PHILIPS

Signage Display

5000 Series

43BDL5050D
50BDL5050D
55BDL5050D

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.

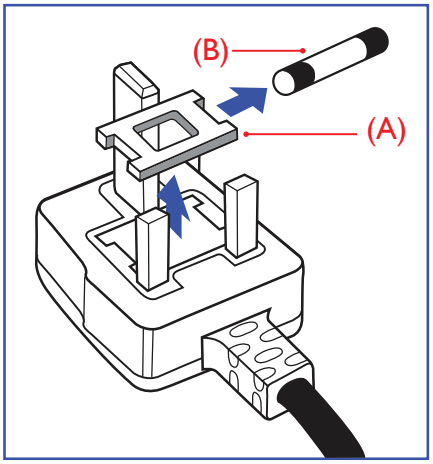
Pozostałe instrukcje bezpieczeństwa

- 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:

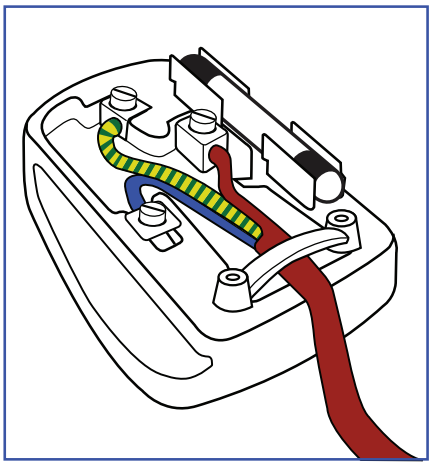
This apparatus is supplied with an approved moulded 13A plug. To change a fuse in this type of plug proceed as follows:+

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。

部件名称	有害物质									
	铅（Pb）	汞（Hg）	镉（Cd）	六价铬（Cr（VI））	多溴联苯（PBB）	多溴二苯醚（PBDE）	邻苯二甲酸二（2-乙基）己酯（DEHP）	邻苯二甲酸丁基苄酯（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。

上表中打“×”的部件，应功能需要，部分有害物质含量超出 GB/T 26572 规定的限量要求，但符合达标管理目录限用物质应用例外清单中的限值要求。

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

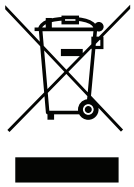
Your new Public Information Display contains several materials that can be recycled for new users.

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

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.

Information for EAC	EAC
Importer and information	Varius Technologies LLC. Mamyr-4, 79, 050036 Almaty Kazakhstan

2. Unpacking and Installation

2.1. Unpacking

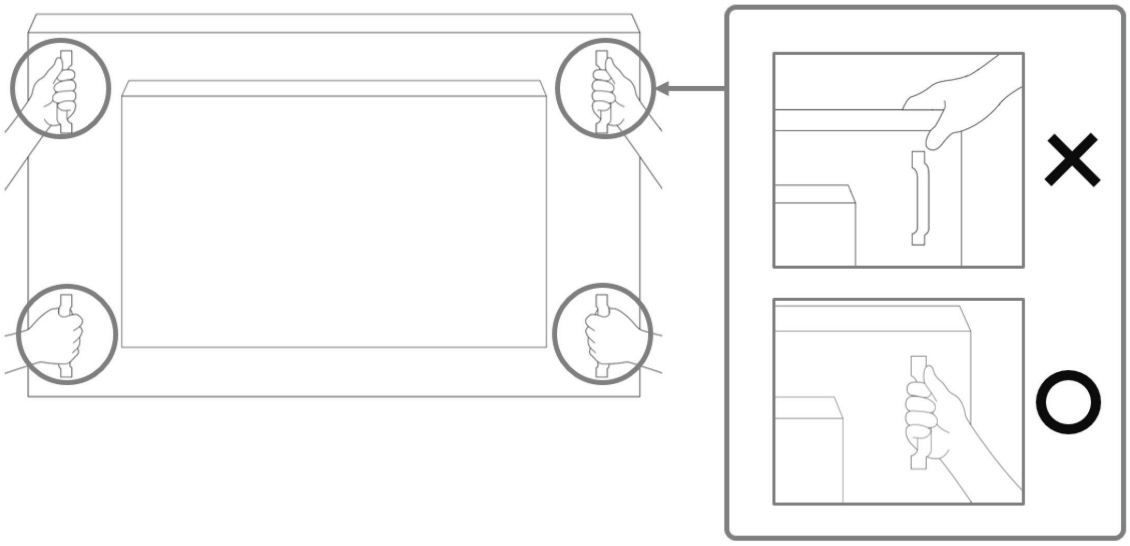
- This product is packed in a carton, together with the standard accessories.
- Any other optional accessories will be packed separately.
- As this product is high and heavy, the operation of moving the device is recommended to be performed by two technicians.
- After opening the carton, ensure that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

■ Before Unpacking

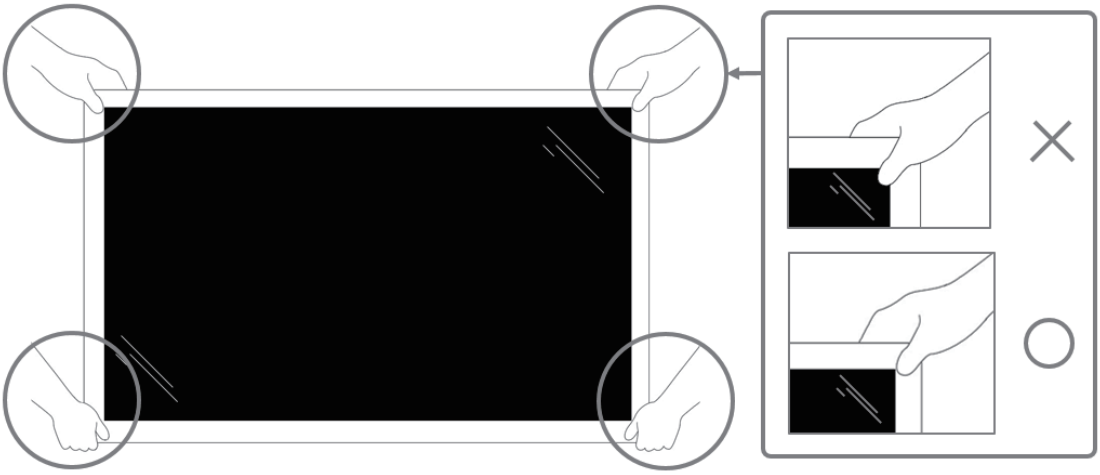
- Please read and fully understand unpacking notice before installation.
- Please check the packaging for any abnormalities, such as creaking, dents, etc.
- Please do necessary inspection before you move the display out of the carton.
- Always have an experienced technician install the display to prevent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

■ Notice

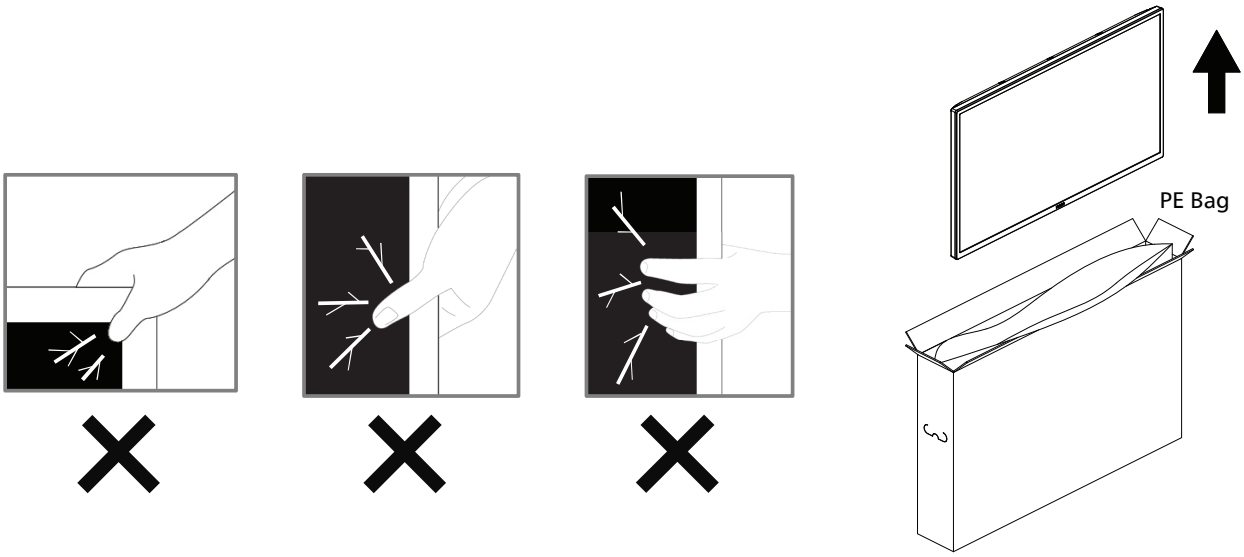
- For display with handles:
  - Take the display out of the carton box by two adults with both hands.
  - Hold onto the handles when moving the display.



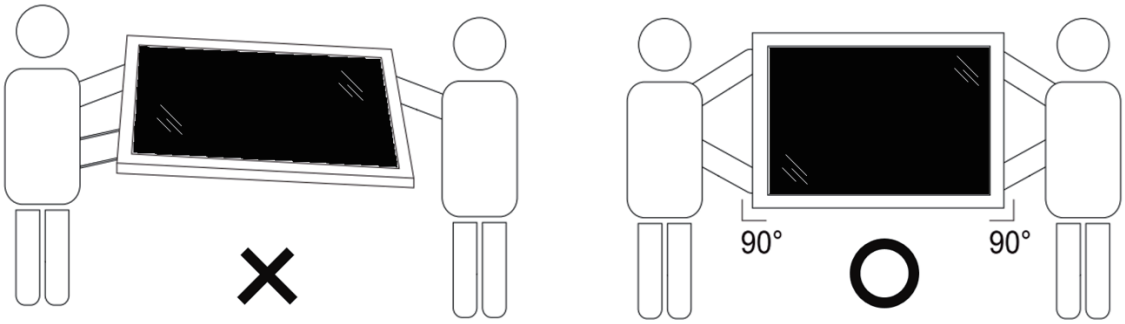
- For display without handle:
  - Take the display out of the carton box by two adults with both hands.
  - Please do not grab or touch the glass of the display.
  - Grasp the bezel surface (plastic or metal) of the display.



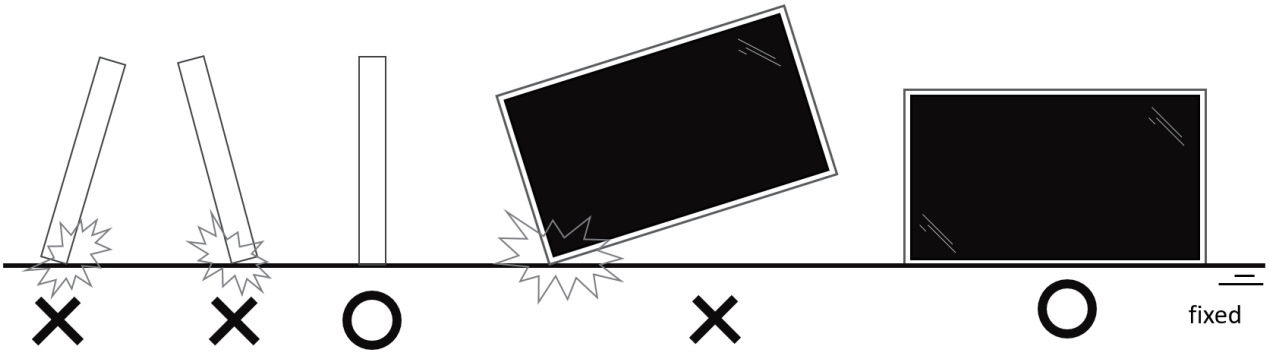
- When removing the display from the box, leave the protective bag inside and take care not to touch the glass of the display to avoid any damage.



- Please keep the display upright when moving it.



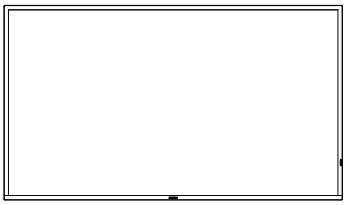
- Place the display vertically and its weight should spread evenly on the surface.



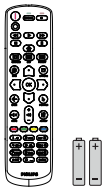
2.2. Package Contents

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
- Dipole Antenna x 2PCS
- AC Switch Cover
- Philips Logo Plate



LCD Display

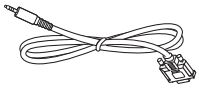


Remote Control and AAA Batteries

Quick Start Guide

* The supplied power cord varies depending on destination.

Power Cord



RS232 Cable

IR Sensor Cable

Dipole Antenna x2PCS

Philips Logo Plate

AC Switch Cover

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

NOTES:

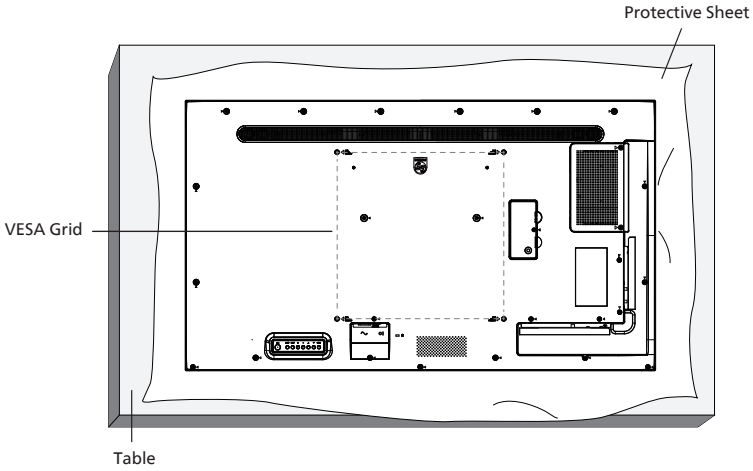
- For all other regions, apply a power cord that conforms to the AC voltage of the power socket and has been approved by and complies with the safety regulations of the particular country (Type H05W-F, 2G or 3G, 0.75 or 1 mm^2 should be used).
- Keep the packaging materials appropriately after unpacking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

43BDL5050D	200(H) x 200(V) mm
50BDL5050D	400(H) x 400(V) mm
55BDL5050D	400(H) x 400(V) mm

Caution:

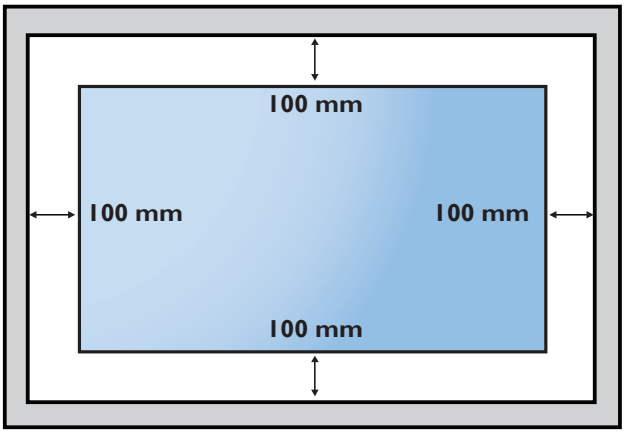
To prevent the display from falling:

- 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.

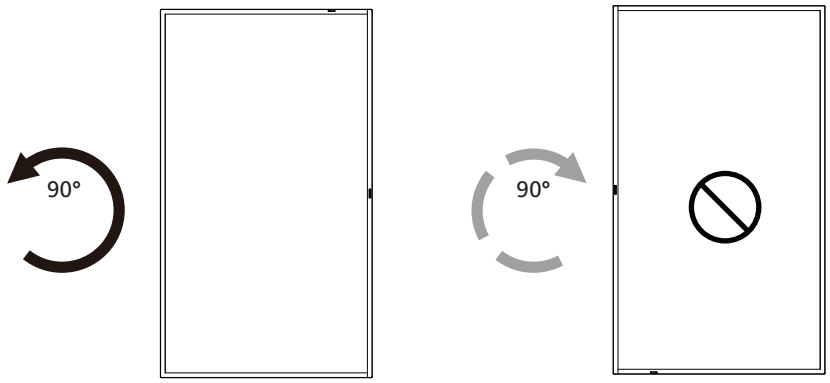


2.5. Mounting in Portrait Orientation

This display can be installed in portrait orientation.

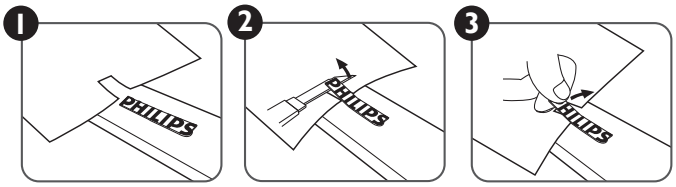
Rotate the display 90 degrees counterclockwise. The "PHILIPS" logo should be on the right side when facing the display.

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



2.5.1. How to remove the logo plate

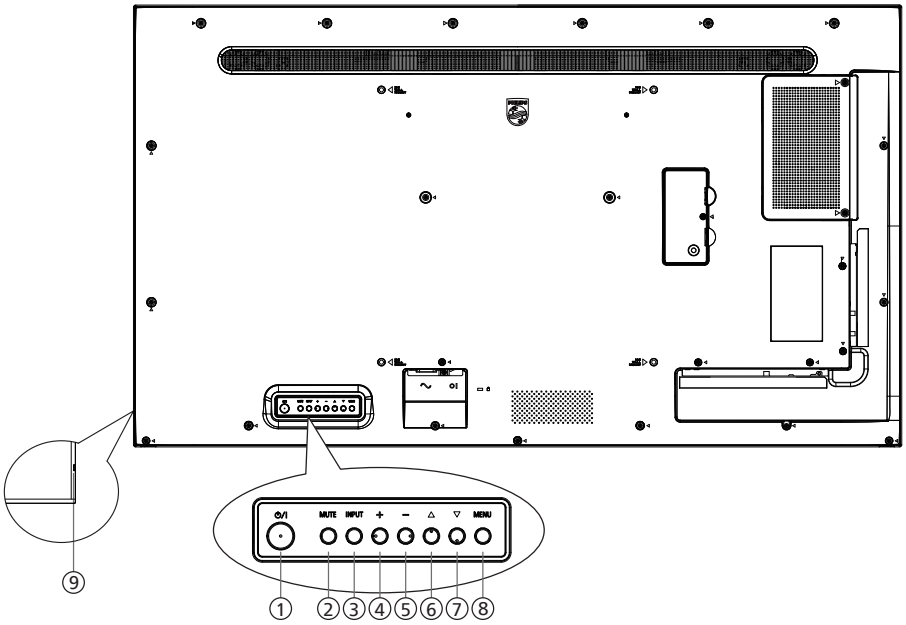
1. Prepare a piece of paper with a cutting area of logo as a protector to prevent the front bezel from scratching.
2. Use a knife and carefully remove the logo sticker with the paper placing beneath.
3. Tear off the logo sticker.



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.

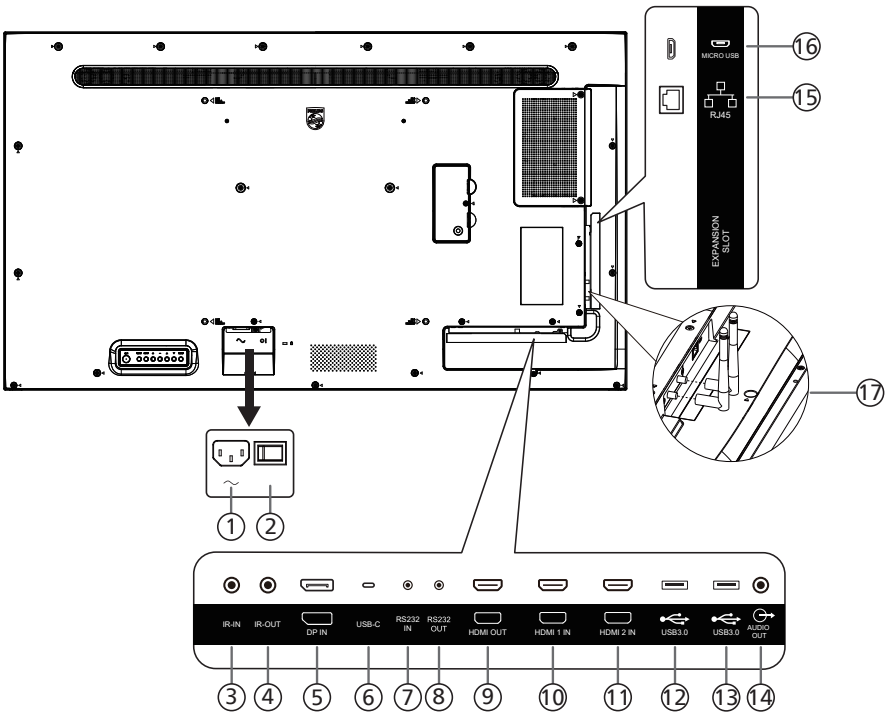
⑨ Remote control sensor and power status indicator

- 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. (Please refer to the instructions on 25)**

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 page 25 for IR Pass Through connection.

⑤ **DisplayPort IN**
DisplayPort video input.

⑥ **USB-C**
Support display and touch function.

⑦ **RS232 IN** / ⑧ **RS232 OUT**
Android RS232 network input/output is reserved for customized protocol usage from System Integrator.

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.

⑯ **MICRO USB**
Support ADB data transmission and OTG.

⑰ **Wi-Fi Antenna**
To ensure that the Wi-Fi functions properly, please install the provided antenna before starting to use the display.

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

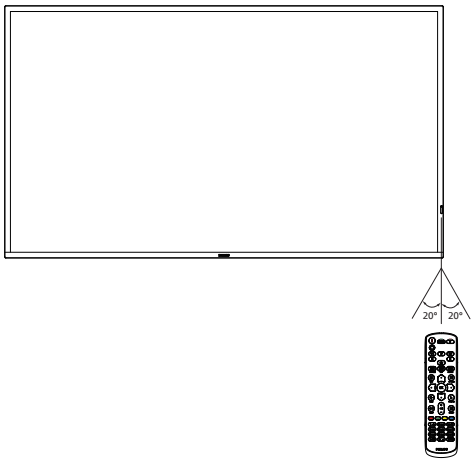
- Do not drop or apply shock to the remote control.
- Do not allow any liquid to get inside the remote control. If water has entered the remote control, wipe the remote control with a dry cloth immediately.
- Do not place the remote control near heat and steam sources.
- Do not attempt to disassemble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

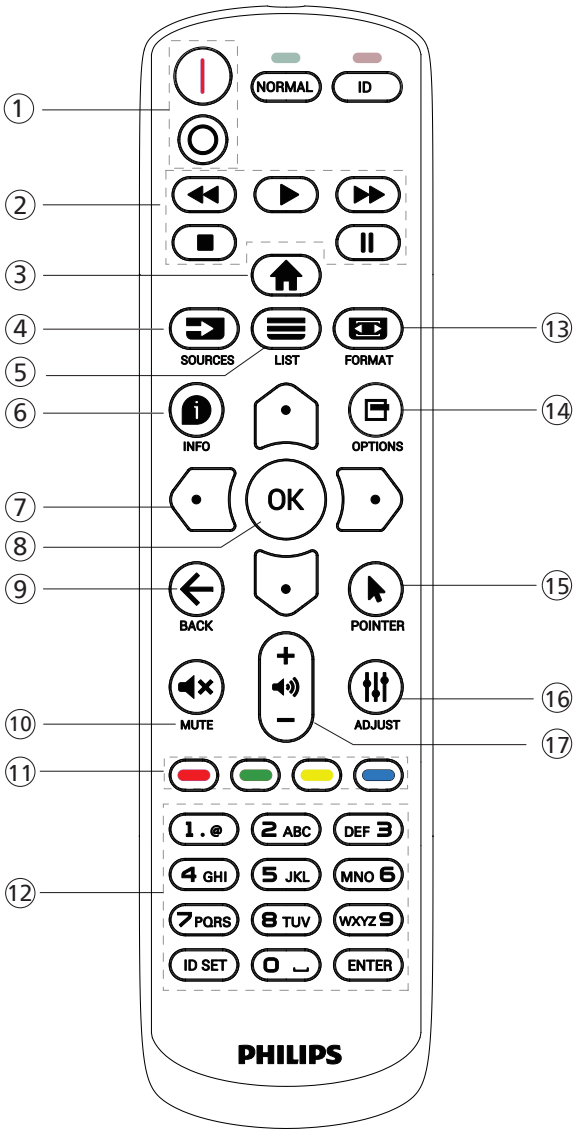
Use the remote control within a distance of less than 4m/16ft from the display’s sensor, and a horizontal and vertical angle of less than 20°.

