22” FHD Wide Screen LED Monitor

User Manual

Contents

Foreword 3

Important Safeguards and Warnings 4

Packing List 6

Angle Adjustment 7

Button Description 8

Cable Connection 9

Menu Description 10

Eco Modes 11

Operations Menu (OSD) Function Descriptions 12

Product Specifications 13

Appendix 1 Cybersecurity Recommendations 14

Foreword

General

This manual introduces the installation and operations of your Amcrest monitor.

Please read carefully before use and keep this document safe for future reference.

Safety Instructions

The following signal words may appear throughout this manual.

Signal Words	Meaning
 **DANGER**	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
 **WARNING**	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
 **CAUTION**	Indicates a potential risk which, if not avoided, could result in property damage, data loss, reductions in performance, or unpredictable results.
 **TIPS**	Provides methods to help you solve a problem or save time.
 **NOTE**	Provides additional information as a supplement to the text.

Interface Declaration

This guide focuses on explaining how to use the device's features. It does not cover information on manufacturing, factory returns, or troubleshooting. For details on these topics, please contact technical support.

About The Manual

- This manual is a guide and may not reflect slight variations between the product and its description. We are not responsible for misuse of the product.
- The manual is updated regularly to comply with current regulations.
- Designs and software are subject to change. Updates might cause discrepancies between the manual and the product. Contact customer service for the most recent information.
- While we strive for accuracy, there could be errors in the descriptions or technical data. We reserve the right to clarify any ambiguities.
- If you have trouble opening the PDF manual, try updating your reader software or using a different mainstream reader.
- All trademarks belong to their respective owners.

For any issues with the device, please visit our website, contact your supplier, or reach out to customer service at amcrest.com/contact

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HIGH-DEFINITION MULTIMEDIA INTERFACE

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Important Safeguards and Warnings

This section provides important information on handling your monitor safely, preventing damage, and protecting yourself from hazards. Please read it carefully before using your monitor and follow these guidelines for optimal use.

Operation Requirements



- Make sure the power supply for the monitor is working properly before use.
- Do not pull the power cable out of the monitor while it is still powered on.
- Only use the monitor within the rated power range.
- Transport, use and store the monitor under allowed humidity and temperature.
- The monitor is not waperproof, keep your monitor dry. Avoid spills and splashes, and do not place liquids on top of the unit.
- Do not disassemble the monitor.

Installation Requirements



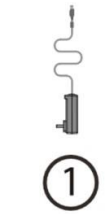
WARNING

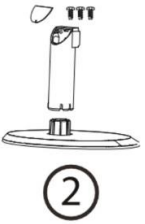
- Connect the monitor to the adapter before turning it on.
- For safe operation, ensure your power outlet meets the voltage requirements listed on the monitor and complies with local electrical safety regulations. • To avoid damage, do not connect the monitor to more than one power supply.



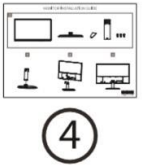
- Do not expose the monitor to direct sunlight or heat sources.
- Do not install the monitor in humid or smokey areas.
- Install the monitor in well-ventilated areas. Do not block the ventilation area of the monitor.
- Only use the power adapter or case adapter provided by the manufacturer. • The power supply must conform to the requirements of ES1 in IEC 62368-1 standard and be no higher than PS2. Power supply requirements are subject to the monitor label.
- Connect all class I electrical appliances to a power socket with proper grounding.

Packing List













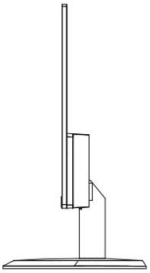
No.	Name
1	Power adapter
2	Base/Stand/Stand cover/Screw (*3)
3	HDMI Cable
4	Installation guide
5	Legal and regulatory information
6	User Manual

NOTE

The images above are for reference only. Please refer to the actual device for detailed information.

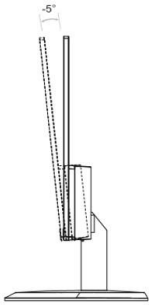
Angle Adjustment

The screen can be adjusted by inclining it forward or backward; however, the specific adjustment depends on the specific model of the monitor. Generally, it may be inclined -5 ± 2° forward and 15 ± 2° backward.



