PHILIPS

Signage Display
4000 Series

43BDL4512D
50BDL4512D
55BDL4512D

User Manual (English)

www.philips.com/ppds

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1. Safety Instructions

Safety precautions and maintenance

WARNING: Use of controls, adjustments or procedures other than those specified in this documentation may result in exposure to shock, electrical hazards and/or mechanical hazards.

Read and follow these instructions when connecting and using your display:

This product is intended for use in professional installations in business settings only and is not suitable for domestic purposes. Any use other than that for which this device is intended can void the warranty.

This product contains an operating system. If it is shut down directly using the AC switch, it may damage the program and prevent it from powering on again. If the system is unable to power on due to frequent shutdowns, please try a factory reset. Please note that all data stored in the system will be lost when the display is rebooted after a factory reset.

Operation:

- This equipment is not suitable for use in locations where children are likely to be present.
- Keep the display out of direct sunlight and away from stoves or any other heat sources.
- Keep the display away from oil, otherwise the plastic cover may be damaged.
- Remove any object that could fall into ventilation holes or prevent proper cooling of the display's electronics.
- Do not block the ventilation holes on the cabinet.
- When positioning the display, make sure the power plug and outlet are easily accessible.
- When turning off the display by detaching the power cord, wait 6 seconds before re-attaching the power cord for normal operation.
- Ensure the use of an approved power cord provided by Philips at all times. If your power cord is missing, please contact your local service center.
- Do not subject the display to severe vibration or high impact conditions during operation.
- Do not knock or drop the display during operation or transportation.
- The eye bolt is for usage in short-time maintenance and installation. We suggest not to use the eye bolt for more than 1 hour. Prolong usage is prohibited. Please keep a clear safety area under the display while using the eye bolt.

Maintenance:

- To protect your display from possible damage, do not put excessive pressure on the LCD panel. When moving your display, grasp the frame to lift; do not lift the display by placing your hands or fingers on the LCD panel.
- Unplug the display if you are not going to use it for an extensive period of time.
- Unplug the display if you need to clean it with a slightly damp cloth. The screen may be wiped with a dry cloth when the power is off. However, never use organic solvent, such as, alcohol, or ammonia-based liquids to clean your display.
- To avoid the risk of shock or permanent damage to the set, do not expose the display to dust, rain, water or an excessively moist environment.
- If your display becomes wet, wipe it with dry cloth as soon as possible.
- If a foreign substance or water gets in your display, turn the power off immediately and disconnect the power cord. Then remove the foreign substance or water, and send the unit to the maintenance center.
- Do not store or use the display in locations exposed to heat, direct sunlight or extreme cold.
- In order to maintain the best performance of your display and ensure a longer lifetime, we strongly recommend using the display in a location that falls within the following temperature and humidity ranges.
  - Temperature: 0-40°C 32-104°F
  - Humidity: 20-80% RH
- LCD panel temperature need to be 25 degrees Celsius at all time for better luminance performance.

IMPORTANT: Always activate a moving screen saver program when you leave your display unattended. Always activate a periodic screen refresh application if the unit will display unchanging static content. Uninterrupted display of still or static images over an extended period may cause "burn in", also known as "after-imaging" or "ghost imaging", on your screen. This is a well-known phenomenon in LCD panel technology. In most cases, the "burned in" or "after-imaging" or "ghost imaging" will disappear gradually over a period of time after the power has been switched off.

WARNING: Severe “burn-in” or “after-image” or “ghost image” symptoms will not disappear and cannot be repaired. This is also not covered under the terms of your warranty.

Service:

- The casing cover should be opened only by qualified service personnel.
- If there is any need for repair or integration, please contact your local service center.
- Do not leave your display under direct sunlight.

If your display does not operate normally, having followed the instructions set out in this document, please contact a technician or your local service center.

Stability Hazard

The device may fall, causing serious personal injury or death. To prevent injury, this device must be securely attached to the floor/wall in accordance with the installation instructions.

Read and follow these instructions when connecting and using your display:

- Unplug the display if you are not going to use it for an extensive period of time.
- Unplug the display if you need to clean it with a slightly damp cloth. The screen many be wiped with a dry cloth when the power is off. However, never use alcohol, solvents or ammonia-based liquids.
- Consult a service technician if the display does not operate normally when you have followed the instructions in this manual.
- The casing cover should be opened only by qualified service personnel.
- Keep the display out of direct sunlight and away from stoves or any other heat sources.
- Remove any object that could fall into the vents or prevent proper cooling of the display’s electronics.
- Do not block the ventilation holes on the cabinet.
- Keep the display dry. To avoid electric shock, do not expose it to rain or excessive moisture.
- When turning off the display by detaching the power cable or DC power cord, wait for 6 seconds before re-attaching the power cable or DC power cord for normal operation..
- To avoid the risk of shock or permanent damage to the set do not expose the display to rain or excessive moisture.
- When positioning the display, make sure the power plug and outlet are easily accessible.
- **IMPORTANT:** Always activate a screen saver program during your application. If a still image in high contrast remains on the screen for an extended period of time, it may leave an ‘after-image’ or ‘ghost image’ on the front of the screen. This is a well-known phenomenon that is caused by the shortcomings inherent in LCD technology. In most cases the afterimage will disappear gradually over a period of time after the power has been switched off. Be aware that the after-image symptom cannot be repaired and is not covered under warranty.
- If provided with a 3-pin attachment plug on the power cord, plug the cord into a grounded (earthed) 3-pin outlet. Do not disable the power cord grounding pin, for example, by attaching a 2-pin adapter. The grounding pin is an important safety feature.

EU Declaration of Conformity/UK Declaration of Conformity

This device complies with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility (2014/30/EU), Low-voltage Directive (2014/35/EU), RoHS Directive (2011/65/EU), ESPR Regulation (EU) 2024/1781(Regulation (EU) 2019/2021).

This product has been tested and found to comply with the harmonized standards for Information Technology Equipment, these harmonized standards published under Directives of Official Journal of the European Union.

ESD Warnings

When user close to the monitor may cause the equipment discharge and reboot to the display of main menu.

Warning:

This equipment is compliant with Class A of EN55032/CISPR 32. In a residential environment this equipment may cause radio interference.

Federal Communications Commission (FCC) Notice (U.S. Only)

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.

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

TPV USA Corp
6525 Carnegie Blvd #200
Charlotte, NC 28211
USA

Canada:

Industry Canada statement:

This device complies with RSS-247 of the Industry Canada 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.

Ce dispositif est conforme à la norme CNR-247 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Polish Center for Testing and Certification Notice

The equipment should draw power from a socket with an attached protection circuit (a three-prong socket). All equipment that works together (computer, display, printer, and so on) should have the same power supply source.

The phasing conductor of the room's electrical installation should have a reserve short-circuit protection device in the form of a fuse with a nominal value no larger than 16 amperes (A).

To completely switch off the equipment, the power supply cable must be removed from the power supply socket, which should be located near the equipment and easily accessible.

A protection mark "B" confirms that the equipment is in compliance with the protection usage requirements of standards PN-93/T-42107 and PN-89/E-06251.

Wymagania Polskiego Centrum Badań i Certyfikacji

Urządzenie powinno być zasilane z gniazda z przyłączonym obwodem ochronnym (gniazdo z kołkiem). Współpracujące ze sobą urządzenia (komputer, monitor, drukarka) powinny być zasilane z tego samego źródła.

Instalacja elektryczna pomieszczenia powinna zawierać w przewodzie fazowym rezerwową ochronę przed zwarciami, w postaci bezpiecznika o wartości znamionowej nie większej niż 16A (amperów).

W celu całkowitego wyłączenia urządzenia z sieci zasilania, należy wyjąć wtyczkę kabla zasilającego z gniazdka, które powinno znajdować się w pobliżu urządzenia i być łatwo dostępne.

Znak bezpieczeństwa "B" potwierdza zgodność urządzenia z wymaganiami bezpieczeństwa użytkowania zawartymi w PN-93/T-42107 i PN-89/E-06251.

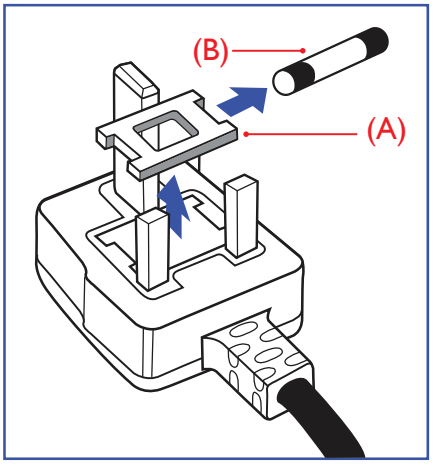
Pozostałe instrukcje bezpieczeństwa

- Nie należy używać wtyczek adapterowych lub usuwać kołka obwodu ochronnego z wtyczki. Jeżeli konieczne jest użycie przedłużacza to należy użyć przedłużacza 3-żyłowego z prawidłowo połączonym przewodem ochronnym.
- System komputerowy należy zabezpieczyć przed nagłymi, chwilowymi wzrostami lub spadkami napięcia, używając eliminatora przepięć, urządzenia dopasowującego lub bezzakłóceniowego źródła zasilania.
- Należy upewnić się, aby nic nie leżało na kablach systemu komputerowego, oraz aby kable nie były umieszczone w miejscu, gdzie można byłoby na nie nadeptywać lub potykać się o nie.
- Nie należy rozlewać napojów ani innych płynów na system komputerowy.
- Nie należy wpychać żadnych przedmiotów do otworów systemu komputerowego, gdyż może to spowodować pożar lub porażenie prądem, poprzez zwarcie elementów wewnętrznych.
- System komputerowy powinien znajdować się z dala od grzejników i źródeł ciepła. Ponadto, nie należy blokować otworów wentylacyjnych. Należy unikać kładzenia luźnych papierów pod komputer oraz umieszczania komputera w ciasnym miejscu bez możliwości cyrkulacji powietrza wokół niego.

Electric, Magnetic and Electromagnetic Fields ("EMF")

1. We manufacture and sell many products targeted at consumers, which, like any electronic apparatus, in general have the ability to emit and receive electromagnetic signals.
2. One of our leading Business Principles is to take all necessary health and safety measures for our products, to comply with all applicable legal requirements and to stay well within the EMF standards applicable at the time of producing the products.
3. We are committed to develop, produce and market products that cause no adverse health effects.
4. We confirm that if its products are handled properly for their intended use, they are safe to use according to scientific evidence available today.
5. We play an active role in the development of international EMF and safety standards, enabling us to anticipate further developments in standardization for early integration in its products.

Information for U.K. only



WARNING - THIS APPLIANCE MUST BE EARTHED.

Important:

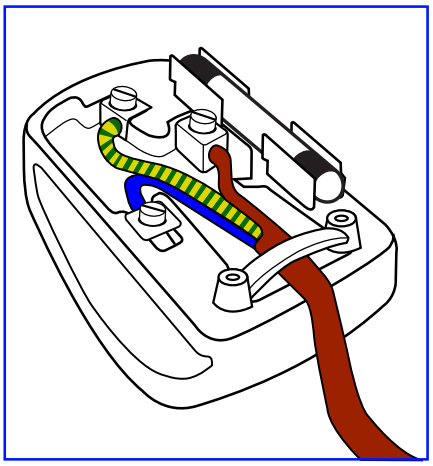
This apparatus is supplied with an approved moulded 13A plug. To change a fuse in this type of plug proceed as follows:+

1. Remove fuse cover and fuse.
2. Fit new fuse which should be a BS 1362 5A, A.S.T.A. or BSI approved type.
3. Refit the fuse cover.

If the fitted plug is not suitable for your socket outlets, it should be cut off and an appropriate 3-pin plug fitted in its place.

If the mains plug contains a fuse, this should have a value of 5A. If a plug without a fuse is used, the fuse at the distribution board should not be greater than 5A.

Note: The severed plug must be destroyed to avoid a possible shock hazard should it be inserted into a 13A socket elsewhere.



How to connect a plug

The wires in the mains lead are coloured in accordance with the following code:

BLUE - “NEUTRAL” (“N”)

BROWN - “LIVE” (“L”)

GREEN & YELLOW - “EARTH” (“E”)

1. The GREEN & YELLOW wire must be connected to the terminal in the plug which is marked with the letter “E” or by the Earth symbol or coloured GREEN or GREEN & YELLOW.
2. The BLUE wire must be connected to the terminal which is marked with the letter “N” or coloured BLACK.
3. The BROWN wire must be connected to the terminal which marked with the letter “L” or coloured RED.

Before replacing the plug cover, make certain that the cord grip is clamped over the sheath of the lead - not simply over the three wires.

North Europe (Nordic Countries) Information

Placering/Ventilation

VARNING:

FÖRSÄKRA DIG OM ATT HUVUDBRYTARE OCH UTTAG ÄR LÄTÅTKOMLIGA, NÄR DU STÄLLER DIN UTRUSTNING PÅPLATS.

Placering/Ventilation

ADVARSEL:

SØRG VED PLACERINGEN FOR, AT NETLEDNINGENS STIK OG STIKKONTAKT ER NEMT TILGÆNGELIGE.

Paikka/Ilmankierto

VAROITUS:

SIJOITA LAITE SITEN, ETTÄ VERKKOJOHTO VOIDAAN TARVITTAESSA HELPOSTI IRROTTAA PISTORASIASTA.

Plassering/Ventilasjon

ADVARSEL:

NÅR DETTE UTSTYRET PLASSERES, MÅ DU PASSE PÅ AT KONTAKTENE FOR STØMTILFØRSEL ER LETTE Å NÅ.