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/O] POWER button

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

② [PLAY] buttons

Control playback of media files.(for Media Input only)
Freeze feature

Pause: hotkey for freezing all inputs content.

Play: hotkey for unfreezing all input content.

③ [⌂] HOME button

Root Menu: Access the OSD menu.

Others: Exit the OSD menu.

④ [⇥] SOURCE button

Root Menu: Choose input source.

⑤ [≡] LIST button

Reserved.

⑥ [ⓘ] INFO button

Show Information OSD.

⑦ NAVIGATION buttons

[⌂]
Root Menu: Go to the OSD of Smart picture.
Main Menu: Move the selected item up to make adjustment.

IR Daisy Chain Menu: Increase the controlled Group ID number.

[⌄]

Root Menu: Go to the OSD of Audio source.

Main Menu: Move the selected item down to make adjustment.

IR Daisy Chain Menu: Decrease the controlled Group ID number.

[◁]

Main Menu: Go to the previous level of menu.

Source Menu: Exit from the source menu.

Volume Menu: Decrease the volume.

[▷]

Main Menu: Go to the next level of menu or set selected option.

Source Menu: Go to the selected source.

Volume Menu: Increase the volume.

⑧ [OK] button

Root Menu: Go to the OSD of IR daisy chain in Primary/ Secondary mode.

Main Menu: Confirm an entry or selection.

⑨ [←] BACK button

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

⑩ [🔇] MUTE button

Mute or unmute the sound.

⑪ [▬] [▬] [▬] [▬] COLOR buttons

[▬] Hotkey to turn on and off backlight.

⑫ [Number/ ID SET/ ENTER] button

Enter text for network setting.

Press to set the display ID. Refer to 3.6.2. ID Remote Control for more details.

⑬ [▭] FORMAT button

Select image zoom mode.

⑭ [▭] OPTIONS button

Reserved.

⑮ [↖] POINTER button

Reserved.

⑯ [⚙] ADJUST button

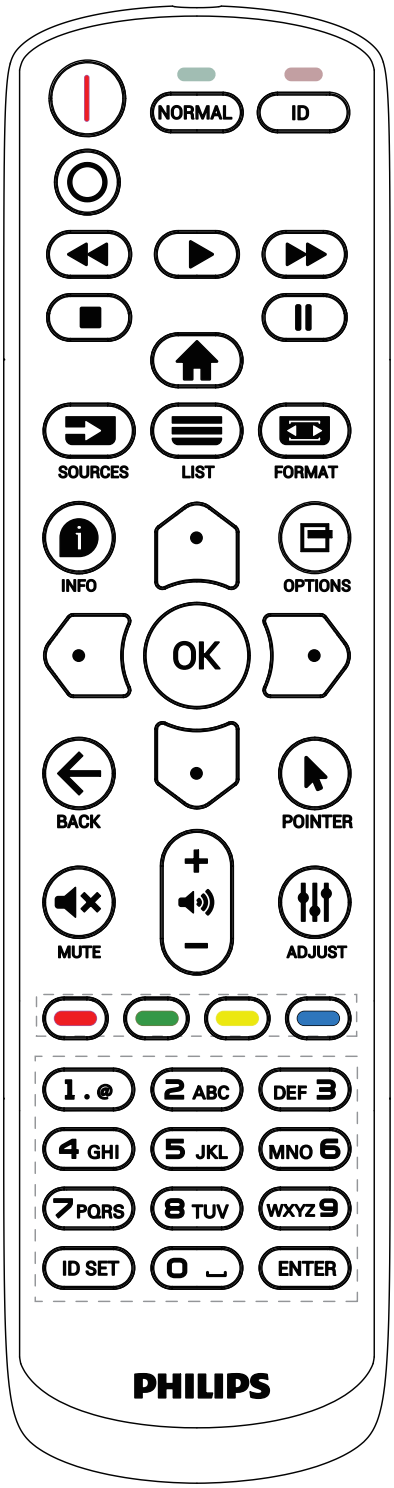
Go to the OSD of Auto Adjust (for VGA only).

⑰ [—] [+] VOLUME button

Adjust the volume.

3.6.2. ID Remote Control

Set remote control ID number when using several displays.



Press the [ID] button and 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 will exit the ID Mode. The red LED lights off.

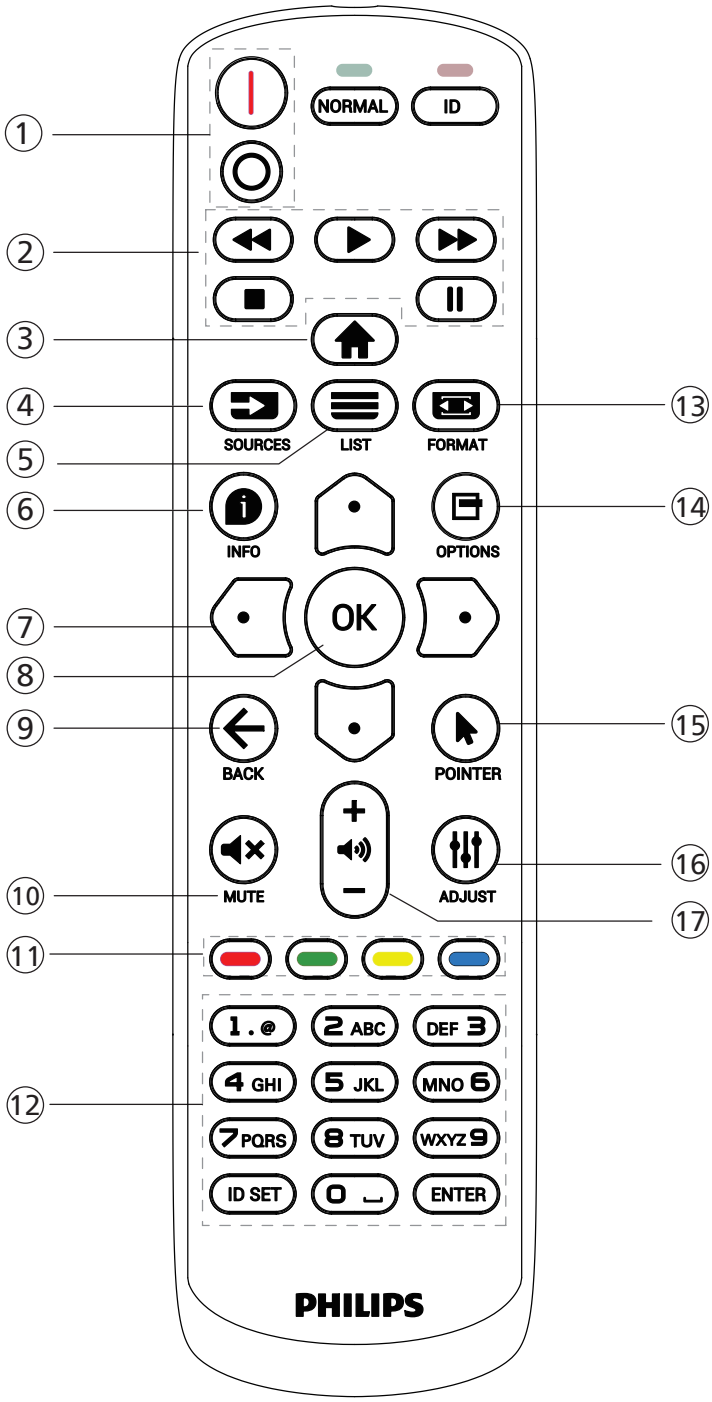
Press the digit numbers [0] ~ [9] to select the display to be controlled.
For example: press [0] and [1] for display No.1, press [1] and [1] for display No.11.
The numbers available are [01] ~ [255].

2. If no button is pressed within 10 seconds, it will exit from the ID mode.
3. If a wrong button is pressed, wait for 1 second until the red LED lights off and then turns on again, then press the correct digits.
4. Press [ENTER] button to confirm your selection. The red LED blinks twice and then lights off.

NOTE:

- Press [NORMAL] button. The green LED blinks twice, indicating that the display is under normal operation.
- It is necessary to set up the ID number for each display before selecting its ID number.

3.6.3. Remote Control buttons on Android source



① [I/○] POWER button

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

② [PLAY] buttons

Control playback of media files.(for Media Input only)
[▶]Play the media files directly.

[II]Pause playing.

[■]Stop playing media files. .

After stopping playing by [■] button, pressing [▶] again, playing will be started from the beginning of the file.

③ [⌂] HOME button

Access the OSD menu.

④ [⇥] SOURCE button

Choose input source.

⑤ [≡] LIST button

1.In the content of the web page, move the focus up to the next clickable items.

2.Move the focus up to the next control or widget such as buttons.

⑥ [ⓘ] INFO button

Display information about current input signal.

1.Media Player -> Compose -> edit or new add playlist -> choose any media files -> press [ⓘ] to show the information of the chosen media file.

⑦ [△][▽][◁][▷]NAVIGATION buttons

1.Navigate through menus and choose items.

2.In the content of the web page, these buttons are to control the scroll bar of the screen. Press [△] or [▽] is for moving vertical scroll bar up or down. Press [◁] or [▷] is for moving horizontal scroll bar left or right.

⑧ [OK] button

Confirm an entry or selection.

⑨ [←] BACK button

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

⑩ [🔇] MUTE button

Press to turn the mute function on/off.

⑪ [▬] [▬] [▬] [▬] COLOR buttons

Reserved.

⑫ [Number/ ID SET/ ENTER] button

1.No functions for ID SET and ENTER on Android source.

2.For PDF file, enter the page number by pressing number buttons and then press [OK] button to jump to the specific page.

⑬ [▭] FORMAT button

Change picture format.

⑭ [⊟] OPTIONS button

Open toolbox in Media Player and PDF Player.

1.Media Player or PDF Player ->Compose -> Edit or new add playlist -> press [⊟] to open toolbox. Toolbox will be slide from the left side of the screen.

⑮ [↖] POINTER button

Enter or exit Pointer mode.

When the user presses the POINTER key on the remote control, the system will enter Pointer Mode. In this mode, the following behaviors are changed to simulate mouse operations:

- Pointer Mode Behavior:

Remote Key	Function
UP	Move mouse cursor upward
DOWN	Move mouse cursor downward
LEFT	Move mouse cursor to the left
RIGHT	Move mouse cursor to the left
OK	Simulate mouse left-click
LIST	Simulate mouse wheel scroll upward
ADJUST	Simulate mouse wheel scroll downward

This allows intuitive control of the mouse using directional and function keys on the remote

- Exit Pointer Mode:

Pressing the POINTER key again will exit Pointer Mode.

After exiting, all keys will return to their original remote control behavior.

Note:

Pointer Mode will be disabled automatically after each system reboot or when switching input sources.

You must press the POINTER button again to re-enable the mode.

⑯ [ ] ADJUST button

1.In the content of the web page, move the focus down to the next clickable items.

2.Move the focus down to the next control or widget such as buttons.

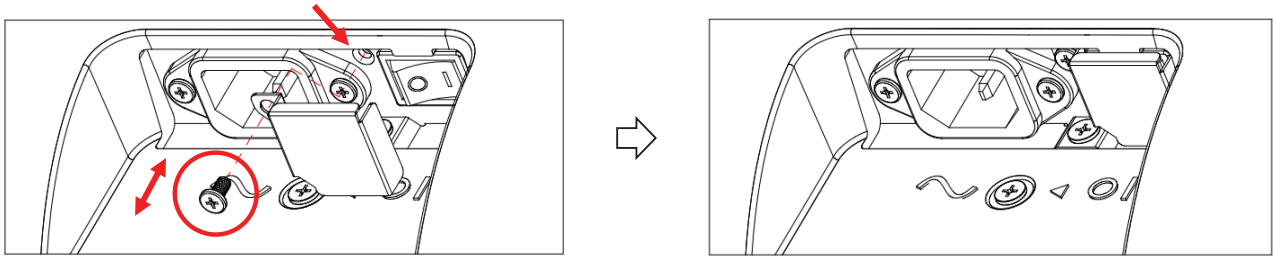
⑰ [—] [+] VOLUME button

Adjust the volume.

3.7. AC Switch Cover

Use AC Switch Cover to cover the AC switch.

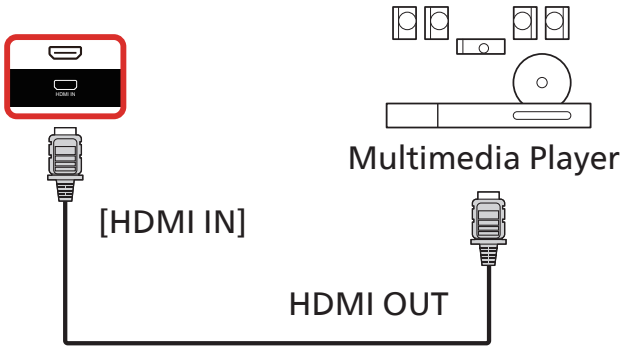
1. Release the screw.
2. Install the AC Switch Cover.
3. Fix the AC Switch Cover with the screw in step1.



4. Connecting External Equipment

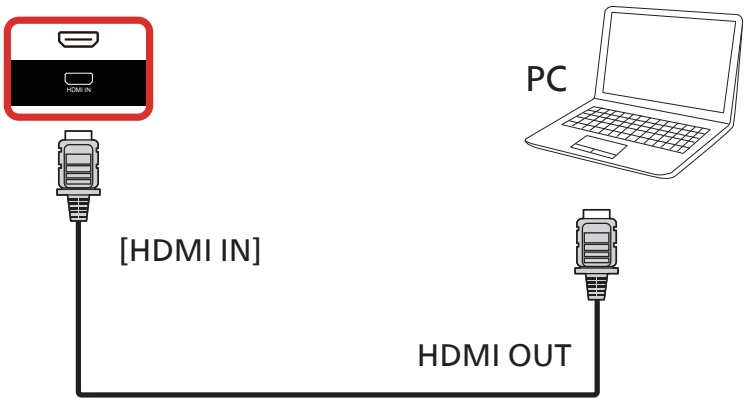
4.1. Connecting External Equipment (Multimedia Player)

4.1.1. Using HDMI video input

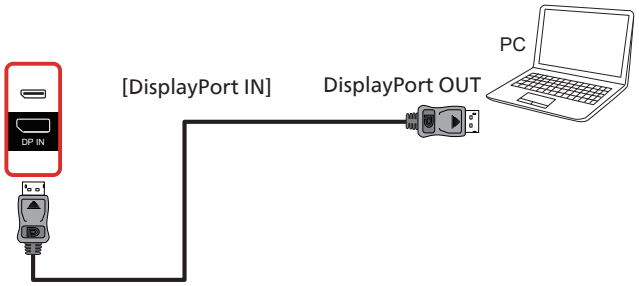


4.2. Connecting a PC

4.2.1. Using HDMI input

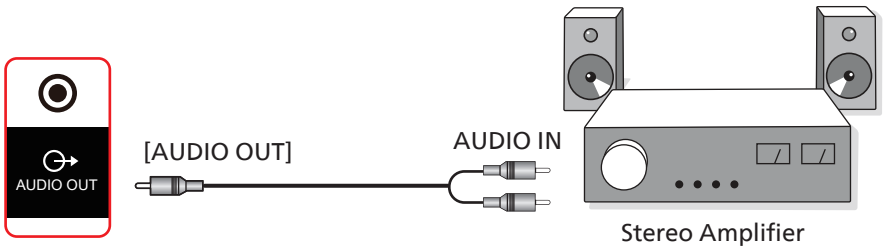


4.2.2. Using DisplayPort input



4.3. Connecting Audio Equipment

4.3.1. Connecting an external audio device

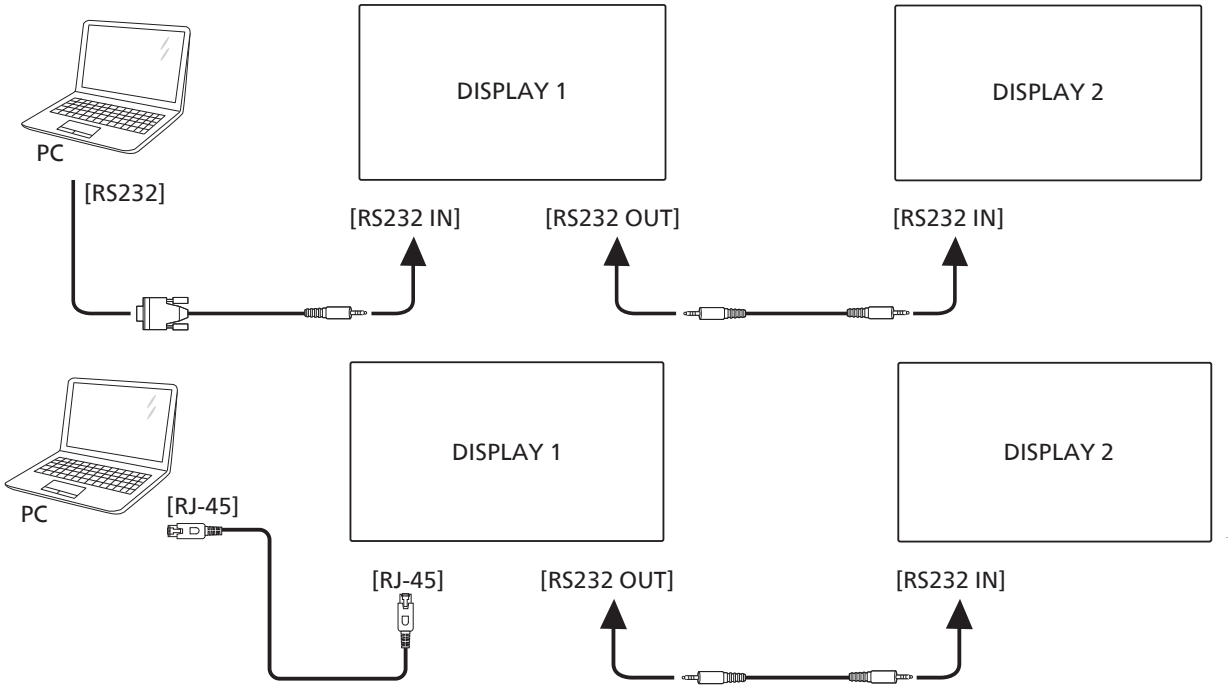


4.4. Connecting Multiple Displays in a Daisy-Chain Configuration

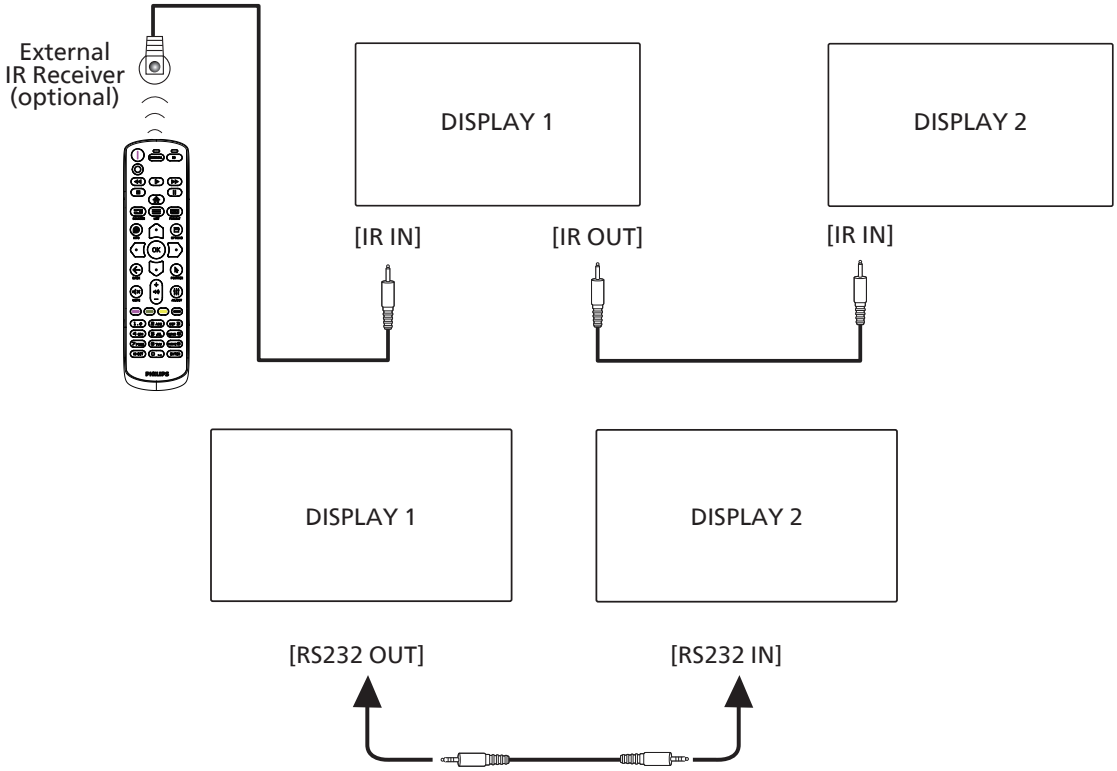
You can interconnect multiple displays to create a daisy-chain configuration for applications such as a menu board.

4.4.1. Display control connection

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



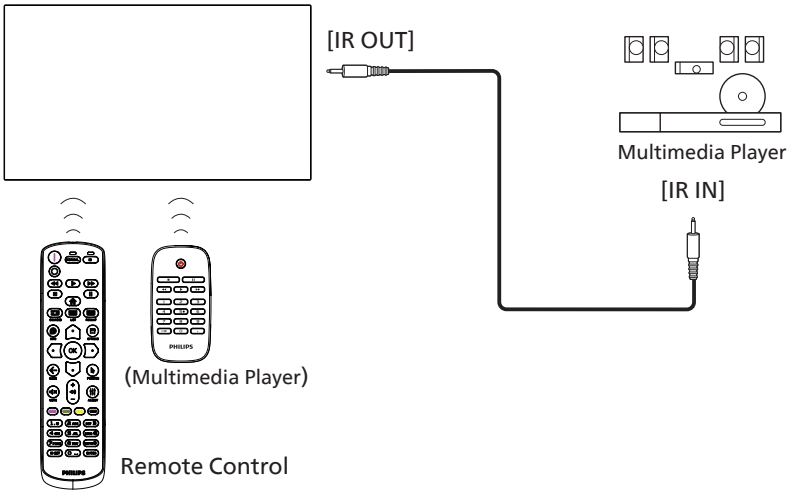
4.5. IR Connection



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. Watch the Connected Video Source

1. Press the [ ] SOURCE button.
2. Press [ ] or [ ] button to select a device, then press [OK] button.

5.2. Change Picture Format

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

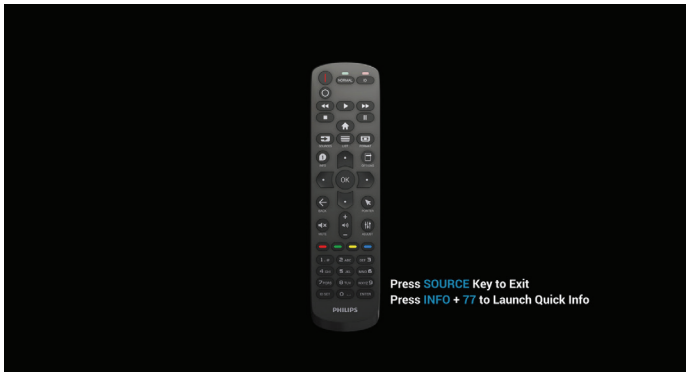
The available picture formats depend on the video source:

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

5.3. Overview

1. Android PD launcher:
   - Android PD launcher is a black page as shown below:

   - Exit the App by pressing the "Back" key and the screen will enter Android PD launcher.
   - When you return to Android PD launcher, a hint image will be prompted on the screen for 5~10 seconds.
   - The hint image notifies you that you can press source key to change source.



2. Admin mode:
   - Press "Home + 1888" to enter the Admin mode. Please make sure that you see the Home OSD menu after "Home" is pressed, and then press 1888 in sequence. Two continuous "Home" keys will not be a valid hotkey.
   - The Admin mode consists of the following Apps: "Settings", "Apps", "Network" "Storage" and "Help".
   - When leaving from the Admin mode, the system will return to last source.

