# **PANTONE®**3



# **Operation Manual**

Register your product and get access to important product updates, exclusive content, service support, and other tools to help you get the most of your product. www.xrite.com/registration

Consult this documentation in all cases where the Attention symbol  $\angle I$  appears. This symbol is used to inform you of any potential HAZARD or actions that may require your attention.

# **CE Declaration**

Hereby, X-Rite declares that this 'PANTONE 3' light booth is in compliance with the essential requirements and other relevant provisions of Directive(s) EMC 2014/30/EU, LVD 2014/35/EC, and RoHS EU 2015/863.

# **Federal Communications Commission Notice**

NOTE: 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 will be required to correct the interference at his own expense.

# Industry Canada Compliance Statement

This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

# Safety Information

IF THE EQUIPMENT IS USED IN A MANNER NOT SPECIFIED BY X-RITE, THE PROTECTION PROVIDED BY THE EQUIPMENT MAY BE IMPAIRED.

**PLEASE READ AND FOLLOW INSTRUCTIONS**: Read and follow all instructions before you attempt to assemble, install or operate the unit.

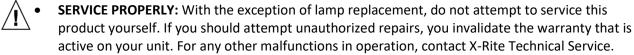
- **CAUTION! THIS UNIT MUST BE EARTHED. DO NOT** connect to an ungrounded outlet. **DO NOT** use with 2-wire extension cords or adaptors.
- **OBEY WARNINGS:** Please comply with all warnings and safeguards that we provide in this manual. They have been written to keep you and your unit safe. If the unit is used in a manner not specified in this manual, the protection provided by the unit may be impaired.
- UNIT WEIGHS APPROXIMATELY 23.5 KG. Take care when lifting and obey manual handling safety procedures.



 CHECK VOLTAGE SETTING PRIOR TO PLUGING IN THE UNIT. Applying the incorrect voltage may cause the fuses to blow. Contact your local X-Rite representative for replacement fuses and follow

the fuse replacement procedure in this manual.

- ALWAYS UNPLUG THE UNIT BEFORE CHANGING THE VOLTAGE SELECTOR OR FUSE.
- **NEVER BLOCK ACCESS TO THE MAINS INLET AND POWER SWITCH.** The mains inlet and power switch are located at the rear of the unit.
- **DO NOT BLOCK VENTS:** The vents allow air to circulate between the canopy interior and the ambient air. Blocking the vents will cause heat buildup within the canopy which may result in inaccurate lighting conditions, damage to the equipment, and possible personal injury.
- **USE ONLY A PROPER POWER SOURCE:** Use the proper power source for this unit. Consult the power label on the back of the unit for this information. Operation with a power source not specified on the power label may result in inaccurate lighting conditions, damage to the equipment, and possible personal injury.



- UNPLUG THE UNIT BEFORE CHANGING THE LAMPS: Always unplug the unit before you change the lamps.
- ALLOW THE LAMPS TO COOL BEFORE HANDLING THEM. Diffuser and lamps get hot during operation. Allow time to cool before touching.
- **CAREFULLY HANDLE THE LAMPS:** The lamps are made from glass. Take care not to knock or drop them. Always use lens paper or an equivalent to handle the replacement halogen lamps. Skin oils interfere with lamp performance.
- **CLEAN PROPERLY:** You can wipe the unit with a clean, white lint-free cloth. Do not apply liquid cleaners or agents containing wax, since these can yellow and change reflectance and gloss properties. Clean outer surfaces with a dampened cloth containing a mild soap.
- **PROTECT FROM WATER AND MOISTURE:** Maintain electrical safety when you use this unit. Do not use it in an area where there is possible hazard of electric shock from spilled water or other liquids or uncontrolled moisture.
- **DAMAGE REQUIRING SERVICE:** The unit must be serviced by qualified service personnel when the unit has been dropped or damaged, water or other liquid(s) have been spilled into the electrical components or the unit does not operate normally.
- WARNING: This instrument is not for use in explosive environments.

**RETAIN THIS MANUAL FOR FUTURE REFERENCE:** Once you have read this manual, keep it handy for others to read or refer to when they need to operate the unit.

