING**
►Never use the product in or after an abnormality (for example, giving off smoke, smelling strange, finding a foreign object inside, broken, and so on.) If an abnormality should occur, unplug the projector urgently.
►Situate the product away from children and pets.
►Keep small parts away from children and pets. If swallowed, consult a physician immediately for emergency treatment.
►Do not use the product during electrical storms.
►Unplug the projector from the power outlet if the projector is not being used.
►Do not open or remove any portion of the product, unless the manuals direct it. For internal maintenance, leave it to your dealer or their service personnel.

ENGLISH

⚠**WARNING**

►Use only the accessories specified or recommended by the manufacturer.

►Do not modify the projector or accessories.

►Do not let any things or any liquids enter to the inside of the product.

►Do not get the product wet.

►Do not place the projector where any oils, such as cooking or machine oil, are used. Oil may harm the product, resulting in malfunction, or falling from the mounted position. Do not use adhesive such as threadlocker, lubricant and so on.

►Do not apply a shock or pressure to this product.

 - Do not place the product on an unstable place such as the uneven surface or the leaned table.

 - Ensure the product is stable. Place the projector so that it does not protrude from the surface where the projector is placed on.

 - Remove all the attachments including the power cord and cables, from the projector when carrying the projector.

►Do not look into the lens and the openings on the projector while the light source is on, since the projection ray may cause a trouble on your eyes.

►Do not approach the exhaust vents, while the light source is on. Also after the light source goes out, do not approach them for a while, since too hot.

Note: The Dukane models described in this document are manufactured by Maxell/Hitachi and use the same firmware, software programs, control code, and accessory parts. The equivalent Dukane to Maxell models are 8970WUSS (MP-WU8701W), 8970WUSSB (MP-WU8701B) [Black version], 8980WUSS (MP-WU8801W) and 8980WUSSB (MP-WU8801B) [Black version].

Electro-magnetic interference

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

This product may cause interference if used in residential areas. Such use must be avoided unless the user takes special measures to reduce electromagnetic emissions to prevent interference to the reception of radio and television broadcasts.

In Canada

CAN ICES-3(A) / NMB-3(A).

In the US and places where the FCC regulations are applicable

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to 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 is likely to cause harmful interference in which case the user is required to correct the interference at his own expense.

INSTRUCTIONS TO USERS: Some cables have to be used with the core set. Use the accessory cable or a designated type cable for the connection. For cables that have a core only at one end, connect the core to the projector.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Laser precautions

"No direct exposure to the beam shall be permitted"

As with any bright source, do not stare into the direct beam,
RG2 IEC 62471-5:2015.

Hazard distance

Refer to the table **T-1** in **Supplement** (at the back of this manual). The table shows the hazard distance in which the beam strength described in IEC 62471 - 5 (Photobiological safety of lamps and lamp systems – Part 5: Image projectors) is categorized as RG3.

For the combination of the lens and projector for which a value is shown in the table, when the projection distance is the value or shorter the beam strength is categorized as RG3, and is a hazard.

When applying the combination shown in the table, "operators shall control access to the beam within the hazard distance or install the product at the height that will prevent exposures of spectators' eyes within the hazard distance".

Refer to the **F-8** in **Supplement** (at the back of this manual).

Laser aperture and Laser caution label
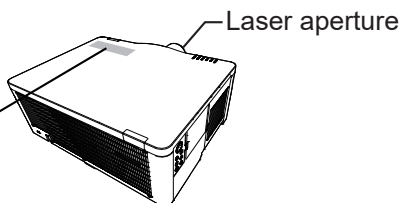
Laser aperture

The positions of the laser aperture (⚠) and the laser caution label are shown in figure.

Laser evaluation standard

IEC60825-1: 2007,   IEC60825-1: 2014,   EN60825-1: 2014

Internal Laser Specifications

This product is equipped with 2 Laser Diodes.

1. 8980WUSS/8980WUSSB
Internal Laser 1 : 71W, Wave Length: 449 - 461nm
Internal Laser 2 : 95W, Wave Length: 449 - 461nm

2. 8970WUSS/8970WUSSB
Internal Laser 1 : 71W, Wave Length: 449 - 461nm
Internal Laser 2 : 71W, Wave Length: 449 - 461nm
LASER ENERGY - EXPOSURE NEAR APERTURE MAY CAUSE BURNS

- This projector is classified as a class 1 laser product that complies with IEC60825-1:2014 and JIS C 6802:2014, and as a class 3R laser product that complies with IEC60825-1:2007.
  Improper handling may cause injury. Be careful of the following.

- If an abnormality occurs in the projector, turn it off immediately, unplug the power cord from the outlet, and consult your dealer or service company. If you continue to use it, it may cause not only electric shock or fire but also vision disorder.

- Do not disassemble or modify the projector. The projector has a high-power laser device inside. It may cause serious injury.

- Do not look into the beam while projecting an image. Do not look into the lens through optical devices such as magnifiers or telescopes. It may cause vision disorder.

- Make sure that nobody is looking into the lens when you turn on the projector by remote control away from the projector.

- Do not let children operate the projector. If children could possibly operate the projector, they must be accompanied by an adult.

- Do not expose optical devices such as magnifiers or reflection mirrors to a projected image. It may cause bad effects on the human body if you continue to use it. It may also cause fire or accidents.

- Do not disassemble the projector when you dispose of it. Dispose of it according to laws and regulations of each country or region.

⚠CAUTION
►Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Disposal of old equipment and batteries only for European Union and countries with recycling systems

The above mark is in compliance with the Waste Electrical and Electronic Equipment Directive 2012/19/EU (WEEE). The mark indicates the requirement NOT to dispose the equipment including any spent or discarded batteries as unsorted municipal waste, but use the return and collection systems available. If the batteries or accumulators included with this equipment display the chemical symbol Hg, Cd, or Pb, then it means that the battery has a heavy metal content of more than 0.0005% Mercury, or more than 0.002% Cadmium or more than, 0.004% Lead.

Note for the battery symbol (bottom symbol): This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

Contents of package

Your projector should come with the items shown below. Check that all the items are included. Contact your dealer immediately if any items are missing.

(1) Remote control with two AA batteries

(2) Power cord

(3) Computer cable

(4) Cable tie
    for power cord (x1)
    for HDMI™ cable (x3)

(5) Terminal cover
    2 types

(6) Lens hole cover

(7) Information sheet

  * This is the basic manual on the product.

(8) Security label

(1)　　　　(5)

(2)

(3)　　　　(6)

(4)　　　　(7)

(8)
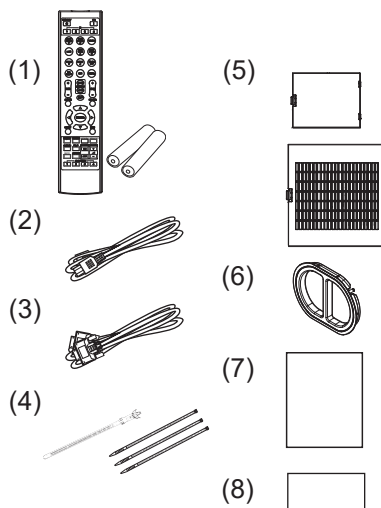
⚠WARNING

►Keep small parts away from children and pets. Take care not to put in the mouth. If swallowed, consult a physician immediately for emergency treatment.

NOTE • Keep the original packing materials for future reshipment. Be sure to use the original packing materials when moving the projector. Remove the lens unit and attach the lens hole cover when moving the projector.
• This product does not include batteries for the internal clock. (📖*20*)

About the lens unit

This product is supplied without a lens unit. You can select some of the optional lens units to meet your requirements.

It is necessary to install the lens unit to operate this product. Prepare one or more lens units together with this product.

For more information, consult your dealer.

Preparing for the remote control

Insert the batteries into the remote control before using it.

Use the appropriate AA carbon-zinc or alkaline batteries (non-rechargeable) in accordance with laws and regulations.

If the remote control starts to malfunction, try to replace the batteries. If you will not use the remote control for long period, remove the batteries from the remote control and store them in a safe place.

1. Remove the battery cover.

2. Align and insert the two AA batteries according to their plus and minus terminals as indicated in the remote control.

3. Put the battery cover back to the former state.
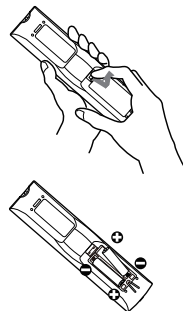
⚠WARNING

►Always handle the batteries with care and use them only as directed. Improper use may result in battery explosion, cracking or leakage, which could result in fire, injury and/or pollution of the surrounding environment.

- When replacing the batteries, replace both of the batteries with new batteries of the same type. Do not use a new battery with a used battery.
- Be sure to use only the batteries specified. Do not use batteries of different types at the same time. Do not mix a new battery with used one.
- Make sure the plus and minus terminals are correctly aligned when loading a battery.
- Keep a battery away from children and pets.
- Do not recharge, short circuit, solder or disassemble a battery.
- Do not place a battery in fire or water. Keep batteries in a dark, cool and dry place.
- If you observe battery leakage, wipe out the leakage and then replace a battery. If the leakage adheres to your body or clothes, rinse well with water immediately.
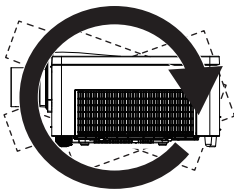- Obey the local laws on disposing the battery.

Arrangement

Refer to the table **T-2** in **Supplement** (at the back of this manual) to determine the screen size and projection distance. The values shown in the table are calculated for a full size screen.

This projector will perform in a free tilt angle, as shown in the figures below.
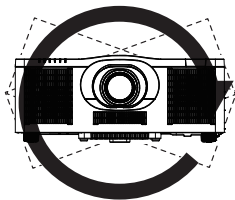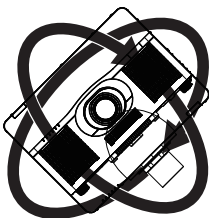
Horizontal 360°   Vertical 360°

Tilt 360° (combination of horizontal and vertical)

Secure a clearance of 30 cm or greater between the intake vents of the projector and other objects such as walls. There are intake vents on the left and right sides.