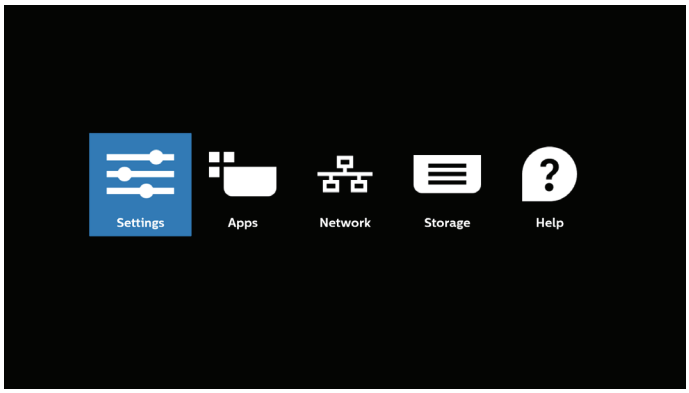
   Settings: go to Settings page.

   Applications: show all apps.

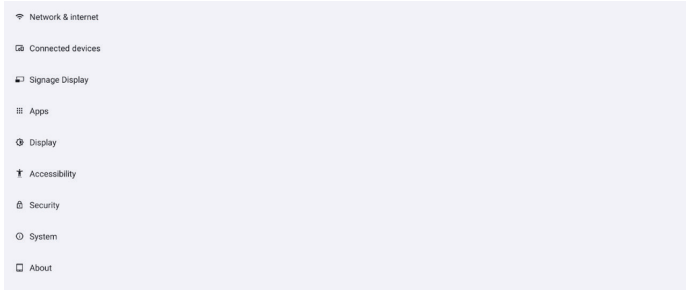
   Network: set Wi-Fi, Ethernet and Mobile network (optional).

   Storage: go to Storage page.

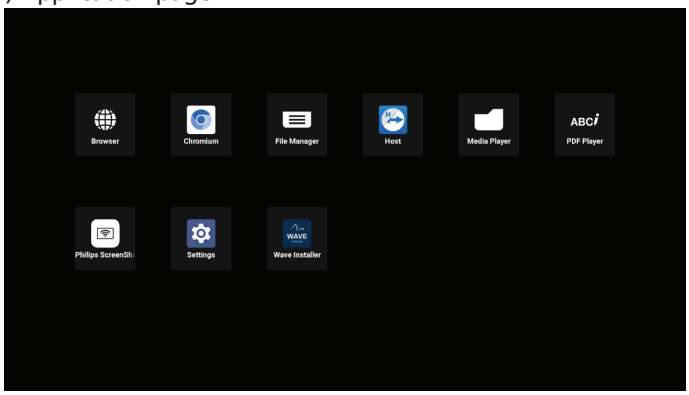
   Help: display QR code to get help.



1) Settings page:



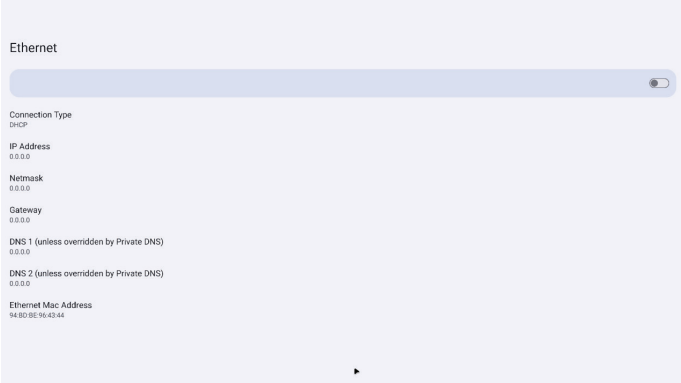
2) Application page:



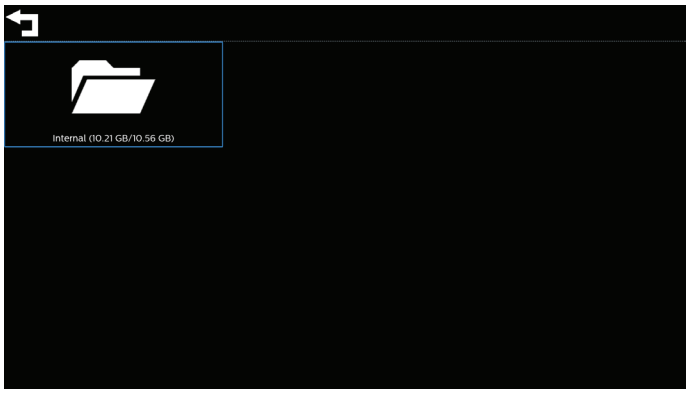
3) Network page

(Wi-Fi will not be visible if no Wi-Fi dongle is connected.)

3.1) Ethernet page:



4) Storage page



5) Help page

Display QR to link to Philips support website.

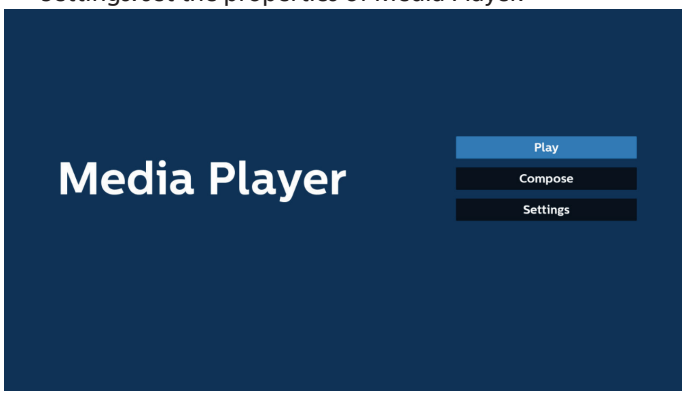
5.4. Media Player

5.4.1. OSD menu interaction with media player:

1. Boot on source:
   - Input:
     - If you select Media player as the source, the system will enter media player automatically after the boot process is completed.
   - Playlist:
     - Playlist 0 : go to the main page of media player.
     - Playlist 1 - Playlist 7: go to media player and playback File1 - File7 of playlist automatically
     - Playlist 8 : go to media player and play USB files automatically.
2. Schedule:
   - Today:
     - Show date and time.
   - 1 - 7:
     - Set up to 7 schedules.
   - On/Off:
     - Set start time and end time.
   - Input:
     - Select Media player as the source, the PD will launch the media player automatically at end time.
   - MON, TUE, WED, THU, FRI, SAT,SUN, Every week :
     - Set life cycle.
   - Play list :
     - 0: go to the main page of media player.
     - 1 - 7: go to media player and playback File1 - File7 of the playlist automatically.

5.4.2. Media Player introduction:

1. The main page of Media Player, this page consists of three options: “Play”, “Compose” and “Settings”.
   Play: select a playlist to play.
   Compose: edit a playlist.
   Settings: set the properties of Media Player.



2. Select “Play” on the main page, first you should choose one playlist to play between FILE 1 and FILE 7.
   The pencil icon means that the playlist contains the content.

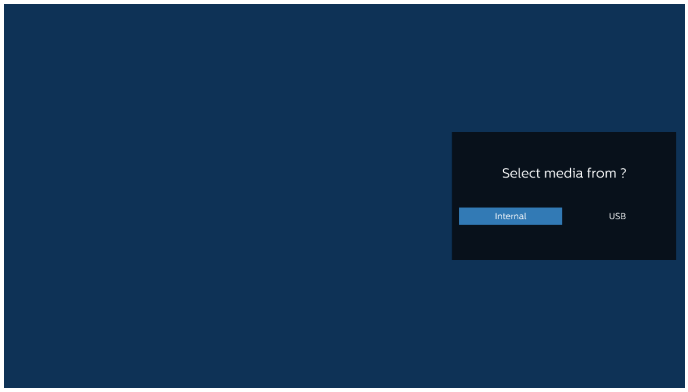
3. Select “Compose” on the main page, first you should select one playlist to edit between FILE 1 and FILE 7.
   The pencil icon means that the playlist contains the content.

4. If an empty playlist is selected, the App will guide you through selecting the media source.

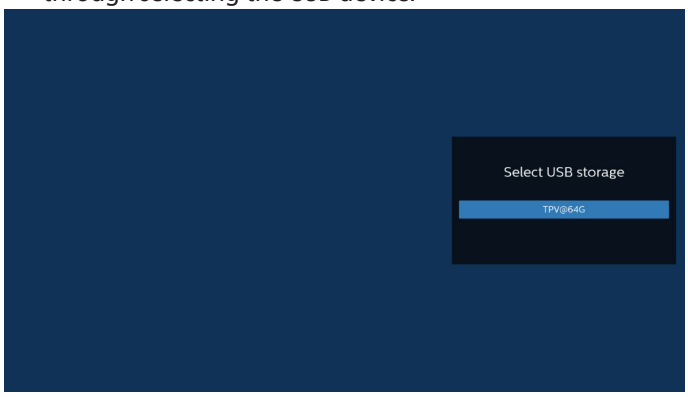
   All media files should be stored in /philips/ of root directory.

   For example,

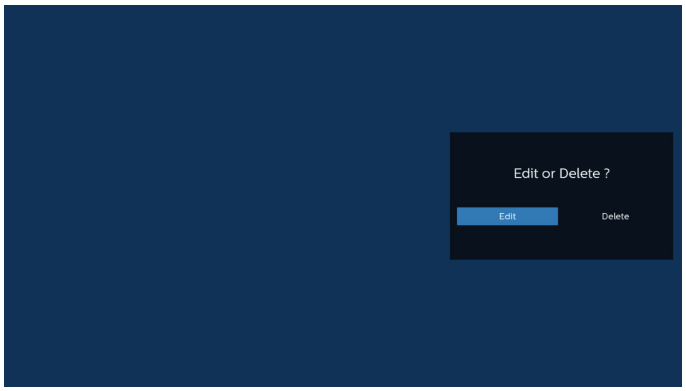
   videos: {root dir of storage}/philips/video/
   photos: {root dir of storage}/philips/photo/
   music : {root dir of storage}/philips/music/



5. If you select “USB” storage, the App will guide you through selecting the USB device.

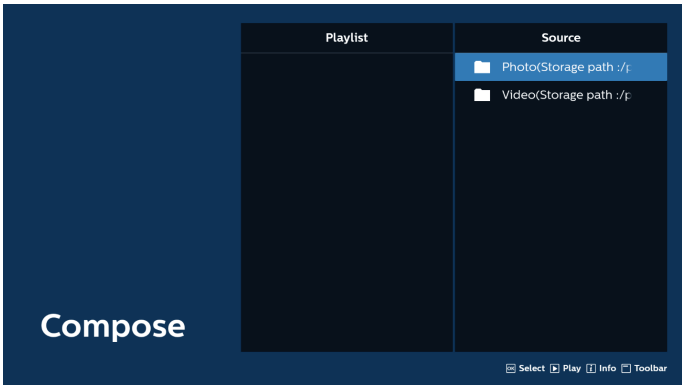


6. To edit or delete a non-empty playlist, select the desired playlist that has a pencil icon on right side of the selected file.

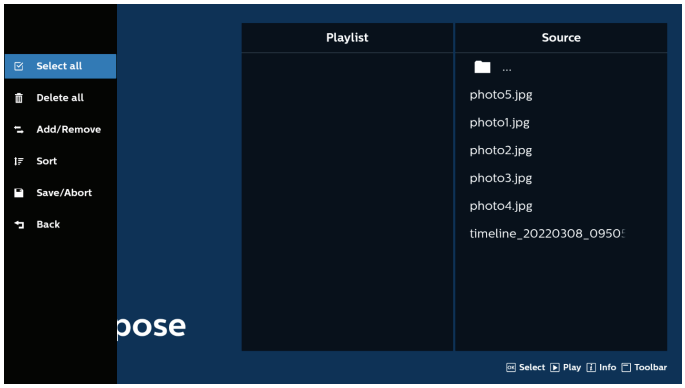


7. Once you start to edit a playlist, you will see below screen.
   Source - files in storage.
   Playlist – files in playlist.
   Option – launch the side menu bar.
   Play key – play the media file.
   Info key – show the media information.
   Touch file - select/deselect a file.

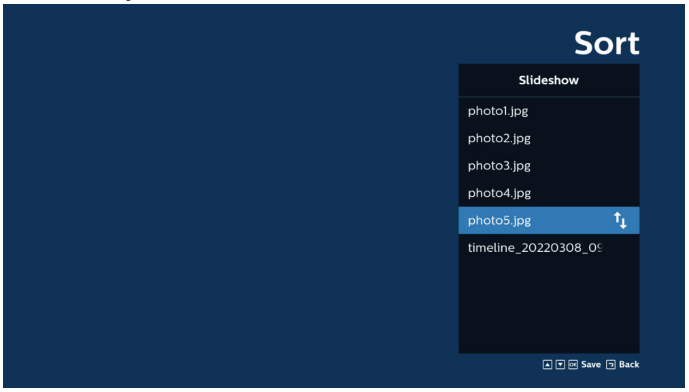
   Note:
   When long press on one of the directories in Source, full path will then be displayed.



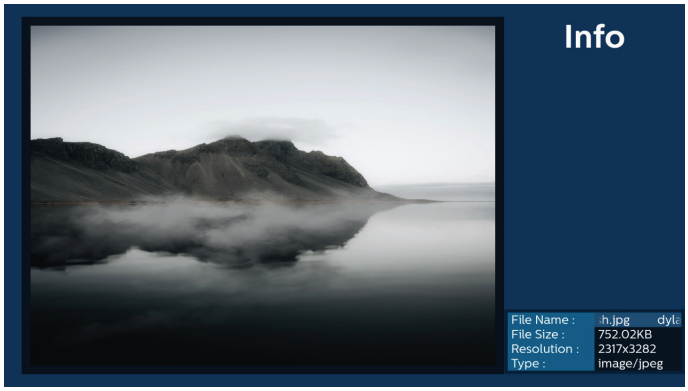
   7-1 From the side menu bar, the following functions are available:
   - select all: select all storage files.
   - delete all: delete all playlist files.
   - add/remove: update playlist from source.
   - sort: sort playlist.
   - save/abort: save or abort playlist.
   - back: return to the previous menu.



8. If “Sort” is selected, you can customize the file order severally.

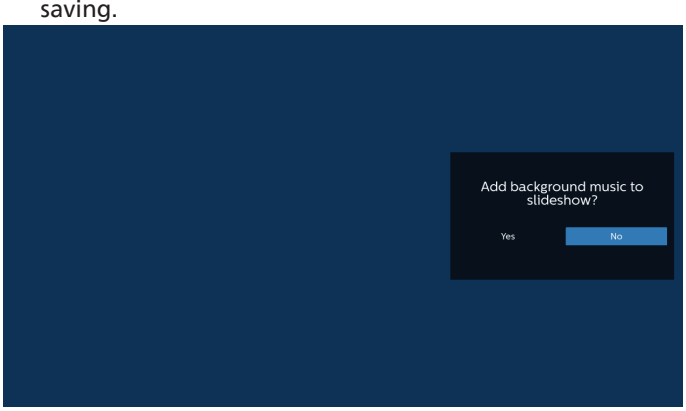


9. After selecting the desired file, press “Info” key to obtain the detailed information.

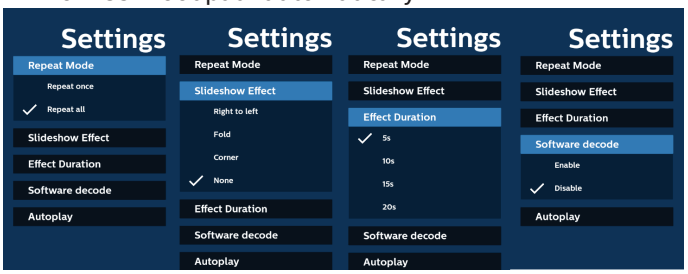


10. After selecting the desired file, press “Play” key to play the media file immediately.

11. If you create a playlist with all image files, you will be asked to add a background music to the slideshow before saving.



12. Select “Settings” on the main page, there are 5 options available: “Repeat Mode”, “Slideshow Effect”, “Effect Duration”, “Software Decode” and “USB Autoplay”.
Repeat mode: set the repeat mode.
Slideshow Effect: photo slideshow effect.
Effect Duration: duration of photo effect.
Software Decode: no black screen between video play.
Autoplay: Plug in the USB device and it will play the files from USB root path automatically.



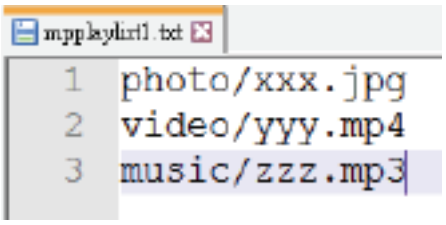
13. Media Player import text file

Step 1. Create media player text file.

- File name : mpplaylistX.txt, “X” means playlist number(1,2,3,4,5,6,7).

Ex. mpplaylist1.txt, mpplaylist2.txt

- Content :



Note: If the playlist contains video and music files, the screen becomes black when playing music file.

Step 2. Copy “mpplaylistX.txt” to “philips” folder of internal storage. You may use SFTP to do this.

- File path : /storage/emulated/0/philips (for DL, PL)
  Ex. /storage/emulated/0/philips/mpplaylist1.txt

Step 3. Prepare media files to “photo”, “video” and “music” folder under “philips” folder, internal storage only.

- Ex. /storage/emulated/0/philips/photo/xxx.jpg
  /storage/emulated/0/philips/video/yyy.mp4
  /storage/emulated/0/philips/photo/zzz.mp3

Step 4. Start media player app, it will automatically import media player text file.

PS. If the user updates the playlist on the UI, the mpplaylistX. txt file will be updated as well.

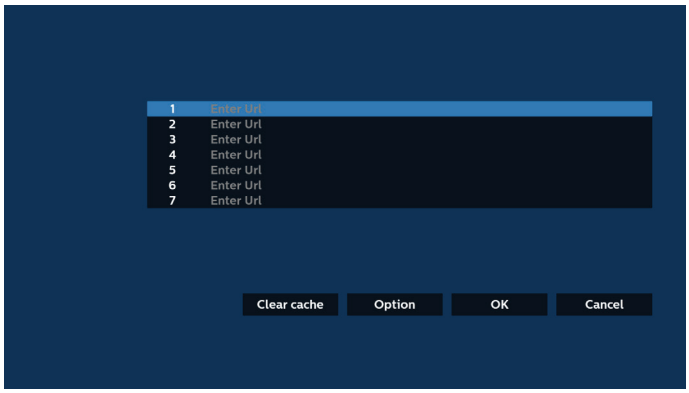
5.5. Browser

Before using this feature, ensure that the system is connected successfully to the network.

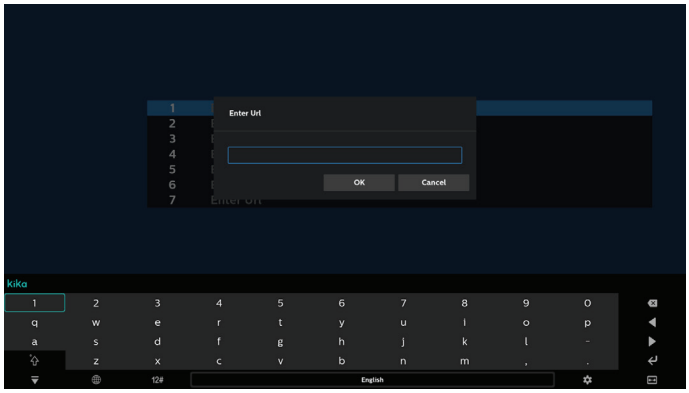
(See 6.1.1.1.1. Wi-Fi & 6.1.1.1.2. Ethernet)

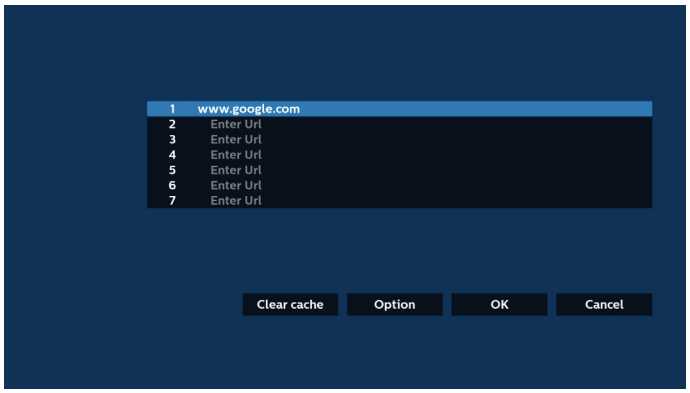
1. Main page of “Browser” App which allows you to make related settings.

2. Press “Compose” then enter the next page.
   Users can choose between 1~7.
   A dialog box appears after the selection is made.

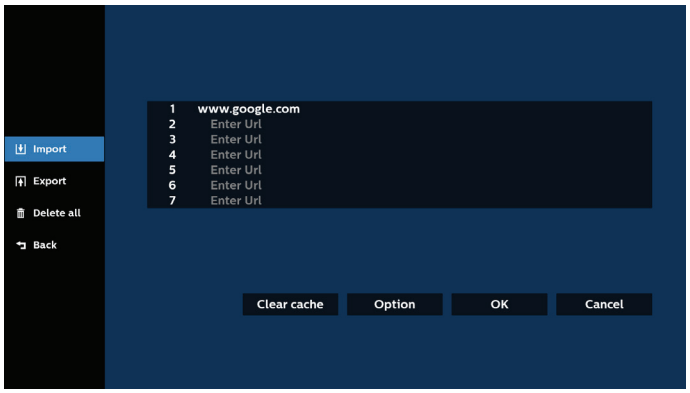


3. Use the on-screen keyboard to enter URL and press the OK button, the data will be saved in the List.



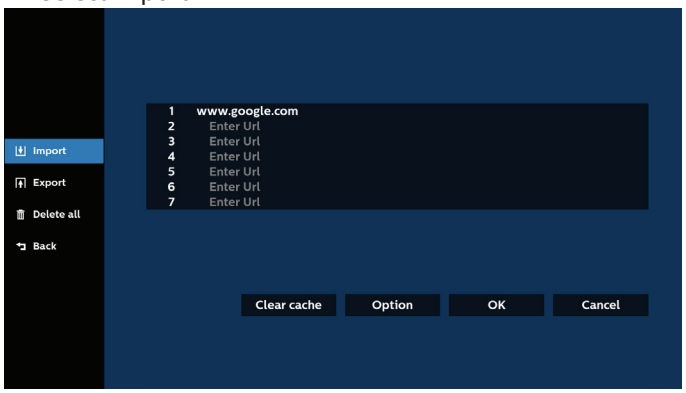


4. Press “Option” and a list will appear on the left side.
   Import: Import the file of URL list
   Export: Export the file of URL list
   Delete all: Delete all URL records from the main screen
   Back: Close the side menu bar

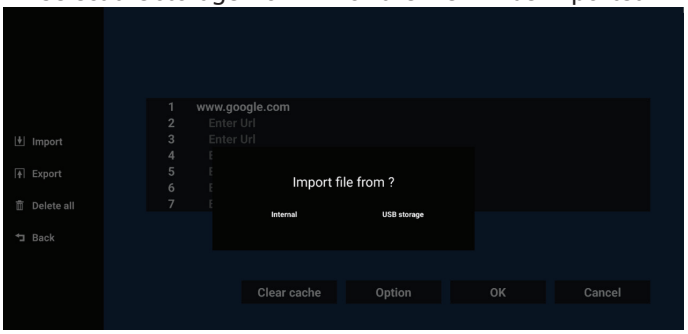


4.1 Import

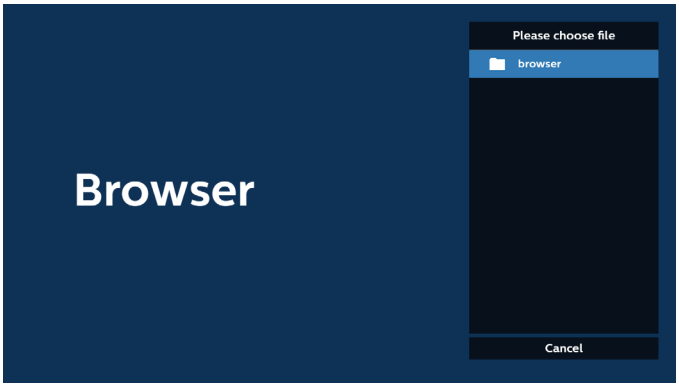
- Select import.