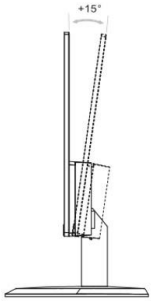
Tilting angle

-5° (± 2°) to 15° (± 2°)



Forward angle

-5° (± 2°) to 0°



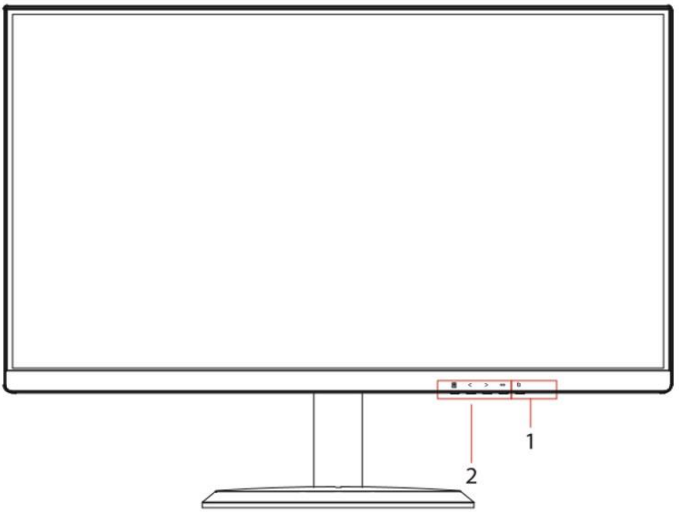
Backward angle

0° to 15° (± 2°)

NOTE

- When adjusting the angle of the monitor, be sure not to touch or press on the screen.
- The images above are for reference only. Please refer to the actual device for detailed information.

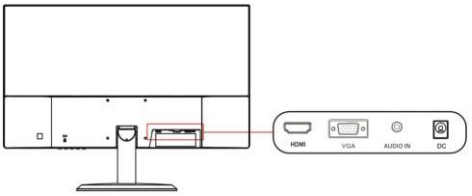
Button Description



No.	Name	Description
1	Indicator Light	• The light is green when the screen is turned on. • The light is orange when the screen enters energy saver mode. • The light is off when the screen is turned off.
2	OSD/ Power Button	Press the button to turn the monitor on.

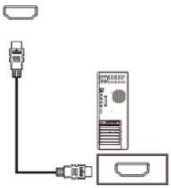
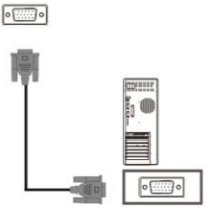
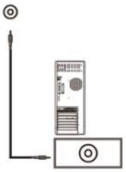
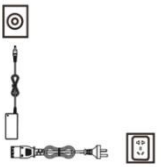
OSD Button	Function
	Displays main menu options
	Move the options up or down/ Hot key (option)
	Move the options down or up/Hot key (option)
	Exit main menu, or when no menus are displayed (signal switching)
	Power the monitor ON/OFF.

Cable Connection



NOTE

The image above is for reference only. Please refer to the actual device for detailed information.

HDMI Interface	**VGA interface**
	
Use the HDMI cable to connect the HDMI IN interface of the monitor to the HDMI OUT interface of the PC.	Use a VGA cable to connect the VGA interface of the monitor to the VGA interface of the PC.
Audio In	**Power Adapter**
	
Use an audio cable to connect the audio interface of the monitor to the audio interface of the PC.	Connect the power adapter to the corresponding power port of the monitor. Connect the other end of the adapter to a properly grounded power outlet.

Menu Description

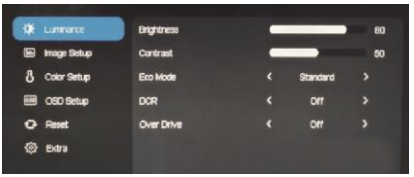
- The color and shape of the OSD menu of the computer you are using may be slightly different from the figures shown.
- The on-screen display (OSD) menu allows you to adjust your monitor's settings. Please note that the menu options may change as we update features to improve your experience. To access the OSD menu, simply turn on your monitor and press the menu button.

Step 1: Press a button to activate a browsing screen.