Secure a clearance of 50 cm or greater between the exhaust vents of the projector and other objects such as walls. There are exhaust vents on the back side.

When installing the projectors side by side, secure a clearance of 50 cm or greater between both projectors.
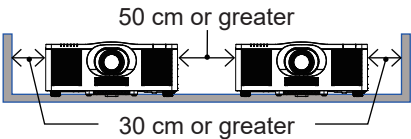
Assume that there is enough clearance in the front and top of the projector.

These also apply to the portrait mode installation.

30 cm or greater

Intake vents

50 cm or greater

Exhaust vents

50 cm or greater

30 cm or greater

⚠WARNING

►Install the projector where you can access the power outlet easily.

►Install the projector in a stable horizontal position.
- Do not use any mounting accessories except the accessories specified by the manufacturer. Read and keep the manuals of the accessories used.
- For special installation such as ceiling mounting, be sure to consult your dealer beforehand. Specific mounting accessories and services may be required.
- Do not put the projector on its side, front or rear position. If the projector falls or is knocked over, it could cause injury and/or damage to the projector.
- Do not attach nor place anything on the projector unless otherwise specified in the manual.

►Do not install the projector near thermally conductive or flammable things.

►Do not place the projector where any oils, such as cooking or machine oil, are used.

►Do not place the product in a place where it may get wet.

⚠CAUTION

►Place the projector in a cool place with sufficient ventilation.
- Secure the specified clearance around the projector.
- Do not stop up, block nor cover the projector's vent holes.
- Do not place the product at places that are exposed to magnetic fields, doing so can cause the cooling fans inside the projector to malfunction.
- When you use the projector with the air filter facing towards the ceiling, it is clogged more frequently. Clean the air filter periodically.

►Avoid placing the product in smoky, humid or dusty place.
- Do not place the projector near humidifiers.

NOTICE

►Position the product to prevent light from directly hitting the projector's remote sensor.

►Positional deviation or distortion of a projected image, or shift of the focus may occur due to ambient conditions, and so on. They tend to occur until the operation becomes stable, especially within about 30 minutes after the light source is turned on. Check and readjust them as necessary.

►Do not place the product in a place where radio interference may be caused. For details, see the **Operating Guide**. (📖*1*)

Connecting with your devices

Before connecting the projector to a device, consult the manual of the device to confirm that the device is suitable for connecting with this product and prepare the required accessories, such as a cable in accord with the signal of the device. Consult your dealer when the required accessory did not come with the product or the accessory is damaged.

After making sure that the projector and the devices are turned off, perform the connection, according to the following instructions. Refer to figures **F-1** to **F-6** in **Supplement** (the end of this manual).

For details, see the **Operating Guide**. (&*1*) Before connecting the projector to a network system, be sure to read the **Network Guide**. (&*1*)

⚠WARNING

►Use only the appropriate accessories. Otherwise it could cause a fire or damage the projector and devices.
  - Use only the accessories specified or recommended by the projector's manufacturer. It may be regulated under some standards.
  - Neither disassemble nor modify the projector and the accessories.
  - Do not use the damaged accessory. Be careful not to damage the accessories. Route a cable so that it is neither stepped on nor pinched.

⚠CAUTION

►For a cable with a core at only one end, connect the end with the core to the projector. That may be required by EMI regulations.

►Before connecting the projector to a network system, be sure to obtain the consent of the administrator of the network.

►Do not connect the **LAN** port to any network that might have the excessive voltage.

►The designated USB wireless adapter that is sold as an option is required to use the wireless network function of this projector.

►Before you insert or pull out the USB wireless adapter from the projector, turn off the power of the projector and pull out the power cord's plug from the outlet. Do not touch the USB wireless adapter while the projector is receiving AC power.

NOTE • Do not turn on or off the projector while connected to a device in operation, unless that is directed in the manual of the device.
• Some input ports are selectable in the use. For details, see the **Operating Guide**. (&*1*)
• Be careful not to mistakenly connect a connector to a wrong port.

Connecting to a power supply

1. Put the connector of the power cord into the **AC** (AC inlet) of the product.

2. Firmly plug the power cord's plug into the outlet. In a couple of seconds after the power supply connection, the **POWER** indicator lights up in steady orange.
When the DIRECT POWER ON function is activated, the connection of the power supply make the projector turn on.
When the AUTO POWER ON function is activated and the projector is receiving an input signal, it is turned on by connecting to the power supply.

ENGLISH

AC

3. Use the supplied cable tie (for power cord) to fasten the power cord.
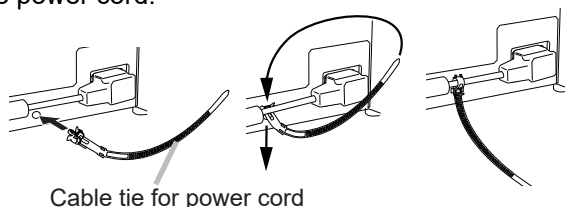
Power cord

Cable tie for power cord
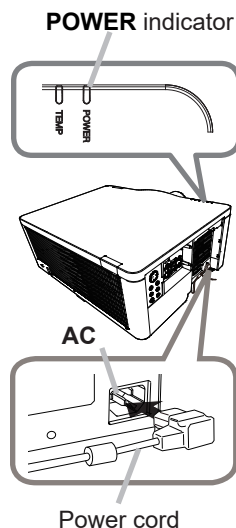
⚠WARNING

►Use extra caution when connecting the power cord, as incorrect or faulty connections may result in fire and/or electrical shock.
- Do not touch the power cord with a wet hand.
- Only use the power cord that came with the projector. If it is damaged, consult your dealer to get a new one. Never modify the power cord.
- Only plug the power cord into an outlet whose voltage is matched to the power cord. The power outlet should be close to the projector and easily accessible. Remove the power cord for complete separation.
- Do not distribute the power supply to multiple devices. Doing so may overload the outlet and connectors, loosen the connection, or result in fire, electric shock or other accidents.
- Connect the ground terminal for the AC inlet of this unit to the ground terminal of the building using an appropriate power cord (bundled).

NOTICE

►This product is also designed for IT power systems with a phase-to-phase voltage of 220 to 240 V.

Turning on the power

1. Make sure that the power cord is firmly and correctly connected to the projector and the outlet.

2. Make sure that the **POWER** indicator is steady orange. Then remove the lens cover.

3. Press the **STANDBY/ON** button on the projector or the **ON** button on the remote control.

The projection light source will light up, and the **POWER** indicator will begin blinking in green.

When the power is completely on, the indicator stops blinking and light in steady green.

POWER indicator

⚠WARNING

►A strong light is emitted when the projector's power is on. Do not look into the lens of the projector or look inside of the projector through any of the projector's openings, since the projection ray may cause a trouble on your eyes.

NOTE • Power on the projector prior to any connected devices.
• The projector has the DIRECT POWER ON function, which makes the projector automatically turn on. For more information, see the **Operating Guide**. (&*1*)

STANDBY/ON

ON
I
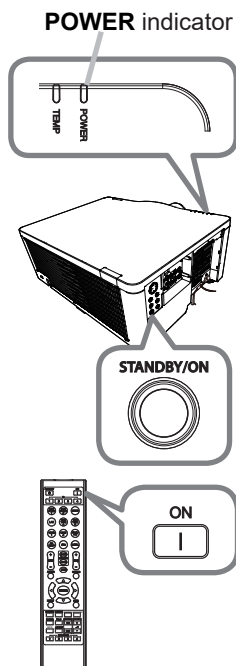
Adjusting the projector's elevator

Lengthening or shortening the length of the elevator feet shifts the projection position and the projection angle.

Turn the elevator feet each to adjust their length.

Elevator feet

⚠WARNING

►Do not lengthen the elevator feet exceeding 30 mm. The foot lengthened exceeding the limit may come off and drop the projector down, and result in an injury or damaging the projector.

max. 30 mm
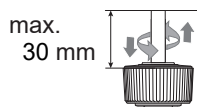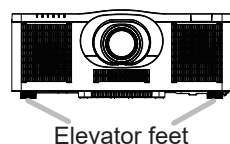
Adjusting the lens position

Press the **LENS SHIFT** button on the projector or the **SHIFT** button on the remote control to display the LENS SHIFT menu. Press the ► or **ENTER** button to select LENS SHIFT, then shift the lens with the ▲/▼/◄/► buttons.

LENS SHIFT

⚠CAUTION

►Do not put your fingers or any other things around the lens. The moving lens could catch them in the space around the lens and result in an injury.

SHIFT
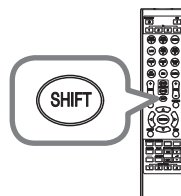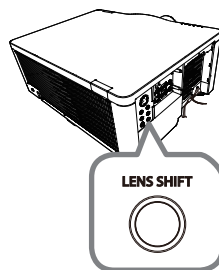
Displaying the picture

1. Activate your signal source. Turn the signal source on, and make it send the signal to the projector.

2. Use the **VOLUME + / -** buttons to adjust the volume.

3. Press the button of the desirable input on the remote control.

   When you press the **INPUT** button on the projector, selectable inputs are listed on the screen. You can use the cursor buttons to select the desirable input from the list.

4. Press the **ASPECT** button on the remote control. Each time you press the button, the projector switches the mode for aspect ratio in turn.

5. Use the **ZOOM +/-** buttons on the remote control to adjust the screen size.

   You can also use **ZOOM** button on the projector. Use the cursor buttons after pressing the **ZOOM** button.