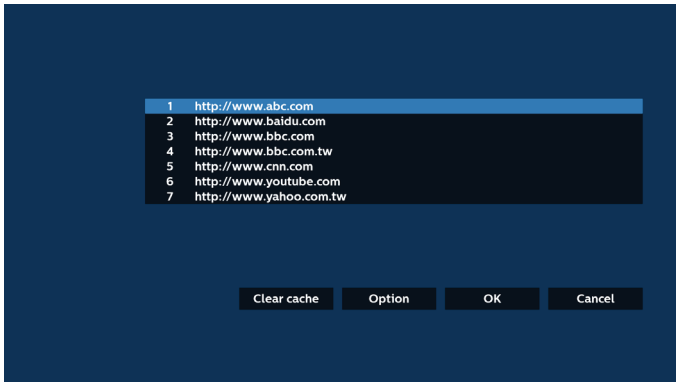
- Select the storage from which the file will be imported.



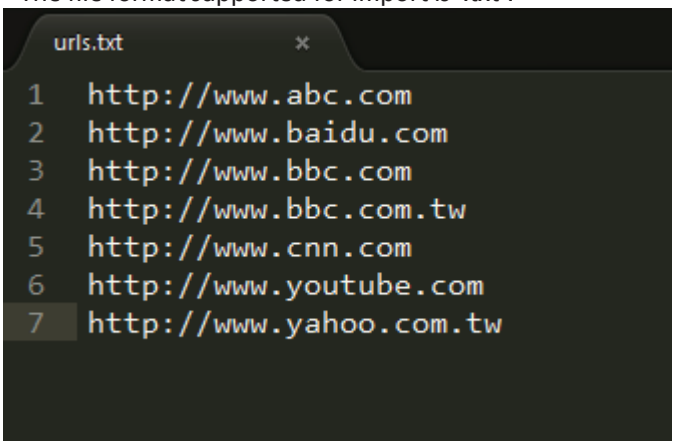
- Select a browser file.



- Import the browser file and the URL will be listed on the screen.

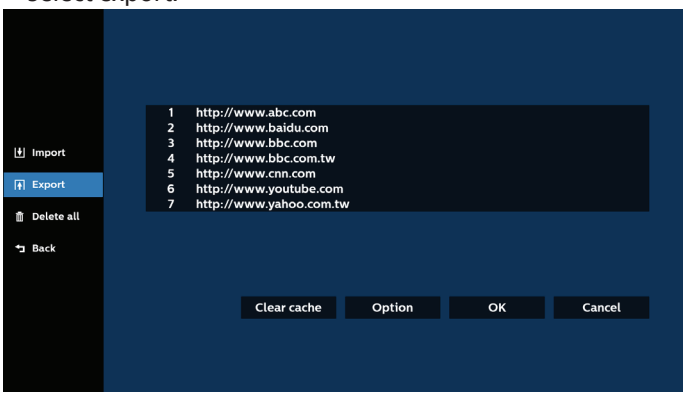


- The file format supported for import is ".txt".

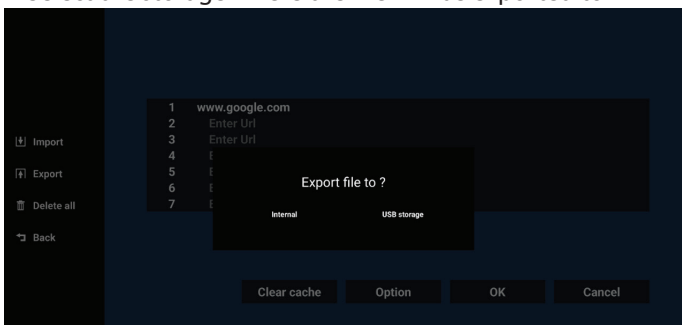


4.2 Export:

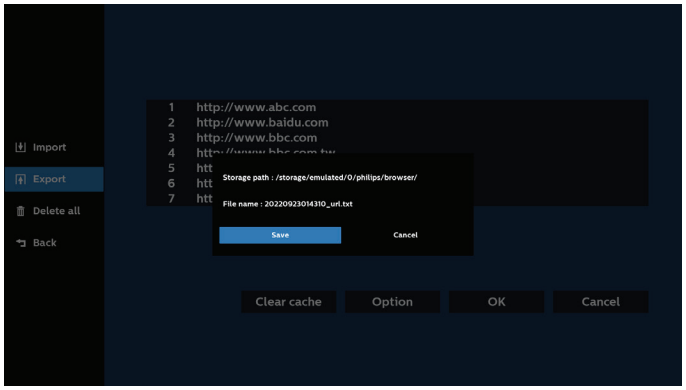
- Select export.



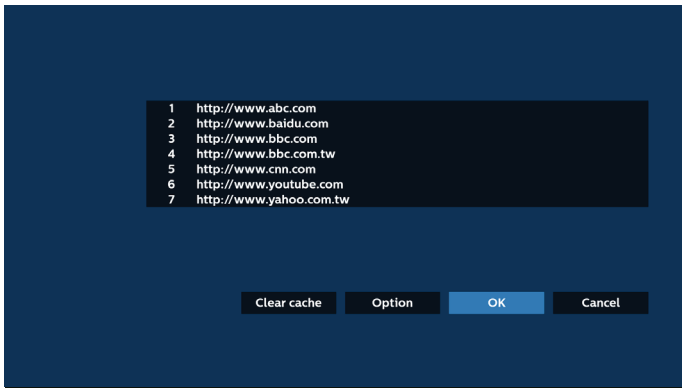
- Select the storage where the file will be exported to.

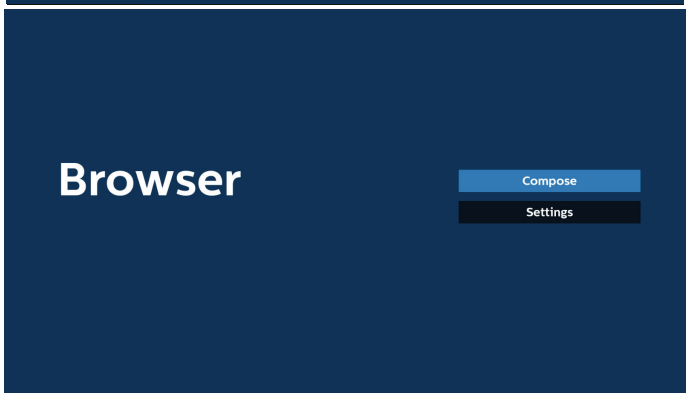


- A dialog box displays the path of the file to be saved as well as the file name. Press the "Save" button to save the URL.

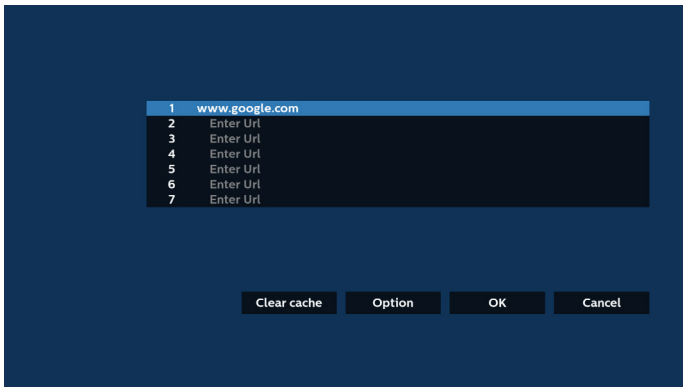


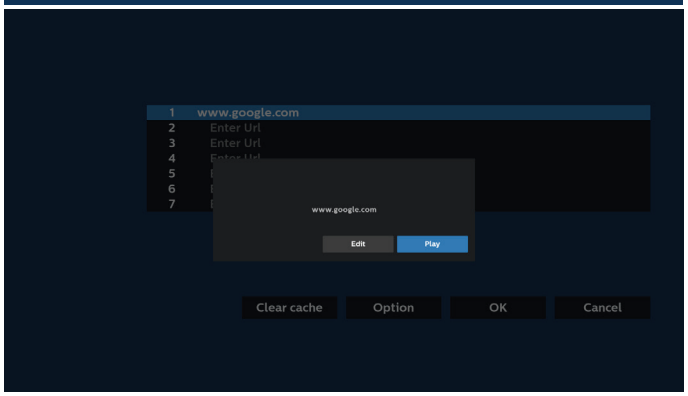
5. Press the "OK" button to save the URL record.



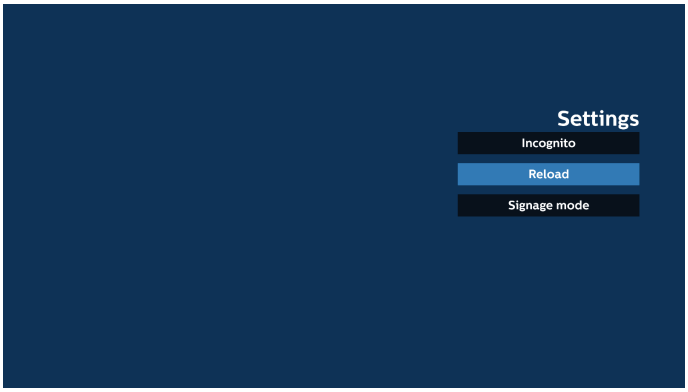


6. If you select a non-empty item from the URL list, a message will appear asking if you want to edit or play the URL. If you select "Edit" a dialog box allows you to edit the URL. If you select "Play", a web page of the selected URL appears.





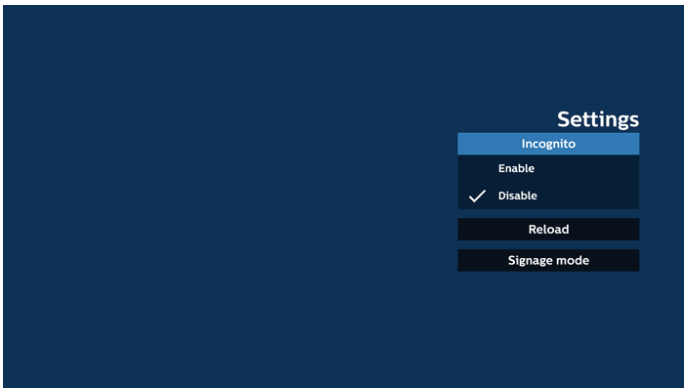
7. Press “Settings” then enter the next page.



7.1 Incognito

a. Enable : Display webpages using incognito mode.

b. Disable: Display webpages using non-incognito mode.



7.2 Reload

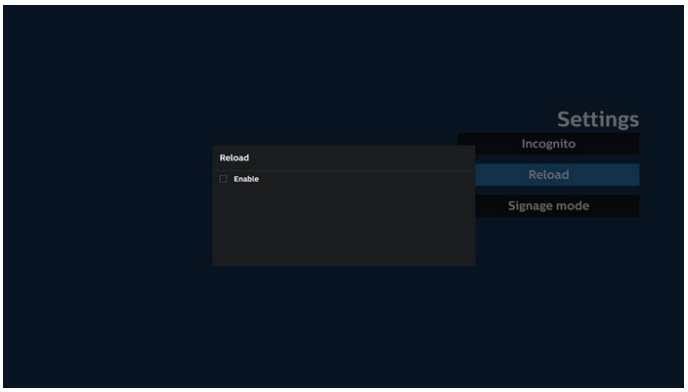
Allow users to set the webpage reload time.

a. If the enable checkbox is unchecked, the default reload time is 60 seconds.

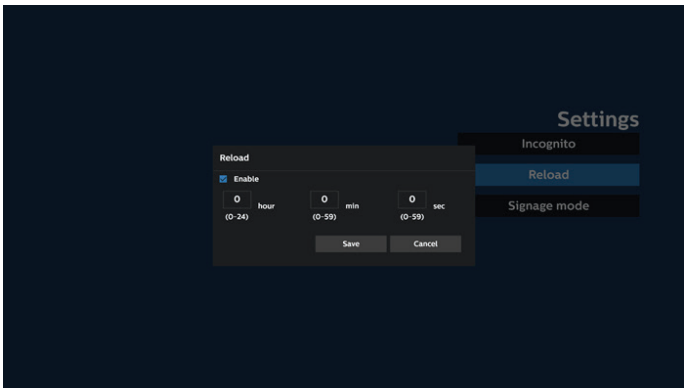
Note:

In this case, the webpage only reloads when the network state changes.

If the network state is always connected, the webpage will not reload after 60 seconds.



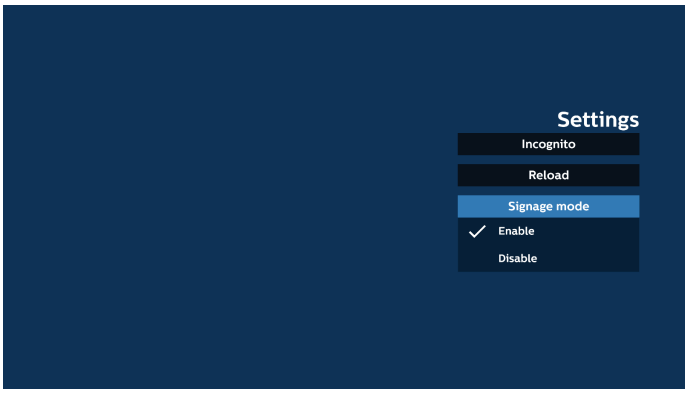
b. If the enable checkbox is checked, you can set the reload time.



7.3 Signage mode

Enable going back to the Browser Compose page when the user returns from another app’s activity. Disable keeping the Browser screen on the latest webpage. The option is enabled by default.

Open www.google.com and search for “PDF demo file”. Click one PDF file in search result, the PDF file will be downloaded and opened. When user press “Back” button, the screen goes back to Browser Compose page if the option is enabled. The screen goes back to the search result if disabled.



8. OSD menu interaction with Browser

8.1 Boot on source

- Set OSD menu > Configuration1 > Boot on source > set BROWSER Play List to 0.
  Then PD will show Browser after rebooting.
- Set OSD menu > Configuration1 > Boot on source > Input be BROWSER Play List be 1.
  Then PD will show the web page with 1st URL in Browser app.

8.2 Schedule

Set OSD menu > Advanced option > Schedule >
On time1, Off time2, Browser as input, any day of the week and Play List.
Then PD will show the web page with URL in Browser app at time1 and finish at time2.

9. How to edit the URL list via SFTP
   Step 1. Create a text file of Browser.

   - File name: bookmarklist.txt.
   - Content:

   Step 2. Copy bookmarklist.txt to “philips” folder of your internal storage. You may use SFTP to do this.

   - File path: /storage/emulated/0/philips (for DL, PL)

   Ex. /storage/emulated/0/philips/bookmarklist.txt

   Step 3. Start Browser App, it will import the text file of Browser automatically.

   PS. If the user updates the playlist on the UI, the bookmarklist.txt file will be updated as well.

10. Offline browsing
    When an address is set with URL1 and OSD schedule is used to open URL1 web page, browser app will automatically save home web page data of Url1 to local storage.

    If the network is disconnected while the OSD scheduler is opening the browser app, the browser app will automatically open the URL 1 address home page from local storage.

    Note:

    a. Browser app can only save Url 1 address home page data, data for Url 2 to Url 7 cannot be saved.
    b. Local storage : /sdcard/Download/Browser_ cache.png.
    c. Pressing “Clear cache” button can clear Url 1 address home page data from local storage.

5.6. PDF Player

5.6.1. OSD menu interaction with PDF player:

1. Boot on source:
   - Input:
     - If "PDF Player" is selected as the source, it will enter PDF Player page automatically after the boot process is completed.
   - Playlist:
     - Playlist 0 : go to the main page of PDF player.
     - Playlist 1 - Playlist 7: go to PDF player and playback File1 - File7 of playlist automatically
2. Schedule:
   - Today:
     - Show date and time.
   - 1 - 7:
     - Set up to 7 schedules.
   - On/Off:
     - Set start time and end time.
   - Input:
     - Select PDF Player as the source, the PD will launch the PDF Player automatically at end time.
   - MON, TUE, WED, THU, FRI, SAT,SUN, Every week :
     - Set life cycle.
   - Play list :
     - 0 : go to the main page of o PDF player.
     - 1-7 : go to media player and playback File1 - File7 of the playlist automatically.

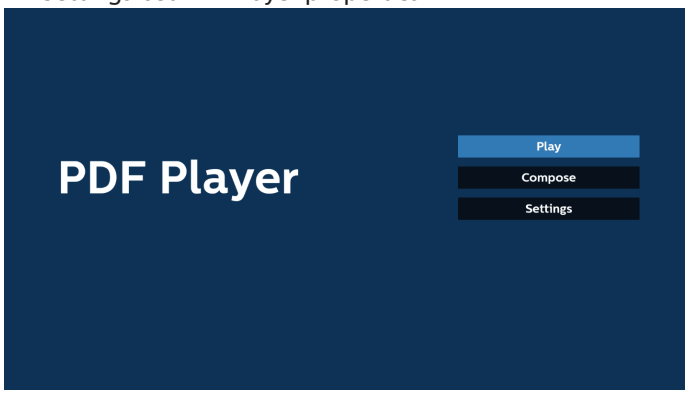
5.6.2. PDF Player introduction:

1. The main page of PDF Player, this page consists of three options: "Play", "Compose" and "Settings".

   Play: select a playlist to play.

   Compose: edit the playlist.

   Settings: set PDF Player properties.



2. Select "Play" on the main page, first you should select one playlist to play between FILE 1 and FILE 7.

   The pencil icon means that the playlist contains the content.

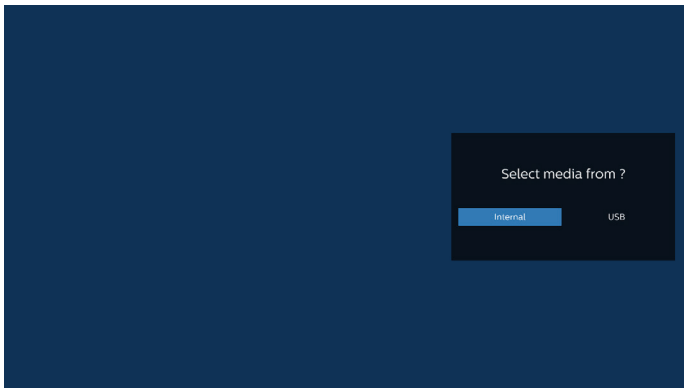
3. Select "Compose" on the main page, first you should select one playlist to edit between FILE 1 and FILE 7.

   The pencil icon means that the playlist contains the content.

4. If an empty playlist is selected, the App will guide you through selecting the media source.

   All media files should be stored in /philips/ of root directory. For example,

   pdfs : {root dir of storage}/philips/pdf/

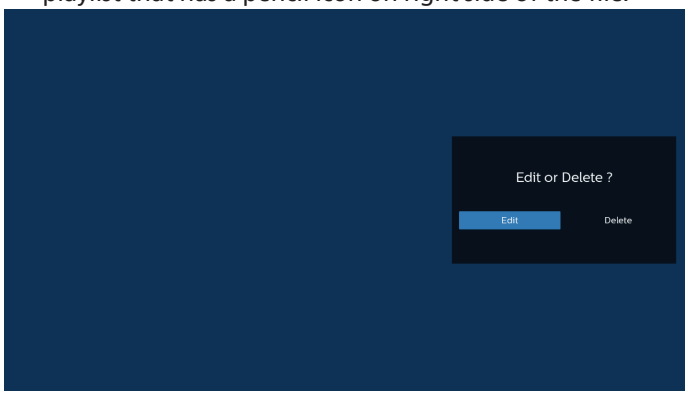


Note:

- If the USB stick cannot be found, the following message will be displayed. "Please plug in USB storage".

- Internal storage is always available, so it can navigate to the next page.

5. To edit or delete a non-empty playlist, select the desired playlist that has a pencil icon on right side of the file.



6. Once you start to edit a playlist, a menu is displayed as below.

   Source- files saved in the memory storage.

   Playlist– files saved in the playlist.

   The following functions can be operated through the corresponding keys on the remote control.
   Option key – launch the side menu bar

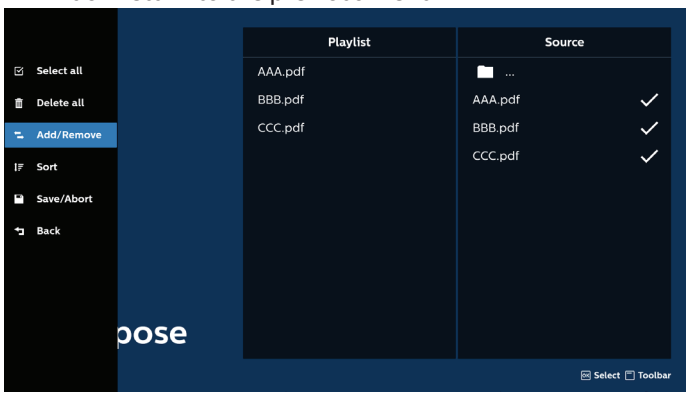
   Play key – play the media file.

   Info key – show the media info.

   Ok key – select/deselect a file.

   6-1. From the side menu bar, the following functions are available:

   - Select all: select all files saved in the storage.
   - Delete all: delete all playlist files.
   - Add/Remove: add or remove a playlist from source.
   - Sort: sort the playlist.
   - Save/abort: save or abort the playlist.
   - Back: return to the previous menu.



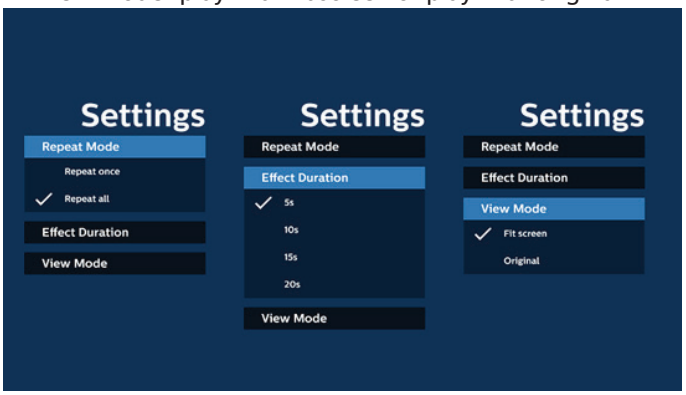
7. If "Sort" is selected, you can customize the file order severally.

8. Select "Settings" on the main page, there are three options available: "Repeat Mode", "Effect Duration" and "View Mode".

   Repeat Mode: set the repeat mode.

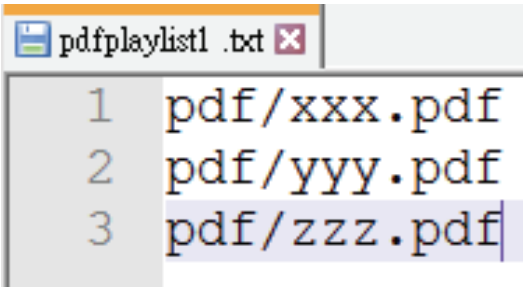
   Effect Duration: duration of photo effect.

   View Mode : play with fit screen or play with original.



9. How to edit the PDF list via SFTP:
   Step 1. Create a text file of PDF player.

   - File name : pdfplaylistX.txt, "X" means playlist number(1,2,3,4,5,6,7).
     Ex. pdfplaylist1.txt, pdfplaylist2.txt
   - Content:



   Step 2. Copy pdfplaylistX.txt to "philips" folder of the internal storage. You may use SFTP to do this.

   - File path : /storage/emulated/0/philips (for DL, PL)
     Ex. /storage/emulated/0/philips/pdfplaylist1.txt

Step 3. Add the PDF files to the “PDF” folder in the “philips” folder of your internal storage.

- Ex. /storage/emulated/0/philips/pdf/xxx.pdf
  /storage/emulated/0/philips/pdf/yyy.pdf
  /storage/emulated/0/philips/pdf/zzz.pdf

Step 4. Start the PDF player App, it will import the text file of PDF player automatically.

PS. If the user updates the playlist on the UI, the bookmarklist.txt file will be updated as well.

Media Hotkey:

Play: play the file.

Pause: pause.

Fast forward: skip to the next page. If the page is close to the end of file, it will go to the next file.

Rewind: skip back to the previous page. If the page is close to the beginning of file, it will go to the last file.

Stop: return to the first page of file.

Arrow keys:

Up/Down/Left/Right: Adjust the page. (when the page is zoomed in/out)

Left: Previous page. (when the page is not zoomed in/out)
Right: Next page. (when the page is not zoomed in/out)

Combination key:

Number key + OK key: select a specific page and press OK key to change the page.

