

ASUS®

MB16AHG

Portable USB Monitor

User Guide

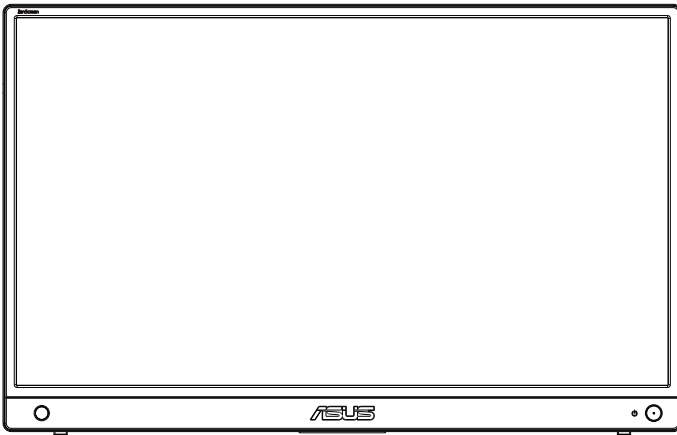


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Notices

Federal Communications Commission Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.



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), ErP Directive (2009/125/EC) and RoHS directive (2011/65/EU). 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.

WEEE Symbol Statement

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 where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.



Safety information

- Before setting up this Portable USB Monitor, carefully read all the documentation that came with the package.
- To prevent fire or shock hazard, never expose this Portable USB Monitor to rain or moisture.
- Never try to open this Portable USB Monitor cabinet.
- Before using this Portable USB Monitor, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- Avoid dust, humidity, and temperature extremes. Do not place this Portable USB Monitor in any area where it may become wet. Place this Portable USB Monitor on a stable surface.
- Never push objects or spill liquid of any kind into the slots on this Portable USB Monitor cabinet.
- If you encounter technical problems with this Portable USB Monitor, contact a qualified service technician or your retailer.
- This Portable USB Monitor is powered by USB port which complies with LPS and SELV circuit according to IEC60950-1:2005.

WARNING

Restriction on Hazardous Substances statement (India) This product complies with the "India E-Waste (Management) Rules, 2016" and prohibits use of Lead, Mercury, Hexavalent Chromium, polybrominated biphenyls(PBBs) and polybrominated diphenyl ethers(PBDEs) in concentration exceeding 0.1% by weight in homogenous materials and 0.01% by weight in homogenous materials for cadmium, except of exemptions listed in Schedule 2 of the Rule.

Care & cleaning

- Cleaning. Turn your monitor off and unplug the cable. Clean the monitor surface with a lint-free, non-abrasive cloth. Stubborn stains may be removed with a cloth dampened with mild cleaner.
- Avoid using a cleaner containing alcohol or acetone. Use a cleaner intended for use with the LCD. Never spray cleaner directly on the screen, as it may drip inside the monitor and cause an electric shock.

The following symptoms are normal with the monitor:

- You may find slightly uneven brightness on the screen depending on the desktop pattern you use.
- When the same image is displayed for hours, an afterimage of the previous screen may remain after switching the image. The screen will recover slowly or you can turn off the Power Switch for hours.
- When the screen becomes black or flashes, or cannot work anymore, contact your dealer or service center to fix it. Do not repair the screen by yourself!

Conventions used in this guide



WARNING: Information to prevent injury to yourself when trying to complete a task.



CAUTION: Information to prevent damage to the components when trying to complete a task.



IMPORTANT: Information that you **MUST** follow to complete a task.



NOTE: Tips and additional information to aid in completing a task.

Where to find more information

Refer to the following sources for additional information and for product and software updates.

1. ASUS websites

The ASUS websites worldwide provide updated information on ASUS hardware and software products. Refer to **<http://www.asus.com>**

2. Optional documentation

Your product package may include optional documentation that may have been added by your dealer. These documents are not part of the standard package.

3. Protect your eyes with ASUS EYE CARE Monitors

The latest ASUS monitors feature exclusive Blue Light Filter and Flicker free technologies to keep your eyes healthy in today's digital world.