6. Use the **FOCUS +/-** buttons on the remote control to focus the picture.

   You can also use the **FOCUS** button on the projector. Use the cursor buttons after pressing the **FOCUS** button.
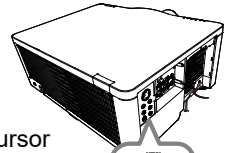
Cursor buttons
INPUT button
FOCUS button
ZOOM button
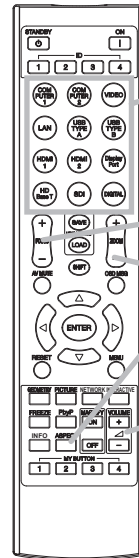
Buttons for input ports

FOCUS +/- buttons
ZOOM +/- buttons
ASPECT button
VOLUME +/- buttons

⚠WARNING

► If you wish to have a blank screen while the light source is on, use the BLANK function (see the **Operating Guide** (📖*1*)). Taking any other action may cause the damage on the projector. Blocking the beam by something causes high temperature and could result in fire or smoke.

NOTE • The **ASPECT** button does not work when no proper signal is input.
• There may be some noise and/or the screen may flicker for a moment when an operation is made. This is not a malfunction.
• For the details of how to adjust the picture, see **Operating Guide**. (📖*1*)

Turning off the power

POWER indicator

1. Press the **STANDBY/ON** button on the projector or the **STANDBY** button on the remote control.

The message "Power off?" appears on the screen for about 5 seconds.

2. Press the **STANDBY/ON** or **STANDBY** button again while the message appears.

The light source will go off, and the **POWER** indicator will begin blinking in orange.

Then the **POWER** indicator will stop blinking and light in steady orange when the light source cooling is completed.

3. Attach the lens cover, after the **POWER** indicator turns to steady orange.

STANDBY/ON

STANDBY

⚠WARNING

►Do not touch around the exhaust vents during use or just after use, since they are too hot.

►Remove the power cord for complete separation. The power outlet should be close to the projector and easily accessible.

NOTE • Power off the projector after any connected devices are powered off.
• This projector has the AUTO POWER OFF function that can make the projector turn off automatically. For more information, see the **Operating Guide**. (▢*1*)
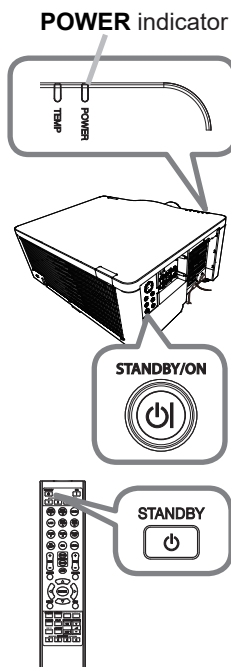
Cleaning and replacing the air filter

Check and clean the air filter periodically. When the indicators or a message prompts you to clean the air filter, comply with it as soon as possible.

1. Turn the projector off, and unplug the power cord. Allow the projector to sufficiently cool down.

2. Use a vacuum cleaner on and around the filter cover.

2

Filter cover

3. Pick and pull up the filter cover knobs to take it off.

3

Extra air filter

Filter cover knobs

4. Press up slightly the bottom side knobs to unlock the bottom side of the air filter, and take it off.

4 Air filter

Air filter knobs

5. The air filter consists of two parts. Press down around the interlocking parts to unlock, then separate the two parts.

Use a vacuum cleaner for both sides of the air filter.

If the air filter is damaged or heavily soiled, replace it with the new one. Request for an air filter with the following type number from your dealer when purchasing a new one.

Type number: **UX43481**

5

Interlocking Parts

6. Use a vacuum cleaner for the filter vent of the projector.

7. Put back the air filter and filter cover into their place.

6 Filter vent

8. Turn the projector on and reset the filter time using the FILTER TIME item in the EASY MENU.

(1) Press the **MENU** button to display a menu.

(2) Point at the FILTER TIME using the ▲/▼ buttons, then press the ► button. A dialog will appear.

(3) Press the ► button to select "OK" on the dialog. It performs resetting the filter time.

Cleaning and replacing the air filter (continued)
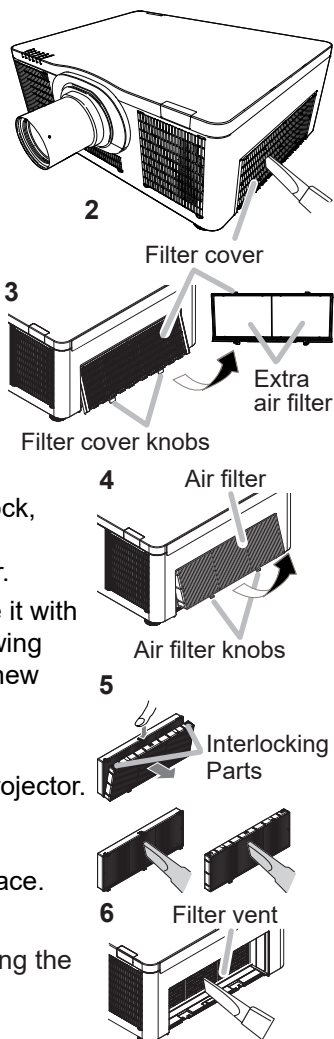
⚠WARNING

►Before taking care of the air filter, make sure the power cord is not plugged in, then allow the projector to cool sufficiently.

►Use only the air filter of the specified type. Do not use the projector without the air filter or the filter cover. It could result in a fire or malfunction to the projector.

►Clean the air filter periodically. If the air filter becomes clogged by dust and so on, internal temperatures rise and could cause a fire, a burn or malfunction to the projector.

NOTE • Reset the filter time only when you have cleaned or replaced the air filter, for a suitable indication about the air filter.
• The projector may display the message such as the "CHECK THE AIR FLOW" or turn off the projector, to prevent the internal heat level rising.

Inserting or replacing the internal clock battery

This product has an internal clock. The battery for the internal clock is not contained at the time of factory shipment. When you use the function that requires the internal clock (📖"Event Scheduling" in the **Network Guide**), install a new battery according to the following procedure.

Use the following type of battery.

> MAXELL, Part No. CR2032 or CR2032H

Battery Cover

Bottom side

1. Turn the projector off, and unplug the power cord. Allow the projector to cool sufficiently.

2. Turn the battery cover fully counterclockwise using a coin or the like, and pick the cover up to remove it.

3. Pry up the old battery using a flathead screwdriver or the like to take it out. Do not use any metal tools. While prying it up, put a finger lightly on the battery since it may pop out of the holder.

4. Insert the new battery or replace the battery with a new one.
Slide the battery in under the plastic claw, and push it into the holder until it clicks.

5. Place the battery cover in place, then turn it clockwise using such as coins to fix.

90°

90°
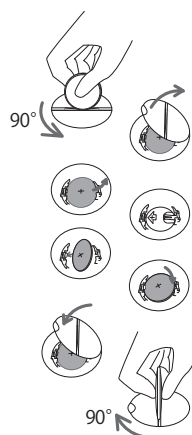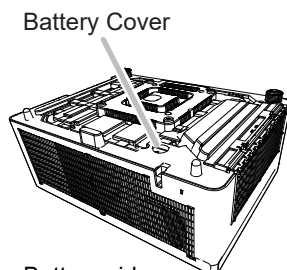
⚠WARNING

►Always handle the batteries with care and use them only as directed. The battery may explode if mistreated. Do not recharge, disassemble or dispose of using fire. Improper use may result in cracking or leakage, which could result in fire, injury and/or pollution of the surrounding environment
  - Be sure to use only the batteries specified.
  - Make sure the plus and minus terminals are correctly aligned when loading a battery.
  - Keep a battery away from children and pets. If swallowed, consult a physician immediately for emergency treatment.
  - Do not short circuit or solder a battery.
  - Do not place a battery in fire or water. Keep batteries in a dark, cool and dry place.
  - If you observe battery leakage, wipe out the leakage and then replace a battery. If the leakage adheres to your body or clothes, rinse well with water immediately.
  - Obey the local laws on disposing a battery.

Specifications

Item	Specification
Product name	Liquid crystal projector
Liquid Crystal Panel	2,304,000 pixels (1920 horizontal x 1200 vertical)
Light source	Laser diode
Power supply/ Rated current	**8980WUSS/8980WUSSB:** 5.9A (AC100V-120V), 3.0A (AC220V-240V) **8970WUSS/8970WUSSB:** 5.4A (AC100V-120V), 2.7A (AC220V-240V)
Power consumption	**8980WUSS/8980WUSSB:** 580W (AC100V-120V), 560W (AC220V-240V) **8970WUSS/8970WUSSB:** 520W (AC100V-120V), 500W (AC220V-240V)

Temperature range	0 ~ under 1,600m
	 NORMAL
	  0 ~ 45 °C (Operating)
	  35 ~ 45 °C (The brightness of the light source is reduced automatically.)
	 WHISPER
	  0 ~ 45 °C (Operating)
	1,600 ~ 3,048m
	 NORMAL
	  0 ~ 40 °C (Operating)
	  30 ~ 40 °C (The brightness of the light source is reduced automatically.)
	 WHISPER
	  0 ~ 40 °C (Operating)

Size	585 (W) x 242 (H) x 444 (D) mm 582 (W) x 215 (H) x 431 (D) mm (Not including protruding parts.) Refer to figure **F-7** in **Supplement** (the end of this manual).
Weight (mass)	Approx. 18.2 kg

(continued on next page)

Item	Specification
Ports	**COMPUTER IN** .... D-sub 15 pin mini jack x1 **HDMI 1** .... HDMI connector x1 **HDMI 2** .... HDMI connector x1 **HDMI OUT** .... HDMI connector x1 **HDBaseT** .... RJ45 jack x1 **3G-SDI** (MP-WU8801W/MP-WU8801B) .... BNC jack x1 **DisplayPort** .... DisplayPort connector x1 **MONITOR OUT** .... D-sub 15 pin mini jack x1 **VIDEO** .... RCA jack x1 **AUDIO IN1** .... 3.5 mm (stereo) mini jack x1 **AUDIO IN2 (L, R)** .... RCA jack x2 **AUDIO OUT** .... 3.5 mm (stereo) mini jack x1 **WIRELESS** .... Wireless connector x1 **CONTROL** .... D-sub 9 pin plug x1 **LAN** .... RJ45 jack x1 **REMOTE CONTROL IN** .... 3.5 mm (stereo) mini jack x1 **REMOTE CONTROL OUT** .... 3.5 mm (stereo) mini jack x1 * Refer to figure **F-1** in **Supplement** (the end of this manual).
Optional parts	**Air filter**: UX43481 **Wireless adapter:** USB-WL-5G * For more information, check our website. (📖*1*)

Manufacturing year and month

The manufacturing year and month of this projector is indicated as follows in the serial number of the rating label on the projector.