# Disposal



Instructions for disposal: Please dispose of Waste Electrical and Electronic Equipment (WEEE) at designated collection points for the recycling of such equipment.

#### **Proprietary Notice**

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#### **Warranty Information**

X-Rite warrants this Product against defects in material and workmanship for a period of twelve (12) months from the date of shipment from X-Rite's facility, unless mandatory law provides for longer periods. During such time, X-Rite will either replace or repair at its discretion defective parts free of charge.

X-Rite's warranties herein do not cover failure of warranted goods resulting from: (i) damage after shipment, accident, abuse, misuse, neglect, alteration or any other use not in accordance with X-Rite's recommendations, accompanying documentation, published specifications, and standard industry practice; (ii) using the device in an operating environment outside the recommended specifications or failure to follow the maintenance procedures in X-Rite's accompanying documentation or published specifications; (iii) repair or service by anyone other than X-Rite or its authorized representatives; (iv) the failure of the warranted goods caused by use of any parts or consumables not manufactured, distributed, or approved by X-Rite; (v) any attachments or modifications to the warranted goods that are not manufactured, distributed or approved by X-Rite. Consumable parts and Product cleaning are also not covered by the warranty.

X-Rite's sole and exclusive obligation for breach of the above warranties shall be the repair or replacement of any part, without charge, which within the warranty period is proven X-Rite's reasonable satisfaction to have been defective. Repairs or replacement by X-Rite shall not revive an otherwise expired warranty, nor shall the same extend the duration of a warranty.

Customer shall be responsible for packaging and shipping the defective product to the service center designated by X-Rite. X-Rite shall pay for the return of the product to Customer if the shipment is to a location within the region in which the X-Rite service center is located. Customer shall be responsible for paying all shipping charges, duties, taxes, and any other charges for products returned to any other locations. Proof of purchase in the form of a bill of sale or receipted invoice which is evidence that the unit is within the Warranty period must be presented to obtain warranty service. Do not try to dismantle the Product. Unauthorized dismantling of the equipment will void all warranty claims. Contact the X-Rite Support or the nearest X-Rite Service Center, if you believe that the unit does not work anymore or does not work correctly.

THESE WARRANTIES ARE GIVEN SOLELY TO BUYER AND ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR APPLICATION, AND NONINFRINGEMENT. NO EMPLOYEE OR AGENT OF X-RITE, OTHER THAN AN OFFICER OF X-RITE, IS AUTHORIZED TO MAKE ANY WARRANTY IN ADDITION TO THE FOREGOING.

IN NO EVENT WILL X-RITE BE LIABLE FOR ANY OF BUYER'S MANUFACTURING COSTS, OVERHEAD, LOST PROFITS, GOODWILL, OTHER EXPENSES OR ANY INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES BASED UPON BREACH OF ANY WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT, OR ANY OTHER LEGAL THEORY. IN ANY EVENT OF LIABILITY, X-RITE'S MAXIMUM LIABILITY HEREUNDER WILL NOT EXCEED THE PRICE OF THE GOODS OR SERVICES FURNISHED BY X-RITE GIVING RISE TO THE CLAIM.

# Introduction and Installation

The PANTONE3 is a visual color evaluation system which provides selectable standardized light sources.

# PANTONE 3





### Key Features

#### Three light sources:

- **Daylight:** (fluorescent) CIE D65 (6500 K) *or* CIE D50 (5000 K)
- Store: (fluorescent) Halophosphor Cool White/F2 (CWF) (4100 K) or Triphosphor 840/TL84/F11 (4000 K) or 835/U35 (3500 K) or 830/U30/F12 (3000 K)
- **Home:** (halogen) CIE Illuminant A (2856 K)

**NOTE:** Refer to the light source table displayed on the outside of the canopy to identify exactly which lamp types are fitted in the cabinet.

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#### **Other features:**

- Balanced light that conforms to or exceeds published international standards for the visual evaluation of color.
- Durable, neutral matte paint finish Munsell N7.
- Instant illumination allows for rapid switching between light sources.
- The hour counter allows the user to monitor when the daylight lamp has reached the maximum recommended 2000 hours usage.