中国 RoHS

根据中国大陆《电器电子产品有害物质限制使用管理办法》，以下部分列出了产品中有害物质的名称及含有信息表。

因型号不同，产品可能不包含以下部分部件，请以产品实际销售配置为准。

产品中有害物质的名称及含有信息表

部件名称	有害物质									
	铅（Pb）	汞（Hg）	镉（Cd）	六价铬（Cr（VI））	多溴联苯（PBBs）	多溴二苯醚（PBDEs）	邻苯二甲酸二（2-乙基）己酯（DEHP）	邻苯二甲酸丁苄酯（BBP）	邻苯二甲酸二正丁酯（DBP）	邻苯二甲酸二异丁酯（DIBP）
外壳	○	○	○	○	○	○	○	○	○	○
液晶显示屏	×	○	○	○	○	○	○	○	○	○
电路板组件 *	×	○	○	○	○	○	○	○	○	○
电源适配器	×	○	○	○	○	○	○	○	○	○
电源线 / 连接线	×	○	○	○	○	○	○	○	○	○
遥控器	X	○	○	○	○	○	○	○	○	○

注 1：

*: 电路板组件包括印刷电路板及其构成的零部件，如电阻、电容、集成电路、连接器等。

O: 表示该有害物质在该部件所有均质材料中的含量均不超出电器电子产品有害物质限制使用国家标准要求。

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电器电子产品有害物质限制使用国家标准要求。

注 2：以上未列出的部件，表明其有害物质含量均不超出电器电子产品有害物质限制使用国家标准要求。

环保使用期限

此标识指期限（十年），电子电气产品中含有的有害物质在正常使用的条件下不会发生外泄或突变，电子电气产品用户使用该电子电气产品不会对环境造成严重污染或对其人身、财产造成严重损害的期限。

《废弃电器电子产品回收处理管理条例》提示性说明

为了更好地关爱及保护地球，当用户不再需要此产品或产品寿命终止时，请遵守国家废弃电器电子产品回收处理相关法律法规，将其交给当地具有国家认可的回收处理资质的厂商进行回收处理，不当利用或者处置可能会对环境和人类健康造成影响。

警告：在居住环境中，运行此设备可能会造成无线电干扰。

警語 : 使用過度恐傷害視力。

注意事項 :

(1) 使用 30 分鐘請休息 10 分鐘。

(2) 未滿 2 歲幼兒不看螢幕，2 歲以上每天看螢幕不要超過 1 小時。

警告使用者 :

此為甲類資訊技術設備 , 於居住環境中使用時 , 可能會造成射頻擾動 , 在此種情況下 , 使用者會被要求採取某些適當的對策。

警告：為避免電磁干擾，本產品不應安裝或使用於住宅環境。

Turkey RoHS:

Türkiye Cumhuriyeti: EEE Yönetmeliğine Uygundur

Ukraine RoHS:

Обладнання відповідає вимогам Технічного регламенту щодо обмеження використання деяких небезпечних речовин в електричному та електронному обладнанні, затвердженого постановою Кабінету Міністрів України від 3 грудня 2008 № 1057

Vietnam RoHS:

This product is compliant with requirements of Circular No. 30/2011/TT-BCT Regulations “STIPULATING TEMPORARILY THE PERMISSIBLE CONTENT LIMITATION OF SOME TOXIC CHEMICALS IN THE ELECTRONIC, ELECTRICAL PRODUCTS”.

End-of-Life Disposal

Your new Public Information Display contains materials that can be recycled and reused. Specialized companies can recycle your product to increase the amount of reusable materials and to minimize the amount to be disposed of.

Please find out about the local regulations on how to dispose of your old display from your local Philips dealer.

(For customers in Canada and U.S.A.)

This product may contain lead and/or mercury. Dispose of in accordance to local-state and federal regulations. For additional information on recycling contact www.eia.org (Consumer Education Initiative)

Waste Electrical and Electronic Equipment-WEEE

Attention users in European Union private households

This marking on the product or on its packaging illustrates that, under European Directive 2012/19/EU governing used electrical and electronic appliances, this product may not be disposed of with normal household waste. You are responsible for disposal of this equipment through a designated waste electrical and electronic equipment collection. To determine the locations for dropping off such waste electrical and electronic, contact your local government office, the waste disposal organization that serves your household or the store at which you purchased the product.

Attention users in United States:

Please dispose of according to all Local, State and Federal Laws. For the disposal or recycling information, contact: www.mygreenelectronics.com or www.eiae.org.

End of Life Directives-Recycling

Your new Public Information Display contains several materials that can be recycled for new users.

Please dispose of according to all Local, State, and Federal laws.

ENERGY STAR is a program run by the U.S. Environmental Protection Agency (EPA) and U.S. Department of Energy (DOE) that promotes energy efficiency.

This product qualifies for ENERGY STAR in the “factory default” settings and this is the setting in which power savings will be achieved.

Changing the factory default picture settings or enabling other features will increase power consumption that could exceed the limits necessary to qualify for ENERGY STAR rating.

For more information on the ENERGY STAR program, refer to energystar.gov.

Restriction on Hazardous Substances statement (India)

This product complies with the “E-Waste (Management) Rules, 2016” CHAPTER V, rule 16, sub-rule (1) . Whereas New Electrical and Electronic Equipment and their components or consumables or parts or spares do not contain Lead, Mercury, Cadmium, Hexavalent Chromium, polybrominated biphenyls and polybrominated diphenyl ethers beyond a maximum concentration value of 0.1% by weight in homogenous materials for lead, mercury, hexavalent chromium, polybrominated biphenyls and polybrominated diphenyl ethers and of 0.01% by weight in homogenous materials for cadmium. except of exemptions set in Schedule 2 of the Rule.

E-Waste Declaration for India

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment . The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about E -waste please visit http://www.india.philips.com/about/sustainability/recycling/index.page and to know where you can drop off your waste equipment for recycling in India please contact on below given contact details.

Helpline number: 1800-425-6396 (Monday to Saturday, 9 a.m. to 5:30 pm)

E-mail: india.callcentre@tpv-tech.com

Batteries

For EU: The crossed-out wheeled bin implies that used batteries should not be put to the general household waste! There is a separate collection system for used batteries, to allow proper treatment and recycling in accordance with legislation.

Please contact your local authority for details on the collection and recycling schemes.

For Switzerland: The used battery is to be returned to the selling point.

For other non-EU countries: Please contact your local authority for correct method of disposal of the used battery. According to EU Battery Regulation (EU) 2023/1542, the battery can’t be disposed improperly. The battery shall be separated to collect by local service.

Após o uso, as pilhas e/ou baterias deverão ser entregues ao estabelecimento comercial ou rede de assistência técnica autorizada.

2. Unpacking and Installation

2.1. Unpacking

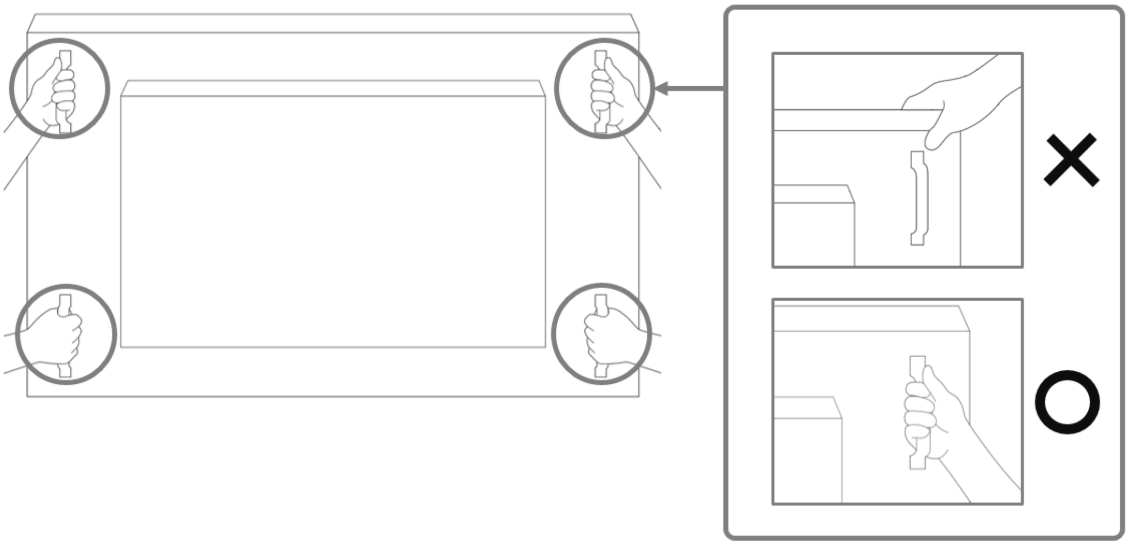
- This product is packed in a carton, together with the standard accessories.
- Any other optional accessories will be packed separately.
- As this product is high and heavy, the operation of moving the device is recommended to be performed by two technicians.
- After opening the carton, ensure that the contents are complete and in good condition.

■ Before Unpacking

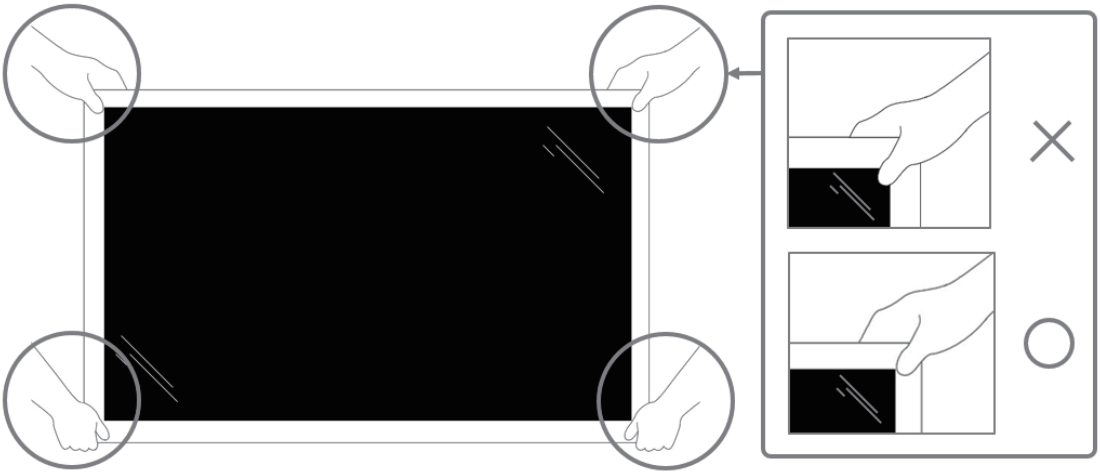
- Please read and fully understand unpacking notice before installation.
- Please check the packaging for any abnormalities, such as creaking, dents, etc.
- Please do necessary inspection before you move the display out of the carton.
- Always have an experienced technician install the display to prevent any damage.

■ Notice

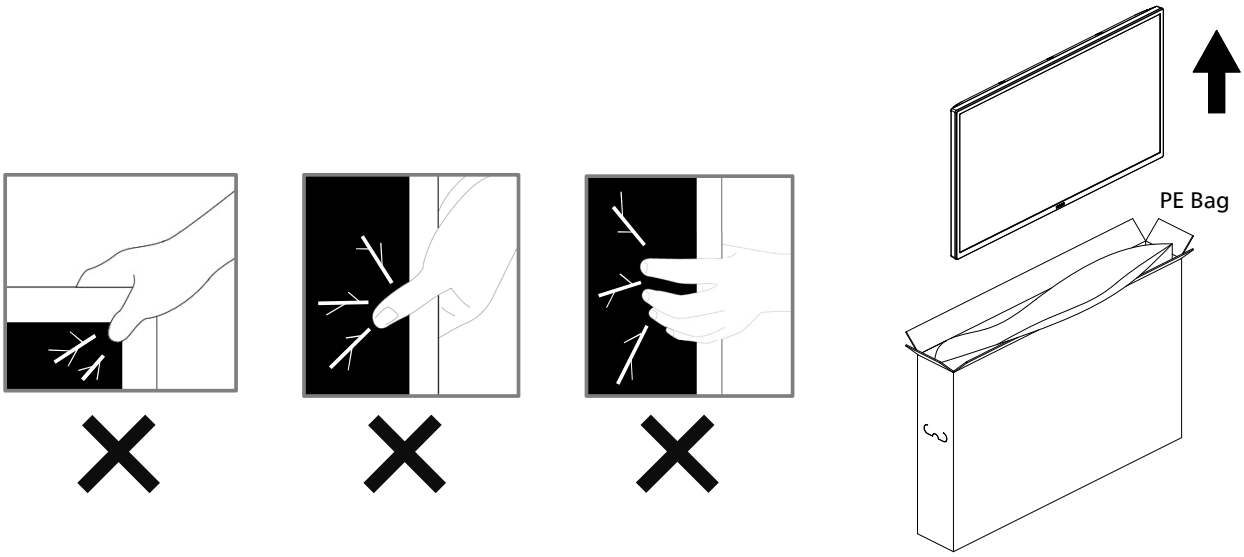
- For display with handles:
  - Take the display out of the carton box by two adults with both hands.
  - Hold onto the handles when moving the display.



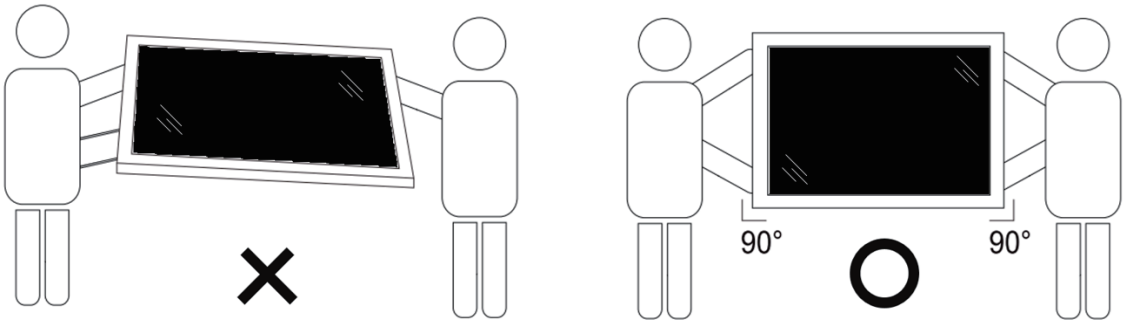
- For display without handle:
  - Take the display out of the carton box by two adults with both hands.
  - Please do not grab or touch the glass of the display.
  - Grasp the bezel surface (plastic or metal) of the display.



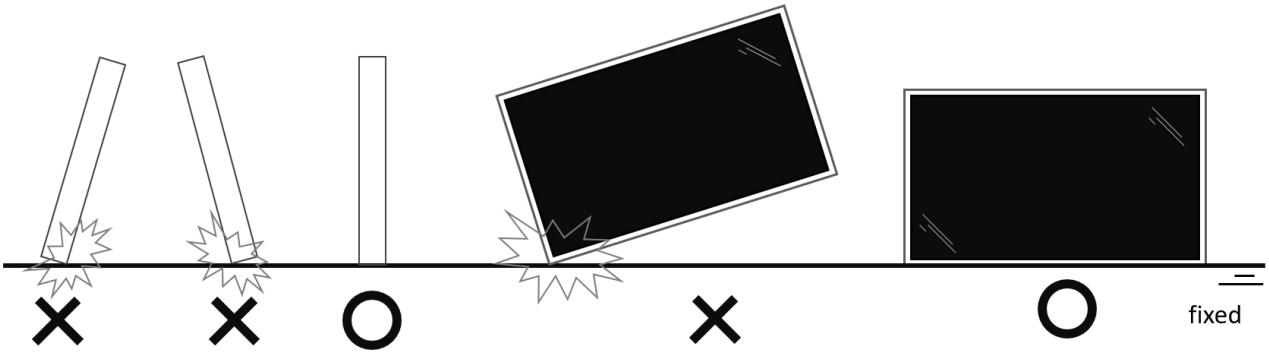
- When removing the display from the box, leave the protective bag inside and take care not to touch the glass of the display to avoid any damage.



- Please keep the display upright when moving it.