- Press a number key.

- Press OK key, the page number will be shown at the bottom of the page. If the page number exceeds the total page number, the current page number will remain at the bottom of the page.

Note:

If you plug in two or more USB disks to edit the playlist, playback from the playlist cannot be guaranteed after powering on/off, due to the USB storage path may be changed. It is strongly recommended to use only one USB disk when editing the playlist.

5.7. Custom App

Set up the application for Customer Source.

Note:

(1) It only displays the App installed by user.

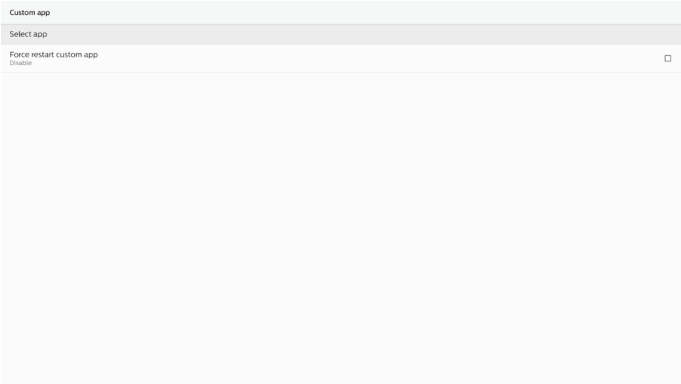
(2) System's pre-installed App is not displayed.

5.7.1. OSD Menu operation:

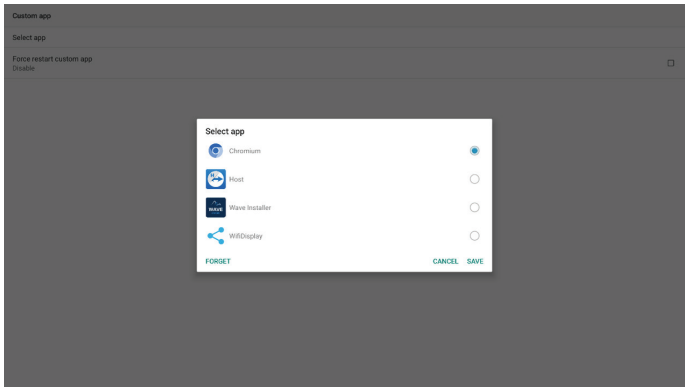
RCU: Source > Custom

If a customer APK is set, the PD will open the customer App when switching the source to Customer mode.

If the customer APK is not set, the PD will show a black screen when switching the source to Customer mode.



5.7.2. Function Introduction



Save

Pressing "Save" will perform the function of storing.

Forget

After pressing "Forget", those previously stored information can be removed.

Cancel

Cancel and close the dialog box.

If there is no customer installed APK, the list will be blank.

If the options are not available, "Save" and "Forget" keys will be shown in gray.

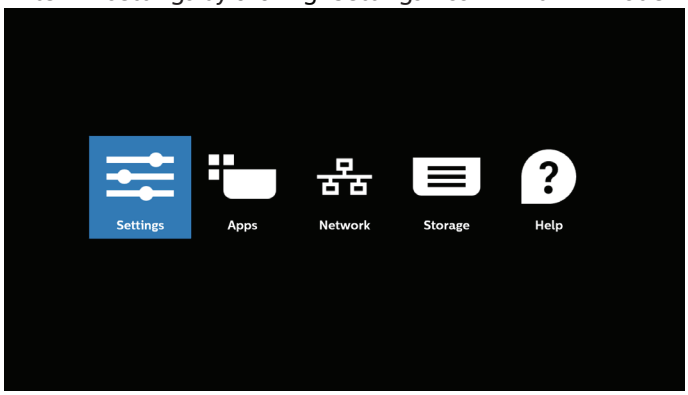
Force restart custom app

If the app is closed due to an exception, the app will be automatically reopened.

6. Setting

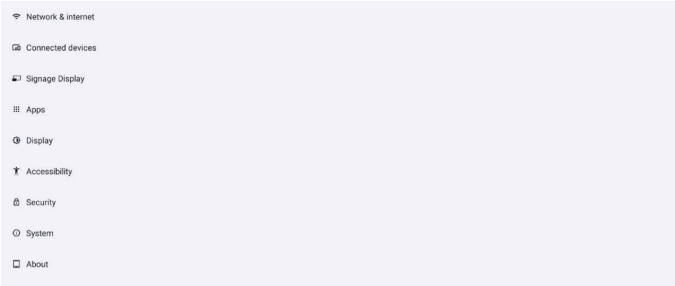
6.1. Settings

Enter PD settings by clicking “Settings” icon in Admin mode.

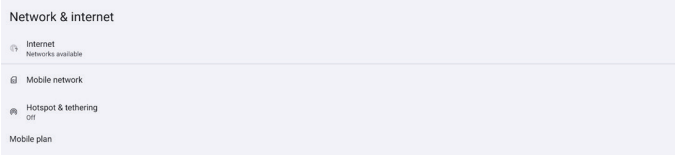


Setting menu consists of the following items:

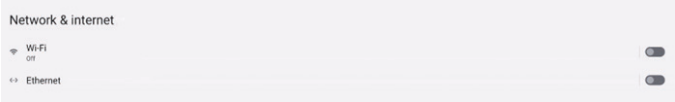
(1) Network & Internet
(2) Connected devices
(3) Signage Display
(4) Apps
(5) Display
(6) Accessibility
(7) Security
(8) System
(9) About



6.1.1. Network & Internet



6.1.1.1. Internet



6.1.1.1.1. Wi-Fi

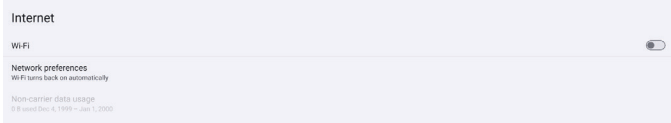
Settings -> Network & Internet -> Internet -> Wi-Fi

Important Note: This option is available only when the supported Wi-Fi dongle is plugged. Reboot the device whenever you plug or remove the USB Wi-Fi dongle.

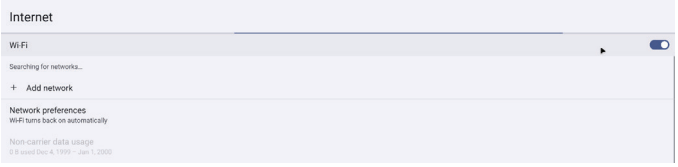
Enable Wi-Fi

Enable/disable Wi-Fi connection through main switch in Setting -> Network & Internet -> Internet -> Wi-Fi -> Off/On toggle button.

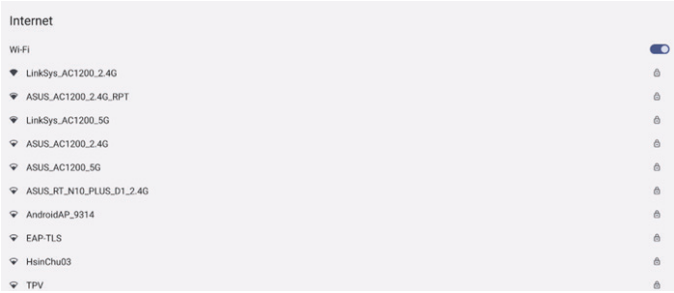
Wi-Fi Off



Wi-Fi On

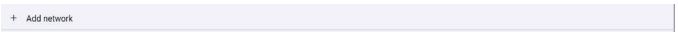


On the available network list, select an AP (access point) on an existing wireless network.



Enter the required settings.

There is an “Add network” item at the end of list. If network is not listed, use “Add Network” to join a hidden network.



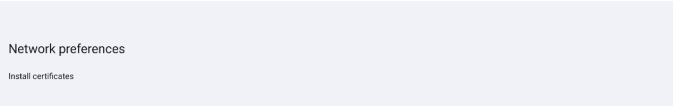
You must input network SSID, security type and other advanced options for this network.

Note:

When Wi-Fi is enabled, Ethernet will be disabled automatically.

Network preferences

Settings -> Network & Internet -> Wi-Fi -> Network preferences



6.1.1.1.2. Ethernet

Settings -> Network & Internet -> Internet -> Ethernet

Enable Ethernet

Enable/disable Ethernet connection by Setting -> Network & Internet -> Internet -> Ethernet toggle button.

By default, the system uses DHCP to join the network.

Connection Information (When the options are grayed out, they are not editable).

A. IP Address

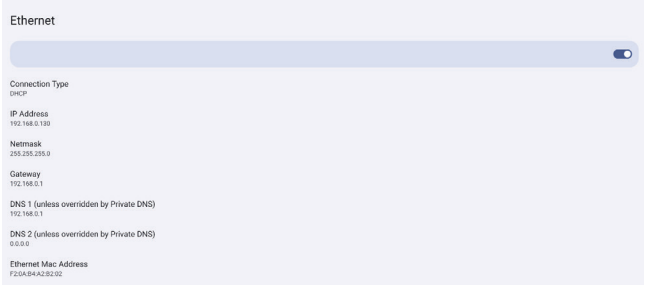
B. Netmask

C. Gateway

D. DNS 1

E. DNS 2

F. Ethernet Mac Address

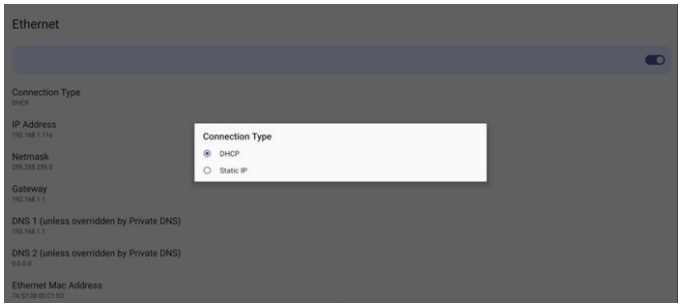


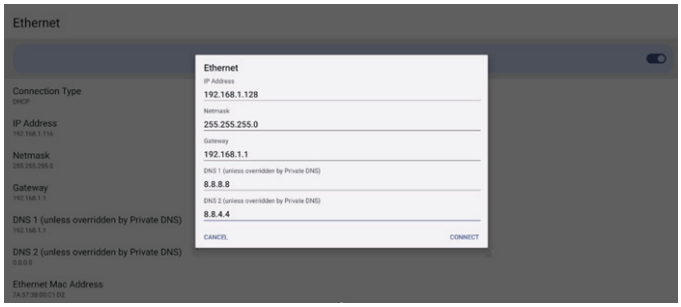
Note:

Wi-Fi connection will be disabled automatically when Ethernet connection is enabled.

Ethernet Static IP

When the Connection Type is changed to “Static IP”, the user can manually set the Ethernet IP Address, Gateway, Netmask and DNS 1/2 address.





Note:

1. Please input IPv4 address in all fields; in dot-decimal notation, consisting of four decimal numbers, each ranges from 0 to 255, separated by dot.

6.1.1.2. Mobile network

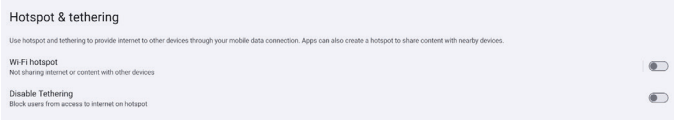
This option show when device plug-in supported 4G module with SIM card. System not support hot-plug 4G module, please shutdown system (AC off) before install 4G module to device, and then power on again.

Switch to enable in main switch in Settings -> Network & internet -> Mobile network to enable mobile data. The SIM card must be plug into SIM card slot before using it.

6.1.1.3. Hotspot & tethering

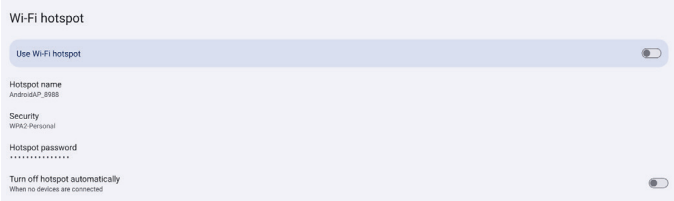
Settings -> Network & internet -> Hotspot & tethering.

Important Note: This option only appears when the supported Wi-Fi dongle is plugged-in.

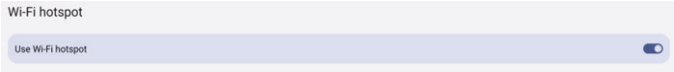


6.1.1.3.1. Wi-Fi hotspot

Settings -> Network & internet -> Hotspot & tethering -> Wi-Fi hotspot

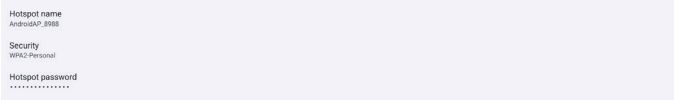


Use Wi-Fi hotspot



When enable this, the Wi-Fi turn off connection and become a hotspot AP (access point). Other Wi-Fi client devices can join into and share network. User can set up detail Wi-Fi hotspot information when user enable “Wi-Fi hotspot”.

Setup Wi-Fi hotspot information



Hotspot name : it is the SSID and must comply with the IEEE 802.11 specification. It is recommended to use 0-32 octets with UTF-8 encoding.

Security : System provide NONE and WPA2 PSK security protocol to provide hotspot network. Suggest using WPA2 PSK which more secure than NONE.

Hotspot password : it is randomly generated for other clients to connect by default. The user can also set a new password manually.

Turn off hotspot automatically

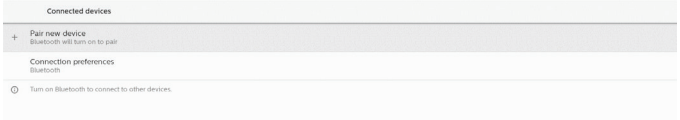
When enabled, this feature will automatically deactivate the hotspot if no devices are connected to it for a specified period of time. This prevents the hotspot from staying on unnecessarily when it's not in use.

6.1.1.3.2. Disable Tethering

By default, devices can use mobile data to access network via a hotspot. If enabling the option, the system will block devices from network access by hotspot.

6.1.2. Connected devices

Show the devices connected via Bluetooth.



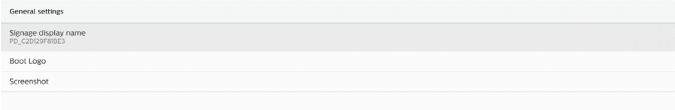
6.1.3. Signage Display

Settings -> Signage Display, to setup most features of signage display. See below for more detailed information about Signage Display settings.

6.1.3.1. General Settings

Settings -> Signage Display -> General Settings

Set up Signage Display name, User logo and Screenshot.



6.1.3.1.1. Signage Display Name

Settings -> Signage Display -> General Settings -> Signage Display Name

Set up the Signage Display name, the default name is the Ethernet MAC address with a prefix “PD_”. For example, “PD_000b12223398”. The maximum length of the name is 36 characters in UTF8 format. Click to rename it.

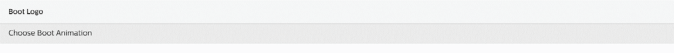
6.1.3.1.2. Boot Logo

Settings -> Signage Display -> General Settings -> Boot Logo

User can set up device boot up logo (boot animation) when OSD Menu -> Configuration 2 -> Logo is set to “User” mode.

If the Logo is not set to “User” mode, the user will not be able to select a custom boot animation.

When set to “User” mode, the “Choose Boot Animation” becomes available.



When Logo is set to User mode, the system will disable the default Philips logo and replace it with the user selected boot animation file. If user does not set a boot animation file for User mode, the default Philips boot animation will be displayed during boot time.

Click “Choose Boot Animation” to pop up a dialog for the user to select a boot animation file. The system will automatically scan the files under the USB storage.

The boot animation file name must be set to “bootanimation.zip”, any other name is invalid.

All available boot animation files can be found in the following folder:

1. File under /data/local/bootanimation/:
   The boot animation file that was copied from USB.
2. File under {USB_STORAGE_VOLUME_NAME}/:
   The boot animation file saved on the USB storage.

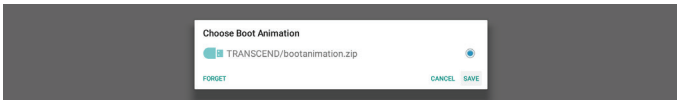
Dialog options:

1. FORGET
   Clear “bootanimation.zip under /data/local/bootanimation/.
   Custom boot animation will not be used during system boot up.
2. CANCEL
   Cancel and close the dialog box.
3. SAVE
   Copy the selected file to /data/local/bootanimation/. After doing this, user can remove their external storage (USB). System uses the boot animation file under /data/local/bootanimation.

If the system does not found any bootanimation.zip file under external storage (USB) and /data, the file list will be empty. The “SAVE” and “FORGET” buttons will be grayed out, user should check the content saved on the USB memory. Click “CANCEL” button to close the dialog box, and plug in the USB memory again.

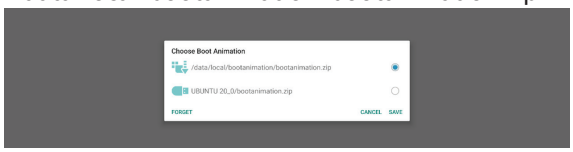
If /data/local/bootanimation/ folder is empty, it means that “bootanimation.zip” has not been saved by the user before. Default Philips logo appears during system boot up.

When “bootanimation.zip” is found in the external storage, a dialog box displaying the list of files will appear.



If the file “bootanimation.zip “ can be found in the folder “/data/local/bootanimation/”, the pop-up dialog box will

show that file as the first option. It simply means that user has previously copied (saved) the file “bootanimation.zip” and that the system will boot up with boot animation from /data/local/bootanimation/bootanimation.zip.

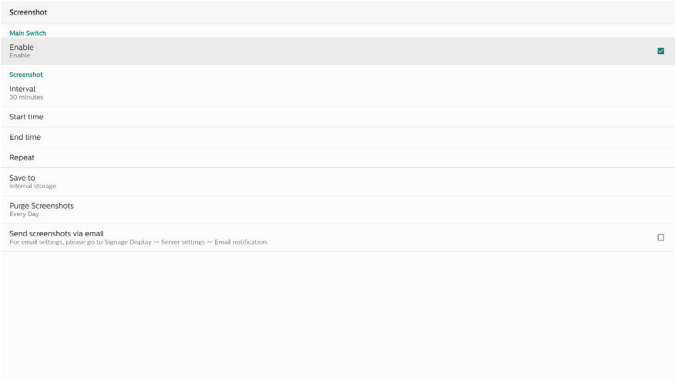


Boot animation file can be replaced by using the “SAVE” button.

6.1.3.1.3. Screenshot

Settings -> Signage Display -> General Settings -> Screenshot

To capture the screenshots from the imported content, click “Enable” to enable the auto screenshot function. If the screenshot options are grayed out, it means that the screenshot function has not be enabled yet.



After enabling this feature, you can set the interval time between each screenshot, as well as the destination folder where the captured screen will be saved. The option “Save to” notifies you that the screenshot images will be saved to the internal storage and they cannot be changed manually.

NOTE:

1. The screenshot images will be deleted automatically under the following conditions:
   (a). When the start time of the screenshot feature is set to 0 seconds.
   (b). Starting the screenshot at 40 seconds of minute.
   (c). If you decide to purge the screenshot photos every week, the data of deleting the photos will be changed to the day that you apply the setting of screenshot feature.For example, if you set the purging day to Monday of every week, then changed other settings in screenshot feature on Friday, the purging day will be changed to Friday (the day of the system’s current time).
2. Sleep (system suspend) and screenshot feature:
   The screenshot feature is suspended when the system enters sleep mode. The function of mailing out the screenshot is consequently suspended. The screenshot-related features will be restarted when the system enters active mode.

(1). Interval
Set the interval time between each screenshot. The available options are 30 and 60 minutes.

(2). Start Time
Set the start time of a day to begin the screenshot function.
Make sure that you click the “Save” button before leaving the dialog box, or your settings will not be saved.
The start time must be lesser than the end time. A toast message will appear notifying you if it is an invalid value.

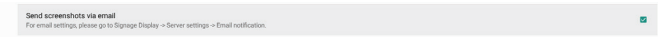
(3). End Time
Set the end time of a day to end the screenshot function.
Make sure that you click the “Save” button before leaving the dialog box, or your settings will not be saved.
The start time must be lesser than the end time. A toast message will appear notifying you if it is an invalid value.

(4). Repeat
Set the repeat mode for auto screenshot.

(5). Save to
The screen images will be saved in the folder “philips/screenshot” of the internal storage.

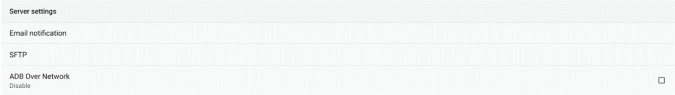
(6). Purge Screenshots
Set the interval time for deleting the screenshot images. The available options are “Every day” and “Every week”.

(7). Send screenshots via email
You can send each screenshot image as an e-mail attachment. The user must first set up the mail information in “Settings -> Signage Display -> Server Settings -> Email notification” (Refer to 6.1.3.2.1. Email Notification section).



6.1.3.2. Server Settings

Settings -> Signage Display -> Server Settings



6.1.3.2.1. Email Notification

Settings -> Signage Display -> Server Settings -> Email Notification

Click the checkbox to enable/disable E-mail notification feature. Set SMTP and manager E-mail after enabling the E-mail notification feature.

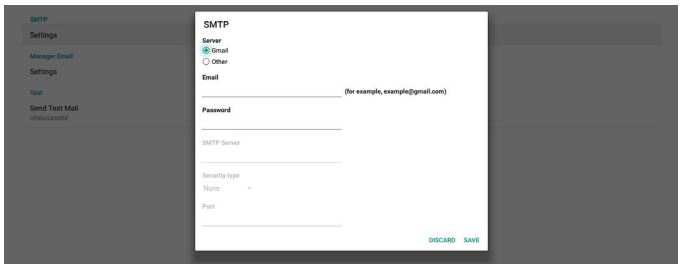
SMTP

Set up the sender E-mail address and SMTP server information. There are two types of SMTP server for user to set up: “Gmail” and “Other”. By using the “Other” option, user can manually set up an STMP server, security type and server port.

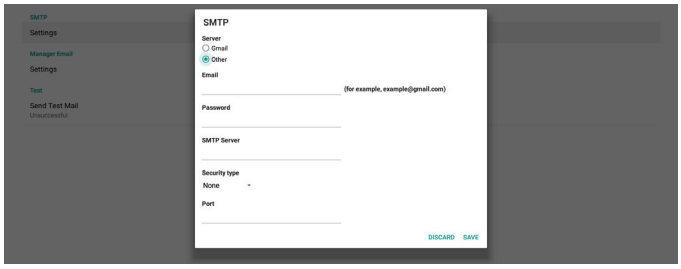
Note:

1. The password should be in UTF8 format with 6 to 20 characters.
2. User cannot set port 5000 (SICP default port) and 2121 (SFTP server default port).
   SICP network port setting in “Settings -> Signage Display -> Network Application -> SICP network port”.
   SFTP network port settings in “Settings -> Signage Display -> Server settings -> SFTP -> Port”.

Gmail: (SMTP server, Security type and Port are grayed out)

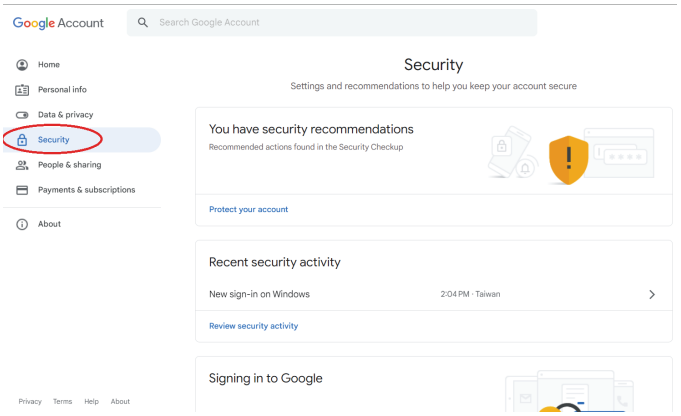


Other:



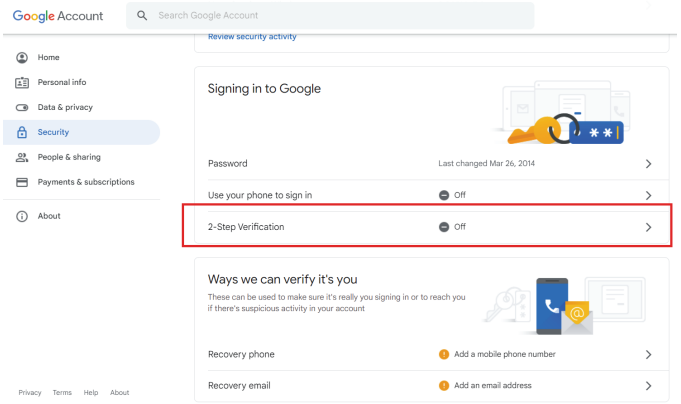
Gmail Security Settings

Open a web browser and login into your Google account. Click on the “Security” menu which can be found either on the left or at the top of the webpage.