Example:

F 9 C x 0 0 0 0 1

    └─ Manufacturing month: A = January, B = February, ... L = December.

   └──── Manufacturing year: 9 = 2019, 0 = 2020, 1 = 2021, ...

Country of manufacture: China

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Troubleshooting - Warranty and after-service

If an abnormal operation (such as smoke, strange odor or excessive sound) should occur, stop using the projector immediately.

Otherwise if a problem occurs with the projector, first refer to "Troubleshooting" of the **Operating Guide**, **Network Guide** and **Instant Stack Guide**, and follow the suggested checks. (&*1*)

If this does not resolve the problem, consult your dealer or service company. They tell you what warranty condition is applied.

Check our website where you may find the latest information for this product. (&*1*)

NOTE • The information in this manual is subject to change without notice.
• The illustrations shown in this manual are example only. Your projector may differ from the illustrations.
• The manufacturer assumes no responsibility for any errors that may appear in this manual.
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DUKANE CORP AV SERVICE DEPT
2900 Dukane Drive
St Charles, IL 60174
800-676-2487 / 630-762-4032
Fax 630-584-5156
avservice@dukane.com
www.dukaneav.com

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Supplement

Laser regulation

T-1: Combination of projector and lens classified as RG3 IEC 62471-5

Option lens	Projector	
	8980WUSS 8980WUSSB	8970WUSS 8970WUSSB
FL-710	–	–
FL-701	–	–
USL-701	–	–
SL-712	–	–
ML-713	–	–
LL-704	–	–
UL-705	1.6 m	1.5 m

When using the projector with the UL-705 lens, the clearance from the hazard zone shall be minimum 2.5 m in the horizontal direction and 3.0 m from the floor in the vertical direction.

Screen size and projection distance

Ⓗ x Ⓥ: Screen size
ⓐ : Projection distance (from the elevator feet)
— Projector top
— Projector bottom
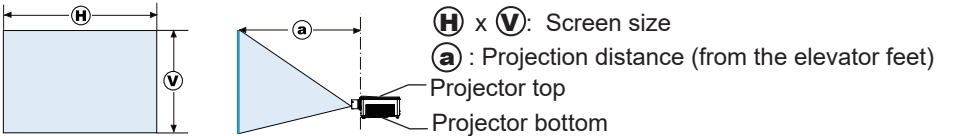
T-2: with the lens ML-713 (1920 x 1200, ±10%)

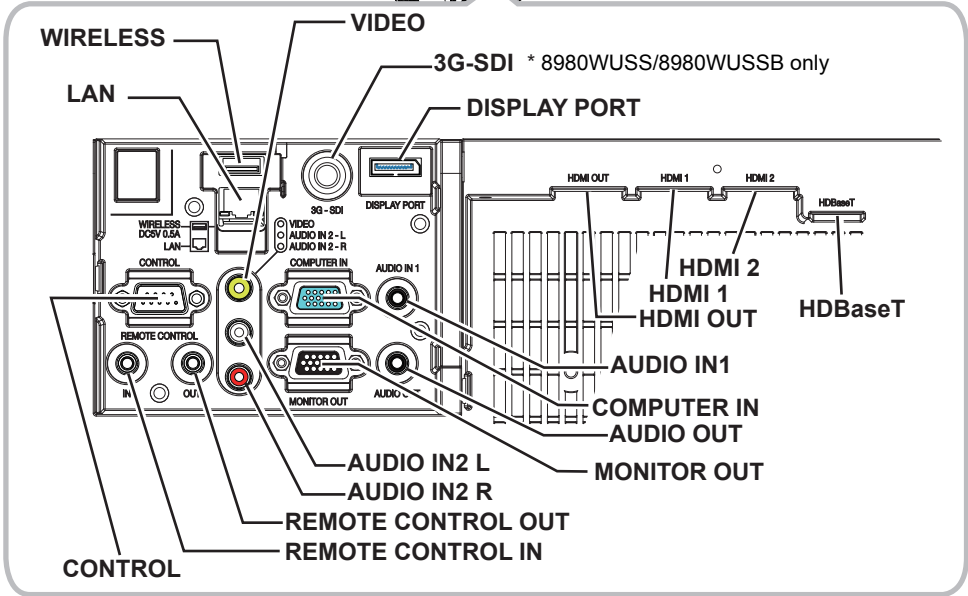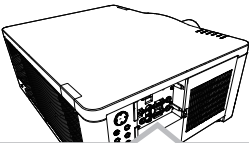| Screen type	16 : 10						16 : 9						4 : 3					
	Screen Size		Projection distance				Screen Size		Projection distance				Screen Size		Projection distance			
	H	V	a min.		a max.		H	V	a min.		a max.		H	V	a min.		a max.	
	m	m	inch	m	inch	m	m	m	inch	m	inch	m	m	m	inch	m	inch	m
30	0.6	0.4	45	1.1	75	1.9	0.7	0.4	46	1.2	77	2.0	0.6	0.5	51	1.3	85	2.2
40	0.9	0.5	59	1.5	100	2.5	0.9	0.5	61	1.6	103	2.6	0.8	0.6	67	1.7	113	2.9
50	1.1	0.7	74	1.9	125	3.2	1.1	0.6	76	1.9	128	3.2	1.0	0.8	83	2.1	141	3.6
60	1.3	0.8	88	2.2	149	3.8	1.3	0.7	91	2.3	153	3.9	1.2	0.9	100	2.5	169	4.3
70	1.5	0.9	103	2.6	174	4.4	1.5	0.9	106	2.7	179	4.5	1.4	1.1	116	3.0	197	5.0
80	1.7	1.1	117	3.0	198	5.0	1.8	1.0	121	3.1	204	5.2	1.6	1.2	133	3.4	224	5.7
90	1.9	1.2	132	3.3	223	5.7	2.0	1.1	135	3.4	229	5.8	1.8	1.4	149	3.8	252	6.4
100	2.2	1.3	146	3.7	248	6.3	2.2	1.2	150	3.8	254	6.5	2.0	1.5	165	4.2	280	7.1
120	2.6	1.6	175	4.4	297	7.5	2.7	1.5	180	4.6	305	7.7	2.4	1.8	198	5.0	336	8.5
150	3.2	2.0	219	5.6	371	9.4	3.3	1.9	225	5.7	381	9.7	3.0	2.3	247	6.3	419	10.7
200	4.3	2.7	291	7.4	494	12.5	4.4	2.5	299	7.6	507	12.9	4.1	3.0	329	8.4	559	14.2
250	5.4	3.4	363	9.2	617	15.7	5.5	3.1	373	9.5	634	16.1	5.1	3.8	411	10.4	698	17.7
300	6.5	4.0	435	11.1	740	18.8	6.6	3.7	448	11.4	760	19.3	6.1	4.6	493	12.5	838	21.3
350	7.5	4.7	508	12.9	863	21.9	7.7	4.4	522	13.3	887	22.5	7.1	5.3	575	14.6	977	24.8
400	8.6	5.4	580	14.7	986	25.0	8.9	5.0	596	15.1	1014	25.7	8.1	6.1	656	16.7	1116	28.4
500	10.8	6.7	725	18.4	1232	31.3	11.1	6.2	745	18.9	1267	32.2	10.2	7.6	820	20.8	1395	35.4
600	12.9	8.1	869	22.1	1478	37.6	13.3	7.5	893	22.7	1520	38.6	12.2	9.1	984	25.0	1674	42.5

Connection

F-1

WIRELESS

VIDEO

LAN

3G-SDI * 8980WUSS/8980WUSSB only

DISPLAY PORT

HDMI 2
HDMI 1
HDMI OUT

HDBaseT

AUDIO IN1

COMPUTER IN
AUDIO OUT

MONITOR OUT

AUDIO IN2 L
AUDIO IN2 R
REMOTE CONTROL OUT
REMOTE CONTROL IN

CONTROL

F-2

*3G-SDI port is equipped only on the models 8980WUSS/8980WUSSB.