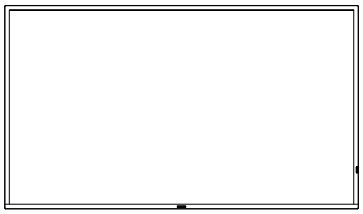
- Place the display vertically and its weight should spread evenly on the surface.



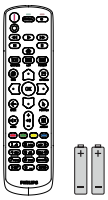
2.2. Package Contents

Please verify that you received the following items with your package content:

- LCD Display
- Remote Control and AAA Batteries
- Quick Start Guide
- Power Cord
- RS232 Cable
- IR Sensor Cable
- AC Switch Cover
- Philips Logo Plate



LCD Display

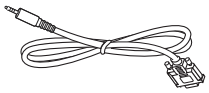


Remote Control and AAA Batteries

Quick Start Guide

* The supplied power cord varies depending on destination.

Power Cord



RS232 Cable

IR Sensor Cable

AC Switch Cover

Philips Logo Plate

* Items may differ in different locations
* Display design and accessories may differ from the images shown.

NOTES:

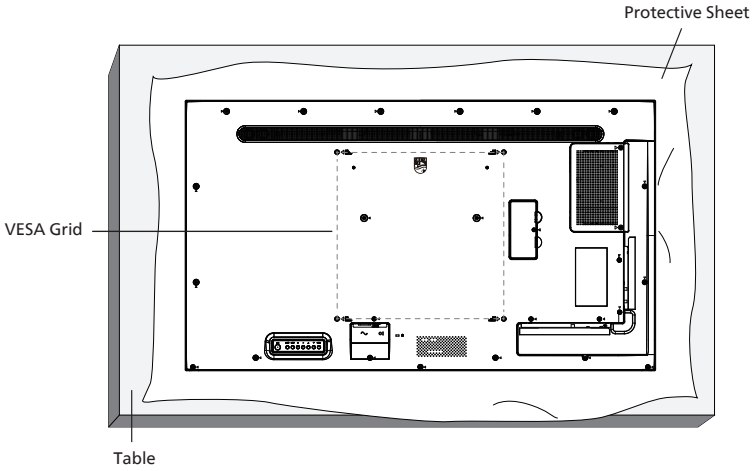
- For all other regions, apply a power cord that conforms to the AC voltage of the power socket and has been approved by and complies with the safety regulations of the particular country (Type H05W-F, 2G or 3G, 0.75 or 1 mm^2 should be used).
- Keep the packaging materials appropriately after unpacking the product.

2.3. Installation Notes

- Only use the power cable provided with this product. If an extension cord is required, please consult your service agent.
- The product should be installed on a flat surface, or the product may tip over. Leave a space between the rear of the product and the wall for proper ventilation. Do not install the product in a kitchen, bathroom or a place exposed to moisture, failure to do so may shorten the life of the internal parts.
- Do not install the product where it is 5000m and higher in altitude. Failure to do so may result in malfunctions.

2.4. Mounting on a Wall

To mount this display on a wall, a standard wall-mounting kit (commercially available) is required. It is recommended that you use a mounting interface that complied with TUV-GS and /or UL1678 standard in North America.



1. Prepare a flat and horizontal surface that is larger than the display and spread a thick protective sheet on it to facilitate your operation without scratching the screen.
2. Ensure you have all accessories for all types of mounting (wall mount, ceiling mount, table stand, etc).
3. Follow the instructions that came with the Wall Mount kit. Failure to follow the correct mounting procedures could result in damage to the equipment, or injury to the user or installer. The product warranty does not cover the damage caused by improper installation.
4. For the wall-mounting kit, use the M6 mounting screws (with a length 10 mm longer than the thickness of the mounting bracket) and tighten them securely.

2.4.1. VESA Grid

43BDL4512D	200(H) x 200(V) mm
50BDL4512D	400(H) x 400(V) mm
55BDL4512D	400(H) x 400(V) mm

Caution:

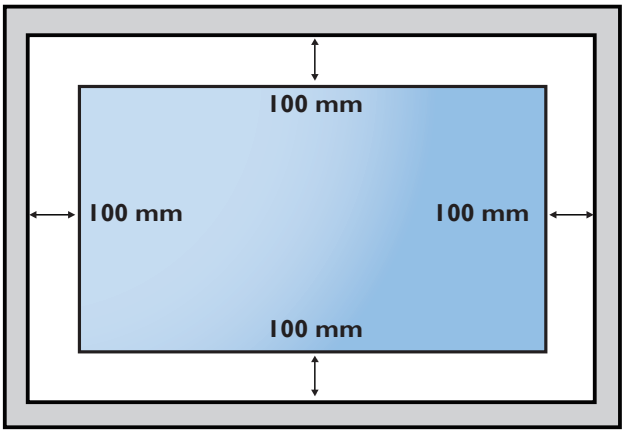
To prevent the display from falling:

- For wall or ceiling mounting, we recommend that you install the display with metal brackets which are commercially available. For detailed instructions about the installation, refer to the guide provided with the bracket.
- To prevent the display from falling in case of earthquake or other natural disaster, please consult the manufacturer of the bracket for the mounting location.
- As this product is high and heavy, the installation of this product is recommended to be performed by four technicians.

Required space for ventilation

Leave a space of 100 mm at the top, rear, right and left of the display for ventilation.

Note: We recommend you contact a professional technician when installing the display on a wall. We are not responsible for any damage to the product if the installation is not performed by a professional technician.

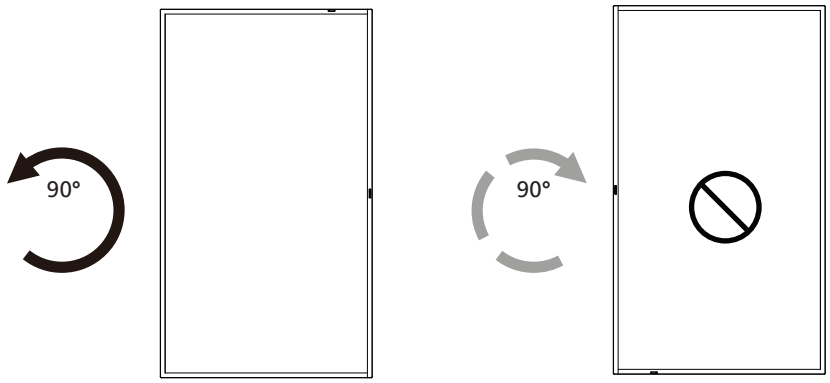


2.5. Mounting in Portrait Orientation

This display can be installed in portrait orientation.

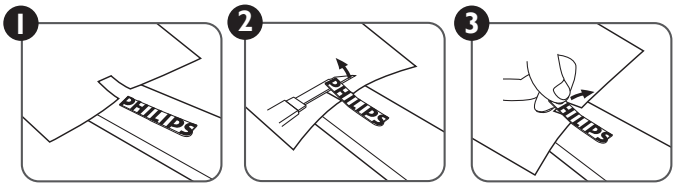
Rotate the display 90 degrees counterclockwise. The "PHILIPS" logo should be on the right side when facing the display.

NOTE: The working hour in portrait mode is 24 hours per day.



2.5.1. How to remove the logo plate

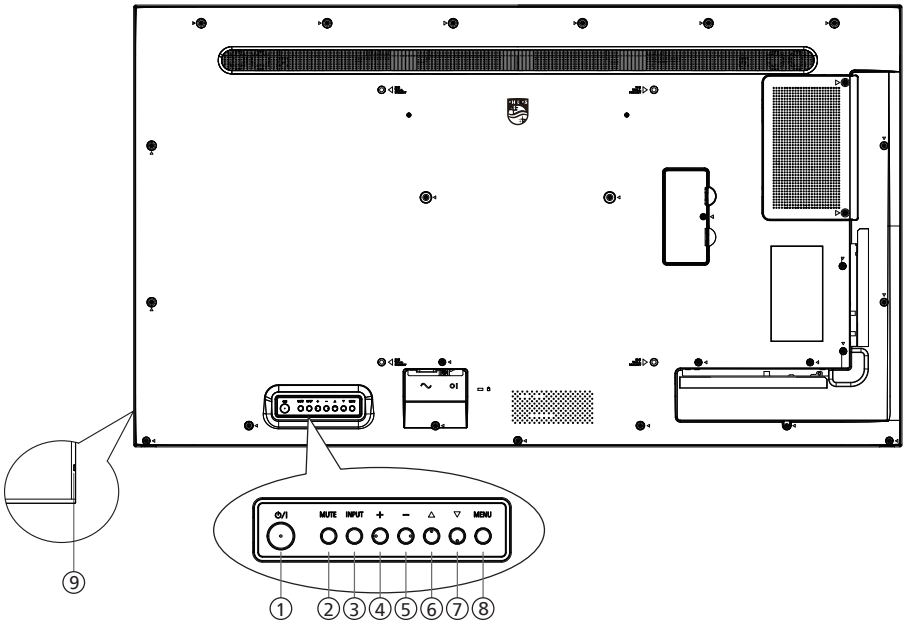
1. Prepare a piece of paper with a cutting area of logo as a protector to prevent the front bezel from scratching.
2. Use a knife and carefully remove the logo sticker with the paper placing beneath.
3. Tear off the logo sticker.



NOTE: We recommend you contact a professional technician when installing the display on a wall. We are not responsible for any damage to the product if the installation is not performed by a professional technician.

3. Parts and Functions

3.1. Control Panel



① **[⏻/I]button**
Press this button to turn the display on or put it in standby mode.

② **[MUTE] button**
Press this button to mute or unmute the sound.

③ **[INPUT] button**
Select an input source.

④ **[+] button**
Increase the adjustment while OSD menu is On, or increase the audio output level while OSD menu is Off.

⑤ **[—] button**
Decrease the adjustment while OSD menu is On, or decrease the audio output level while OSD menu is Off.

⑥ **[▲] button**
Move the selected item one level up while the OSD menu is On.

⑦ **[▼] button**
Move the selected item one level down while the OSD menu is On.

⑧ **[MENU] button**
Return to the previous menu while the OSD menu is On. This button can also be used to activate the OSD menu when the OSD menu is Off.

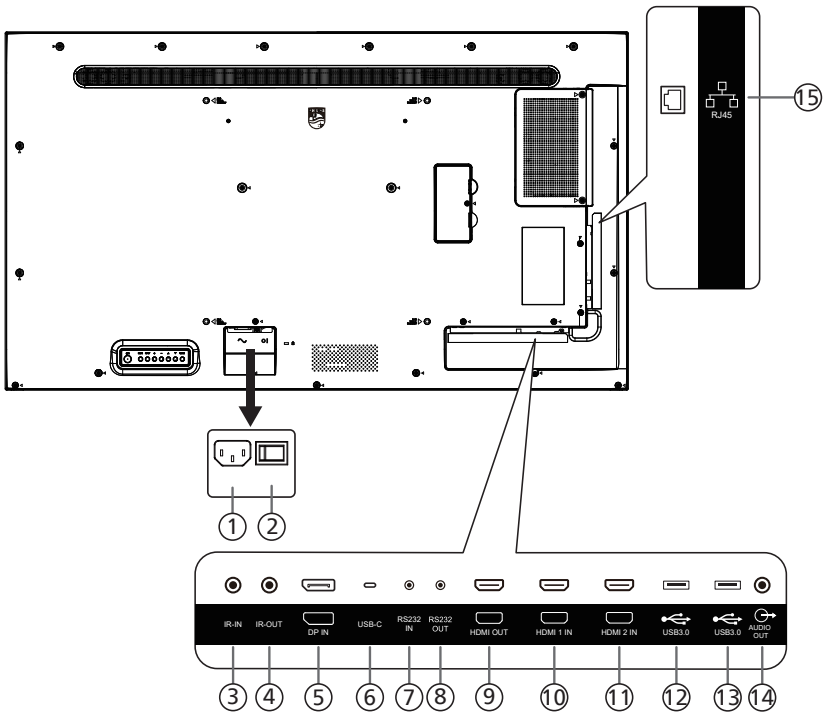
⑨ **Remote control sensor and power status indicator**

- Receive command signals from the remote control.
- Indicate the operating status of the display:

- Light green when the display is turned On
- Light red when the display is in the standby mode
- When {SCHEDULE} is enabled, the light blinks green and red
- If the light blinks red, it indicates that a failure has been detected
- Lights off when the main power of the display is turned off

*** Use an IR sensor cable(optional) for better remote control performance.**

3.2. Input/Output Terminals



① **AC IN**
AC power input from the wall outlet.

② **MAIN POWER SWITCH**
Switch the main power between On and Off.

③ **IR IN** / ④ **IR OUT**
IR signal input/output for the loop-through function.

NOTES:
- The remote control sensor of this display will stop working if the jack [**IR IN**] is connected.
- To remotely control your A/V device via this display, refer to IR Pass Through connection.

⑤ **DisplayPort IN**
DisplayPort video input.

⑥ **USB-C**
Support display.

⑦ **RS232 IN** / ⑧ **RS232 OUT**
RS232 network input / output for the loop-through function.

⑨ **HDMI OUT**
HDMI video/audio input /output.

⑩ **HDMI 1 IN**
Connect to a source device via an HDMI cable.

⑪ **HDMI 2 IN**
Connect to a source device via an HDMI cable.

⑫ **USB 3.0**
Connect to a USB storage device(Only this port support updating scaler SW firmware).

⑬ **USB 3.0**
Connect to a USB storage device.

⑭ **AUDIO OUT**
Audio output for external AV device.

⑮ **RJ-45 IN**
The LAN control function is used for sending the remote control signal from the control center.

3.3. Inserting the Batteries in the Remote Control

The remote control is powered by two 1.5V AAA batteries.

To install or replace the batteries:

1. Press and then slide the cover to open it.
2. Insert the batteries with the correct polarity (+) and (–).
3. Replace the cover.

Caution:

Incorrect use of batteries may cause leakage or explosion. Be sure to follow the instructions below:

- Insert “AAA” batteries with the correct polarity (+ and -).
- Do not mix battery types.
- Do not use a new battery with a used one together. Otherwise, it may cause leakage or shorten the life of the batteries.
- Remove the dead batteries immediately to avoid battery leakage in the battery compartment. Do not touch exposed battery acid, as it may cause injury to your skin.
- Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion; leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas; and a battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.

Note: Remove the batteries from the battery compartment when not using for an extended period of time.

3.4. Handling the Remote Control

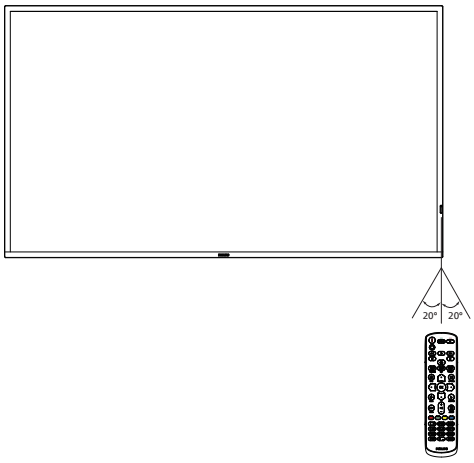
- Do not drop or apply shock to the remote control.
- Do not allow any liquid to get inside the remote control. If water has entered the remote control, wipe the remote control with a dry cloth immediately.
- Do not place the remote control near heat and steam sources.
- Do not attempt to disassemble the remote control, unless you need to place batteries in the remote control.