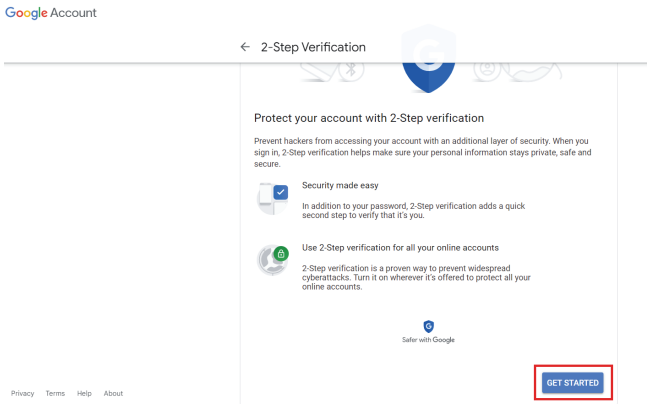
Step 1 - Select “2-Step Verification”

If 2-Step Verification is off, click to enable it.

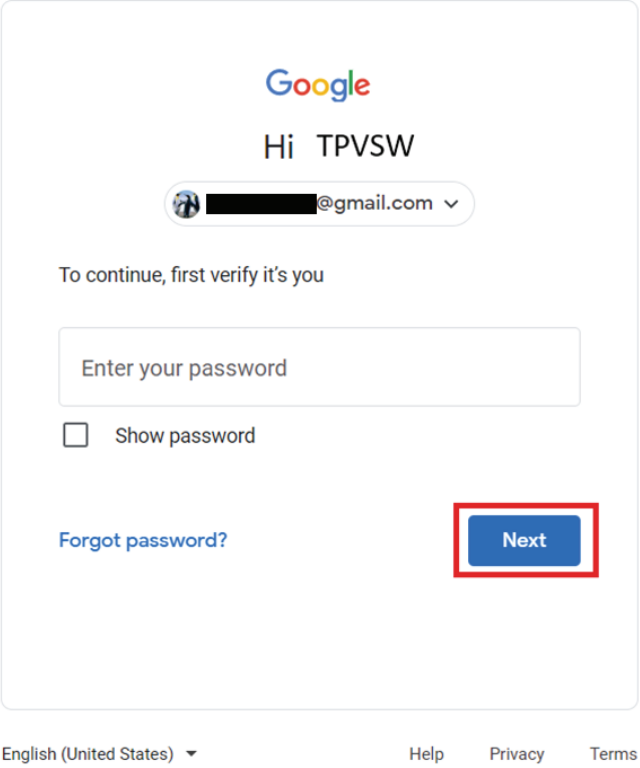


Step 2 - Configure 2-Step verification

Click the “GET STARTED” button to start configuring the 2-step verification options.

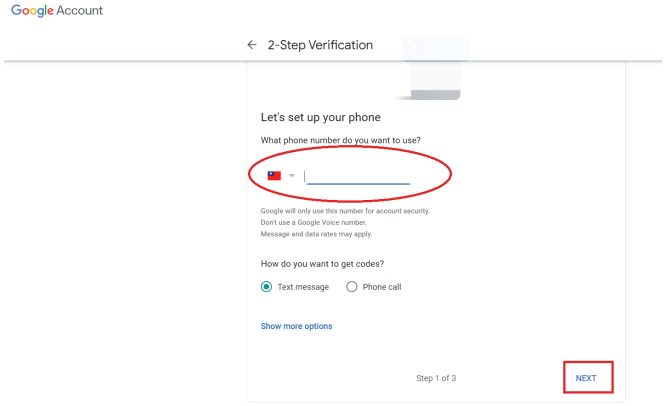


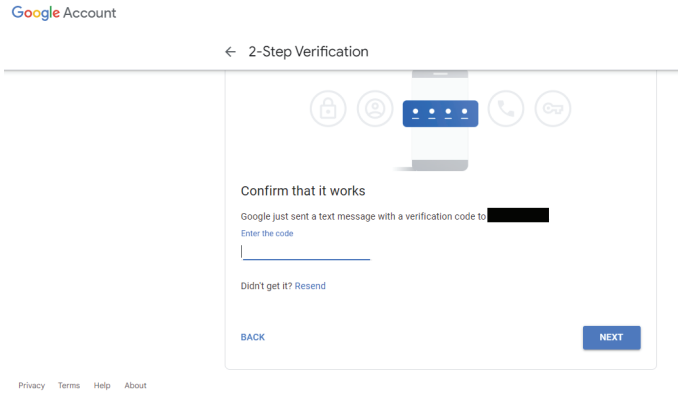
You may be prompted to log in to your Google Account again to confirm your identity.

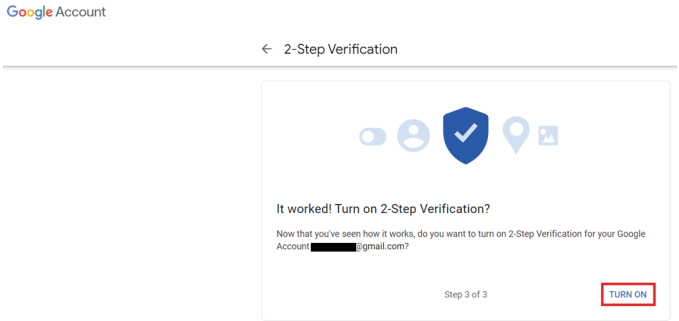


Step 3 - Use your phone to complete configuration

Use on-screen instructions and available options to complete 2-Step verification using your phone.

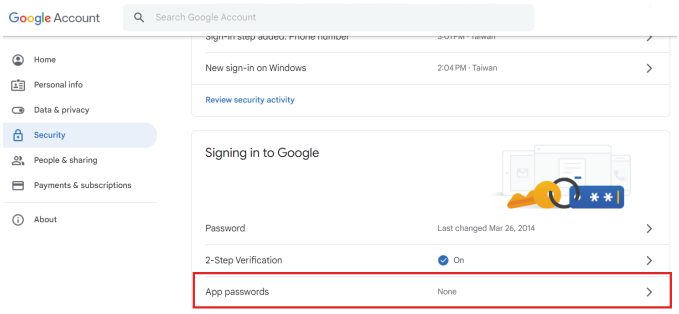






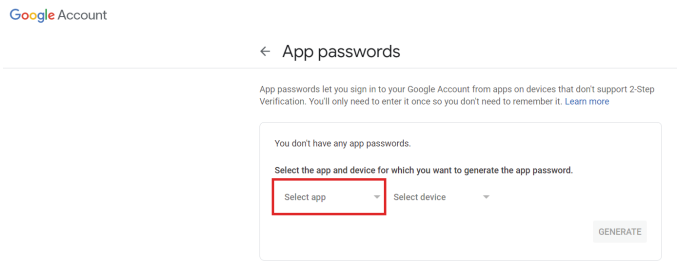
Step 4 - Create the App Password

Click on the "App Password" option to create a new application password:



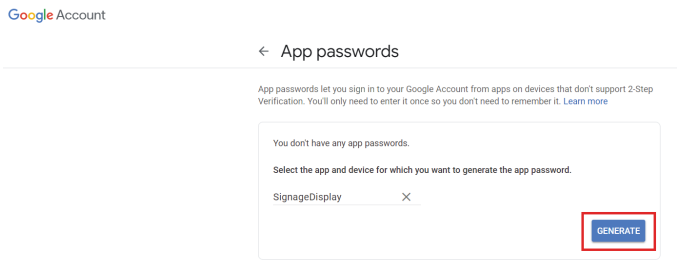
Step 5 - Add New App Name

First, select a device (for example, Windows Computer) and then click on "Select App" menu and choose "Other (custom name)":

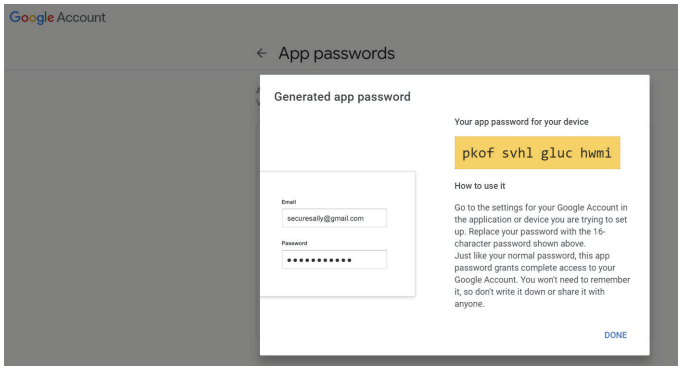


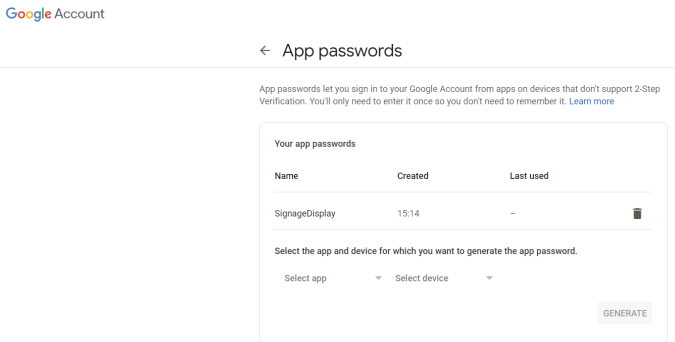
Enter a custom application name (it does not matter what name is used in this field). Click the "Generate" button:

(Ex. Enter "SignageDisplay" as an app name)



Record the auto-generated app password or simply select it and copy to the clipboard for later use.





Manager Email

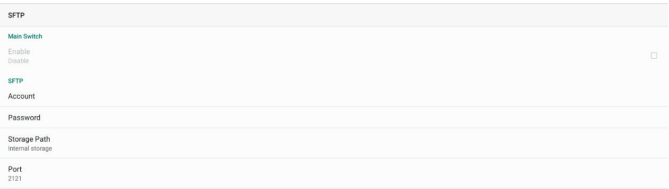
Specify the destination address to receive the e-mail.

Test

To check if your e-mail settings are correct, select 'Send Test Mail" to send a test e-mail.

6.1.3.2.2. SFTP

Settings -> Signage Display -> Server Settings -> SFTP



Click the checkbox to enable/disable SFTP server feature. After enabling this feature, user can setup an account, password and port number.

(1). Account: The user name to log into the SFTP server must be between 4 and 20 characters long, and only alphanumeric characters (a-z, A-Z, 0-9) can be used.

(2). Password: The password to log in to the SFTP server should be between 6 and 20 characters long, and can only contain the characters [a-z], [A-Z], and [0-9]. After setting the password, it will be displayed as asterisks.

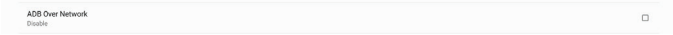
(3). Storage path: The SFTP server has access to the internal storage only. The storage path is unchangeable.

(4). Port: The port number for the SFTP server is available in the range from 1025 to 65535, the default setting is 2121. The following port number cannot be used: 8000 / 9988 / 15220 / 28123 / 28124 and SICP network port (default 5000).

Finally, manually reboot the system to apply the SFTP settings.

6.1.3.2.3. ADB over Network

You can access ADB over a network connection with port 5555.



6.1.3.3. Source Settings

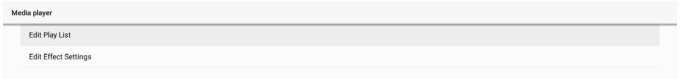
Settings -> Signage Display -> Source Settings

Users can configure the detailed options of the source APK.

6.1.3.3.1. Media Player

Settings -> Signage Display -> Source Settings -> Media Player

Open Media Player APK's edit play list activity and edit effect settings activity.



6.1.3.3.2. Browser

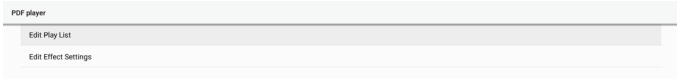
Settings -> Signage Display -> Source Settings -> Browser

Open Browser APK's bookmark editor activity.

6.1.3.3.3. PDF Player

Settings -> Signage Display -> Source Settings -> PDF Player

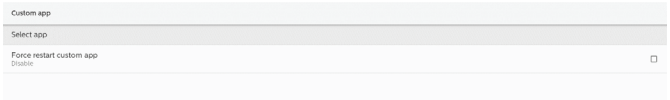
Open PDF Player APK's edit play list activity and edit effect settings activity.



6.1.3.3.4. Custom app

Settings -> Signage Display -> Source settings -> Custom app

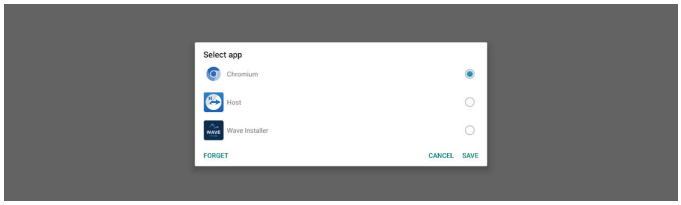
User can set up customer source APK. The selected APK will be launched when switching into customer input source.
If customer source APK is not set, the system shows a black screen when switching to customer input source.



If a custom source APK is set, the APK name will be displayed. Otherwise, it means that the custom App has not been set.

Select APP

Select a specific APP for custom APP source.



Note:

The APKs pre-installed by the system will not be shown on the list. Only the APKs that were installed manually will be listed.

(1). FORGET button
Clear the custom source application. It will be grayed out if the customer source application has not been set.

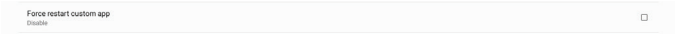
(2). CANCEL button
Quit without saving changes.

(3). SAVE button
Click the "Save" button to select the APS as the custom source application. It will be grayed out if no available application can be selected.

Force Restart Custom APP

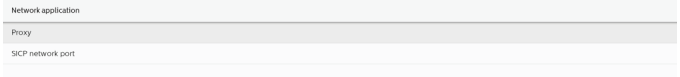
When this feature is enabled, the system can monitor the status of custom APP. If the custom APP doesn't exist and that boot on source is set to "Custom app", the system will then try to launch custom APP again.

Default setting is Disable.



6.1.3.4. Network Application

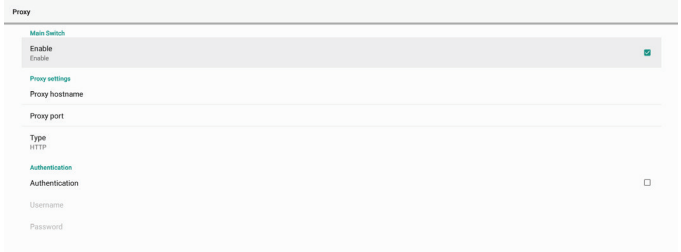
Settings -> Signage Display -> Network Application



6.1.3.4.1. Proxy

Settings -> Signage Display -> Network Application -> Proxy

Enable the proxy server by clicking the checkbox of "Enable". User can set up the host IP and port number of the proxy server. The default setting is "Disable".



System supports the following proxy types: HTTP/HTTPS, SOCKS4, and SOCKS5. Choose one for your proxy server.

If an authorization is requested by proxy server, click the checkbox of "Authorization" and enter the username and password.

6.1.3.4.2. SICP Network Port

Settings -> Signage Display -> Network Application -> SICP Network Port

Set up the default port of SICP and enable/disable the network SICP. The default SICP is enabled with the port 5000.

Note:

Port number ranges from 1025 ~ 65535.

The following ports are already occupied and cannot be assigned: 8000, 9988, 15220, 28123, 28124. The default SFTP port is 2121.

6.1.3.5. System Tools

Settings -> Signage Display -> System Tools

There are six major features in signage display system tools:

(1). Clear Storage

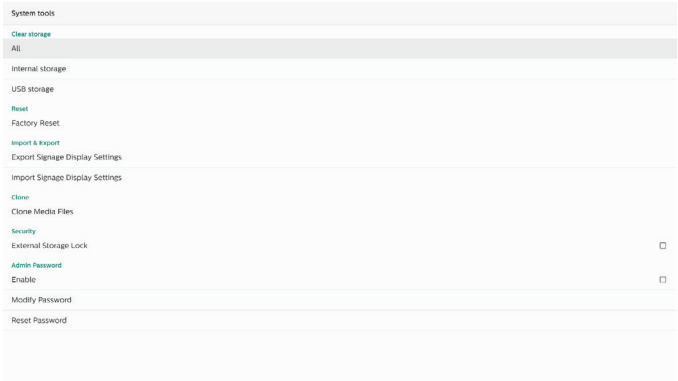
(2). Reset

(3). Import & Export

(4). Clone

(5). Security

(6). Admin Password



6.1.3.5.1. Clear Storage

Settings -> Signage Display -> System Tools -> Clear Storage

Clear the data under {storage}/philips/folder of the internal and external storage.

(1). All
Clear the folder "Philips" from the internal storage and USB.

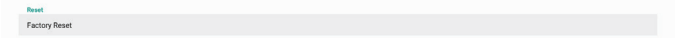
(2). Internal Storage
Clear the folder "Philips" from the internal storage only.

(3). USB Storage
Clear the folder "Philips" from the USB storage only.

A dialog box lists all the folders that the system is going to clear. Press "RESET" to clear all data under the listed folder, or press the back key to quit without saving.

6.1.3.5.2. Reset

Settings -> Signage Display -> System Tools -> Reset



Factory Reset

This function allows you to clear all user data and settings. The system will auto reboot and jump to OOBE after rebooting.

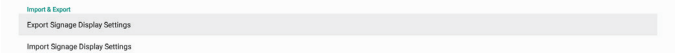
Important Note:

1. Only the data stored in the internal storage will be cleared and cannot be recovered, the data includes the device settings, installed APPs, APPs' data, downloaded files, music, photos and all data under"/data". However, the data stored on the USB will not be cleared.
2. Make sure that the AC adapter and power are always present during the factory reset process. User can only power off after seeing OOBE on the screen.

Click "Factory Reset" to perform factory reset. Press "OK" to confirm when the dialog box appears. Please note this action clears all data in the internal storage and it is not recoverable.

6.1.3.5.3. Import & Export

Settings -> Signage Display -> System Tools -> Import & Export



This function allows you to import/export the settings and 3rd party APK from/to other device. Please note that:

(a). Export data to BDL5050D-clone.zip file under {storage}/philips/clone folder.

(b). Support old clone files method, and put files under {storage}/philips/sys_backup:
AndroidPDMediaPlayerData.db
AndroidPDPdfData.db
menu_settings.db
settings_global.xml
settings_secure.xml
settings_system.xml
signage_settings.db
Note that the latest export data will archive all files into a ZIP file.

(c). "Signage Display Name" will not be imported/exported.

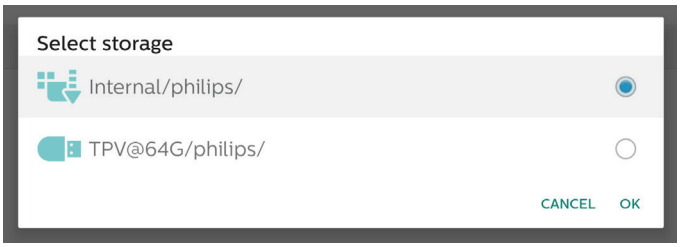
Export Signage Display Settings

System exports database data and third party APKs into {storage}/philips/clone/BDL5050D-clone.zip file of the selected storage (internal storage, USB storage).

Note:

If the selected storage (internal storage, USB external storage) does not contain Philips/folder, then the system will create it automatically.

A list of all available storage (internal storage and USB storage):



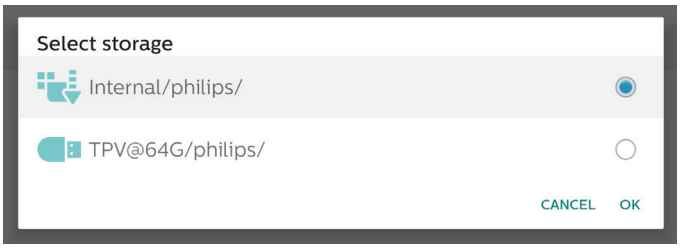
Import Signage Display Settings

Import database data from philips/clone/BDL5050D-clone.zip file of the selected storage (internal Storage or USB storage). System imports following data in ZIP file:

(a). Import Database in BDL5050D-clone.zip

(b). Import 3rd party APK in BDL5050D_clone.zip

A list of all available storage (internal storage and USB storage):



A confirmation dialog box is displayed before importing the settings and APKs. Click the "OK" button to start importing the data.

6.1.3.5.4. Clone

Settings -> Signage Display -> System Tools -> Clone

Clone Media Files

This function allows you to copy the media files from the selected source storage to the target storage.

System clone files are located in the following folder:
philips/photo
philips/music
philips/video
philips/pdf
philips/browser

6.1.3.5.5. Security

Settings -> Signage Display -> System tools -> Security

External Storage Lock

Click the checkbox to lock or unlock external storage (USB storage). Default is unlocked.

Note:

When you disable the external storage lock to enable state, please unplug and plugin the external storage again (for USB storage). After that, system can detect external storage again.

6.1.3.5.6. Admin Password

To improve security and comply with U.S. and EU regulations, eliminate the use of default passwords and mandate user-driven password creation.

Enable

If Enable checkbox is not checked, it means the password is empty now.

You can click the checkbox and input the new password.

Note:

The password rule is 6-digits, no consecutive, no repeating numbers.

Ex: 112233、123457、654322 (ok)
123456、111111、654321 (no)

(1) Unchecked: Disable.

(2) Checked: Enable.

Note:

After enable, you need password to login Admin Mode.

Modify Password

User can change the password for login Admin Mode. Follow below steps:

(1). Enter current password first.

If the current password is not correct, you will see an “Incorrect password” toast message.

(2). Enter the new password.

(3). Enter the new password again.

If the new password again does not match the new password, you need to try again.

If the password is changed successfully, you will see an Android Toast “Successful” message.

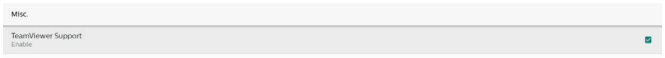
Reset Password:

Settings -> Signage Display -> System tools -> Admin Password -> Reset Password.

6.1.3.6. Misc.

TeamViewer Support

Click the checkbox to enable or disable the TeamViewer support. TeamViewer will send a virtual HOME key to open Admin mode. Default is enable.



TeamViewerHost and TeamViewerQSAddOn APKs will be installed to the system automatically. Or, system will remove them if “TeamViewer Support” is disabled.

The following two APKs will be listd in Settings->Apps if “TeamViewer support” is enabled.

Enable logging

Enable or disable logging via checkbox.

Once enabled, PD will start logging android logcat log, kernel message and save them to USB or internal storage automatically. The fisrt priority is USB storage. if there are no connected USB devices on PD, all data will then be saved to the internal storage.

The saved path will be {root directory of USB storage}/ philips/Log/xxBDL5050D-Log-{ yyyy-MM-dd-HH-mm-ss }

Or

{root directory of internal storate}/ philips/Log/xxBDL5050D-Log-{ yyyy-MM-dd-HH-mm-ss }

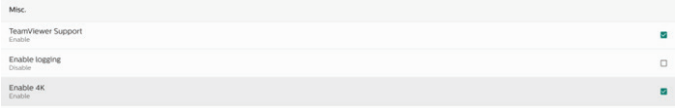
If disabling logging, all data will be saved to a zip file such as {root directory of USB storage}/ philips/Log/xxBDL5050D-Log-{ yyyy-MM-dd-HH-mm-ss }.zip

Or

{root directory of internal storate}/ philips/Log/xxBDL5050D-Log-{ yyyy-MM-dd-HH-mm-ss }.zip

Enable 4K

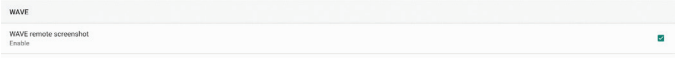
Change the display resolution to 4K@30 or 1080P via the check box.