#### **Recommendations for placement**

- UNIT WEIGHS APPROXIMATELY 23.5 KG. Take care when lifting and obey manual handling safety procedures.
  - **NEVER BLOCK ACCESS TO THE MAINS INLET AND POWER SWITCH.** The mains inlet and power switch are located at the rear of the unit.
  - **DO NOT BLOCK VENTS:** The vents allow air to circulate between the canopy interior and the ambient air. Blocking the vents will cause heat buildup within the canopy which may result in inaccurate lighting conditions, damage to the equipment, and possible personal injury.

Make certain that the unit is placed on a stable, vibration-free surface that will support the weight of the unit. Assembled weight 23.5 Kg.

When choosing where to position the cabinet the following factors should be taken into consideration:

- Avoid placing in the immediate vicinity of other light sources, i.e. windows, luminaires, spot lights, etc.
- If lighting in the immediate vicinity is required we recommend artificial CIE daylight to match the cabinet (D50/D65) at a level of approximately 200 to 300 lux.
- Nearby windows should be fitted with suitable light-excluding blinds.
- Strong colors should not be visible in the observer's field of view. Ideally, the walls directly behind the cabinet should be neutral grey Munsell N7.
- The operator carrying out a visual assessment should not wear clothing of a strong color.
- The ideal ambient temperature of the room should be between 18 to 25°C.

#### Specifications

Dimensions / Shipping	H 500 mm x D 420 mm x W 690 mm
Dimensions	H 560 mm x D 610 mm x W 800 mm

Weight / Shipping Weight	23.5 Kg			
	27.5 Кд			
Electrical	Power			
	2.5A 100/115/127/230Vac 50/60Hz			
	Main Fuse			
	Inlet Socket			
	Live - 2.5A			
	Neutral – 2.5A			
	Power Cord			
	Connector: country specific			
	Plug: IEC 60320 C13 type			
Safety Compliance	Pollution Degree: 2			
	Usage: Indoor			
	Only Altitude: 2000M			
	Transient Overvoltage: Category II			
<b>Environmental Specifications</b>	Operating temperature: 0°C to 40°C (32°F to 104°F)			

Design and specifications subject to change without notice.

#### Operation



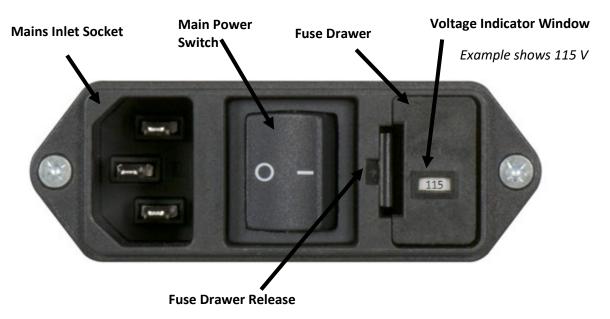
If the equipment is used in a manner not specified by X-Rite, the protection provided by the equipment may be impaired.

- ALWAYS UNPLUG THE UNIT BEFORE CHANGING THE VOLTAGE SELECTOR OR FUSE.
- **CAUTION! THIS UNIT MUST BE EARTHED. DO NOT** connect to an ungrounded outlet. **DO NOT** use with 2-wire extension cords or adaptors.
- CHECK VOLTAGE SETTING PRIOR TO PLUGING IN THE UNIT. Applying the incorrect voltage may cause the fuses to blow. Contact your local X-Rite representative for replacement fuses and follow the fuse replacement procedure in this manual.
- USE ONLY A PROPER POWER SOURCE: Use the proper power source for this unit. Consult the power label on the back of the unit for this information. Operation with a power source not specified on the power label may result in inaccurate lighting conditions, damage to the equipment, and possible personal injury.

#### **Applying Power to the Assembled Unit**

**1.** The mains inlet socket and power switch is located on the rear of the cabinet.

**2.** Check the voltage before applying power to the unit. To check the voltage, identify the voltage displayed in the 'Voltage Indicator Window' of the fuse drawer.