3.5. Operating range of the Remote Control

Point the top front of the remote control at the remote sensor on the display when you press the buttons.

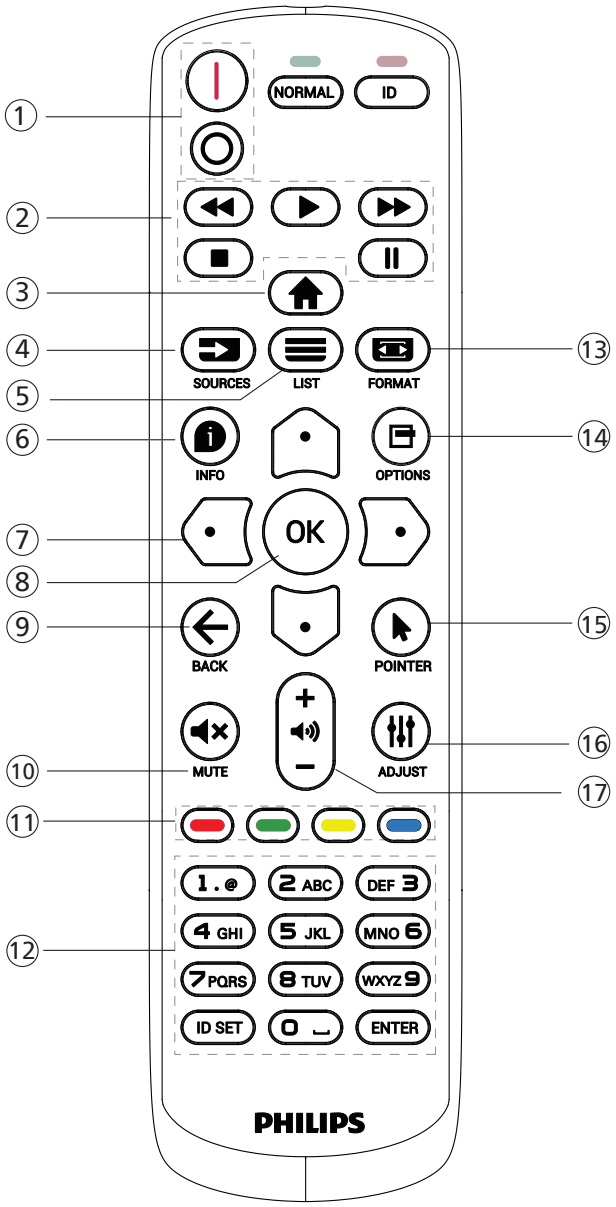
Use the remote control within a distance of less than 4m/16ft from the display’s sensor, and a horizontal and vertical angle of less than 20°.

Note: The remote control may not function properly when the remote control sensor on the display is under direct sunlight or strong illumination, or when there is an object between the remote control and the remote sensor of the display.



3.6. Remote Control

3.6.1. General functions



① [I/○] POWER button

[I]Turn the power On.
[○]Turn the power Off.

② [PLAY] buttons

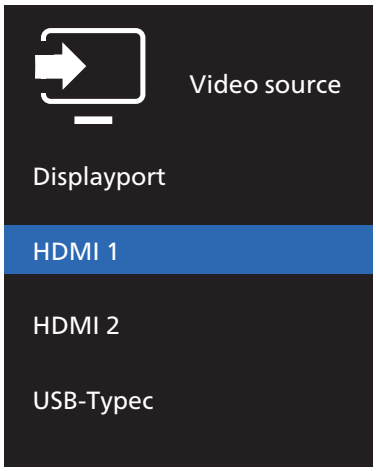
Reserved.

③ [⌂] HOME button

Access the OSD menu.

④ [⇥] SOURCE button

Choose input source. Press [⌂] or [⌄] button to choose from **DP, HDMI 1, HDMI 2, USB-Typec.** Press [OK] button to confirm and exit.



⑤ [≡] LIST button

Reserved.

⑥ [ⓘ] INFO button

Display information about current activity

⑦ [⌂][⌄][◁][▷]NAVIGATION buttons

Navigate through menus and choose items.

⑧ [OK] button

Confirm an entry or selection.

⑨ [←] BACK button

Return to the previous menu page or exit from the previous function.

⑩ [🔇] MUTE button

Press to turn the mute function on/off.

⑪ [▬] [▬] [▬] [▬] COLOR buttons

Choose tasks or options

⑫ [NUMERIC] buttons

Enter text for network setting, and set up ID for ID mode

⑬ [⛶] FORMAT button

Change zoom mode.

⑭ [⊟] OPTIONS button

Reserved.

⑮ [↖] POINTER button

Reserved.

⑯ [⚙] ADJUST button

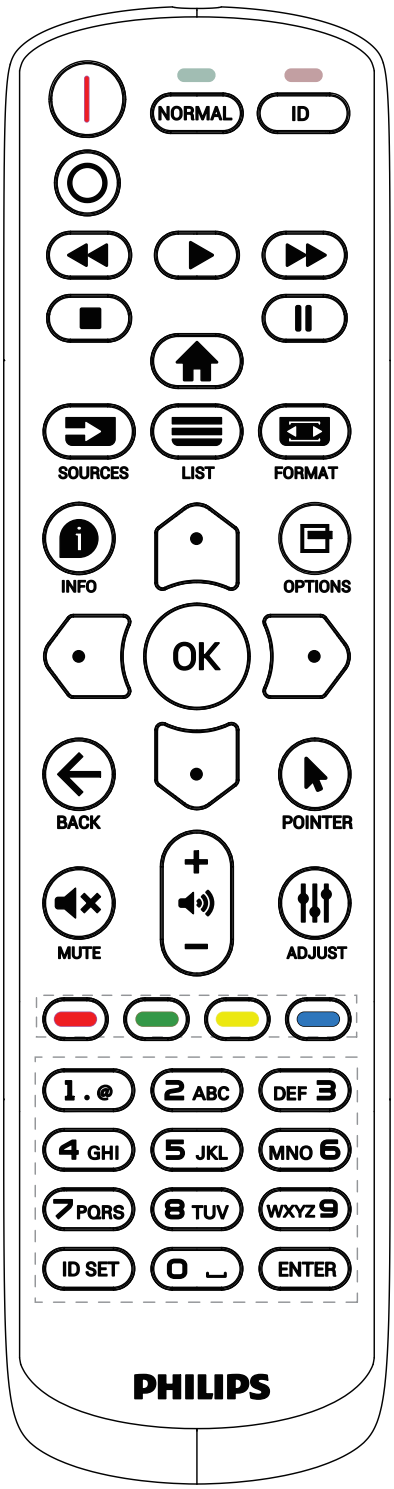
Reserved.

⑰ [—] [+] VOLUME button

Increase or decrease the volume level.

3.6.2. ID Remote Control

Set the remote control ID if you intend to use this remote control on several different displays.



Press [ID] button. The red LED blinks twice.

1. Press [ID SET] button for more than 1 second to enter the ID Mode. The red LED lights up.
   Press the [ID SET] button again to exit from ID mode. The red LED lights off.

Press the digit numbers [0] ~ [9] to select the display you want to control.
For example: press [0] and [1] for display No.1, press [1] and [1] for display No.11.
The numbers available are from [01] ~ [255].

2. Not pressing any button within 10 seconds will exit the ID Mode.
3. If a wrong button is pressed, wait 1 second after the red LED lights off and then lights up again, then press the correct digits again.
4. Press [ENTER] button to confirm. The red LED blinks twice and then lights off.

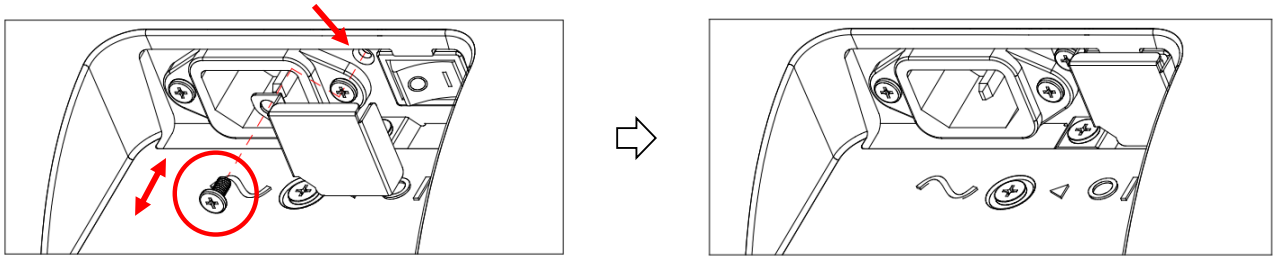
NOTE:

- Press [NORMAL] button. The green LED blinks twice, indicating the display is in normal operation.
- It is necessary to set up the ID number for each display before selecting its ID number.
- Use "❚❚" (pause) key on the remote control to freeze the screen. Use "▶" (play) key on the remote control to unfreeze the screen.
- The "Freeze" feature can only be applied when "Zoom Mode = 1:1" and the input source is a video source such as DP, HDMI or USBtypeC.
- Any operation on the remote control or video mode change will unfreeze the screen.

3.7. AC Switch Cover

Use AC Switch Cover to cover the AC switch.

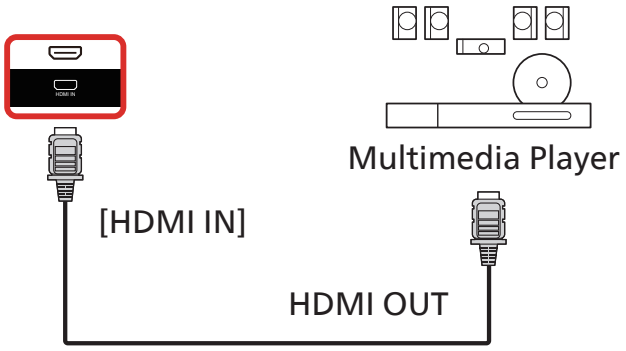
1. Release the screw.
2. Install the AC Switch Cover.
3. Fix the AC Switch Cover with the screw in step1.



4. Connecting External Equipment

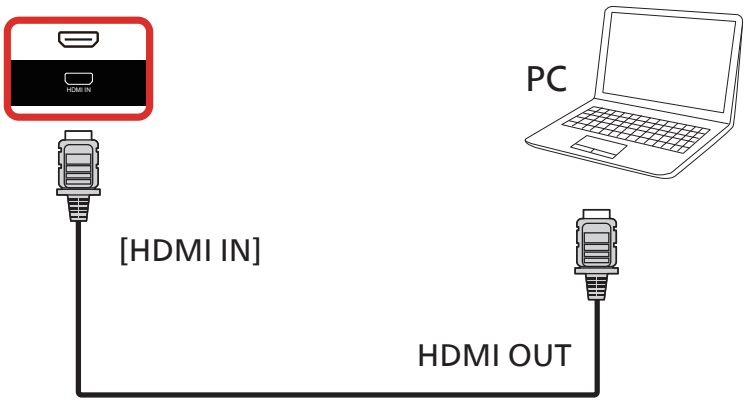
4.1. Connecting External Equipment (Multimedia Player)