WAVE->WAVE remote screenshot

Enable or disable WAVE remote screenshot via checkbox.

Once enabled, PD can allow screenshot pass through Custom Intent.

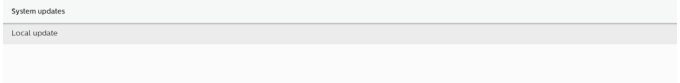


6.1.3.7. System updates

Local update

Settings -> Signage Display -> System updates -> Local update

System will automatically search for “update.zip” in the root folder of the USB disk. If “update.zip’ is found on the external storage, a list will be shown for user to select the file to update.



Once the file is selected from the list, the system starts rebooting and updating.

Please note that:

(a). Do not turn off the power or remove the power adapter until the update is complete.

(b). The current system only supports full Android update.

(c). The update file must be named “update.zip” only.

(d). The “update.zip” file must be stored in the root folder of your external storage.

6.1.3.8. Scaler FW updates

Start update

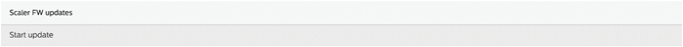
Settings -> Signage Display -> Scaler FW updates -> Start update

Only the USB port near the Ethernet port can support scaler firmware update.

System will automatically search “{panel size}_5050D.bin” in the root folder of the USB disk.

The prefix of the filename for the panel size must match the panel size of the platform.

For example, in 32BDL5050D platform, only 32_5050D.bin can be accepted.

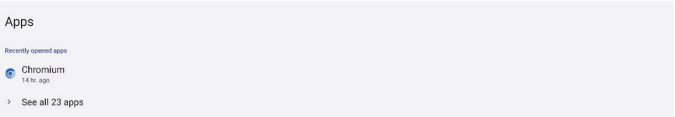


Please note that:

Keep the system power on during Scaler FW update, do not remove the power adapter.

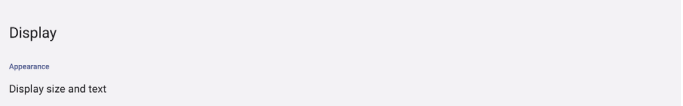
6.1.4. Apps

Display installed APKs information.



6.1.5. Display

Settings -> Display



6.1.5.1. Display size and text

6.1.5.1.1. Font size

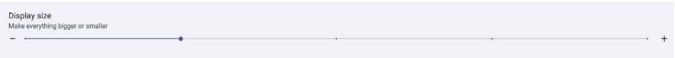
Settings -> Display -> Display size and text -> Front size

Move the slider to make the text on screen smaller or larger.

6.1.5.1.2. Display size

Settings -> Display -> Display size and text -> Display size

Move the slider to make the UI on screen smaller or larger, including layout and text.



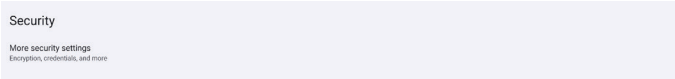
6.1.6. Accessibility

Accessibility services are apps that can help users with disabilities or special needs to interact with their Android device more easily.

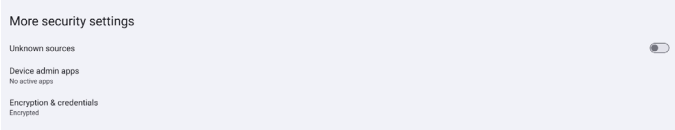
In the Downloaded apps menu, you can view all the accessibility apps that are installed on the device, and enable or disable them as needed. You can also access the settings for each individual accessibility app by tapping on its name in the list.

6.1.7. Security

Settings->Security



6.1.7.1. More security settings



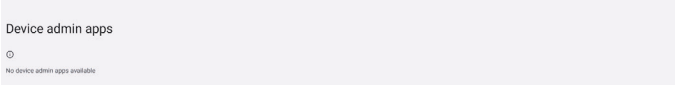
6.1.7.1.1. Unknown sources

Allowing app installs from Unknown Sources in Android.

6.1.7.1.2. Device admin apps

Settings->Security->More security settings->Device admin apps

A list showing the app that supports admin-related operations and controls.

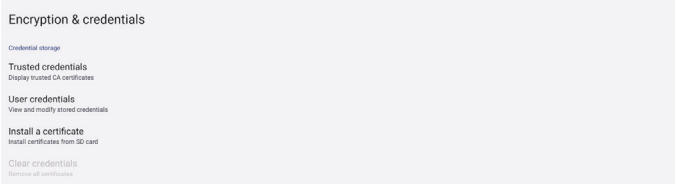


6.1.7.1.3. Encryption & credentials

Settings->Security->More security settings-> Encryption & credentials

This will display a list of all trusted certs on the device.

User can install/uninstall certificates by themselves.



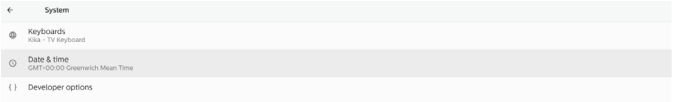
6.1.8. System

The following options are listed in Settings -> System.

(1). Keyboards

(2). Date & time

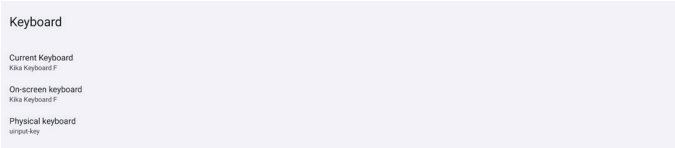
(3). Developer options



6.1.8.1. Keyboards

Settings -> System -> Keyboard

User can change IME and keyboard settings.



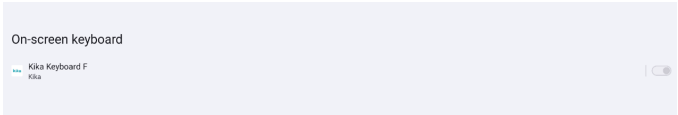
Current Keyboard

Choose input method.

On-screen keyboard

Let user set default software IME (Virtual keyboard) and control detailed IME settings.

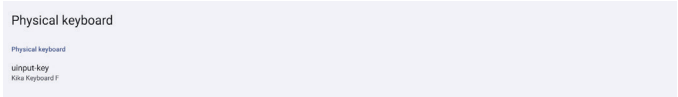
The Japanese IME will automatically be installed when user selects Japanese language in OOBE.



Physical keyboard

Settings -> System -> Keyboard ->Physical keyboard

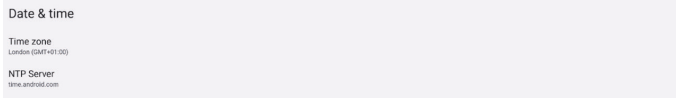
Let user control physical keyboard and detail keyboard settings.



6.1.8.2. Date & Time

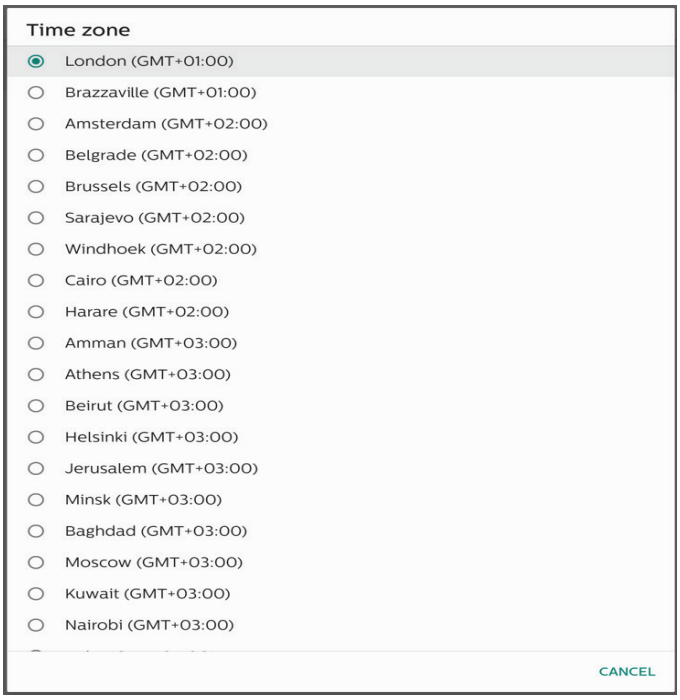
Settings -> System -> Date & Time

User can change the time zone and NTP server.



Time zone

Allow user to choose the time zone.



NTP Server

Allow user to edit the NTP server in the prompted dialog.

6.1.8.3. Developer options

Settings -> System -> Developer options

Android developer options for developers, default is on and USB debugging is on by default.

6.1.9. About

Settings -> About

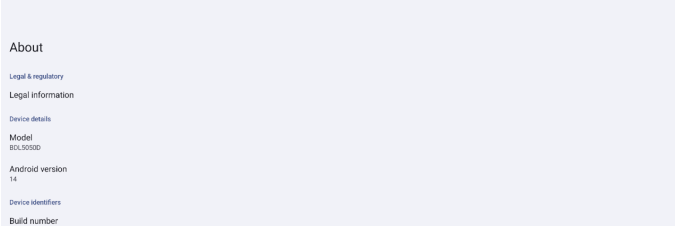
View the following information about the system.

(1). Legal information

(2). Model (model name of this device)

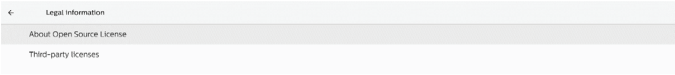
(3). Android version

(4). Build number (release version)

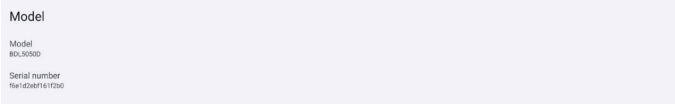


6.1.9.1. Legal Information

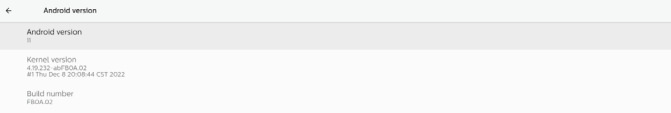
Legal information and licenses of all open source projects will be listed.



6.1.9.2.Model



6.1.9.3. Android version



6.2. Supplementary

6.2.1. Quick Info

Press “Info + 77” to startup quick info.

Quick info will show “Network” and “Monitor Information”.

Note:

Operation hours: updates every minute.

Heat status : updates every 5 seconds.

6.2.2. How to custom an Android boot animation?

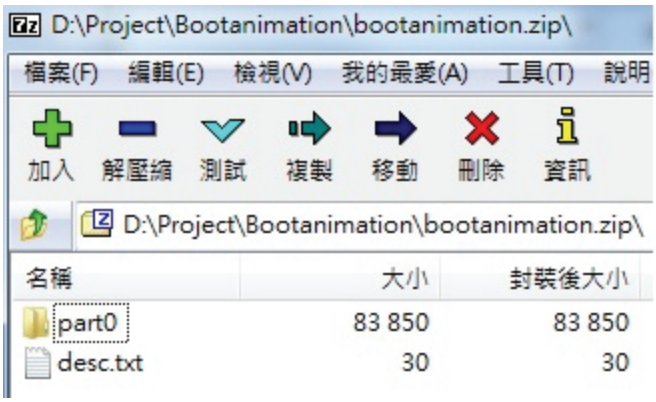
1. Overview

The Android boot animation is a script used to load PNG files when the device boots. It is included in an uncompressed zip file called bootanimation.zip.

2. In the bootanimation.zip file

The bootanimation.zip as follows:

- The image folder (contains PNG images named in incremental numbers)
- The desc.txt file



(1) The image folder

This folder contains PNG images that are named by numbers, starting from something like 0000.png or 0001.png and increasing by increments of 1. The minimum number of folder is 1 and the maximum number of folder is unlimited.

(2) The desc.txt file

This file defines how the images in the folder(s) are displayed during the boot animation, in the following format:

- Width Height Frame-rate
- mode Loop delay-time Folder1
- mode Loop delay-time Folder2

An example of a desc.txt file is:

- 1920 1080 30
- p 1 0 part0
- p 0 0 part1

a. The first line

1920 and 1080 define the width and height of the screen resolution.

30 is the frame rate in fps (frames per second) i.e. number of images to display per second.

b. The second and third lines have a same format.

The first "p" means that the play mode stops immediately when the boot process is complete.

The number next to 'p' defines the repeat mode

- Set to 0 to make the part loop indefinitely until the device boot is complete.
- Set to 1 to make the part playback for once.

The next number defines the delay time(ms). For example, if it is set to 10, the system will be delayed for 10ms when all image files have finished playing.

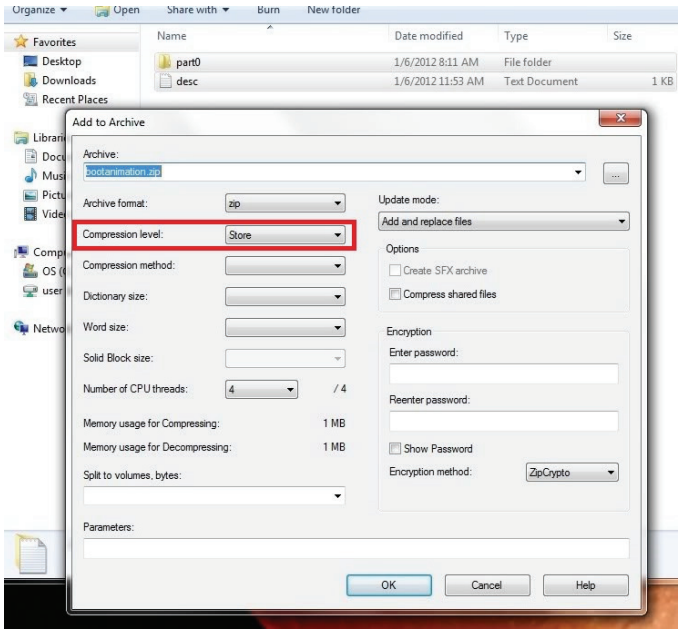
Part0 and part1 refer to image folder names.

As to the above example, the boot animation will play at a resolution of 1920 by 1080 pixels, at a frame rate of 30 fps, starting with the contents of part0 folder. After playing them in one loop, switch to the contents of part1 folder and play them continuously until the device boot process is complete.

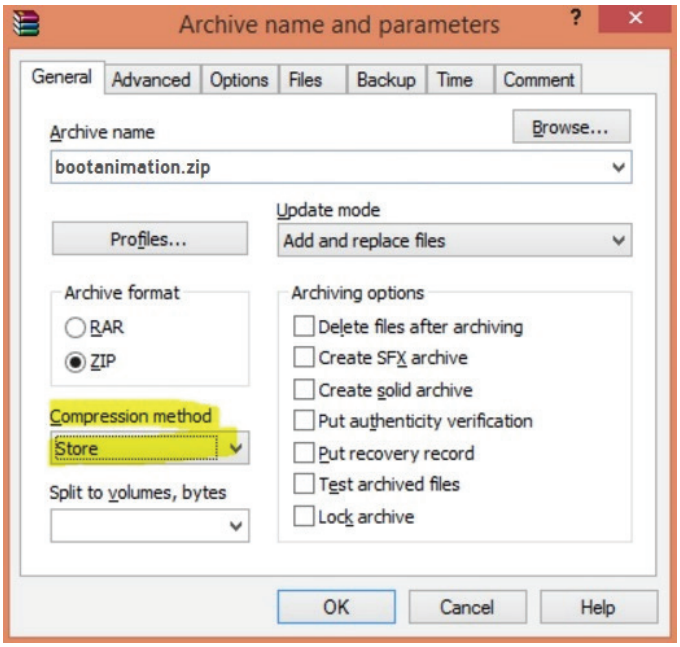
3. Zip file:

Select all (including image folders and desc.txt) inside the Bootanimation folder and zip them into a new uncompressed zip archive using your favorite compression utility such as 7zip or WinRAR and so on.

If using 7zip, set compression level to "Store".



If using WinRAR, set "Compression method" to "Store".



or bootanimation WON'T work.

4. Apply the custom bootanimation

Procedure:

(1) Place your custom bootanimztion.zip file into the external USB and plug the storage device into Phillips PD platform.

(2) Make sure that the Logo option is enabled.

Press the Home key on the RCU: OSD menu > Configuration 2 > Logo > set "on"

(3) Press the combination key "Home + 1888" on the RCU to go to Admin mode:

Settings > Signage Display > GENERAL SETTINGS > Boot Logo

(4) The system will search the bootanimation.zip on the external USB automatically and copy it to /data/local

(5) Once the step 1~4 are complete, restart the system. The new customized boot animation should be displayed during boot time.

6.2.3. How to Install Android app?

There are 3 ways to install your own Android App.

(a) Via File Manager in Admin Mode

1. If you have apk already

1.1 Copy your APK to the USB disk, and plug the storage device into Philips Android Signage Display.

1.2 Go to Admin Mode > Apps > File Manager

1.3 Use File Manager to find your APK to be installed. Simply press "OK" on the selected APK.

2. Download an APK using the Chromium browser, then go to <internal storage path>/Download/ by File Manager.

2.1 The next steps are the same as described above. Please note, each model may have different <internal storage path>.

(b) Via Adb Shell

1. Make sure that your PC can connect to Philips Android Signage Display using adb.

2. Prepare your apk in a folder (for example, C:\apkfolder) on your PC.

3. Execute the following instruction using command line tool.

C:\apkfolder> adb install -r apk_name.apk

(c) Via Customized Intent

1. If you develop an apk that can download any Android App, then your APK can issue a customized intent.

2. Giving that the apk name and the path have been stored., the system will help you to install by program.

Description	Intent	Parameters	
Sw Update	php.intent. action. UPDATE_APK	filePath	The absolute file path including the file name. Please make sure that the file access permission is 664 at least.
		keep	Indicate that you want to keep the file or not after updating. The default value is false.
		packageName	The target package you want to launch automatically after updating.
		activityName	The target activity you want to launch automatically after updating. But if current top activity is not activityName, nothing happened.

For example,

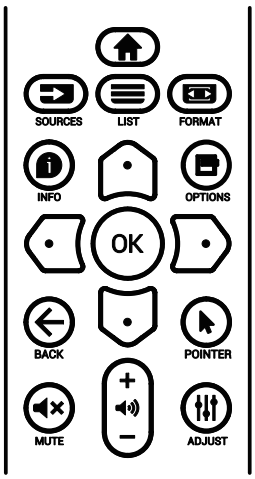
```
Intent intent = new Intent();
intent.setAction("php.intent.action.UPDATE_APK");
intent.putExtra("filePath", "/Download/sample.apk");
intent.putExtra("keep", true);
intent.putExtra("packageName", "com.tpv.example");
intent.putExtra("activityName", "com.tpv.example.
MainActivity");
intent.putExtra("isAllowDowngrade", true); // allow
downgrade
sendBroadcast(intent);
```

7. 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.

7.1. Navigating the OSD Menu

7.1.1. Navigating the OSD menu using the remote control



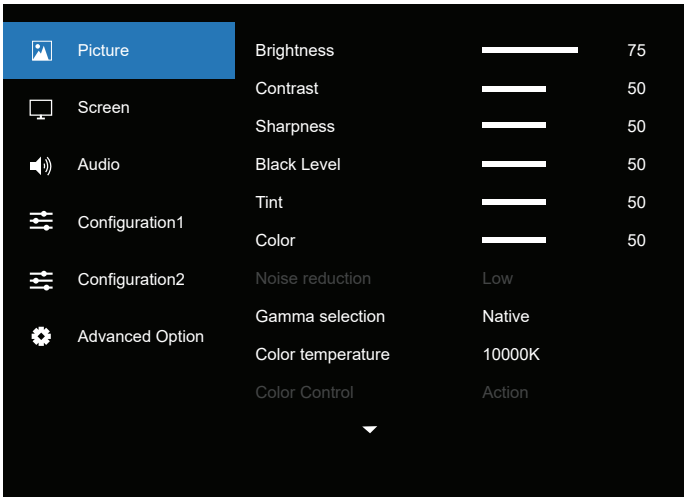
1. Press [🏠] button on the remote control to display the OSD menu.
2. Press [△] or [▽] button to select the item to adjust.
3. Press **[OK]** or [▷] button to enter the submenu.
4. In the submenu, press [△] or [▽] button to toggle between items, press [◁] or [▷] button to adjust the settings. If there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

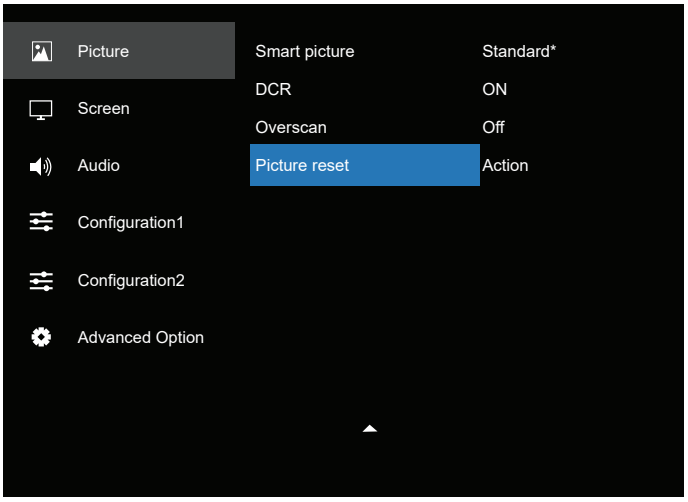
7.1.2. Navigating the OSD menu using the display's control buttons

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.

7.2. OSD Menu Overview

7.2.1. 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}.

DCR

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.

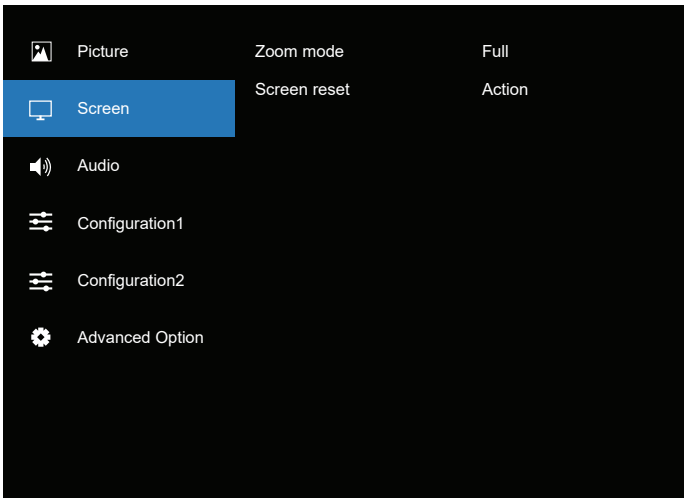
Picture reset

Reset all settings in the Picture menu.

Select “RESET” to restore factory preset data.

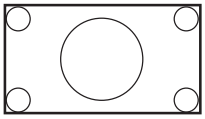
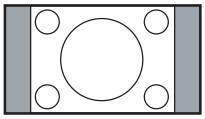
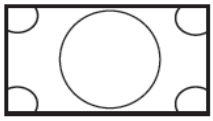
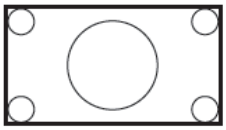
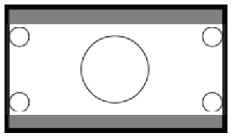
Press “CANCEL” button to cancel and then return to the previous menu.

7.2.2. Screen menu



Zoom mode

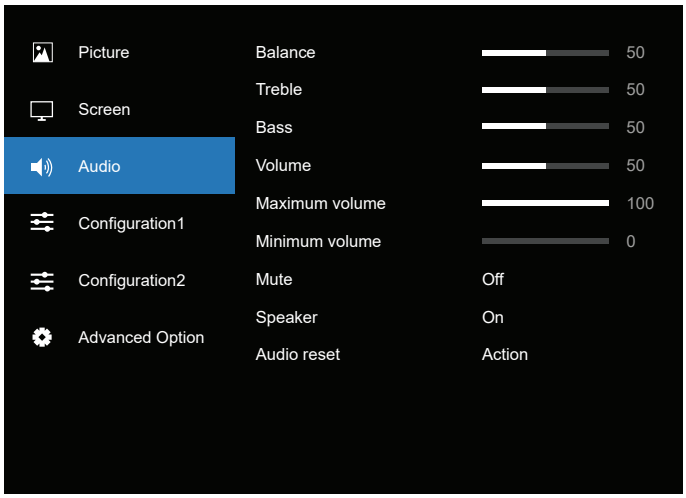
Choose one for video input: {Full} / {4:3} / {1:1} / {16:9}/ {21:9}.