RGB OUT

AUDIO OUT

DISPLAY PORT

HDMI™

HDBaseT™
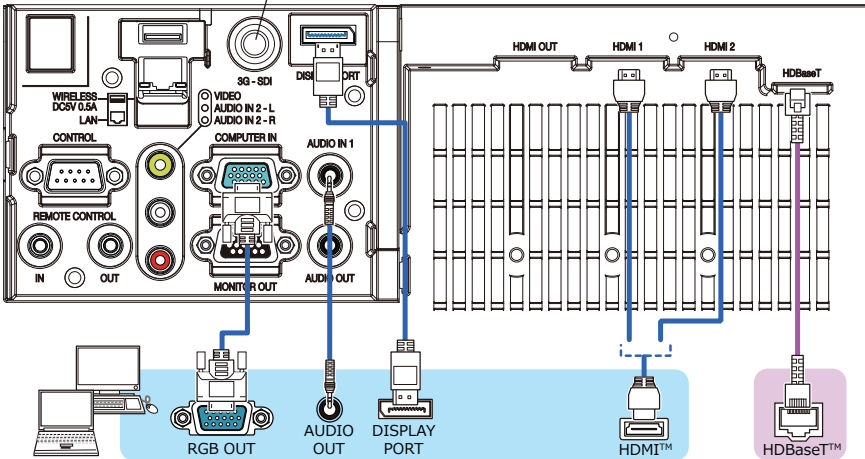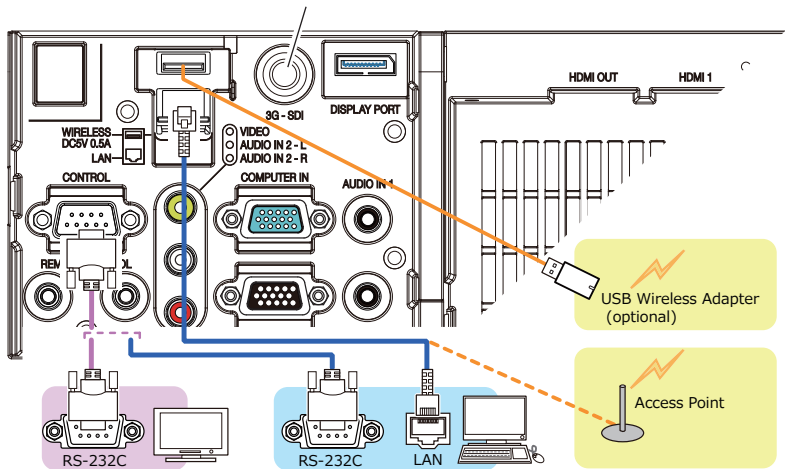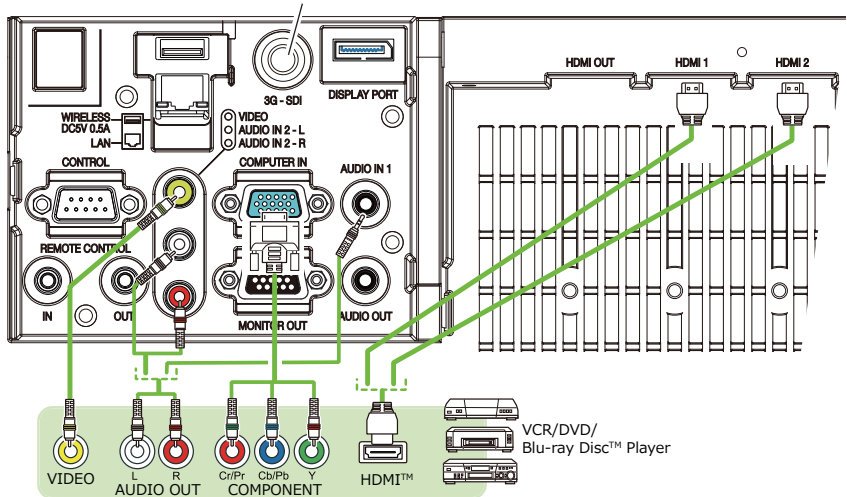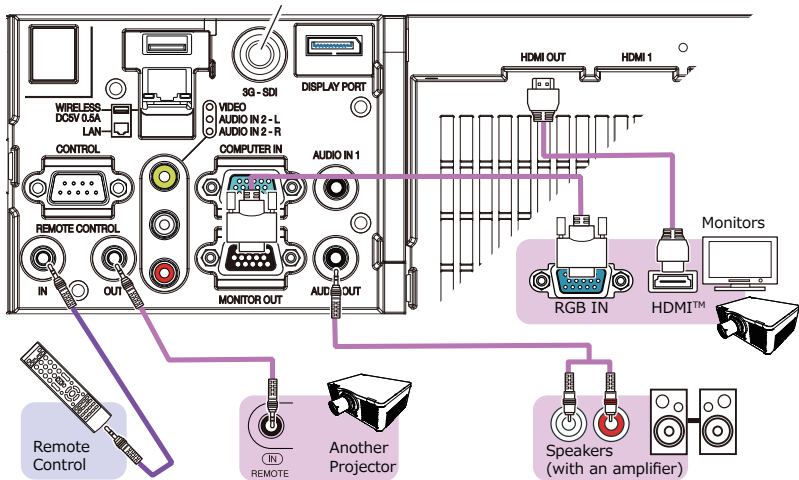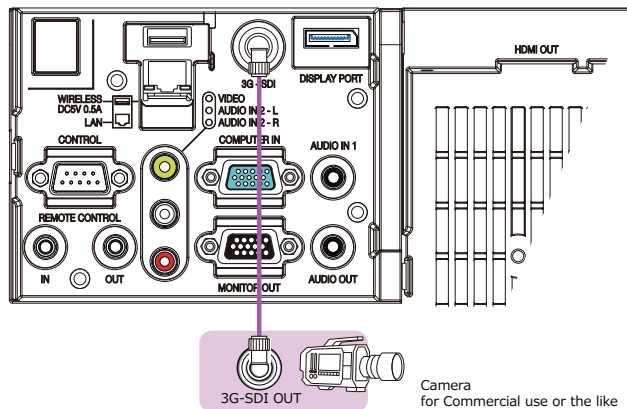
F-3   *3G-SDI port is equipped only on the models 8980WUSS/8980WUSSB.

F-4   *3G-SDI port is equipped only on the models 8980WUSS/8980WUSSB.

F-5   *****3G-SDI port is equipped only on the models 8980WUSS/8980WUSSB.
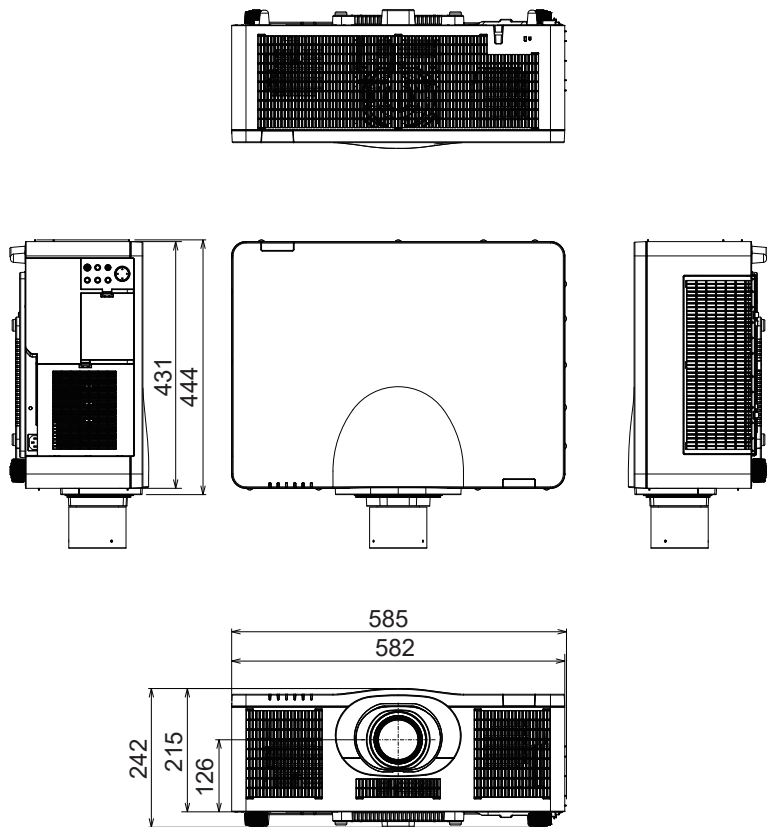

F-6 : Only for the models 8980WUSS/8980WUSSB.

Dimension

F-7

[unit: mm]

F-8

ENGLISH

PERMANENT/TEMPORARY BLINDNESS HAZARD!

Operators must control access to the beam within the hazard distance or install the product at the height that prevents exposure of spectators' eyes within the hazard distance. The hazard zone must be no lower than 3.0 meters above the floor and the horizontal clearance to the hazard zone must be a minimum 2.5 meters.

The following diagram shows the zones for ocular and skin hazard distances:
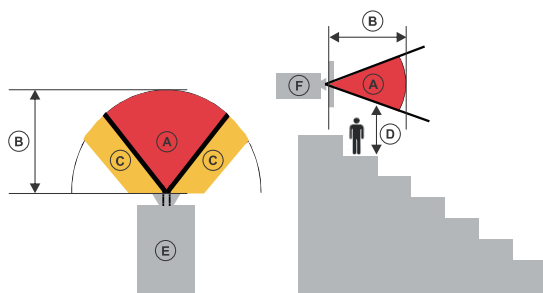
- A—Hazard zone. The region of space where the projection light from the laser-illuminated projector is above emission limits for Risk Group 2. The light intensity may cause eye damage after a momentary or brief exposure (before a person can avert his or her eyes away from the light source). The light may cause skin burns to occur.
- B—Hazard distance. Operators must control access to the beam within the hazard distance or install the product preventing potential exposure of the spectators' eyes from being in the hazard distance.
- C—No access zone. Horizontal clearance of the no access zone must be a minimum of 2.5 meters.
- D—Vertical distance to hazard zone. The hazard zone must be no lower than 3.0 meters above the floor.
- E—Represents the top view of the projector.
- F—Represents the side view of the projector.

FRANÇAIS

RISQUE DE CÉCITÉ TEMPORAIRE/PERMANENTE !

Les opérateurs doivent contrôler l'accès au faisceau dans la distance de risque ou installer l'appareil à une hauteur qui empêche l'exposition des yeux des spectateurs dans la distance de risque. La zone de danger ne doit pas se trouver à moins de 3 mètres au-dessus du niveau du sol et le dégagement horizontal par rapport à la zone de danger doit être, au minimum, de 2,5 mètres.