4.1.1. Using HDMI video input

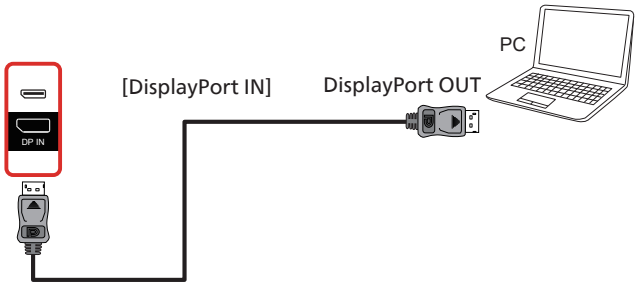


4.2. Connecting a PC

4.2.1. Using HDMI input

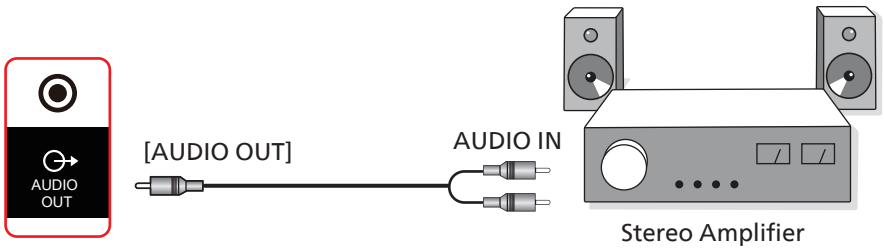


4.2.2. Using DisplayPort input



4.3. Connecting Audio Equipment

4.3.1. Connecting an external audio device

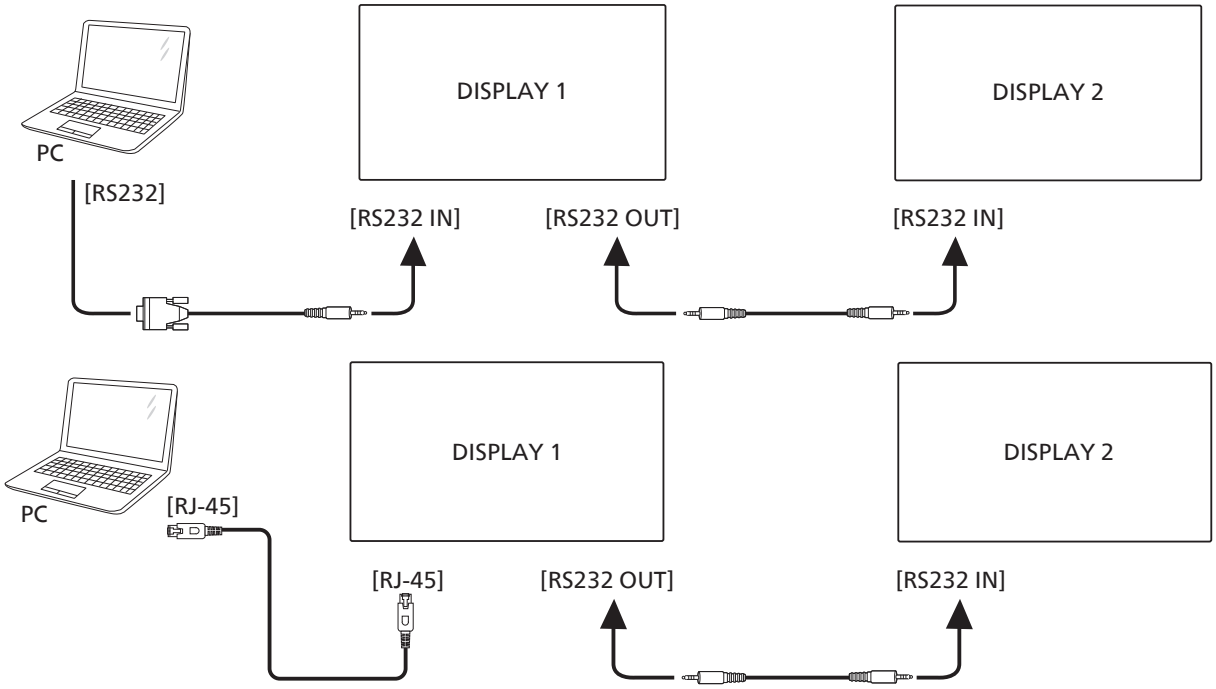


4.4. Connecting Multiple Displays in a Daisy-Chain Configuration

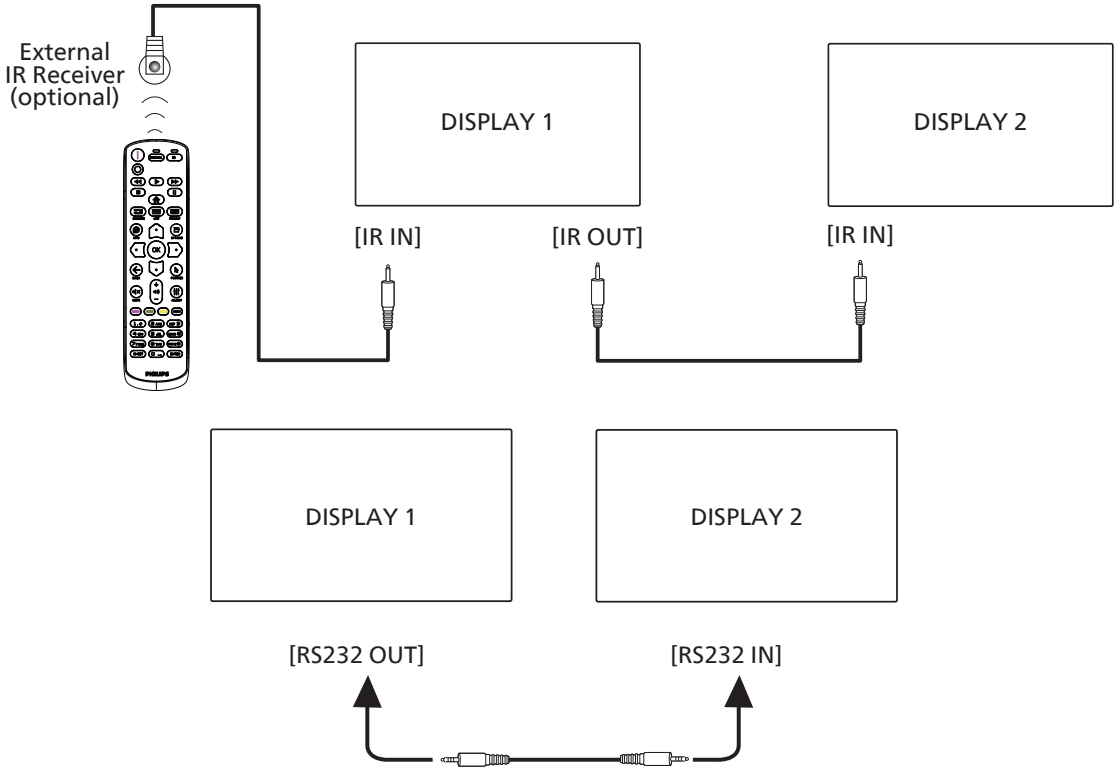
You can interconnect multiple displays to create a daisy-chain configuration for applications such as a menu board.

4.4.1. Display control connection

Connect the [RS232 OUT] connector of DISPLAY 1 to the [RS232 IN] connector of DISPLAY 2.



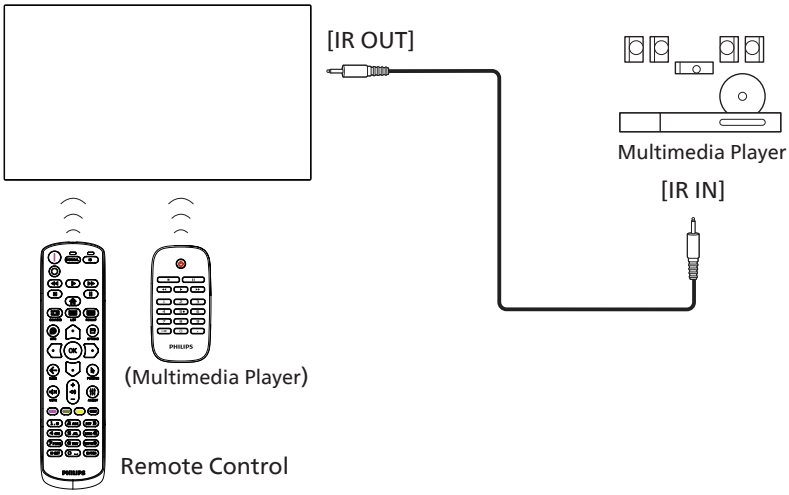
4.5. IR Connection



NOTE:

1. The remote control sensor of this display will stop working if the [IR IN] is connected.
2. IR loop through connection can support up to 9 displays.
3. IR in daisy chain via RS232 connection can support up to 9 displays.

4.6. IR Pass-through Connection



5. Operation

NOTE: The control button described in this section is mainly on the remote control unless specified otherwise.

5.1. Change Picture Format

You can change the picture format to suit the video source. Each video source has its available picture formats.

The available picture formats depend on the video source:

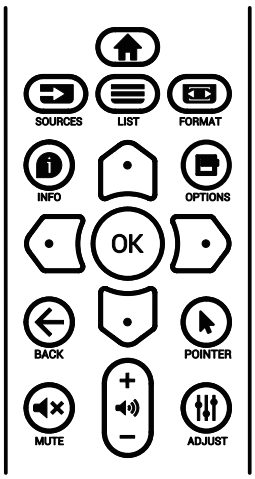
1. Press [ ] FORMAT button to select a picture format.
   - {Full} / {4:3} / {1:1} / {16:9} / {21:9}.

6. OSD Menu

An overview of the On-Screen Display (OSD) structure is shown below. You can use it as a reference for further adjustment of your display.

6.1. Navigating the OSD Menu

6.1.1. Navigating the OSD menu using the remote control



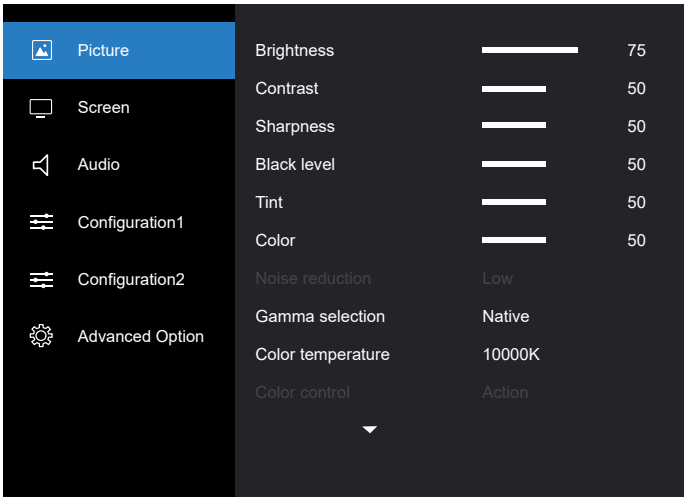
1. Press [🏠] button on the remote control to display the OSD menu.
2. Press [△] or [▽] button to select the item to adjust.
3. Press **[OK]** or [▷] button to enter the submenu.
4. In the submenu, press [△] or [▽] button to toggle between items, press [◁] or [▷] button to adjust the settings. If there is a submenu, press **[OK]** or [▷] button to enter the submenu.
5. Press [←] button to return to the previous menu, or press [🏠]button to exit from the OSD menu.

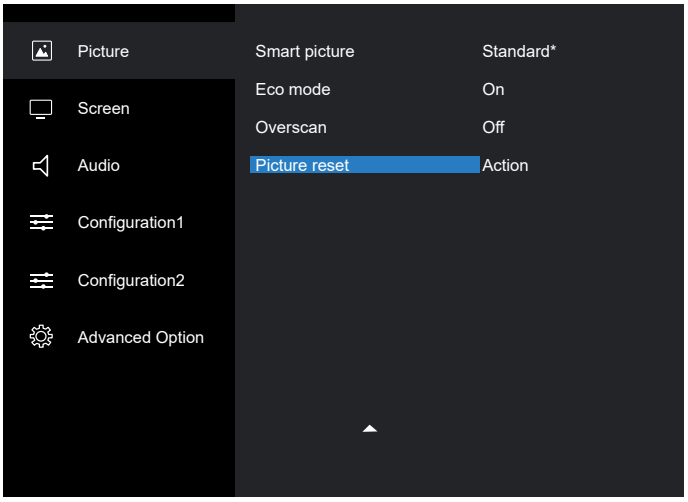
6.1.2. Navigating the OSD menu using the display's control buttons

1. Press **[MENU]** button to display the OSD menu.
2. Press [+] or [—] button to select the item to adjust.
3. Press [+] button to enter the submenu.
4. In the submenu, press [▲] or [▼] button to toggle between items, press [+] or [—] button to adjust settings. If there is a submenu, press [+] button to enter the submenu.
5. Press [MENU] button to return to the previous menu, or keep pressing [MENU] button to exit from the OSD menu.

6.2. OSD Menu Overview

6.2.1. Picture menu





Brightness

Adjust the brightness of this display's backlight.

Contrast

Adjust the contrast ratio for the input signal.

Note: VIDEO source only.

Sharpness

Reserved.

Black level

Adjust the image brightness for the background.

Note: VIDEO source only. sRGB picture mode is standard and cannot be changed.

Tint (Hue)

Adjust the tint of the screen.

Press + button the flesh tone color becomes greenish.

Press - button the flesh tone color becomes purplish.

Note: VIDEO source only.

Color (Saturation)

Adjust the color of the screen.

Press + button to increase color depth.

Press - button to decrease color depth.

Note: VIDEO source only

Noise reduction

Reduce picture noise. You can select a suitable noise reduction level.

The options are: {Off} / {Low} / {Medium} / {High}.

Gamma selection

Select a display gamma. It refers to the brightness performance curve of signal input. Choose from {Native} / {2.2} / {2.4} / {s gamma} / {D-image}.

Note: VIDEO source only. sRGB picture mode is standard and cannot be changed.

Color temperature

Adjust the color temperature.

The image becomes reddish as the color temperature decreases, and becomes bluish as the color temperature increases.

Note: VIDEO source only.

Color control

The color levels of red, green, and blue can be adjusted by the color bars.

R: Red gain, G: Green gain, B: Blue gain.

Smart picture

The following smart picture modes are available for: {Standard} / {Highbright} / {Warm}.

Eco mode

Dynamic Contrast Ratio

- {ON}: Enable DCR
- {OFF}: Disable DCR

Overscan

If you encounter problems with overscanning, you can change display area of the image.

- {ON}: Display 95% of the total image area.
- {OFF}: Display 100% of the total image area.

Note: VIDEO source only.

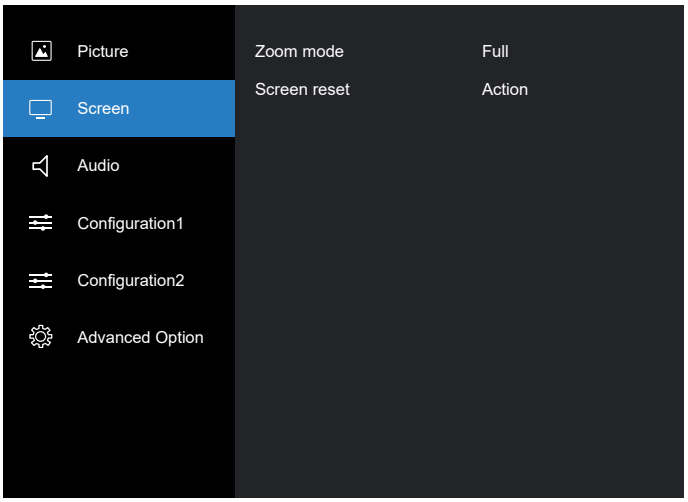
Picture reset

Reset all settings in the Picture menu.

Select “RESET” to restore factory preset data.

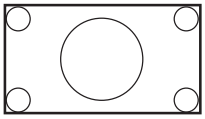
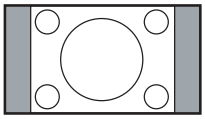
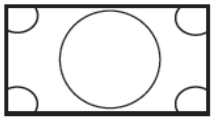
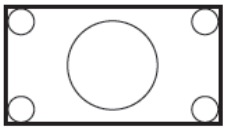
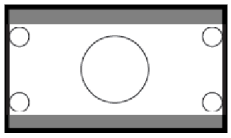
Press “CANCEL” button to cancel and then return to the previous menu.

6.2.2. Screen menu



Zoom mode

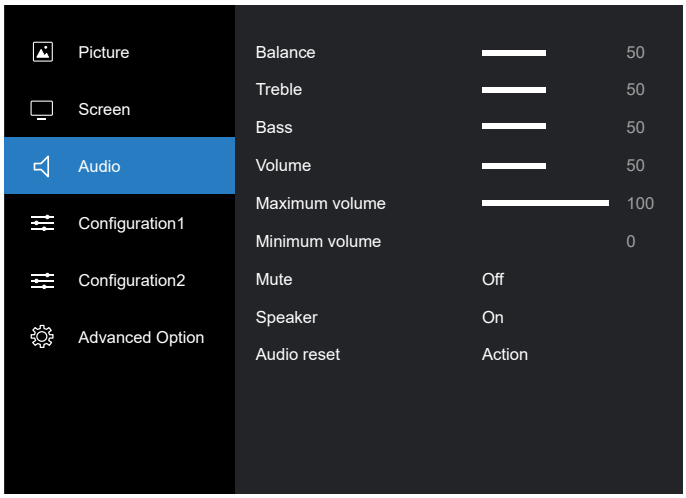
Choose one for video input: {Full} / {4:3} / {1:1} / {16:9}/ {21:9}.

	**Full** This mode restores the correct proportions of pictures transmitted in 16:9 using the full screen display.
	**4:3** The picture is reproduced in 4:3 format and a black band is displayed on either side of the picture.
	**1:1** This mode displays the image pixel-by-pixel on screen without scaling the original image size.
	**16:9** The picture is reproduced in 16:9 format and a black band at the top and bottom.
	**21:9** The picture is reproduced in 21:9 format and a black band at the top and bottom.

Screen reset

Reset all settings in the **Screen** menu to factory preset values.