Refer to

https://www.asus.com/Microsite/display/eye_care_technology/

Takeback services

ASUS recycling and takeback programs come from our commitment to the highest standards for protecting our environment. We believe in providing solutions for our customers to be able to responsibly recycle our products, batteries and other components as well as the packaging materials.

Please go to <http://csr.asus.com/english/Takeback.htm> for detail recycling information in different region.

Product information for EU energy label



1.1 Welcome!

Thank you for purchasing the ASUS Portable USB Monitor!

The latest ASUS Portable USB Monitor provides great portability and productivity to your daily life, enhancing both of your viewing and working experience.

1.2 Package contents

Check your package for the following items:

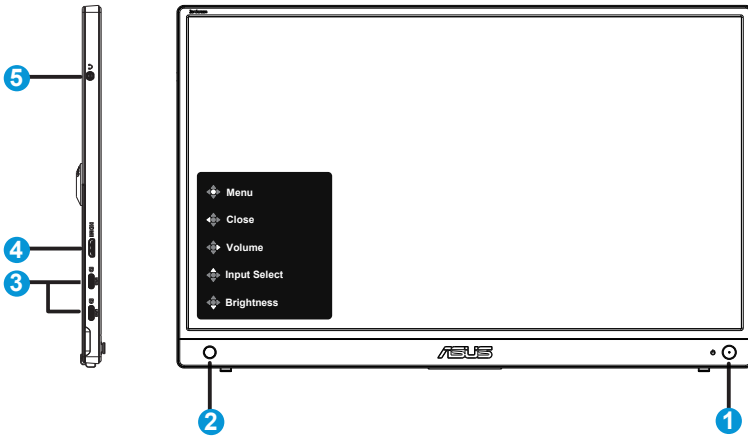
- ✓ Portable USB Monitor
- ✓ Quick Start Guide
- ✓ Warranty Card
- ✓ USB Type-C Cable
- ✓ USB Type-C to A adapter (Optional)
- ✓ USB Type-C to A cable (Optional)
- ✓ Protective Sleeve
- ✓ Mini HDMI to HDMI cable
- ✓ QC3.0 18W Adapter



-
- If any of the above items is damaged or missing, contact your retailer immediately.
-

1.3 Monitor introduction

1.3.1 Front View and Charging Instructions



1. Power button/Power LED
 - Press this button to turn the monitor on/off when connected to a valid source.
 - The color definition of the power indicator is as the below table.

Status	Description
Blue	Power on mode
Dark	OFF
Orange	Standby mode

2. 5 way key
 - Turns on the button functions menu. Enacts the selected OSD menu item.
 - Increases/Decreases values or moves your selection up/down/left/right.
3. USB Type-C port
 - This port connects the power adapter or USB Type-C compatible device.
4. Mini-HDMI port
 - Connect your computer with Mini-HDMI cable.
5. Earphone jack Port:
 - Used to connect Earphone jack.



IMPORTANT:

- Use only bundled power adapter and USB cable to charge your monitor. Using different power adapter and cable might bring potential damage to your device.
- For the best performance, please use power adapter for MB16AHG.



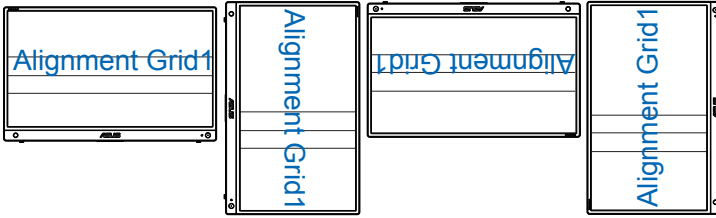
WARNING: The adapter may become warm to hot while in use. **DO NOT** cover the adapter and keep it away from your body while it is connected to a power source. If your device become unusual hot, disconnect the USB cable from your device and send the device including the power adapter and USB cable to an ASUS qualified service personnel

1.3.2 QuickFit Function

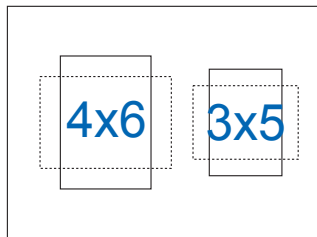
The QuickFit function contains two patterns: (1) Grid (2) Photo size.