Le schéma suivant présente les distances critiques pour les yeux et la peau :
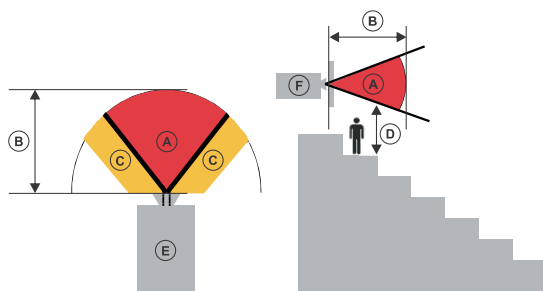
- A—Zone de danger. Région de l'espace dans laquelle la lumière de projection émise par le projecteur à illumination laser est supérieure aux limites d'émission définies pour le groupe de risque 2. L'intensité lumineuse peut provoquer des affections oculaires après une exposition brève ou momentanée (avant que la personne puisse détourner son regard de la source lumineuse). La lumière peut également provoquer des brûlures cutanées.
- B—Distance de risque. Les opérateurs doivent contrôler l'accès au faisceau dans la distance de risque ou installer l'appareil de manière à empêcher l'exposition des yeux des spectateurs dans la distance de risque.
- C—Zone d'accès interdit. Le dégagement horizontal de cette zone doit être, au minimum, de 2,5 mètres.
- D—Distance verticale par rapport à la zone de danger. La zone de danger ne doit pas se trouver à moins de 3 mètres au-dessus du niveau du sol.
- E—Représente la vue de dessus du projecteur.
- F—Représente la vue latérale du projecteur.

DEUTSCH

GEFAHR DAUERHAFTER/VORÜBERGEHENDER ERBLINDUNG!

Der Bediener muss den Zugang zum Lichtstrahl innerhalb des Gefahrenabstands beschränken oder das Produkt in einer Höhe installieren, die verhindert, dass die Augen der Zuschauer innerhalb des Gefahrenabstands dem Lichtstrahl ausgesetzt werden. Die Gefahrenzone darf nicht niedriger als 3,0 Meter über dem Boden liegen, und der horizontale Abstand zur Gefahrenzone muss mindestens 2,5 Meter betragen.

Dem nachstehenden Schaubild sind die Zonen der Gefahrenabstände für Augen und Haut zu entnehmen:
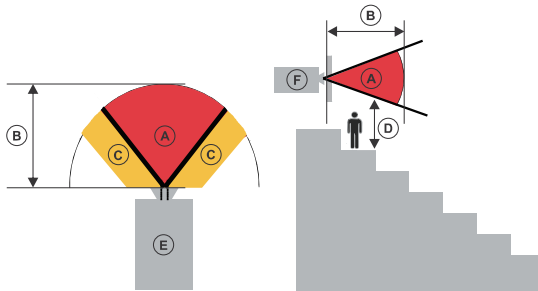
- A — Gefahrenzone. Der Bereich des Raumes, in dem das projizierte Licht des Projektors mit Laserausleuchtung über den Emissionsgrenzwerten für Risikogruppe 2 liegt. Die Lichtintensität kann nach flüchtiger oder kurzzeitiger Exposition (bevor eine Person ihre Augen von der Lichtquelle abwenden kann) Augenschäden verursachen. Das Licht kann Hautverbrennungen verursachen.
- B — Gefahrenabstand. Der Bediener muss den Zugang zum Lichtstrahl innerhalb des Gefahrenabstands beschränken oder das Produkt so installieren, dass eine potenzielle Exposition der Augen der Zuschauer innerhalb des Gefahrenabstands verhindert wird.
- C — Zugangsverbotszone. Der horizontale Abstand der Zugangsverbotszone muss mindestens 2,5 Meter betragen.
- D — Vertikale Distanz zur Gefahrenzone. Die Gefahrenzone darf nicht niedriger als 3,0 Meter über dem Boden liegen.
- E — Stellt die Draufsicht auf den Projektor dar.
- F — Stellt die Seitenansicht des Projektors dar.

ESPAÑOL

¡PELIGRO DE CEGUERA TEMPORAL O PERMANENTE!

El operador deberá controlar el acceso al haz de luz en la distancia de riesgo o instalar el producto a una altura que impida la exposición de los ojos de los espectadores al haz de luz en dicha distancia. La zona de riesgo no debe encontrarse a menos de 3,0 metros por encima del suelo, y la separación horizontal de la zona de riesgo debe ser 2,5 metros como mínimo.

El diagrama siguiente muestra las distancias de riesgo aplicables a estos tipos de radiación, que afectan a los ojos y la piel:
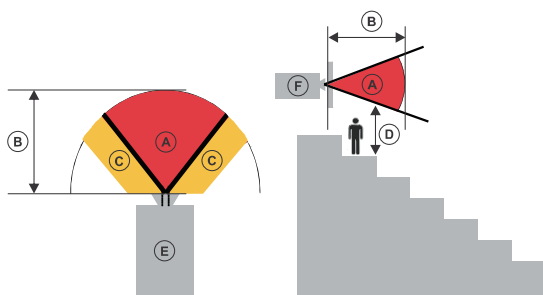
- A—Zona de riesgo. El área espacial donde la luz de proyección del proyector con iluminación láser supera los límites de emisión del Grupo de riesgo 2. La intensidad de la luz puede causar daños oculares tras una exposición breve o momentánea (antes de que el individuo pueda retirar la vista de la fuente de luz). La luz podría causar quemaduras en la piel.
- B—Distancia de riesgo. El operador deberá controlar el acceso al haz de luz en la distancia de riesgo o instalar el producto de forma que impida la exposición potencial de los ojos de los espectadores al haz de luz en dicha distancia.
- C—Zona de acceso prohibido. La separación horizontal de la zona de acceso prohibido debe ser 2,5 metros como mínimo.
- D—Distancia vertical a zona de riesgo. La zona de riesgo no debe encontrarse a menos de 3,0 metros por encima del suelo.
- E—Representa la vista superior del proyector.
- F—Representa la vista lateral del proyector.

ITALIANO

RISCHIO DI CECITÀ PERMANENTE/TEMPORANEA

Gli operatori sono tenuti a controllare l'accesso al fascio luminoso nella distanza di rischio o ad installare il prodotto ad un'altezza che impedisca l'esposizione degli occhi degli spettatori entro la distanza di rischio. L'area di rischio non deve trovarsi al di sotto dei 3 metri di altezza dal pavimento e la distanza orizzontale dall'area di rischio deve essere di almeno 2,5 metri.

Il diagramma seguente mostra le aree di pericolo per occhi e pelle:
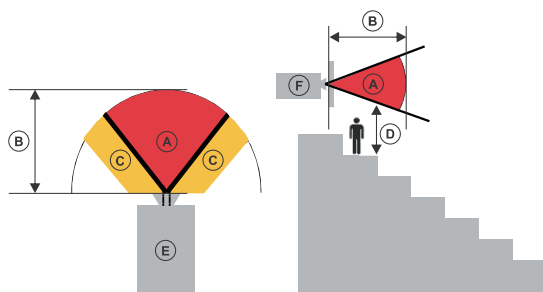
- A—Area di pericolo. La regione di spazio in cui la luminosità di proiezione del proiettore a laser supera i limiti di emissione per il Gruppo di rischio 2. L'intensità luminosa può causare danni agli occhi in seguito ad esposizione transitoria o breve (prima che una persona possa distogliere lo sguardo dalla sorgente luminosa). La luce può causare ustioni dell'epidermide.
- B—Distanza di pericolo. Gli operatori sono tenuti a controllare l'accesso al fascio luminoso entro la distanza di pericolo o ad installare il prodotto in modo da impedire la potenziale esposizione degli occhi degli spettatori entro la distanza di pericolo.
- C—Area ad accesso vietato. L'ingombro orizzontale dell'area ad accesso vietato deve essere di almeno 2,5 m.
- D—Distanza verticale dall'area di pericolo. L'area di pericolo deve trovarsi ad almeno 3 metri di altezza da terra.
- E—Rappresenta la vista dall'alto del proiettore.
- F—Rappresenta la vista laterale del proiettore.

NORSK

FARE FOR PERMANENT/MIDLERTIDIG BLINDHET!

Operatører må kontrollere tilgangen til strålen innenfor risiko-avstanden eller installere produktet i en høyde som hindrer eksponering av tilskuernes øyne innenfor risiko-avstanden. Risikosonen skal ikke være lavere enn 3,0 meter over gulvet, og den horisontale klaringen til risikosonen må være minimum 2,5 meter.

Følgende diagram viser sonene for risikoavstand til øyne og hud:
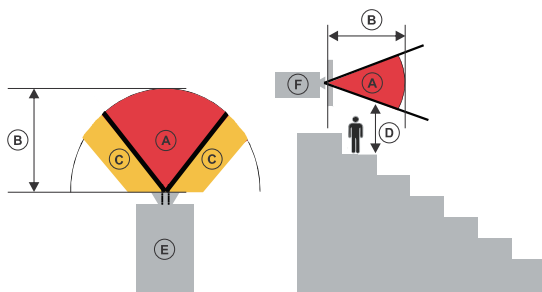
- A—Risikosone. Den delen av rommet der projeksjonslyset fra laserlysprojektoren er over utslippsgrensen for Risikogruppe 2. Lysintensiteten kan forårsake øyeskade etter en momentan eller kortvarig eksponering (det skjer før en person kan avverge skaden ved ta øynene bort fra laserlyskilden). Lyset kan forårsake hudforbrenninger.
- B—Risikoavstand. Operatører skal kontrollere tilgangen til strålen innenfor risiko-avstanden eller installere produktet slik at mulig eksponering av tilskueres øyne forhindres ved at tilskuerne ikke befinner seg innenfor risikoavstanden.
- C—Ingen tilgang-sone. Horisontal klaring for Ingen tilgang-sonen må være minimum 2,5 meter.
- D—Vertikal avstand til faresone. Faresonen må ikke være lavere enn 3,0 meter over gulvet.
- E—Representerer projektoren sett ovenfra.
- F—Representerer projektoren sett fra siden.

NEDERLANDS

GEVAAR VOOR TIJDELIJKE/PERMANENTE BLINDHEID!

De gebruikers moeten toegang tot het gevaarlijke bereik voor de lichtbundel verbieden, of het product op een geschikte hoogte installeren zodat de ogen van de toeschouwers niet kunnen worden blootgesteld aan de lichtbundel binnen het gevaarlijke bereik. De gevarenzone strekt zich uit tot niet lager dan 3,0 meter boven de vloer en de horizontale vrije ruimte tot aan de gevarenzone moet minimaal 2,5 meter zijn.