6.2.3. Audio menu



Balance

Adjust to emphasize left or right audio output balance.

Note: Only can adjust balance for speaker output.

Treble

Adjust to increase or decrease higher-pitched sounds.

Bass

Adjust to increase or decrease lower-pitched sounds.

Volume

Adjust the volume.

Maximum volume

Adjust limitation for the maximum volume setting.

Minimum Volume

Adjust limitation for the minimum volume setting.

Mute

Turn the mute function on/off.

Speaker

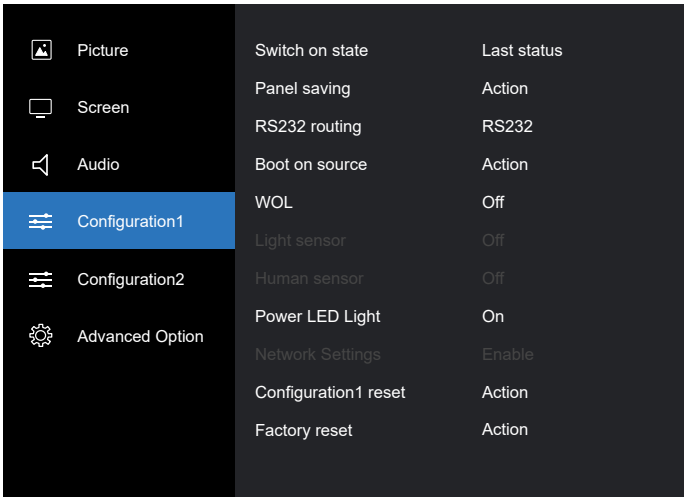
Turn the internal speaker on/off.

NOTE: This function is only available when {Sync. Volume} is on.

Audio reset

Reset all settings in the Audio menu to factory preset values.

6.2.4. Configuration1 menu



Switch on State

Select the display status when you connect the power cord next time.

- {Power off} - The display will remain off when the power cord is connected to a wall outlet.
- {Forced on} - The display will turn on when the power cord is connected to a wall outlet.
- {Last status} - The display will return to the previous power status (on/off/standby) when removing and replacing the power cord.

Panel saving

Choose to enable the panel saving functions and thus reduce the risk of “image persistence” or “ghost-imaging”.

- {Brightness} - Select {On} and the image brightness will be reduced to an appropriate level. The Brightness setting in the Picture menu will be unavailable when selected.
- {Pixel shift} - Select the time interval ({Auto} / {10 ~ 900} Seconds / {Off}) for the display to slightly expand the image size and shift the position of pixels in four directions (up, down, left, or right).

RS232 routing

Select the network control port.

Choose from: {RS232} / {LAN ->RS232}.

Boot on source

Select the source when booting up.

• Input: select input source when boot up.

WOL

Choose to turn on or off the wake on LAN function.

Choose from : {Off} / { On}

Light sensor (require Philips accessory CRD41 External Sensor Box)

Choose to turn on or off backlight adjustment according to environment brightness.

Choose from : {Off} / { On}

Human sensor (require Philips accessory CRD41 External Sensor Box)

This function will turn the backlight On when it senses the presence of human and turn it off after a specified period of time.

The options are:

- {Off} (Default), {10 Min.}, {20 Min.}, {30 Min.}, {40 Min.}, {50 Min.}, {60 Min.}

Power LED Light

Select {Off} to turn off the indicator.

Network settings

- DHCP Enable -> Cannot modify IP address/Subnet mask/ Default gateway
- DHCP Disable-> Can manually input IP address/Subnet mask/Default gateway.

Configuration1 reset

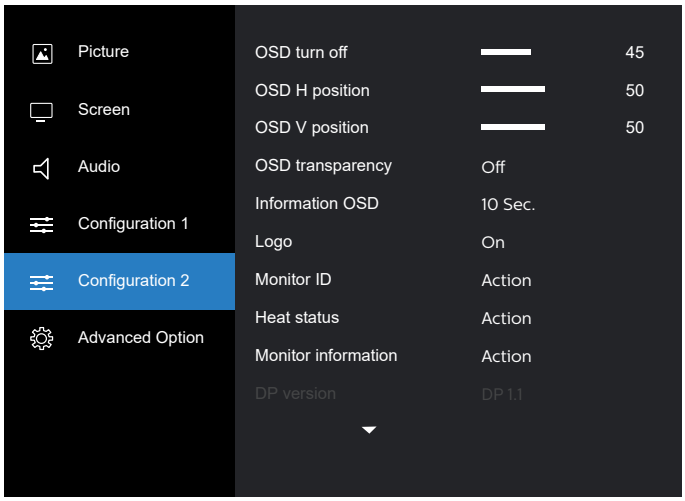
Reset all settings in Configuration1 menu to the factory preset values.

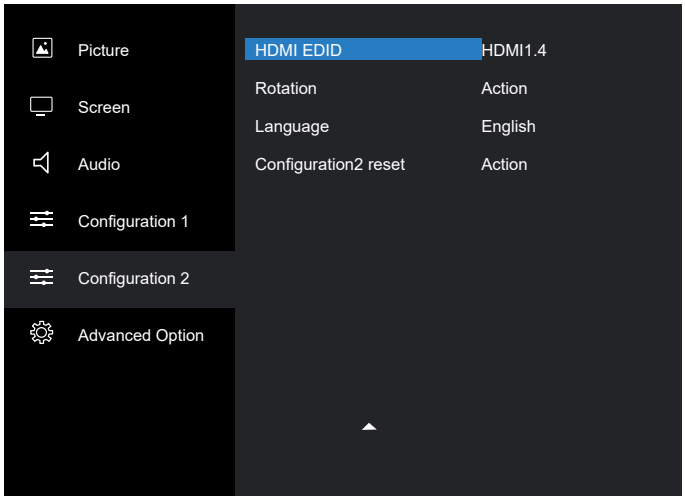
Factory reset

Reset all settings in the OSD menus of {Picture}, {Screen}, {Audio}, {PIP}, {Configuration1}, {Configuration2}, and {Advanced option} to the factory preset values.

Press [◁] or [▷] button to select {Reset}, and press [OK] button to do the reset.

6.2.5. Configuration2 menu





OSD turn off

Set the period of time the OSD (on-screen display) menu stays on the screen.

The options are: {5 ~ 120} seconds.

OSD H-position

Adjust the horizontal position of OSD menu.

OSD V-position

Adjust the vertical position of OSD menu.

OSD Transparency

Adjust OSD transparency.

- {Off} - Transparency off.
- 20/40/60/80/100.

Information OSD

Set the period of time the information OSD display on the screen. The options are {Off, 1-60} seconds.

Logo

Choose to enable or disable the picture of Logo when turning on your display.

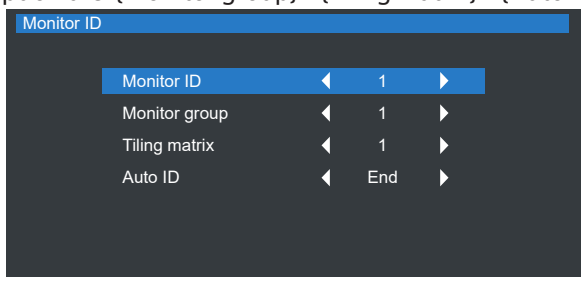
The options are:

- {Off}
- {On}

Monitor ID

Set ID number for controlling the display via the RS232C connection. Each display must have a unique ID number when multiple sets of display are connected. Monitor ID number range is between 1 to 255.

The option are: {Monitor group} / {Tiling matrix} / {Auto ID}

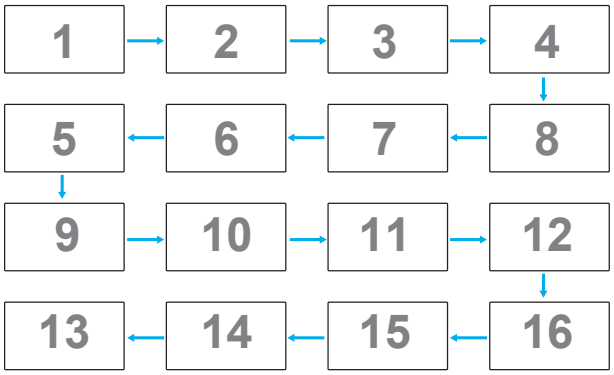


- {Monitor group}

  The options are: {1-255}. The default setting is 1.
- {Tiling matrix}

  Tiling matrix number range is between 1 to 15. 1 is the default setting. The {Auto ID} setup function enables setting up {Monitor ID} of connected machine according to {Tiling matrix} settings.

  Example: Tiling matrix sets to 4



- {Auto ID}

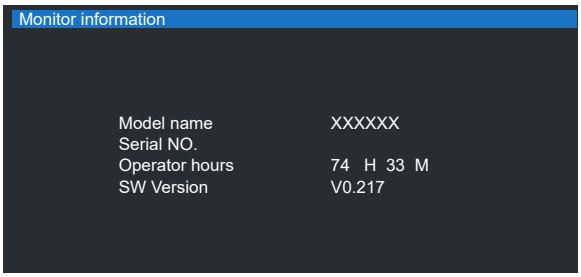
  The option are: {Start} / {End}. The default setting is {End}.
  - Switch to Start to set up the IDs of machines backward from current one.
  - Once the setup is completed, the option exits from End automatically.
  - To use this function, serially connect all machines with RS-232 cable and set their Control ports to RS-232 too.

Heat status

This function allows you to check the thermal status of display at any time.

Monitor information

Show information about your display, including model number, serial number, operating hours and software version.



DP Version

The options are: {DP 1.1} / {DP 1.2}. The default setting is {DP 1.1}.

HDMI EDID

The option are: {HDMI 1.2} / {HDMI 1.4} / {HDMI 2.0}. The default setting is {HDMI 1.4}.

NOTE: HDMI 2.0 option is to support HDMI 2.0 equipment.

Rotation

Set the rotation of Main/Sub/OSD

- OSD Rotation : Landscape/Portrait,Default : Landscape

  OSD Rotation: {Off}, {On} when value is on, OSD rotate 90 °, Off is restored.

Language

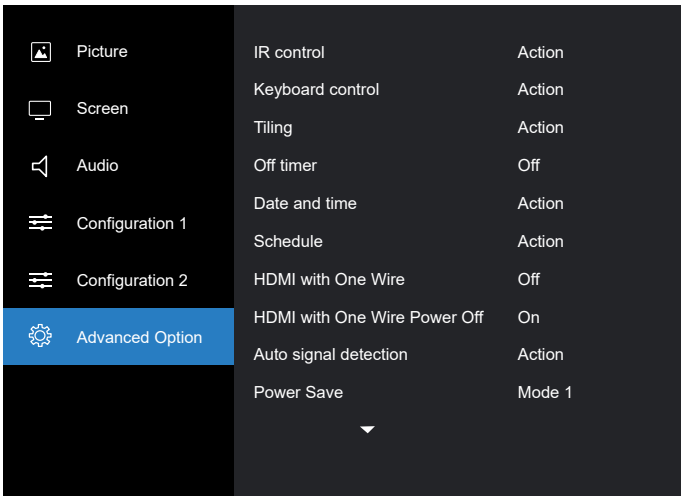
Select the language used in the OSD menu.

The options are: English/Deutsch/ 简体中文 /Français/Italiano/ Español/Русский/Polski/Türkçe/ 繁體中文 / 日本語 /Português/ العربية /Danish/Svenska/Suomi/Norsk/Nederlands

Configuration2 reset

Reset all settings in Configuration2 menu to the factory preset values.

6.2.6. Advanced Option menu



IR control

Select the operation mode of the remote control when multiple displays are connected via RS232 connection.

- {Normal} - All displays can be operated normally by the remote control unit.

- {Lock All} / {Lock all but Volume} / {Lock all but Power} / {Lock all except PWR &VOL} - Lock the remote control function of this display. To unlock, press and hold the INFO button on the remote control for 6 (six) seconds.
- {Primary} - Designate this display as the primary display for remote control operation. Only this display can be operated by the remote control. (In primary mode, IR key will always be processed regardless of the monitor ID/group settings).
- {Secondary} - Designate this display as the secondary display. This display cannot be operated by the remote control, and will only receive the control signal from the primary display via RS232 connection.

Keyboard control

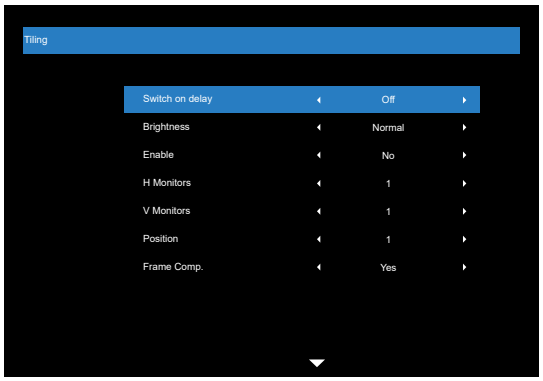
Choose to enable or disable the display keyboard (control buttons) function.

- {Unlock} - Enable the keyboard function.
- {Lock All} / {Lock all but Volume} / {Lock all but Power} / {Lock all except PWR & VOL} - Disable the keyboard function.

Note: "Keyboard Control Lock Mode" This function completely disables the access to all Keyboard Control functions. To enable or disable the keyboard control lock, press both [VOL+] and [UP] buttons and hold down continuously more than 3 seconds.

Tiling

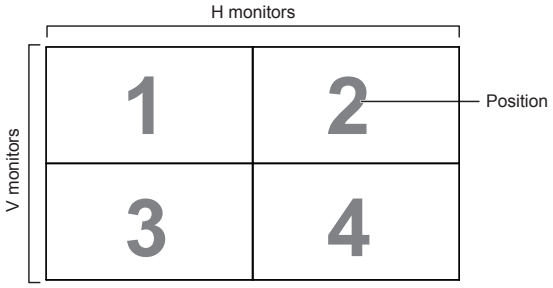
With this function, you can create a single large-screen matrix (video wall) that consists of up to 225 sets of this display (up to 15-sets on the vertical and 15-sets on the horizontal sides). This function requires a daisy-chain connection.



- Switch on delay
  Set the power-on delaying time (in seconds). The default option {Auto} allows a sequential powering-on for each display by their ID number when multiple displays are connected.
  The options are:{Off(0) / Auto(1) /2-255}
- Brightness: {Normal}/{ACS}
  {Normal}: Adjust the overall image and background screen brightness (backlight).
  {ACS}: Automatic Calibration System. The default value before adjustment is the same as OSD brightness value, e.g., 70.
- Enable
  Enable or disable the Tiling function. If {**On**} is selected, the display will apply the settings in {**H monitors**}, {**V monitors**}, {**Position**}, and {**Frame comp.**}.
- H monitors
  Set the number of displays in horizontal side.
- V monitors
  Set the number of displays in vertical side.
- Position
  Set the position of this display in the screen matrix.