1. Grid pattern: Facilitates designers and users to organize content and layout on one page and achieve a consistent look and feel.

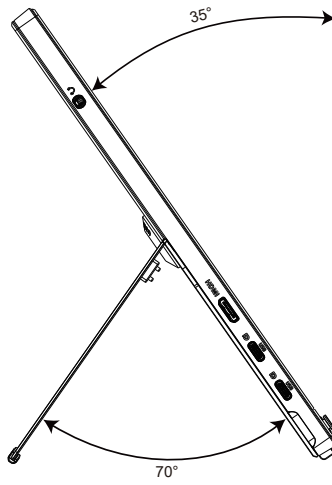
Alignment grid 1 will be rotated automatically if auto rotation is enabled.



2. Photo size: Provides photographers and other users to accurately view and edit their photos in real size on the screen.

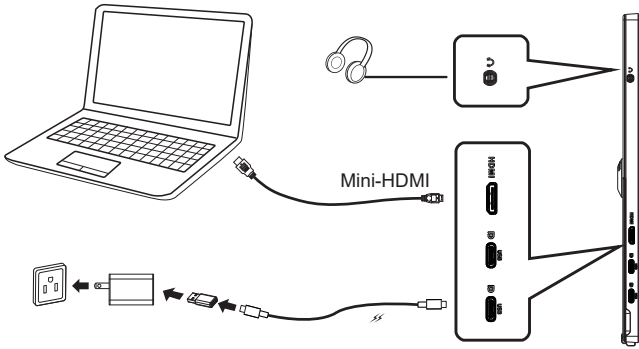


2.1 Adjusting the monitor



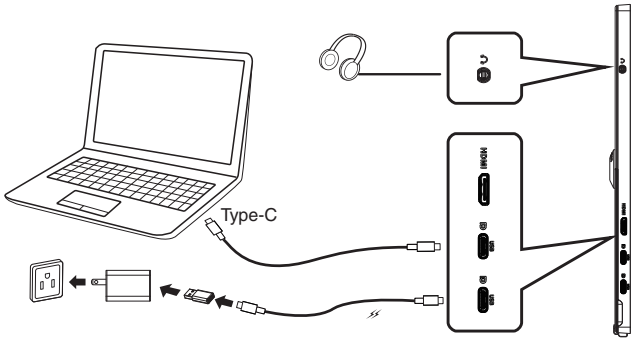
2.2 Connect the USB monitor with system

A



or

B



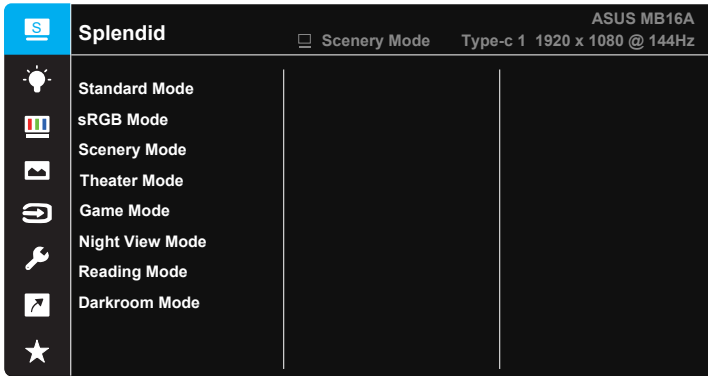
- When connecting with system by HDMI port, please connect inbox adapter to power up the monitor.











- Input power is detected not sufficient to full brightness, please plug in adapter.