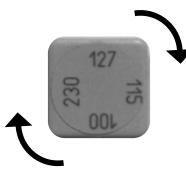


- **3.** If the voltage displayed is correct, plug the power cord into the mains inlet socket, then plug the cord into a properly rated wall socket.
- 4. <u>IF THE VOLTAGE DISPLAYED IS **INCORRECT**</u> proceed to "Changing the Voltage Selection Unit" below.
- 5. Switch on the power switch.

# **Changing the Voltage Selection Unit**

# • ALWAYS UNPLUG THE UNIT BEFORE CHANGING THE VOLTAGE SELECTOR OR FUSE.

- 1. To remove the **Fuse Drawer**, insert a small flat bladed screwdriver or similar sized tool into the **Fuse Drawer Release**, indicated above. The fuse drawer will spring out far enough to grasp the drawer and remove it completely.
- Note the voltage displayed in the window. If a different voltage is needed, remove the gray Voltage Selection Unit and rotate to display the desired voltage in the Voltage Indicator Window. Reinsert the Voltage Selection Unit into its housing.



- **3.** With both fuses properly seated, slide the **Fuse Drawer** back into the unit. Gently press the Fuse Drawer until you hear a distinct click.
- **4.** Reconnect the power cord to the unit and apply power. If the unit shows signs that the fuses may have blown again contact your X-Rite Service Representative.

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#### **Fuse Check and Replacement Procedure**



# ALWAYS UNPLUG THE UNIT BEFORE CHANGING THE VOLTAGE SELECTOR OR FUSE.

- 1. Locate the Fuse Drawer at the rear of the unit and record the number exposed in the Voltage Indicator Window. This number represents the AC power setting (VAC) and will be one of the following: 100, 115, 127, 230.
- 2. Follow Step 1. above Changing the Voltage Selector Unit to remove the fuse drawer.
- **3.** Remove and inspect the two fuses. If there is evidence that one or both fuses have blown, replace them with T2.5A H250V fuses. Both the fuses should be always used.
- **4.** With both fuses properly seated, slide the Fuse Drawer back into the unit. Before you close it, make certain to look at the Voltage Indicator Window to verify the proper voltage is displayed.
- 5. Gently press the Fuse Drawer until you hear a distinct click.
- **6.** Reconnect the power cord to the unit and apply power. If the unit shows signs that the fuses may have blown again contact your X-Rite Service Representative.

#### Selecting a Light Source

**NOTE:** Refer to the light source table displayed on the outside of the canopy to identify exactly which lamp types are fitted in the cabinet.

Press the button labeled:

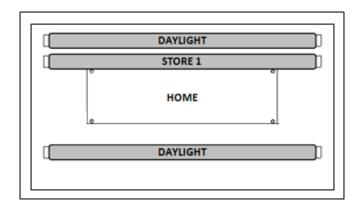
- **1. DAYLIGHT** for the daylight fluorescent source;
- 2. **STORE** for the point of sale fluorescent light source;
- 3. HOME for the incandescent/halogen light source;
- **4.** Pressing the same button again will turn off the light source.

Only use one light source at a time when carrying out visual assessments. Remember to turn off the previous light source before using the next one.

#### **Changing Lamps**

- UNPLUG THE UNIT BEFORE CHANGING THE LAMPS: Always unplug the unit before you change the lamps.
  - ALLOW THE LAMPS TO COOL BEFORE HANDLING THEM. Diffuser and lamps get hot during operation. Allow time to cool before touching.
  - **CAREFULLY HANDLE THE LAMPS:** The lamps are made from glass. Take care not to knock or drop them. Always use lens paper or an equivalent to handle the replacement halogen lamps. Skin oils interfere with lamp performance.
  - 1. To remove the fluorescent lamps rotate the bulb until the pins are able to slide loose from their fittings.
  - 2. Remove the diffuser by unscrewing the four bolts to access the halogen bulbs.
  - 3. Replace the lamps according to the configuration below;

**Note:** Always use lens paper or an equivalent to handle the replacement halogen lamps. Skin oils interfere with lamp performance.