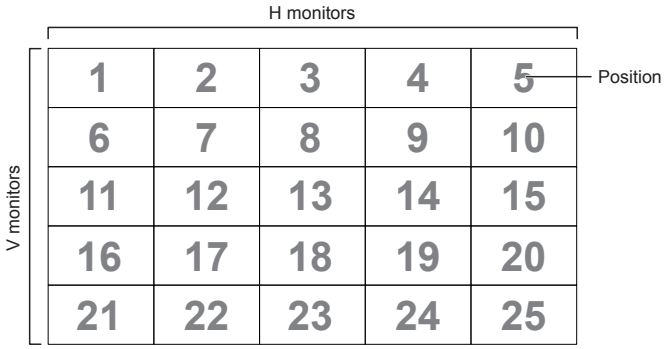
Example: 2 x 2 screen matrix (4 displays)

H monitors = 2 displays
V monitors = 2 displays



Example: 5 x 5 screen matrix (25 displays)

H monitors = 5 displays
V monitors = 5 displays



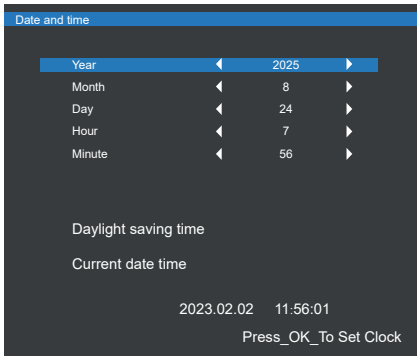
- Frame comp.
  Turn the frame compensation function On or Off. If you select {**On**}, the display will adjust the image to compensate for the width of the display bezels in order to accurately display the image.
- Frame comp. Top
  Adjust the top frame compensation.
- Frame comp. Bottom
  Adjust the bottom frame compensation.
- Frame comp. Left
  Adjust the left frame compensation.
- Frame comp. Right
  Adjust the right frame compensation.

Off timer

Set automatic power off time (in hours).

Date and time

Adjust the current date and time for the display's internal clock.



NOTES:

The definition and behavior of the Daylight saving time:

The current implementation of daylight saving is a reminder tool for the user who doesn't know how to adjust the clock of daylight saving.

It does not adjust the real time clock automatically. The problem is that there are no standard rules on when to adjust the clock defined by region or country. To solve this problem, the user must be able to set the daylight saving start/end date. When daylight saving correction is on (user selectable) then the real time clock should be adjusted at the time set of the daylight saving on/off date. At the start date of daylight saving, the clock should be adjusted 1 hour forward at 2 o'clock. At the end date of daylight saving, the clock should be adjusted 1 hour backward at 2 o'clock.

The existing daylight on/off menu should be replaced by the following menu structure:

The menu item {**Daylight saving**} opens the submenu that contains the following items:

- Menu item {**Daylight saving start date**} Selection item {**1st, 2nd, 3rd, 4th, last**} Sunday of selection item {**1-12 month**}
- Menu item {**Daylight saving stop date**} Selection item {**1st, 2nd, 3rd, 4th, last**} Sunday of selection item {**1-12 month**}
- Menu item {**Correction time**} Selection item {**0.5, 1.0, 1.5, 2.0**} hour
- Menu item {**Daylight saving**} Selection item {**on, off**}

When "daylight saving" is "on", the real time clock will be adjusted automatically at the daylight saving time (e.g. April 5, 2015, 02.00 o'clock: time will be set 1 hour later or October 25, 2015, 02.00 o'clock: time will be set 1 hour earlier).

Schedule

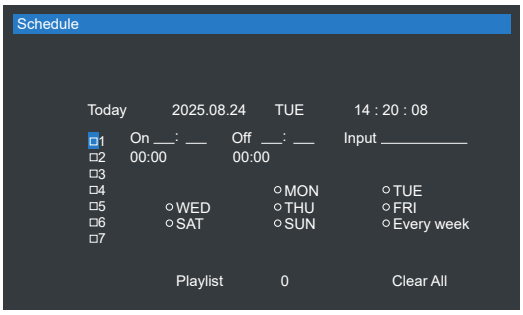
This function allows you to program up to 7 (seven) different scheduled time intervals for the display to activate.

You can select:

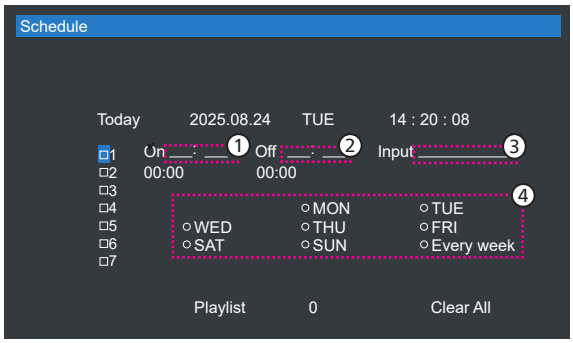
- The time for the display to turn on and turn off.
- The days in a week for the display to activate.
- Which input source the display will use for each scheduled activation period.

NOTE: It is recommended that you set up the current date and time in the {Date and time} menu before using this function.

1. Press [OK] or [▷] button to enter the submenu.



2. Press [△] or [▽] button to select a schedule item (item number 1 ~ 7), and press [OK] button to mark the item number.



3. Press [◁] or [▷] button to select the schedule:
   ① Power-on schedule: Press [△] or [▽] button to adjust and the display will turn on at the specified time.
   ② Power-off schedule: Press [△] or [▽] button to adjust and the display will turn off at the specified time.

   Leave the hour and minute options empty if you do not want to use the function of power-on or power-off schedule.

   ③ Input-source selection: Press [△] or [▽] button to select an input source. If no input source is selected, the input source will remain the same as the previous one.
   ④ Date schedule: Press [▷] button to select which day in a week this schedule item will take effect, then press the [OK] button.
4. For additional schedule settings, press [←], then repeat the steps above. A check mark in the box next to the number of the schedule item indicates that the selected schedule is in effect.

NOTES:

- If the schedules overlap, the scheduled power-on time takes priority over scheduled power-off time.
- If there are two schedule items programmed for the same time, the highest numbered schedule takes priority. For example, if schedule items #1 and #2 both set the display to power on at 7:00 AM and off at 5:00 PM, then only schedule item # 2 will take effect.

HDMI with One Wire

Enable or disable HDMI CEC.

HDMI with One Wire Power off

Only available if "HDMI with One Wire" is On

- {Off} - System Standby disable.
- {On} - System Standby enables.(Default)

Support

- System Standby enables PD to switch to standby mode with CEC standby Command 0x36.

Auto signal detection

OPTION:

{Off}, {All}, {Failover}

{Off}: Disable Auto signal detection

{All}: Displayport->HDMI1 -> HDMI2 -> USB TYPE-C

{Failover}:

Failover 1: HDMI1 (default)
Failover 2: HDMI1 (default)
Failover 3: HDMI1 (default)
Failover 4: HDMI1 (default)

Power Save

Power save modes

Mode 1: [TCP off, WOL on, auto off](default)

DC off -> Power off, LED: Red.
Power Save -> Power off, LED: Red

Mode 2: [TCP off, WOL on, auto on/off]

DC off -> Power off, LED: Red.
Power Save -> Power Saving.
LED: Orange. Can be woken up.

Mode 3: [TCP on, WOL off, auto on/off]

DC off -> Back light off, LED: Red
Power Save -> Back light off, LED: Orange. Can be woken up.

Mode 4: [TCP on, WOL off, no auto on/off]

DC off -> Back light off, LED: Red
Power Save -> Will not enter power save mode. It shows “no signal” only.

Mode 3 DC OFF: Backlight Off only Power Save: Backlight Off only	Mode 1(default) DC OFF: Power Off Power Save: Power Off
Mode 4 DC OFF: Backlight Off only Power Save: No signal(Backlight On)	Mode 2 DC OFF: Power Off Power Save: Power Saving

DC off/on: Press power button by RC

Scalar FW Update

Update scalar FW by USB.

Note: Only USB 2.0 flash disk is supported.

USB Cloning

Copy PD settings from one set to another.

Import: Import settings from another set.

Export: Export settings to another set.

Advanced option reset

Reset all settings except {Date and Time} in the advanced option menu to factory preset values.

7. Input Mode

Item	Mode	Resolution	H.Freq. (KHz)	V.Freq. (Hz)
1	MACINTOSH	640x480	35	66.67
2	VESA	640x480	37.861	72.809
3	VESA	640x480	37.5	75
4	VESA	800x600	35.156	56.25
5	VESA	800x600	37.879	60.317
6	VESA	800x600	48.077	72.188
7	VESA	800x600	46.875	75.000
8	MACINTOSH	832x624	49.726	74.551
9	VESA Standard AddDMT	848x480	31	60.000
10	-	960x720	56.4	75.000
11	VESA	1024x768	48.363	60.004
12	VESA	1024x768	56.476	70.069
13		1152x864	53.986	59.985
14	VESA	1152x864	53.783	59.959
15		1152x864	63.851	70.012
16	VESA	1152x864	67.5	75.000
17	SUN WS	1152x900	61.846	66.004
18	-	1280x720	44.772	60.000
19	-	1280x720	52.5	70.000
20	CVT 2.3MA	1280 x768	47.776	59.870
21	CVT 2.3MA	1280 x768	60.289	74.893
22	CVT	1280x800	49.7	59.810
23	CVT	1280x800	62.8	74.930
24	VESA	1280x960	60	60.000
25	VESA	1280x1024	63.981	60.020
26	SUN WS	1280x1024	71.691	67.189
27	VESA	1280x1024	79.976	75.025
28	VESA Standard AddDMT	1360x768	47.712	60.015
29	VESA Standard AddDMT	1366x768	47.712	59.790
30	VESA-reduced blanking mode	1440x900	55.469	59.901
31	VESA	1440x900	55.935	59.887
32	VESA	1440x900	70.635	74.984
33	CVT-reduced blanking	1400x1050	64.744	59.948
34	CVT AddDMT	1440x1050	65.3	60.000
35	CVT	1400x1050	82.278	74.867
36	CVT Red. Blanking	1600x900	55.54	60.000
37	VESA	1600x1200	75	60
38	CVT1.76MW	1680x1050	65.29	59.954
39	CVT1.76MW-R	1680x1050	64.674	59.883
40	CVT 2.3MA-R	1920x1080	66.587	59.934
41	VESA Standard VDMTREV	1920x1080	67.5	60.000
42	CVT1960H	1920x1080	67.1584	59.963
43	VSC1960H	1920x1080	67.08	60
44	CVT 2.3MA-R	1920x1200	74.038	59.950

4K2K

Item	Resolution	H.Freq. (KHz)	V.Freq. (Hz)
1	3840x2160	53.946	23.900
2	3840x2160	54	24.000
3	3840x2160	56.25	25.000
4	3840x2160	67.432	29.900
5	3840x2160	67.5	30.000
6	4096x2160	54	24.000
7	3840x2160	135	60.000

Video Timing support(HDMI)

Item	Mode	Resolution	Comment
1	60Hz	480i	
2		480p	
3		720p	
4		1080i	
5		1080p	
6		4Kx2K	
7	50Hz	576i	
8		576p	
9		720p	
10		1080i	
11		1080p	
12		4Kx2K	

Note: DisplayPort support 3840x2160@30Hz.

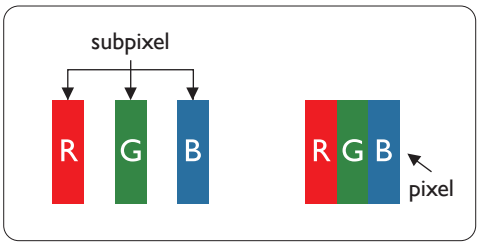
- The PC text quality is optimum in UHD 4K/2K mode(3840 x 2160, 60Hz).
- Your PC display screen might appear different depending on the manufacturer (and your particular version of Windows).
- Check your PC instruction book for information about connecting your PC to a display.
- If a vertical and horizontal frequency-select mode exists, select 60Hz (vertical) and 31.5KHz (horizontal). In some cases, abnormal signals (such as stripes) might appear on the screen when the PC power is turned off (or if the PC is disconnected). If so, press the [INPUT] button to enter the video mode. Also, make sure that the PC is connected.
- The display settings table complies to the IBM/VESA standards, and based on the analog input.
- The best timing for the vertical frequency to each mode is 60Hz.
- Resolution 3840x2160 50/60Hz must be equipped with HDMI certified cable(Premium High Speed HDMI Cables).

8. Pixel Defect Policy

We strive to deliver the highest quality products and use some of the industry's most advanced manufacturing processes whilst practicing stringent quality control. However, pixel or sub-pixel defects on the PDP / TFT panels used in Plasma- & LCD- displays are sometimes unavoidable. No manufacturer can guarantee that all panels will be free from pixel defects, but Philips professional displays guarantee that any Plasma- & LCD- displays with an unacceptable number of defects will be repaired during the warranty period in line with your local guarantee conditions.

This notice explains the different types of pixel defects and defines the acceptable defect level for the LCD screen. In order to qualify for repair under warranty, the number of pixel defects must exceed a certain level as shown in the reference table. If the LCD screen is within specification a warranty exchange / claim back will be refused. Additionally, because some types or combinations of pixel defects are more noticeable than others, Philips sets even higher quality standards for those.

8.1. Pixels and Sub-Pixels



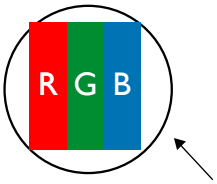
A pixel, or picture element, is composed of three sub-pixels in the primary colors of red, green and blue. Many pixels together form an image. When all sub-pixels of a pixel are lit, the three colored sub-pixels together appear as a single white pixel. When all are dark, the three colored sub-pixels together appear as a single black pixel. Other combinations of lit and dark sub-pixels appear as single pixels of other colors.

8.2. Types of Pixel Defects + Dot Definition

Pixel and sub-pixel defects appear on the screen in different ways. There are three categories of pixel defects and several types of sub-pixel defects within each category.

Dot definition = What is a defective "Dot"? :

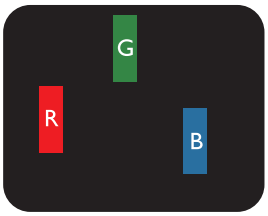
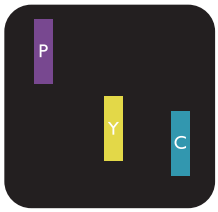
One or more defective, adjacent sub-pixel are defined as one "dot". The no. of defective sub-pixels are not relevant to define a defective dot. This means that a defective dot can consist of one, two or three defective sub-pixels which can be dark or lit.



One dot = One Pixel; consists of three sub-pixels of Red, Green, and Blue.