3.1 OSD (On-Screen Display) menu

3.1.1 How to reconfigure

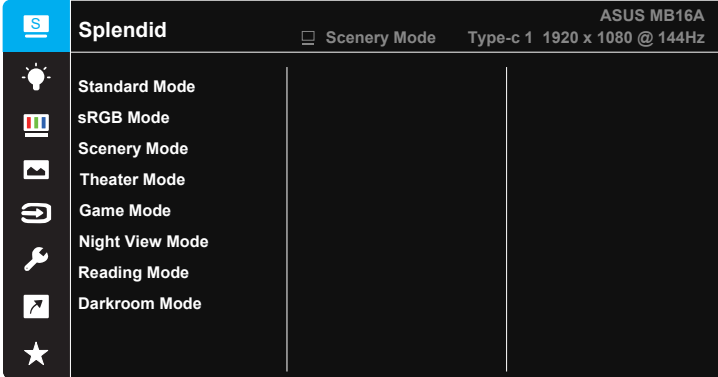


1. Press the Central of 5-way button  to display the OSD menu.
2. Move the Up and Down keys  to switch the options in the menu. When you move from one icon to another, the option name is highlighted.
3. To select a highlighted item from the menu, move the Right key  or the Central button .
4. Move the Up and Down keys to select the desired parameters.
5. Move the Right key  or the Central button  to enter the slide bar, and then use the Up or Down keys  (depending on the indicators in the menu) to make changes.
6. Move the Left key  to return to the previous menu.

3.1.2 OSD Function Introduction

1. Splendid

This function contains eight sub-functions that you can select for your preference.



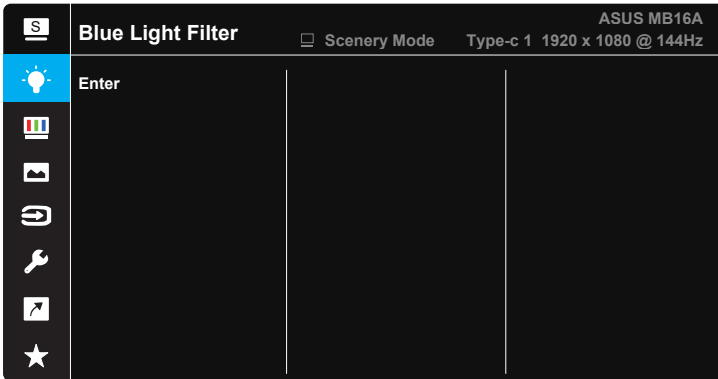
- **Standard Mode:** This is the best choice for document editing with SPLENDID™ Video Intelligence Technology.
- **sRGB Mode:** This is the best choice for viewing photos and graphics from PCs.
- **Scenery Mode:** This is the best choice for scenery photo displaying with SPLENDID™ Video Intelligence Technology.
- **Theater Mode:** This is the best choice for movie watching with SPLENDID™ Video Intelligence Technology.
- **Game Mode:** This is the best choice for game playing with SPLENDID™ Video Intelligence Technology.
- **Night View Mode:** This is the best choice for playing dark-scene game or watching dark-scene movie with SPLENDID™ Video Intelligence Technology.
- **Reading Mode :** This is the best choice for book reading.
- **Darkroom Mode :** This is the best choice for a weak ambient light environment.



-
- In the Standard Mode, the Saturation, SkinTone, Sharpness, and ASCR functions are not user-configurable.
 - In the sRGB, the Saturation, Color Temp., SkinTone, Sharpness, Contrast and ASCR functions are not user-configurable.
 - In the Reading Mode, the Saturation, SkinTone, ASCR, Contrast, and Color Temp functions are not user-configurable.
-

2. Blue Light Filter

Adjust the energy level of blue light emitted from LED backlight.



- **Blue Light Filter:** In this function, you can adjust the blue light filter from Min to max. Min: no changes; Max: The higher the level, the less blue light is scattered. When blue light filter is activated, the default settings of Standard Mode will be automatically imported. Besides maximum level, the brightness is user-configurable. Maximum is the optimized setting. It is compliance with TUV low blue light certification*. The brightness function is not user configurable.



-
- When the user adjusts blue light filter bar to maximum level.

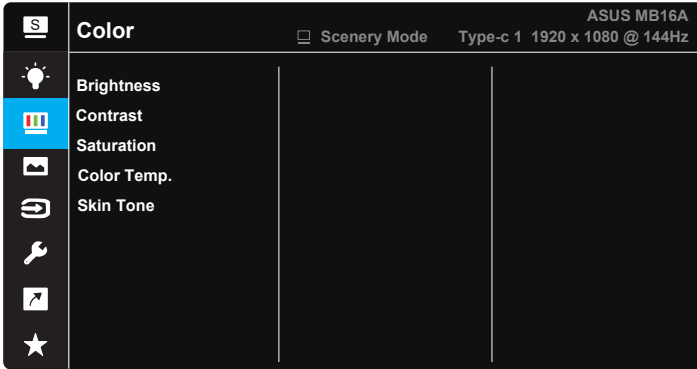


Please refer to the following to alleviate eye strains:

- Users should take some time away from the display if working for long hours. It is advised to take short breaks (at least 5 mins) after around 1 hour of continuous working at the computer. Taking short and frequent breaks is more effective than a single longer break.
 - To minimize eye strain and dryness in your eyes, users should rest the eye periodically by focusing on objects that are far away.
 - Eye exercises can help to reduce eye strain. Repeat these exercises often. If eye strain continues please consult a physician. Eye exercises: (1) Repeating look up and down (2) Slowly roll your eyes (3) Move your eyes diagonal.
 - High energy blue light may lead to eye strain and AMD (Age-Related Macular Degeneration). Blue light Filter to reduce 70% (max.) harmful blue light to avoiding CVS (Computer Vision Syndrome).
-

3. Color

Select the image color you like from this function.



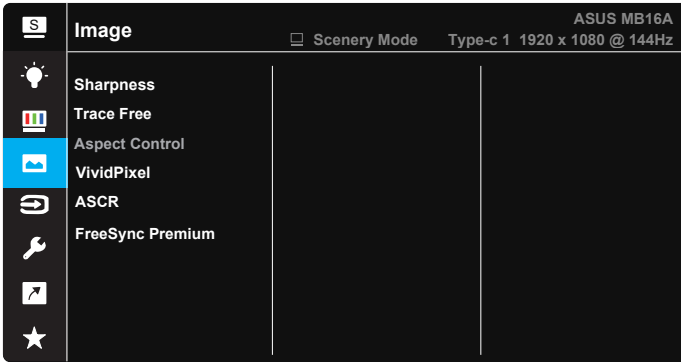
- **Brightness:** The adjusting range is from 0 to 100.
- **Contrast:** The adjusting range is from 0 to 100.
- **Saturation:** The adjusting range is from 0 to 100.
- **Color Temp.:** Contains three preset color modes (**Cool**, **Normal**, **Warm**) and **User Mode**.
- **Skin Tone:** Contains three color modes including **Reddish**, **Natural**, and **Yellowish**.



-
- In the User Mode, colors of R (Red), G (Green), and B (Blue) are user-configurable; the adjusting range is from 0 ~ 100.
-

4. Image

You can adjust the image Sharpness, Trace Free, Aspect Control, VividPixel, ASCR, and FreeSync Premium from this main function.



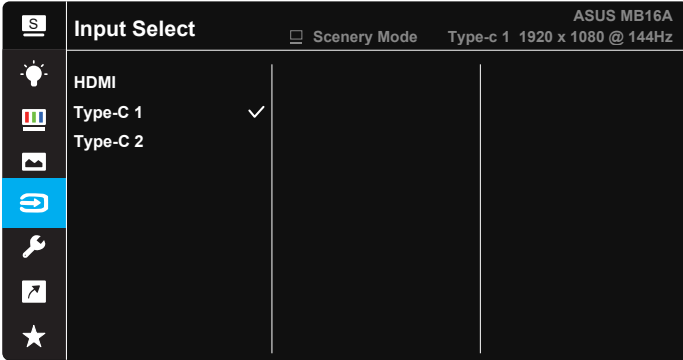
- **Sharpness:** Adjusts the picture sharpness. The adjusting range is from 0 to 100.
- **Trace Free:** Speeds up the response time by Over Drive technology. The adjusting range is from lower 0 to faster 100.
- **Aspect Control:** Adjusts the aspect ratio to “Full”, “4:3”.
- **VividPixel:** ASUS Exclusive Technology that brings lifelike visuals for crystal-clear and detail-oriented enjoyment. The adjusting range is from 0 to 100.
- **ASCR:** Select **ON** or **OFF** to enable or disable dynamic contrast ratio function.
- **FreeSync Premium:** It can allow a FreeSync supported graphics source to dynamically adjust display refresh rate based on typical content frame rates for power efficient, virtually stutter free and low-latency display update.