- **4.** Verify that the lamps are replaced properly by illuminating each one separately to make certain that the operating switch turns the desired lamp ON and OFF.
- 5. Make a note of the hour counter display when the lamps are changed. The lamps must be changed every 2000 hours or every year, whichever comes first.

#### **Replacement Lamps**



• SERVICE PROPERLY: With the exception of lamp replacement, do not attempt to service this product yourself. If you should attempt unauthorized repairs, you invalidate the warranty that is active on your unit. For any other malfunctions in operation, contact X-Rite Technical Service.

# **Parts:** Consult your X-Rite Price List for additional Lamp Kit Options or call your local X-Rite office.

**P3D65840** PANTONE 3 Light booth (D65/TL84/A)

P3D50CWF PANTONE 3 Light booth (D50/CWF/A)

# A-LK/L24D50

Two D50 24" T8 Lamps For JudgeII, JudgeQC and PANTONE 3/5 (two lamps per booth)

### A-LK/L24D65

Two D65 24" T8 Lamps for JudgeII, JudgeQC and PANTONE 3/5 (two lamps per booth)

#### A-LK/L24U30

Two U30 24" T8 Lamps for JudgeII, JudgeQC and PANTONE 3/5

A-LK/L24U35 Two U35 24" T8 Lamps for JudgeII, JudgeQC and PANTONE 3/5

A-LK/L24TL84 Two TL84 24" T8 Lamps for JudgeII, JudgeQC and PANTONE 3/5

#### A-LK/JUCW Four CWF 24" T12 Lamps for JudgeII, JudgeQC and PANTONE 3/5

L24CIEA CIE A Individual Halogen Capsules for JudgeQC and PANTONE 3/5 (two required per booth)

## **L24CWF** CWF Individual 24" T8 Lamp with European CE mark for JudgeII, JudgeQC and PANTONE 3/5

### A-LK/L24UV

Two UVA 24" T8 Lamps for JudgeII, JudgeQC and PANTONE 3/5

**SD33-07** Line Cord, North America

**SD33-33** Line Cord, Argentina

**SD33-63** Line Cord, Australia

**SD33-45** Line Cord, Brazil

SD33-41 Line Cord, China

SD33-08 Line Cord, Europe

SD33-21 Line Cord, India

SD33-48 Line Cord, Italy

**SD33-49** Line Cord, Switzerland

**SD33-34** Line Cord, United Kingdom

#### **SD33-31** Line Cord, Japan

# **China RoHs Disclosure Table**

产品中有害物质的含量

X-Rite, Incorporated. Model PANTONE 3 Series

Instrument	仪器	有害物质					
Assembly	组件	铅	汞	镉	六价	多溴联苯	多溴联苯醚
		(Pb)	(Hg)	(Cd)	铬 (Cr6)	(PBB)	(PBDE)
All	全部						
PCB Assembly	PCB 组件	х	0	0	0	ο	0
Fluorescent Lamps	荧光灯	x	x	о	о	о	ο
Ballasts	镇流器	x	о	о	ο	о	ο
Cords & Cables	线与电缆	x	о	о	о	ο	ο
AC Line Filter	AC 线路滤波器	x	о	о	ο	о	0
Fasteners	扣件	x	о	о	о	о	0
Packaging Material	包裝材料	о	о	о	о	о	О

#### 本表格依据 SJ/T 11364 的规定编制。

Table prepared in accordance with SJ/T 11364-2014 standards.

0: 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。

Indicates the concentration of the hazardous substance in all homogeneous material of the part is below the threshold GB/T 26572 standards.

X: 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。

Indicates the concentration of hazardous substance in at least one homogeneous material of the part is above the threshold of the GB/T 26572 standards.

产品采用的 EPUP 条件 - 在中国销售的电子电气产品环保使用期限的,按下列安全注意事项使用的产品,从生产之日起的 表达,使用有害的产品包含在生命体征内物质不会对环境,人身和财产造成严重影响.

Products EPUP conditions of use - in Chinese sales of electrical and electronic products environmental protection use period, expressed according to the following Safety Precautions for the use of the product, starting from the date of manufacture, the use of harmful product contained within the life signs substance does not have a serious impact on an environment, persons and property.

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