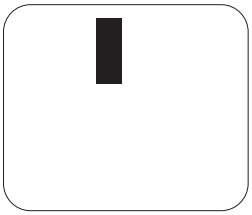
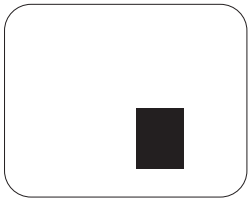
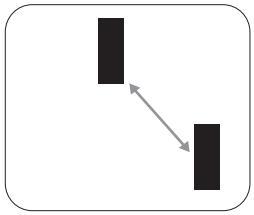
8.3. Bright Dot Defects

Bright dot defects appear as pixels or sub-pixels that are always lit or "on". These are the examples of bright dot defects:

		
One lit red, green or blue sub pixel	Two adjacent lit sub pixels: Red + Blue = Purple Red + Green = Yellow Green + Blue = Cyan (Light Blue)	Three adjacent lit sub pixels (one white pixel)

8.4. Dark Dot Defects

Black dot defects appear as pixels or sub-pixels that are always dark or “off”. These are the examples of black dot defects:

 One dark dot	 Two adjacent dark dots = 1 pair of dark dots	 Two dark dots, specifications defines the minimum distance between dark dots

8.5. Proximity of Pixel Defects

Because pixel and sub-pixels defects of the same type that are nearby one another may be more noticeable, Philips also specifies tolerances for the proximity of pixel defects. In the table below you can find specifications about:

- Allowed amount of adjacent dark dots = (adjacent dark dots =1 pair of dark dots)
- Minimum distance between dark dots
- Total no. of all defective dots

8.6. Pixel Defect Tolerances

In order to qualify for repair due to pixel defects during the warranty period, a PDP / TFT panel in a Philips Plasma / LCD- display must have pixel or sub-pixel defects exceeding the tolerances listed in the following table.

BRIGHT DOT EFFECT	ACCEPTABLE LEVEL
1 lit sub pixel	2
BLACK DOT EFFECT	ACCEPTABLE LEVEL
1 dark sub pixel	10
TOTAL DOT DEFECTS OF ALL TYPES	12

Note: * 1 or 2 adjacent sub pixel defects = 1 dot defect

8.7. Mura

Dark spots or patches may occasionally appear on some liquid crystal display (LCD) panels. This is known within the industry as Mura, which is a Japanese term for “unevenness.” It is used to describe an irregular pattern or area in which uneven screen uniformity appears under certain conditions. Mura is a result of the deterioration of the liquid crystal alignment layer and is most commonly caused by long-term operation under high ambient temperatures. It is an industry- wide phenomenon and Mura is not repairable. It is also not covered by our warranty terms.

Mura has been around since the introduction of LCD technology and with screens getting bigger and in operation 24/7, many displays are running in low light conditions. This all adds to the possibility of Mura affecting displays.

HOW TO SPOT MURA

There are many symptoms of Mura and also multiple causes. Several of these are listed below:

- Impurities or foreign particles in the crystal matrix
- Uneven distribution of LCD matrix during manufacturing
- Non-uniform luminance distribution of the backlight
- Panel assembly induced stress
- Flaws within the LCD cells
- Thermal induced stress - high temperature operation over long periods of time

HOW TO AVOID MURA

Although we can not guarantee the complete eradication of Mura every time, in general the appearance of Mura can be minimized by these methods:

- Lower the backlight brightness
- Use a screen saver
- Reduce the ambient temperature around the unit

9. Cleaning and Troubleshooting

9.1. Cleaning

Caution When Using the Display

- Do not bring your hands, face or objects close to the ventilation holes of the display. The top of the display is usually very hot due to the high temperature of exhaust air being released through the ventilation holes. Burns or personal injuries may occur if any body parts are brought too close. Placing any object near the top of the display could also result in heat related damage to the object as well as the display itself.
- Be sure to disconnect all cables before moving the monitor. Moving the monitor with its cables attached may damage the cables and thus cause fire or electric shock.
- Disconnect the power plug from the wall outlet as a safety precaution before carrying out any type of cleaning or maintenance procedure.

Front Panel Cleaning Instructions

- The front of the display has been specially treated. Wipe the surface gently using only a cleaning cloth or a soft, lint-free cloth.
- If the surface becomes dirty, soak a soft, lint-free cloth in a mild detergent solution. Wring the cloth to remove excess liquid. Wipe the surface of the display to remove dirt. Then use a dry cloth of the same type to dry.
- Do not scratch or hit the surface of the panel with fingers or hard objects of any kind.
- Do not use volatile substances such as insert sprays, solvents and thinners.

Cabinet Cleaning Instructions

- If the cabinet becomes dirty, wipe the cabinet with a soft, dry cloth.
- If the cabinet is extremely dirty, soak a lint-free cloth in a mild detergent solution. Wring the cloth to remove as much moisture as possible. Wipe the cabinet. Use another dry cloth to wipe over until the surface is dry.
- Do not use solution that contains oil to clean the plastic parts. Such product damage the plastic parts and void the warranty.
- Do not allow any water or detergent to come into contact with the surface of the display. If water or moisture gets inside the unit, operating problems, electrical and shock hazards may result.
- Do not scratch or hit the cabinet with fingers or hard objects of any kind.
- Do not use volatile substances such as insert sprays, solvents and thinners on the cabinet.
- Do not place anything made from rubber or PVC near the cabinet for any extended periods of time.

9.2. Troubleshooting

Symptom	Possible Cause	Remedy
No picture is displayed	1. The power cord is disconnected. 2. The main power switch on the back of the display is not switched on. 3. The selected input has no connection. 4. The display is in the standby mode.	1. Plug in the power cord. 2. Make sure that the power switch is switched on. 3. Connect a signal connection to the display.
Interference displayed on the display or an audible noise is heard	Caused by surrounding electrical appliances or fluorescent lights.	Move the display to another location to see if the interference is reduced.
Color is abnormal	The signal cable is not connected properly.	Make sure that the signal cable is attached firmly to the back of the display.
Picture is distorted with abnormal patterns	1. The signal cable is not connected properly. 2. The input signal is beyond the capabilities of the display.	1. Make sure that the signal cable is attached firmly. 2. Check the video signal source to see if it is beyond the range of the display. Please verify its specifications with this display's specification section.
Display image doesn't fill up the full size of the screen	1. The zoom mode is not set correctly. 2. Scan Mode may be set incorrectly to underscan. 3. If the image exceeds the screen size, Scan Mode may need to be set to Underscan.	Use the Zoom mode or Custom zoom function in the Screen menu to fine tune display geometry and time frequency parameter.
Can hear sound, but no picture	Source signal cable is connected improperly.	Make sure that both video inputs and sound inputs are correctly connected.
Can see picture but no sound is heard	1. Source signal cable is connected improperly. 2. Volume is turned all the way down. 3. {Mute} is turned on. 4. No external speaker is connected.	1. Make sure that both video inputs and sound inputs are connected correctly. 2. Press [+] or [—] button to hear sound. 3. Switch MUTE off by using the [🔇] button. 4. Connect external speakers and adjust the volume to a suitable level.
Some picture elements do not light up	Some pixels of the display are off.	This display is designed using an extremely high level of precision technology: however, sometimes some pixels of the display may not display. This is not a malfunction..
After-Images can still be seen on the display after the display is powered off. (Examples of still pictures include logos, video games, computer images, and images displayed in 4:3 normal mode)	A still picture is displayed for an over extended period of time	Do not allow a still image to be displayed for an extended period of time as this can cause a permanent after-image to remain on the display.

How to setup the settings in the menu to control all the monitors at the same time and individually via RC?	Daisy chained by RS232 and no IR cable	1. The first display sets as “Primary” on OSD (Advanced option/IR control item), others set as “Secondary”. 2. The setup OSD will show on top left side of the display.(Toggle MENU will show again if it disappear) 3. Default setting: ID NO: 0, GP NO: 0, this setting can control all displays by IR. The “+”, “-” can change “ID NO” to control signal display by “Monitor ID”. The “UP”, “DOWN” can change “GP NO” to control multi-display by “Group ID”. *The first display is always controlled by IR.
How is the RC working?	Daisy chain: no connection of RS232 and IR cable	No setting is required. Connect with IR cables and control by IR. *This may cause out-of-synchronizm phenomenon. It is suggested to use the above settings with RS-232 cable.

10. Technical Specifications

Display:

Item	Specifications		
	43BDL4512D	50BDL4512D	55BDL4512D
Screen Size (Active Area)	108 cm / 42.5 inches	125.7 cm / 49.5 inch	138.7 cm / 54.6 inches
Aspect Ratio	16:9	16:9	16:9
Number of pixels	3840 (H) x 2160 (V)	3840 (H) x 2160 (V)	3840 (H) x 2160 (V)
Pixel pitch	0.2451(H) x 0.2451 (V) [mm]	0.2854 (H) x 0.2854 (V) [mm]	0.315(H) x 0.315 (V) [mm]
Displayable colors	8 bits+FRC,1.07G colors	8 bits+FRC, 1.07 Billion colors	8 bits+FRC,1.07G colors
Brightness (typical)	500 cd/m^2	500 cd/m^2	500 cd/m^2
Contrast ratio (typical)	1200:1	4000:1	5000:1
Viewing angle	178 degrees	178 degrees	178 degrees

In/Out Terminals:

Item		Specifications
Speaker Output	Internal Speakers	10W (L) + 10W (R) [RMS]/8Ω 82 dB/W/M/160 Hz - 13 KHz
Audio Output	3.5mm phone jack x 1	0.5V [rms] (Normal) / 2 Channel (L+R)
RS232	2.5mm phone jack x 2	RS232 in / RS232 out
RJ-45	RJ-45 Jack x 1 (8 pin)	10/100 LAN port
HDMI Input	HDMI Jack x 2 (Type A) (19 pin)	Digital RGB: TMDS (Video + Audio) MAX: Video - 720p, 1080p, 3840 x 2160/60 Hz Audio - 48 KHz/ 2 Channel (L+R) Supports LPCM only
HDMI Output	HDMI Jack x 1 (Type A) (19 pin)	Digital RGB: TMDS (Video + Audio) MAX: Video - 720p, 1080p, 3840 x 2160/60 Hz Audio - 48 KHz/ 2 Channel (L+R) Supports LPCM only
IR Input/Output	3.5mm x 2	IR pass through or IR daisy chain
USB Input	USB3.0 TypeA x2	USB 3.0, Multimedia play and service port
Displayport in	Displayport Jack x 1 (20 pin)	Digital RGB: TMDS (Video + Audio) MAX: Video - 720p, 1080p, 2160p Audio - 48 KHz / 2 Channel (L+R) Supports LPCM only
USB3.1 C	Type C	4.5W

General:

Item	Specifications		
	43BDL4512D	50BDL4512D	55BDL4512D
Power Input	100 - 240V~, 50/60Hz	100 - 240V~, 50/60Hz	100 - 240V~, 50/60Hz
Power Consumption (Max)	115 W	117 W	155 W
Power Consumption (Typ.)	64 W	66 W	97 W
Power Consumption (Standby mode & Off mode)	<0.5 W	<0.5 W	<0.5 W
AC Switch Off Mode (W)	0 W	0 W	0 W
Dimensions (Without Stand) [W x H x D]	973.0mm(W) x 561.2mm(H)x 63.5mm(D@Wall Mount)	1128.4mm(W) x 649.0mm(H)x 63.5mm(D@Wall Mount)	1241.8mm(W) x 712.6mm(H)x 64.0mm(D@Wall Mount)
Weight (Without Stand)	11.16 Kg	14.25 Kg	17.2 Kg
Gross Weight (Without Stand)	14.15 Kg	18.39 Kg	21.0 Kg

Environmental Condition:

Item		Specifications
Temperature	Operational	0 - 40°C
	Storage	-20 - 60°C
Humidity	Operational	20 - 80% RH (No condensation)
	Storage	5 - 95% RH (No condensation)
Altitude	Operational	0 - 5,000 m
	Storage / Shipment	0 - 9,000 m

Warranty Policy for Philips Professional Displays

Thank you for purchasing this Philips product. Philips products are designed and manufactured with high standards and deliver high quality performance, ease of use and ease of installation. If you encounter any difficulties while using your product, we recommend that you first consult the user manual or the information in the support section of the website, where (depending on the product type) you may find a downloadable user manual, frequently asked questions, instruction videos or a support forum.

LIMITED WARRANTY

In the unlikely event the product requires service, we will arrange for your Philips product to be serviced free-of-charge within the warranty period, provided that the product was used in accordance with the user manual (e.g. in the intended environment).

For these product categories, MMD Hong Kong Holding Limited, a partner company of Philips, is the warrantor of the product. Please check the documentation supplied with your product.

WHO IS COVERED?

Your Warranty coverage begins from the first date of purchase of the product. You need to provide proof of purchase to receive warranty service. A valid sales receipt or other valid document showing that you purchased the product is considered proof of purchase.

WHAT IS COVERED?

If any defect due to faulty materials and/or workmanship occurs within the warranty period, we will make arrangements for a free of charge service. Where a repair is not possible or not commercially viable, we may replace the product with a new or equivalent refurbished product with similar functionality. Replacement will be offered at our discretion and the warranty will continue from the date of original purchase of the first date of purchase of the product. Please note that all parts, including repaired and replaced parts, are covered only for the duration of the original warranty period.

WHAT IS EXCLUDED? Your warranty does not cover:

- Consequential damages (including but not limited to loss of data or loss of income), nor compensation for activities done by yourself, such as regular maintenance, installing firmware updates or saving or restoring data (Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you. This includes, but is not limited to, prerecorded material, whether copyrighted or not copyrighted.)
- Labor charges for installation or setup of the product, adjustment of customer controls on the product, and installation or repair of various types of external devices (e.g., WiFi, antenna, USB dongles, OPS type devices) and other systems outside of the product.
- Reception problems caused by signal conditions or cable or antenna systems outside the unit.
- A product that requires modification or adaptation to enable it to operate in any country other than the country for which it was designed, manufactured, approved and/or authorized, or repair of products damaged by these modifications.
- If the model or production number on the product has been altered, deleted, removed or made illegible.

The warranty applies on condition that the product has been handled properly for its intended use and in accordance with the operating instructions

To Obtain Warranty Service And Information

For detailed warranty coverage information and additional support requirement and help line, please contact the seller and/ or system integrator you purchased the product from. Please note in the USA, this limited warranty is only valid for Products purchased in the Continental United States, Alaska, and Hawaii.

Before Requesting Service

Please check your user's manual before requesting service. Adjustments of the controls discussed there may save you a service call.

WARRANTY PERIOD

Warranty period for PHILIPS signage display is listed as below, for areas not covered in this table, please follow their warranty statement.

Standard warranty period for PHILIPS signage display is listed as below, for areas not covered in this table, please follow the local warranty statement.

Region	Standard Warranty Period
USA, Canada	3 years
China	3 years
Japan	3 years
Rest of world	3 years
Mexico	3 years
Brazil	3 years
Chile	3 years
Peru	3 years

Note that for professional products, the specific warranty terms of the sale- or purchase agreement may apply.

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Specifications are subject to change without notice.

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