	**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.

7.2.3. 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

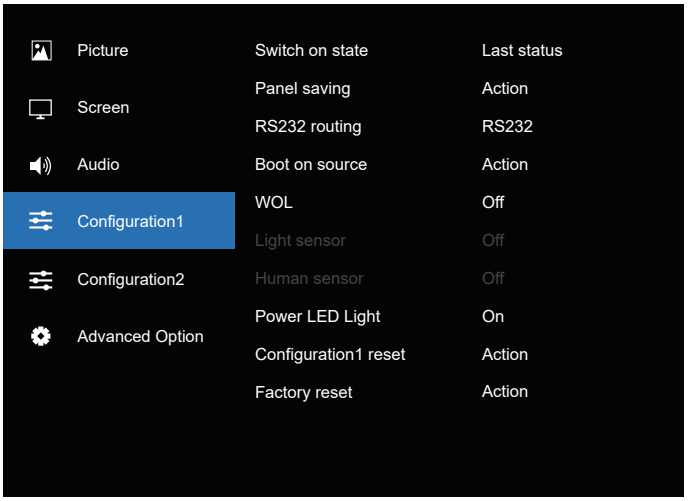
Turn the internal speaker on/off.

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

Audio reset

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

7.2.4. 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.
- {Forced on} - The display will turn on when the power cord is connected.
- {Last status} - The display will return to the previous power status (on/off/standby mode) when the power cord is connected.

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 reduce to an appropriate level. The Brightness setting in the Picture menu cannot be changed when this setting is enabled.
- {Pixel Shift} - Select the time interval ({Auto}, {10-900} seconds, {Off}) for display to slightly expand the image size and shift the position of pixels in four directions (up, down, left and right). Activating pixel shift will disable H position, V position and Zoom mode in Screen menu.

Note: Video source only.

RS232 routing

Select RS232 routing path

- {RS232} – RS232 is routed from 2.5mm phone jack
- {LAN->RS232} – RS232 is routed from RJ45

Boot on source

Choose to select a source when booting up.

- {Input} – Select input source when booting up.
- {Playlist} – Select playlist index for Media Player, Browser. 0 indicates there is no playlist.

WOL (Wake on LAN)

Allow the display to be turned on by a network message.

Note: This function only works in power save mode 1.

Light sensor

Choose to turn on or off the light sensor function.

Human sensor

Choose to turn on or off the human sensor function.

Configuration1 reset

Reset all settings in Configuration menu to factory preset values.

Power LED Light

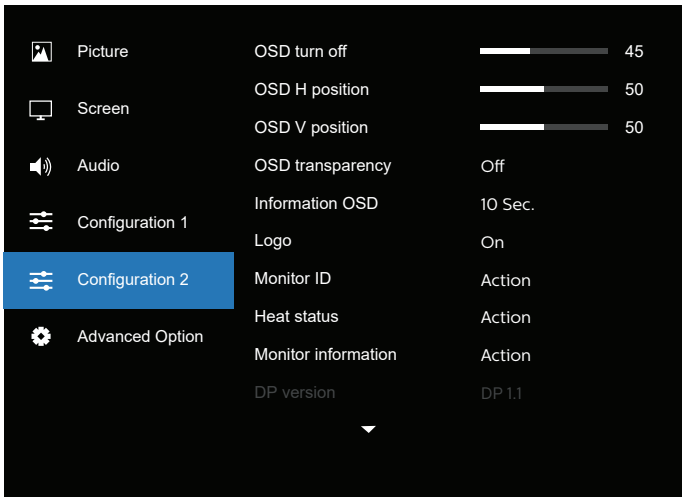
Choose to set power indication LED on or off.

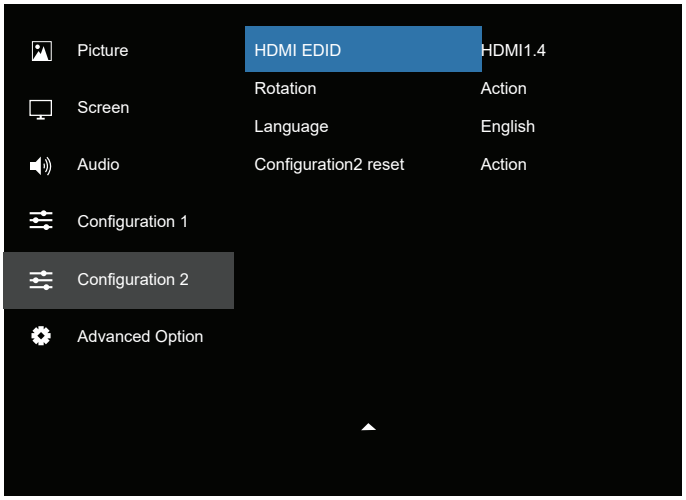
Choose {On} for normal use.

Factory Reset

Reset all customized settings in Picture, Screen, Audio, Configuration and Advanced Option to the factory default values.

7.2.5. 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:

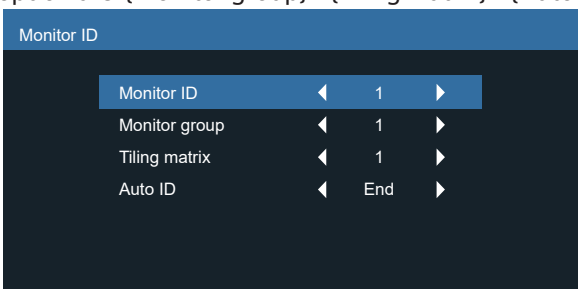
- {Off}
- {On}
- {User}

NOTE: If it is set to {USER}, the rotation function is not supported for user logo.

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}

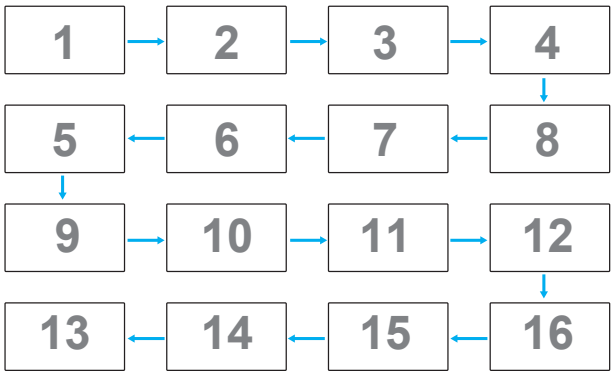


- {Monitor group}

  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.

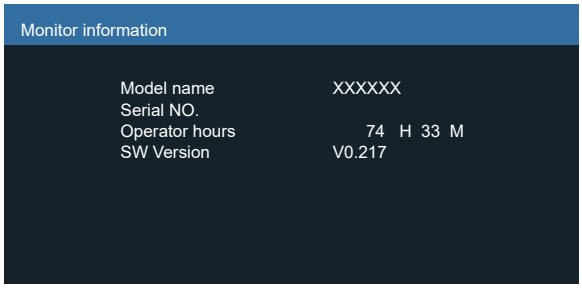
- Once the setup is completed, the option exits from End automatically.
- To use this function, serially connect all machines with RS-232 cable and set their Control ports to RS-232 too.

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}.

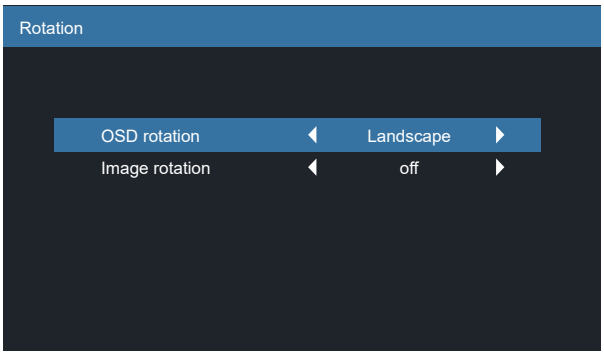
HDMI EDID

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.
- Image rotation: Off/On,Default : Off
  Image rotation: {Off}, {On} when value is on, The Android source rotate 90 °, Off is restored

NOTE: The image rotation function only support in the Android source.

Language

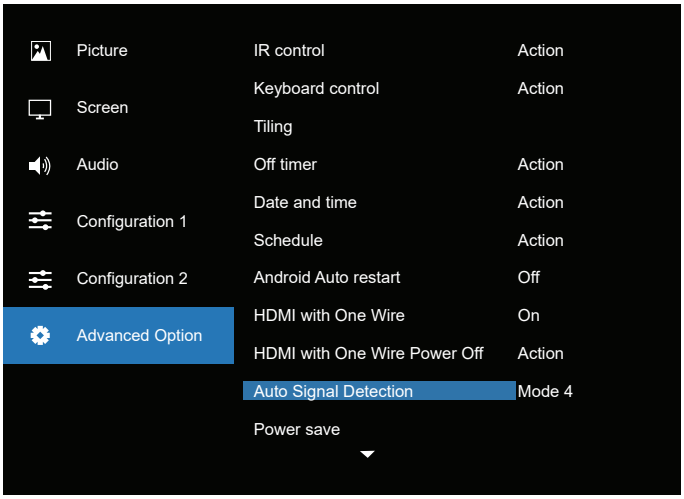
Select the language used in the OSD menu.

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.

7.2.6. Advanced Option menu



IR control

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

- {Unlock} - 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

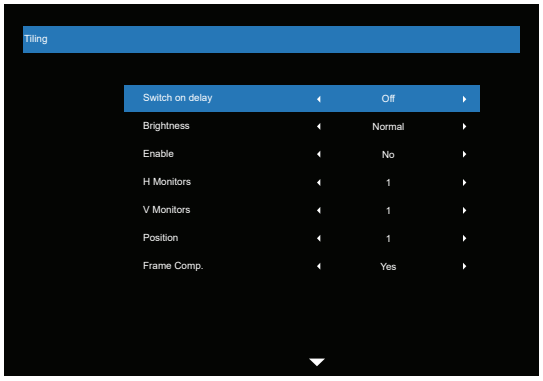
Choose to enable or disable the display keyboard (control buttons) function.

- {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

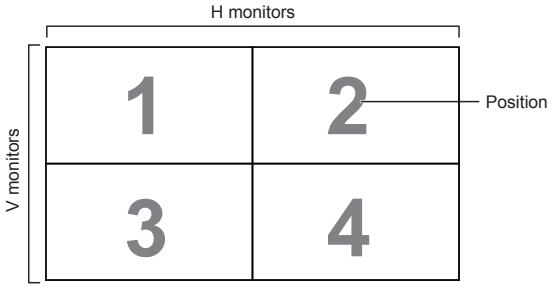
With this function, you can create a single large-screen matrix (video wall) that consists of up to 225 sets of this display (up to 15-sets on the vertical and 15-sets on the horizontal sides). This function requires a daisy-chain connection.



- 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.

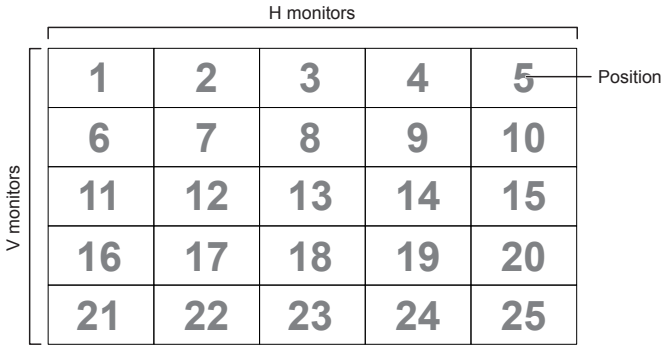
Example: 2 x 2 screen matrix (4 displays)

H monitors = 2 displays
V monitors = 2 displays



Example: 5 x 5 screen matrix (25 displays)

H monitors = 5 displays
V monitors = 5 displays



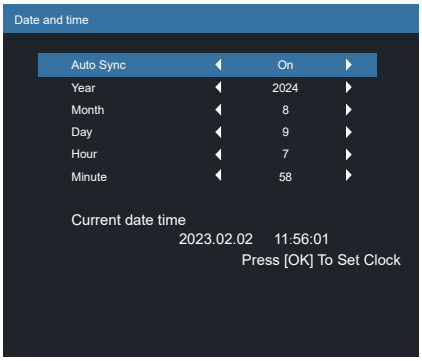
- Frame comp.
  Turn the frame compensation function On or Off. If you select {**On**}, the display will adjust the image to compensate for the width of the display bezels in order to accurately display the image.
- Frame comp. Top
  Adjust the top frame compensation.
- Frame comp. Bottom
  Adjust the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



- {Auto Sync} - Auto sync display's clock with NTP server.

Schedule

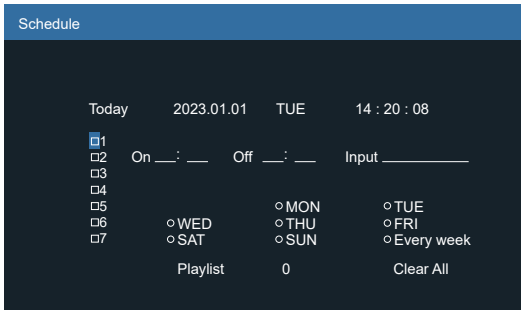
This function allows you to program up to 7 (seven) different scheduled time intervals for the display to activate.

You can select:

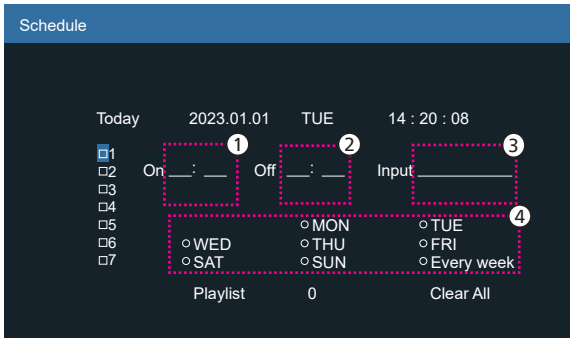
- The time for the display to turn on and turn off.
- The days in a week for the display to activate.
- Which input source the display will use for each scheduled activation period.

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.
   ⑤ When Input-source select to Media player, Browser or

   PDF player, enable to access playlist setting.

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.

Android Auto restart

Define a specific time to restart Android every day

- {Auto Restart} - the option are: {Off} / {On},
  {Off}: Auto restart is disabled
  {On}: Auto restart is enabled
- {Hour} - Select the hour to restart Android.
- {Minute} - Select the minute to restart Android

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 -> Media Player -> Browser -> PDF Player -> Custom -> Screen Share

* Media Player, Browser will only try playlist index 1

{Failover}:

Failover 1: HDMI1 (default)
Failover 2: HDMI1 (default)
Failover 3: HDMI1 (default)
Failover 4: HDMI1 (default)
Failover 5: HDMI1 (default)
Failover 6: HDMI1 (default)
Failover 7: HDMI1 (default)
Failover 8: HDMI1 (default)
Failover 9: HDMI1 (default)
Failover 10: HDMI1 (default)

* Not all modules have all 10 failover list, depends on total source of module

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.

7.3. Android Settings

Open Android Settings

1. When the admin password is enabled from Android Setting -> System tools, it must be entered before accessing the android settings.

Default password is 1234.

8. Supported Media Formats

USB Multimedia Codec Formats

Video Decode						
Type	Video Codec	Container	Decode	Encode	Channel	Remark
MPEG1/2	MPEG1/2	MPEG program stream (.DAT, .VOB, .MPG, .MPEG) MPEG transport stream (.ts) MP4 (.mp4) AVI (.avi) MKV (.mkv)	V			Max Resolution: 1080P@60fps Max Bit Rats : 40Mbps
MPEG-4	MPEG4	MP4 (.mp4) AVI (.avi) MKV (.mkv)	V			Max Resolution: 1080P@60fps Max Bit Rats : 40Mbps
H.263	H.263	FLV (.flv) AVI (.avi)	V			Max Resolution: 1080P@60fps Max Bit Rats : 40Mbps
H.264	H.264	FLV (.flv) MP4 (.mp4) MPEG transport stream (.ts) ASF (.asf) WMV (.wmv) AVI (.avi) MKV (.mkv)	V			Max Resolution: 1080P@60fps Max Bit Rats : 135Mbps 4K2K@30fps
H.265	H.265	MP4 (.mp4) MPEG transport stream (.ts) MKV (.mkv)	V			Max Resolution: 4K2K@60fps Max Bit Rats : 100Mbps
GOOGLE VP8	VP8	MKV (.mkv) WebM (.webm)	V			Max Resolution: 1080P@30fps Max Bit Rats : 20Mbps
Motion JPEG	MJPEG	AVI (.avi) MP4 (.mp4) MKV (.mkv)	V			Max Resolution: 1920*1080 @30fps Max Bit Rats : 40Mbps

Audio Decode

Type	Audio Codec	Container	Decode	Encode	Channel	Remark
MPEG Audio	MPEG1/2/2.5 Audio Layer1/2/3	MP3	V		2	Bit Rate: 8Kbps~320Kbps Sampling Rate: 16KHz~48KHz
Windows Media Audio	WMA Version 7, 8, 9,10 pro M0, 10Pro M1,M10 Pro M2	Decode: WMA	V		2	Bit Rate: 8Kbps~768Kbps Sampling Rate: 8KHz~96(M10) KHz Non-support LBR
AAC Audio	MAIN, ADIF ,ADTS Header for AAC-LC and AAC-HE	File Format: AAC, M4A	V		5.1	Bit Rate: N/A Sampling Rate: 8KHz~48KHz

Image Decode

Type	Image Codec	Photo	Decode	Encode	Channel	Remark
JPEG	JFIF file format 1.02	File Format: JPG, JPEG	V			Max Resolution: 7000 x 7000 The limitation of max resolution depends on DRAM
BMP	BMP	File Format: BMP	V			Max Resolution: 15360 x 8640 The limitation of max resolution depends on DRAM

PNG	PNG	File Format: PNG	V			Max Resolution: 15360 x 8640 The limitation of max resolution depends on DRAM

NOTES:

- Sound or video may not work if the contents have a standard bit rate/frame rate above the compatible Frame/sec listed in the table above.
- Video content with a Bit rate or Frame rate larger than the rate specified in the table above can cause choppy video during playback.

9. Input Mode

DVI/VGA timing support:

Item	Mode	Resolution	H.Freq. (KHz)	V.Freq. (Hz)
1	IBM VGA 10H	640x350	31.469	70.086
2	IBM VGA 12H	640x480	31.469	59.94
3	MACINTOSH	640x480	35	66.67
4	VESA	640x480	37.861	72.809
5	VESA	640x480	37.5	75
6	IBM VGA 3H	720x400	31.469	70.087
7	VESA	800x600	35.156	56.25
8	VESA	800x600	37.879	60.317
9	VESA	800x600	48.077	72.188
10	VESA	800x600	46.875	75.000
11	MACINTOSH	832x624	49.726	74.551
12	VESA Standard AddDMT	848x480	31	60.000
13	-	960x720	56.4	75.000
14	VESA	1024x768	48.363	60.004
15	VESA	1024x768	56.476	70.069
16		1152x864	53.986	59.985
17	VESA	1152x864	53.783	59.959
18		1152x864	63.851	70.012
19	VESA	1152x864	67.5	75.000
20	SUN WS	1152x900	61.846	66.004
21	-	1280x720	44.772	60.000
22	-	1280x720	52.5	70.000
23	CVT 2.3MA	1280 x768	47.776	59.870
24	CVT 2.3MA	1280 x768	60.289	74.893
25	CVT	1280x800	49.7	59.810
26	CVT	1280x800	62.8	74.930
27	VESA	1280x960	60	60.000
28	VESA	1280x1024	63.981	60.020
29	SUN WS	1280x1024	71.691	67.189
30	VESA	1280x1024	79.976	75.025
31	VESA Standard AddDMT	1360x768	47.712	60.015
32	VESA Standard AddDMT	1366x768	47.712	59.790
33	VESA-reduced blanking mode	1440x900	55.469	59.901
34	VESA	1440x900	55.935	59.887
35	VESA	1440x900	70.635	74.984
36	CVT-reduced blanking	1400x1050	64.744	59.948
37	CVT AddDMT	1440x1050	65.3	60.000
38	CVT	1400x1050	82.278	74.867
39	CVT Red. Blanking	1600x900	55.54	60.000
40	VESA	1600x1200	75	60
41	CVT1.76MW	1680x1050	65.29	59.954
42	CVT1.76MW-R	1680x1050	64.674	59.883
43	CVT 2.3MA-R	1920x1080	66.587	59.934
44	VESA Standard VDMTREV	1920x1080	67.5	60.000
45	CVT1960H	1920x1080	67.1584	59.963
46	VSC1960H	1920x1080	67.08	60
47	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/DVD HD/DVI)

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

Note: DisplayPort support 3840x2160@30Hz.

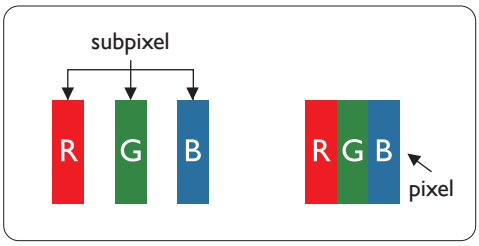
- The PC text quality is optimum in UHD 4K/2K mode(3840 x 2160, 60Hz).
- Your PC display screen might appear different depending on the manufacturer (and your particular version of Windows).
- Check your PC instruction book for information about connecting your PC to a display.
- If a vertical and horizontal 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.
- When horizontal synchronous signals seem irregular in RGB mode, check PC power saving mode or cable connections.
- The display settings table complies to the IBM/VESA standards, and based on the analog input.
- The DVI support mode is regarded as same to the PC support mode.
- 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).

10. 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 guarantees 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.

10.1. Pixels and Sub-Pixels



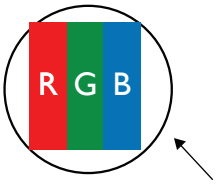
A pixel, or picture element, is composed of three sub-pixels in the primary colors of red, green and blue. Many pixels together form an image. When all sub-pixels of a pixel are lit, the three colored sub-pixels together appear as a single white pixel. When all are dark, the three colored sub-pixels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

10.2. 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"? :

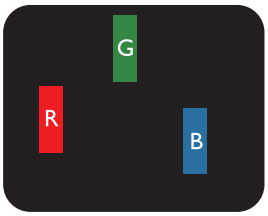
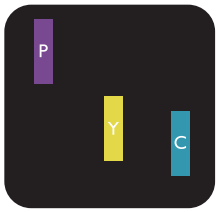
One or more defective, adjacent sub-pixel are defined as one "dot". The no. of defective sub-pixels are not relevant to define a defective dot. This means that a defective dot can consist of one, two or three defective sub-pixels which can be dark or lit.



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

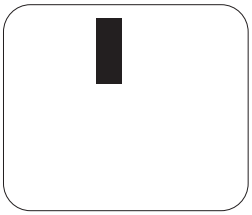
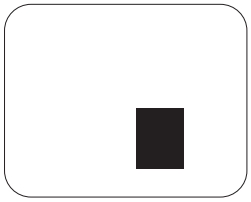
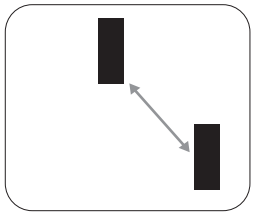
10.3. Bright Dot Defects

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)

10.4. 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

10.5. 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

10.6. 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

10.7. 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

11. Cleaning and Troubleshooting

11.1. 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.

11.2. 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.

12. Technical Specifications

Display:

Item	Specifications		
	43BDL5050D	50BDL5050D	55BDL5050D
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)	600 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)	10/100/1000 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	3.5mm x 1	IR pass through
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	No Power Delivery
Expansion slot	USB 3.0 x 1	Reserve for CRD32
OTG	Micro USB	Support service and ADB data transmission

General:

Item	Specifications		
	43BDL5050D	50BDL5050D	55BDL5050D
Power Input	100 - 240V~, 50/60Hz	100 - 240V~, 50/60Hz	100 - 240V~, 50/60Hz
Power Consumption (Max)	100 W	107 W	135 W
Power Consumption (Typ.)	75 W	78 W	105 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
WiFi+ Bluetooth Function	CRD32: Support WiFi 6 and Bluetooth V5.2		
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)	11.34 Kg	14.60 Kg	17.20 Kg
Gross Weight (Without Stand)	14.50 Kg	18.30 Kg	20.38 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

PHILIPS

Professional Displays

Warranty

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, 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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