-
- 4:3 is only available when input source is in 4:3 format.
-

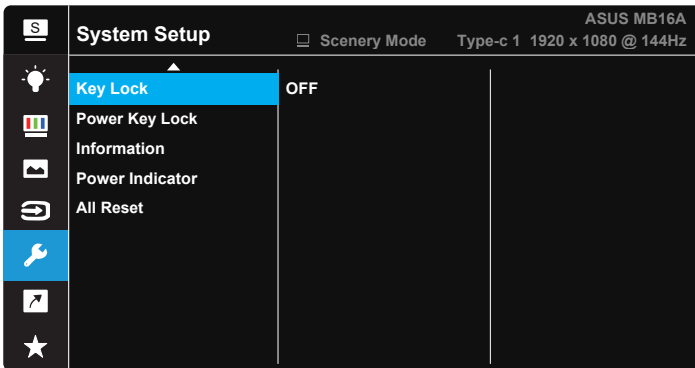
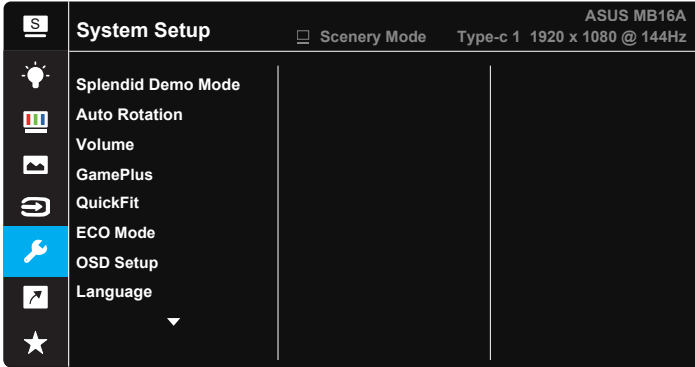
5. **Input Select**

Select the input source from **HDMI, Type-C 1, Type-C 2** input signal.







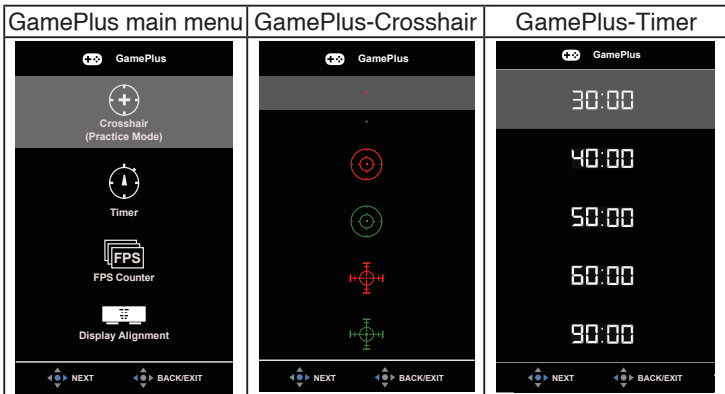
6. System Setup


Adjusts the system configuration.



- **Splendid Demo Mode:** Activate the demo mode for the Splendid function.
- **Auto Rotation:** To enable/disable rotate image automatically. Please be noted that Auto rotation function is only working under **Windows OS** by installing DisplayWidget Lite software.
- **Volume:** Adjusts the output volume of earphone.
- **GamePlus:** The GamePlus Function provides a toolkit and creates a better gaming environment for users when playing different types of games. Particularly, Crosshair function is specially designed for new gamers or beginners interested in First Person Shooter (FPS) games.
To active GamePlus:
 - Press **GamePlus** Button to enter the GamePlus main menu.

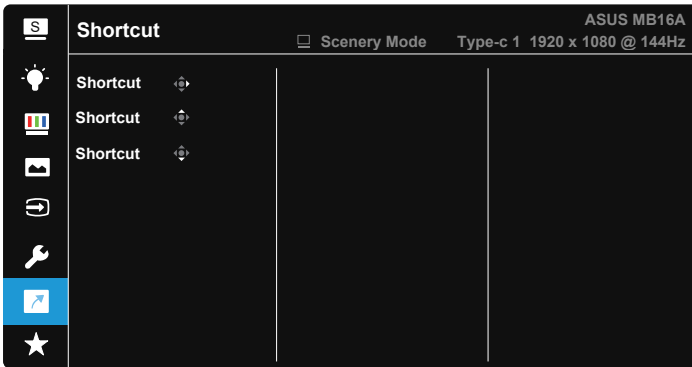
- Activate Crosshair, Timer, FPS Counter or Display Alignment function.
- Move the  button up/down to select and press  to confirm the function needed. Press  to go off, and exit.
- Crosshair/Timer/FPS Counter is movable by moving  5-way key.