Het volgende diagram toont de afstanden voor de gevarenzones wat betreft schade aan de ogen en de huid:
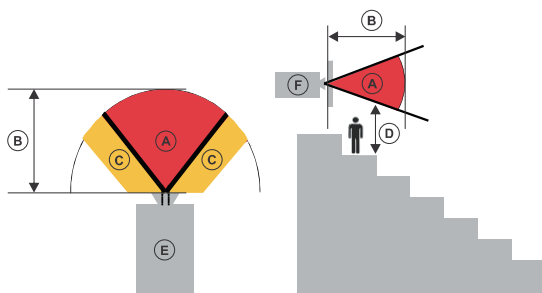
- A—Gevarenzone. Ruimte waar het door de projector geproduceerde laserlicht boven de emissielimieten voor Risicogroep 2 valt. De intensiteit van het licht kan oogschade veroorzaken na slechts een ogenblik of een zeer korte blootstelling (voor iemand zijn of haar ogen kan afwenden van de lichtbron). Het licht kan ook brandwonden op de huid veroorzaken.
- B—Gevarenzone. De gebruikers moeten toegang tot het gevaarlijke bereik voor de lichtbundel verbieden, of het product zo installeren dat de ogen van de toeschouwers niet kunnen worden blootgesteld aan de lichtbundel binnen het gevaarlijke bereik.
- C—Verboden toegangszone. De horizontale vrije ruimte voor de zone waar toegang verboden is moet minimaal 2,5 meter bedragen.
- D— Verticale afstand tot gevarenzone. De gevarenzone mag niet lager zijn dan 3,0 meter boevn de vloer.
- E—Geeft het bovenaanzicht van de projector weer.
- F—Geeft het zijaanzicht van de projector weer.

PORTUGUÊS

PERIGO DE CEGUEIRA PERMANENTE/TEMPORÁRIA!

Os operadores devem controlar o acesso ao feixe dentro da distância de perigo ou instalar o produto a uma altura que previna a exposição dos olhos dos telespectadores dentro da distância de perigo. A zona de perigo não deve ser inferior a 3,0 metros acima do chão e a distância horizontal até à zona de perigo deve ser de pelo menos 2,5 metros.

O seguinte diagrama mostra as zonas para as distâncias de perigo para os olhos e pele:
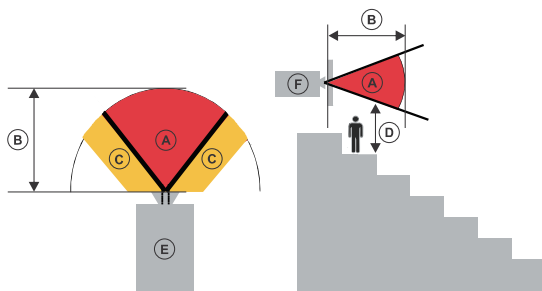
- A—Zona de perigo. A região de espaço onde a luz de projecção desde o projector iluminado por laser está acima dos limites de emissão para o Grupo de Risco 2. A intensidade da luz pode provocar danos aos olhos após uma exposição momentânea ou breve (antes que a pessoa possa desviar seus olhos da fonte de luz). A luz pode provocar queimaduras na pele.
- B—Distância de perigo. Os operadores devem controlar o acesso ao feixe dentro da distância de perigo ou instalar o produto para impedir a possível exposição dos olhos dos telespectadores dentro da distância de perigo.
- C—Zona sem acesso. A distância horizontal da zona sem acesso deve ser de pelo menos 2,5 metros.
- D—Distância vertical até à zona de perigo. A zona de perigo não deve ser inferior a 3,0 metros acima do chão.
- E—Representa a vista superior do projector.
- F—Representa a vista lateral do projector.

简体中文

永久性／暂时性致盲危险！

操作员必须将对光束的接触控制在危险距离内并将产品安装在可防止观察者眼睛在危险距离内接触光束的高度。危险区域在地板以上的距离不得低于 3.0 米，到危险区域的水平间隙不得小于 2.5 米。

下图显示了眼睛和皮肤危险距离的区域：
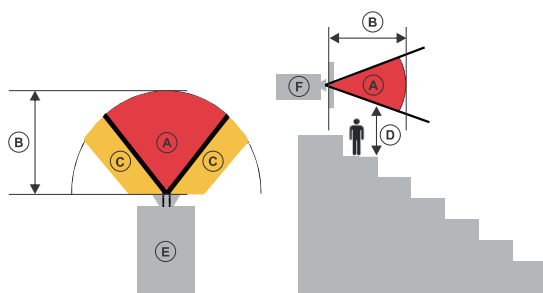
- A—危险区域。激光照明投影机的投影光超过危险等级 2 的辐射极限的空间区域。在短暂或短促的接触后，亮度可能会造成眼睛损伤（在人眼躲避光源之前）。光可能会造成皮肤灼伤。
- B—危险距离。操作员必须将对光束的接触控制在危险距离内，或将产品安装在可防止观察者眼睛在危险距离内接触光束的位置。
- C—无接触区域。无接触区域的水平间隙必须至少为 2.5 米。
- D—到危险区域的垂直距离。危险区域在地板以上的距离不得低于 3.0 米。
- E—表示投影机的俯视图。
- F—表示投影机的侧视图。

한국어

영구적 / 일시적 실명 위험 !

조작자는 위험 거리 내에서 광선에 대 한 접근을 통제하거나 위험 거리 내에서 관중의 눈에 노출되지 않도록 하는 높이에 제품을 설치해야 합니다 . 위험 영역은 바닥 으로부터 3.0m 이상이어야 하며 위험 영역까지의 가로 간격은 최소 2.5m 여야 합니다 .

다음 다이어그램에는 안구 및 피부 위험 거리에 대한 영역이 나와 있습니 다 :
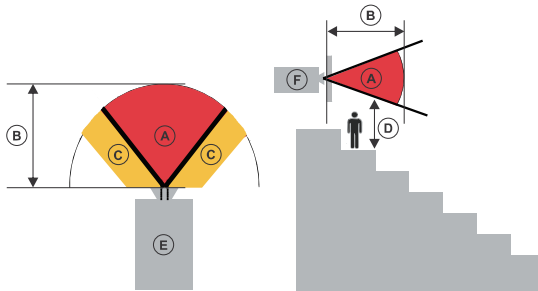
- A—위험 영역 레이저 조명 프로젝터의 영사 조명이 위험 그룹 2 에 대한 방출 제한을 초과하는 공간 영역 . 조명 강도로 인해 순간 적이거나 짧은 노출 후에 눈에 대한 손상이 발생할 수 있습니다 (사람이 광원으로부터 눈을 돌리기 전에). 조명으로 인해 화상이 발생할 수 있습니다 .
- B—위험 거리 . 조작자는 위험 거리 내에서 광선에 대한 접근을 통제하거나 관중의 눈이 위험 거리 내에 잠재적으로 노출되지 않 도록 제품을 설치해야 합니 다 .
- C—접근 불가 영역 . 접근 불가 영역의 가로 간격은 최소 2.5m 여 야 합니다 .
- D—위험 영역까지의 수직 거리 . 위험 영역은 바닥으로부터 3.0m 이상이어야 합 니다 .
- E—프로젝터의 상단 보기를 나타냅니다 .
- F—프로젝터의 측면 보기를 나타냅니다 .

SVENSKA

RISK FÖR PERMANENT/TILLFÄLLIG BLINDHET!

Operatörer måste kontrollera tillgången till strålen inom riskavståndet eller installera produkten på en höjd som förhindrar att åskådares ögon utsätts för strålen inom riskavståndet. Riskområdet får inte vara lägre än 3,0 meter ovanför golvet och det horisontala avståndet till riskområdet måste vara minst 2,5 meter.

Följande diagram visar områdena för okulära och hud riskavstånd:
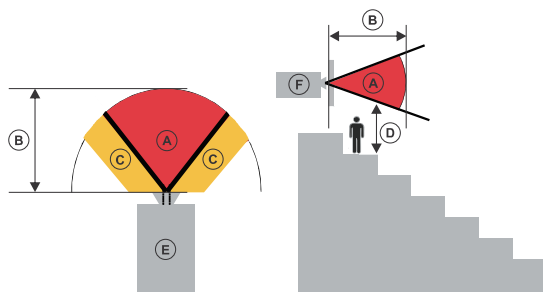
- A—Riskområde. Regionen för utrymmet inom vilket projicerat ljus från laserbelyst projektor överstiger gränserna för Riskgrupp 2. Ljusintensiteten kan orsaka ögonskada efter en tillfällig eller kort utsättning (innan en person kan vända bort hens ögon från ljuskällan). Ljuset kan orsaka brännskada på hud.
- B—Riskavstånd. Operatörer måste kontrollera tillgången till strålen inom riskavståndet eller installera produkten så att det förhindrar eventuell utsättning för att åskådares ögon utsätts för strålen inom riskavståndet.
- C—Tillträde förbjudet område. Horisontellt fritt avstånd till tillträde förbjudet området måste vara minst 2,5 meter.
- D—Vertikalt avstånd till riskområdet. Riskområdet får inte vara lägre än 3,0 meter ovanför golvet.
- E—Representerar projektorn sedd ovanifrån.
- F—Representerar projektorn sedd från sidan.

РУССКИЙ

ОПАСНОСТЬ ПОСТОЯННОГО/ВРЕМЕННОГО ОСЛЕПЛЕНИЯ!

Операторы должны следить, чтобы луч не попадал в глаза на опасном расстоянии, либо должны установить прибор на высоте, которое бы предотвращало попадание света в глаза на опасном расстоянии. Зона опасности должна быть не ниже 3,0 метров над уровнем пола, минимальное расстояние по горизонтали до зоны опасности должно быть не менее 2,5 метров.