- **QuickFit:** See page 1-4 for details.
- **ECO Mode:** Activate the ecology mode for power saving.
- **OSD Setup:** Adjusts the **OSD Timeout**, **DDC/CI**, and **Transparency** of the OSD screen.
- **Language:** Select OSD language. The selections are: **English, French, German, Spanish, Italian, Dutch, Russian, Poland, Czech, Croatia, Hungary, Romania, Portugal, Turkey, Simplified Chinese, Traditional Chinese, Japanese, Korean, Persian, Thai, Indonesian** and **Ukrainian**.
- **Key Lock:** Disable all key functions. Pressing the  button for more than five seconds to disable key lock function.
- **Power Key Lock:** To disable / enable power key.
- **Information:** Displays the monitor information.
- **Power Indicator:** Turn the power LED indicator on/off.
- **All Reset:** Selects “**Yes**” to revert all settings to the factory default mode.

7. Shortcut

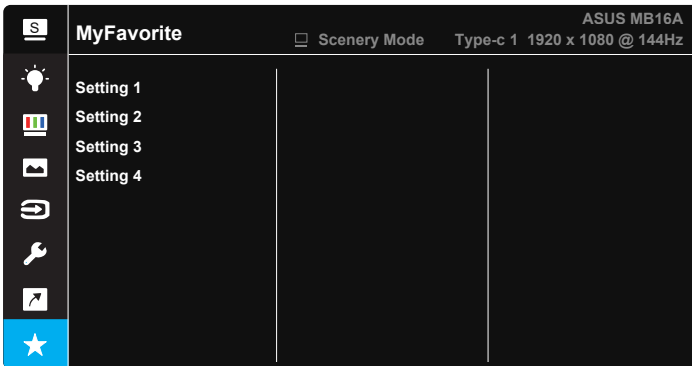
Selecting this option allows you to set shortcut key.



- **Shortcut** : User can select from “Blue Light Filter” “Splendid”, “Brightness”, “Contrast”, “Auto Rotation”, “Input Select”, “Volume” “GamePlus” and set as shortcut key.

8. MyFavorite

Load/Save all settings on the monitor.



3.2 DisplayWidget Lite

Please go to MB16AHG official website, find “Support” tab and choose “Driver &Utility” to download latest DisplayWidget Lite.

Please always connect your MB16AHG to input device **FIRST**, and then turn on DisplayWidget Lite.

We also suggest you to create a shortcut of DisplayWidget Lite on your computer desktop for easier activation.



3.3 Specifications

Model	MB16AHG
Panel Size	15.6" (16:9, 39.62cm) wide screen
Resolution	1920 x 1080
Brightness (Typ.)	300nits
Contrast (Typ.)	1200:1
Display Colors	16.7M
H-Frequency	30KHz ~ 180KHz (HDMI) / 180KHz(Type-C)
V-Frequency	60Hz ~ 144Hz (HDMI/Type-C)
Digital Input	DisplayPort™ Alt Mode for USB Type-C™/ Mini HDMI
Colors	Dark Gray
Power Consumption	≤ 17 W
Operating Temp.	0° ~ 40°C
Phys. Dimension (WxHxD)	359.85 x 226.75 x 11.95 mm
Box Dimension (WxHxD)	485 X 305 x 76 mm
Net Weight (Esti.)	0.92 kg
Gross Weight (Esti.)	2.78 kg
Regulation Approvals	UL, FCC, ICES-3, CB, CE, ErP, EU Energy, WEEE, UkrSEPRO, EAC(CU), CCC, BSMI, RCM, MEPS, VCCI, PC Recycle, J-MOSS, KCC, Sdoc, e-Standby, Vietnam Energy, CEC, BIS, RoHS, WHQL Windows 10/11, TUV Flicker free, TUV Low Blue Light, Freesync Premium
Voltage Rating	5V or 9V ---, 2A

*Specifications are subject to change without notice.

3.4 Troubleshooting (FAQ)

Problem	Possible Solution
Power LED is not ON	<ul style="list-style-type: none">• Press the ⏻ button to check if the monitor is in the ON mode.• Check if the USB Type-C cable is properly connected to the monitor and the computer.
The power LED lights amber and there is no screen image	<ul style="list-style-type: none">• Check if the monitor and the computer are in the ON mode.• Make sure the USB Type-C cable is properly connected between the Portable USB Monitor and the computer.• Inspect the signal cable and make sure none of the pins are bent.• Connect the computer with another available monitor to check if the computer is properly working.
Screen image is too light or dark	<ul style="list-style-type: none">• Adjust the Brightness settings via the button.
Screen image bounces or a wave pattern is present in the image	<ul style="list-style-type: none">• Make sure the USB Type-C cable is properly connected between the Portable USB Monitor and the computer.• Move electrical devices that may cause electrical interference.
Screen image has color defects (white does not look white)	<ul style="list-style-type: none">• Inspect the USB Type-C cable and make sure that none of the pins are bent.

Problem	Possible Solution
<p>After connecting with the USB Type-C source device, the power LED lights continuously blinking or showing ASUS logo repeatedly</p>	<ul style="list-style-type: none"> • Insufficient power supply from source USB Type-C devices. Please follow below steps: • Press the left button , and then connect the USB Type-C cable. This operation will enable built-in safe mode. After displaying ASUS logo, please release the left button. After ASUS Logo disappearing, there is “safe mode” message OSD showing up. Once “safe mode” message OSD disappears, please set background color to white image or nearly white image (*1). • Press MENU button, main menu OSD is showing. The upper left corner of the OSD will display small red-colored font “S”, indicating it is now in safe mode. Enter brightness setup, press the up key to tune up brightness. During the process, please note down brightness value “Y” up until MB16AHG re-start.(*2). For example, if brightness value shows “70” and MB16AHG restarts when adjusting to “71”, “70” is the “Y” value to note down and is the highest brightness value for the connecting USB-C source device. • Press MENU button, main menu OSD is showing. The upper left corner still indicate “S” as safe mode. Adjust the OSD brightness value to “Y” • Close the OSD and press Left hot key for 5 seconds to turn off safe mode. • Complete.

*1: White color background will consume higher power, so it’s better to use white color background to test the power limit from source USB Type-C device.

*2: If MB16AHG does not re-start when adjusting to value 100, that means source USB Type-C device has sufficient power supply.

3.5 Supported Timing List

PC Supported Primary Timing

Resolution	H(KHz)	V(Hz)	Pixel(MHz)
640x480, 60Hz	31.469	59.94	25.175
640x480, 67Hz	35	66.667	30.24
640x480,72Hz	37.861	72.809	31.5
640x480,75Hz	37.5	75	31.5
720x400, 70Hz	31.469	70.087	28.322
800x600,60Hz	37.879	60.317	40
800x600,72Hz	48.077	72.188,	50
800x600,75Hz	46.875	75	49.5
832x624, 75Hz	35	66.667	30.24
1024x768,60Hz	48.363	60.004	65
1024x768,70Hz	56.476	70.069	75
1024x768,75Hz	60.023	75.029	78.75
1152x864,75Hz	67.5	75	108
1280x960,60Hz	60	60	108
1280x1024,60Hz	63.981	60.02	108
1280x1024,75Hz	79.976	75.025	135
1280x720, 60Hz	44.772	59.855	74.5
1280x800, 60Hz	49.702	59.81	83.5
1440x900,60Hz	55.935	59.887	106.5
1680x1050,60Hz	65.29	59.954	146.25
1920x1080, 60Hz	67.5	60	148.5
1920x1080, 75Hz	84.6434	74.90567	220.75
1920x1080, 100Hz	112.5	100	297
1920x1080, 120Hz	135	120	297
1920x1080, 144Hz	158.414	144	325.7