На следующем графике показаны опасные зоны для глаз и кожи:
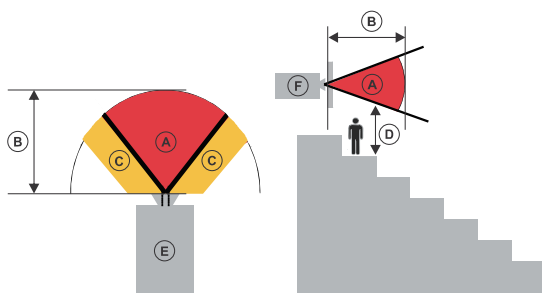
- А—Зона опасности. Зона в пространстве, в которой параметры проецируемого света из лазерного проектора превышают лимиты эмиссии, определенные для Группы риска 2. Интенсивный свет может вызвать повреждение глаз после моментального или кратковременного попадания света (до момента, когда человек успевает отвернуться от источника света). Свет может вызвать ожоги кожи.
- В—Опасное расстояние. Операторы должны контролировать доступ к лучу на опасном расстоянии или установить изделие таким образом, чтобы предупредить потенциальное воздействие света на органы зрения зрителей, возможное на опасном расстоянии.
- С—Зона без доступа. Минимальное карантинное расстояние по горизонтали до зоны без доступа должно быть не менее 2,5 метра.
- D—Вертикальное расстояние до опасной зоны. Зона опасности не должна быть ниже 3,0 метров над уровнем пола.
- Е—Представляет собой вид проектора сверху.
- F—Представляет собой вид проектора сбоку.

SUOMI

PYSYVÄN/ VÄLIAIKAISEN SOKEUTUMISEN VAARA!

Käyttäjien tulee kontrolloida pääsyä säteeseen vaaraetäisyysalueen sisäpuolella tai asentaa tuote sellaiselle korkeudelle, joka estää katsojan silmien altistumisen vaaraetäisyyden sisäpuolella. Vaara-alue ei saa olla matalampi kuin 3,0 metriä lattian yläpuolella, ja vaakasuoran etäisyyden vaara-alueeseen tulee olla vähintään 2,5 metriä.

Seuraava kaavakuva näyttää alueet silmien ja ihon vaurioitumisvaaraetäisyyksille:
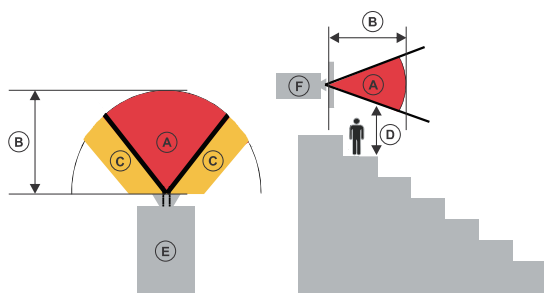
- A—Vaara-alue. Tila-alue, jossa laservalaistusta projektorista tuleva projisointisäde on Riskiryhmä 2:n päästörajojen yläpuolella. Valon voimakkuus saattaa aiheuttaa silmävamman hetkellisen tai lyhyen altistumisen jälkeen (ennen kuin henkilö ehtii siirtää katseensa pois valolähteestä). Valo saattaa aiheuttaa ihopalovammoja.
- B—Vaaraetäisyys. Käyttäjien tulee kontrolloida pääsyä säteeseen vaaraetäisyyden sisäpuolella tai asentaa tuote siten, että estetään katsojien silmien mahdollinen altistuminen vaaraetäisyydellä olemisen vuoksi.
- C—Ei pääsyä-alue. Vaakasuora etäisyys ei pääsyä-alueesta täytyy olla vähintään 2,5 metriä.
- D—Pystysuora etäisyys vaara-alueeseen. Vaara-alue ei saa olla matalammalla kuin 3,0 metriä lattiasta.
- E—Esittää näkymää projektorin päältä.
- F—Esittää näkymää projektorin sivulta.

POLSKI

ZAGROŻENIE TRWAŁĄ/PRZEJŚCIOWĄ UTRATĄ WZROKU!

Operatorzy muszą kontrolować dostęp do wiązki w odległości stanowiącej zagrożenie lub instalować produkt na wysokości uniemożliwiającej narażenie oczu widzów w odległości stanowiącej zagrożenie. Strefa zagrożenia musi znajdować się nie niżej niż 3,0 m nad podłogą, a strefa niedostępna musi być rozszerzona w poziomie o co najmniej 2,5 m od granicy strefy zagrożenia.

Poniższy diagram przedstawia strefy odległości zagrożenia urazami oczu i skóry:
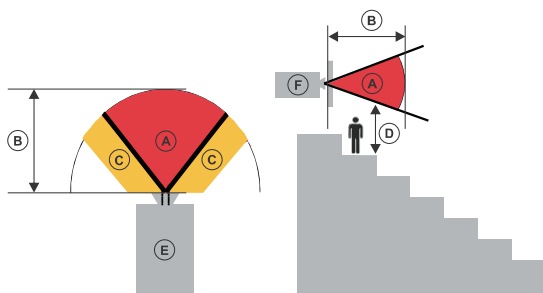
- A — Strefa zagrożenia. Strefa, w której natężenie światła z projektora laserowego przekracza limity emisji dla grupy ryzyka 2. Natężenie światła może spowodować uszkodzenie oczu po chwilowym lub krótkotrwałym narażeniu (zanim osoba będzie w stanie odwrócić wzrok od źródła światła). Światło może spowodować oparzenia skóry.
- B — Odległość zagrożenia. Operatorzy muszą kontrolować dostęp do wiązki światła w odległości niebezpiecznej lub zainstalować urządzenie w sposób zapobiegający potencjalnemu narażeniu oczu widzów w odległości niebezpiecznej.
- C — Strefa niedostępna Strefa niedostępna musi być rozszerzona w poziomie o co najmniej 2,5 m od granicy strefy zagrożenia.
- D—Odległość od strefy zagrożenia w pionie. Strefa zagrożenia musi znajdować się nie niżej niż 3,0 m nad podłogą.
- E — Widok projektora z góry.
- F — Widok projektora z boku.

TÜRK

KALICI/GEÇİCİ KÖRLÜK TEHLİKESİ!

Operatörler mutlaka tehlike mesafesindeki huzme erişimini kontrol etmeli veya ürünü, izleyicilerin gözlerinin tehlike mesafesinde kalmayacağı bir yüksekliğe monte etmelidir. Tehlike bölgesi, zeminden en az 3,0 metre yükseklikte olmalı ve tehlike bölgesine yatay mesafe minimum 2,5 metre olmalıdır.

Aşağıdaki şemada göz ve cilt tehlike mesafelerine karşılık gelen bölgeler açıklanmıştır:
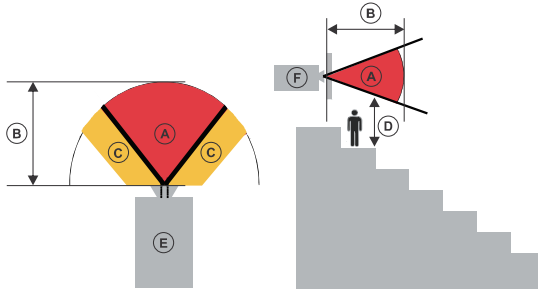
- A—Tehlike bölgesi. Lazerle çalışan projektörlerden gelen projektör ışığının, Risk Grubu 2 emisyon sınırlarının üzerinde olduğu bölgedir. Işık yoğunluğu anlık veya kısa süreli bir maruziyet sonrası (kişi, gözlerini ışık kaynağından kaçırana kadar geçen sürede) göz hasarına neden olabilir. Işık, cilt yanıklarının meydana gelmesine neden olabilir.
- B—Tehlike mesafesi. Operatörler mutlaka tehlike mesafesindeki huzme erişimini kontrol etmeli veya ürünü, izleyicilerin gözlerinin tehlike mesafesinde kalmayacağı şekilde monte etmelidir.
- C—Erişilmesi yasak bölge. Erişilmesi yasak bölgenin yatay mesafesi mutlaka en az 2,5 metre olmalıdır.
- D—Tehlike bölgesine düşey mesafe. Tehlike bölgesi mutlaka zeminden en az 3,0 metre yükseklikte olmalıdır.
- E—Projektörün üstten görünümünü temsil eder.
- F—Projektörün yandan görünümünü temsil eder.

繁體中文

永久性 / 暫時性致盲危險!

操作人員必須控制對危險距離內光束的接觸,或將產品安裝於可防止觀察者的眼睛在危險距離內暴露於光照之下的高度。危險區域與地面相距不得低於 3.0 公尺,且與危險區域的水平間隙至少須為 2.5 公尺。

下圖針對眼睛與皮膚危險距離顯示了各個區域:
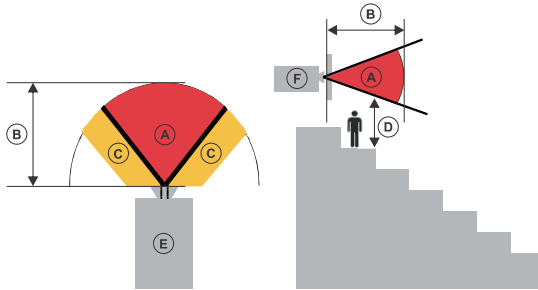
- A—危險區域。投影光線從雷射燈源投影機射出的空間區超過風險等級 2 的輻射上限。在短暫暴露之下 (在人員可以使其眼睛避開光源之前),光強可能會導致視力損傷。光線可能會導致皮膚灼燒。
- B—危險距離。 操作人員必須控制對危險距離內光束的接觸, 或在安裝產品時防止觀察者的眼睛在危險距離內暴露於光照之下。
- C—非進入區。 非進入區的水平間隙至少須達 2.5 公尺。
- D—與危險區域的垂直距離。 危險區域與地面相距不得低於 3.0 公尺。
- E—投影機頂視圖。
- F—投影機側視圖。

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DUKANE CORP AV SERVICE DEPT
2900 Dukane Drive
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