Icon	Function
	Menu/Enter
	Up
	Down
	Auto/Exit
	Power ON/OFF

Step 2: Press the menu button to enter the OSD screen.



Step 3: Press or to browse through the options. the

- Select the desired option and press the menu button to enter a submenu.
- Press the or to browse the submenus. Press the menu button to confirm.
- Press the or to select an option. Press the menu button to confirm the settings and exit the current menu.

Step 4: Press the Auto/Exit button to exit the menu.

Eco Modes

Press the button to switch ECO modes. These modes (Standard, RTS, FPS, Text, Movie, Game) can be used to optimize settings according to your activity. Standard mode is suitable for most activities.



Operations Menu (OSD) Function Descriptions

Menu	Sub Menu	Value Range	
Luminance 	Brightness	0-100	
	Contrast	0-100	
	Eco Mode	Standard Game Movie Text FPS RTS	
	DCR	ON/OFF	
	Over Drive	ON/OFF	
Image Setup 	H. Position	0-100	
	V. Position	0-100	
	Clock	0-100	
	Phase	0-100	
	Image Ratio	Wide/4:3	
Color Setup 	Color Temp.	Warm	
		Standard	
		Cool	
		sRGB	
		User	Red
			Green
			Blue
	Low Blue Mode	Off/On	
OSD Setup 	Language	12 Languages	
	H. Position	0-100	
	V. Position	0-100	

	Timeout	5-60	
	Transparence	0-100	
Reset 	Auto Config.	---	
	Auto Color	---	
	Reset*	---	
Extra 	Input Select	VGA/HDMI	
	Mute	Off/On	
	Volume	0-100	

Product Specifications

Model	AM-LM22
Display	
Screen Size	21.45”
Aspect Ratio	16:9
Resolution	1920 x 1080 (FHD)
Backlight	W-LED
Brightness/Luminance	250 cd/m^2
Contrast	3000:1
Display Color	16.7M(8bit)
Viewing Angle (H/V)	178° (H) / 178° (V)
Response time (typ.)	6ms
Refresh Rate	100 Hz
Signals	
Input	VGA x 1, HDMI x a, Audio in
Output	Speaker, 1.5W x 2
General	
Power Supply	12V DC, 2A
Consumption (Standard)	24W
Consumption (Standby)	≤0.5W
Weight	4.63 lbs.
VESA	3.0” x 3.0” (75mm x 75mm)
Dimension (L x W x H)	19.4” x 11.2” x 1.5” (491.7mm x 285.1 x 38mm)
Working Temperature	32°F ~ 104°F (0°C ~ 40°C)
Humidity	10% ~ 90%

Appendix 1 Cybersecurity Recommendations

Mandatory actions to be taken for basic device network security:

1. Use Strong Passwords

Please refer to the following suggestions to set passwords:

- The length should not be less than 8 characters.
- Include at least two types of characters; character types include upper- and lower-case letters, numbers and symbols.
- Do not contain the account name or the account name in reverse order.
- Do not use continuous characters, such as 123, abc, etc.
- Do not use overlapped characters, such as 111, aaa, etc.

2. Update Firmware and Client Software in Time

- According to the standard procedure in tech-industry, we recommend keeping your device (such as NVR, DVR, IP camera, etc.) firmware up to date to ensure the system is equipped with the latest security patches and fixes. When the device is connected to the public network, it is recommended to enable the "auto-check for updates" function to obtain timely information of firmware updates released by the manufacturer.
- We suggest that you download and use the latest version of client software.

"Nice to have" recommendations to improve your device network security:

1. Physical Protection

We suggest that you perform physical protection to the device, especially storage devices. For example, place the device in a special computer room and cabinet, and implement well-done access control permission and key management to prevent unauthorized personnel from carrying out physical contacts such as damaging hardware, unauthorized connection of removable device (such as USB flash disk, serial port) etc.

2. Change Password Regularly

We suggest that you change passwords regularly to reduce the risk of being guessed or cracked.

3. Set and Update Passwords Reset Information Timely

The device supports password reset function. Please set up related information for password reset in time, including the end user's mailbox and password protection questions, it is suggested not to use those that can be easily guessed.

4. Enable Account Lock

The account lock feature is enabled by default, and we recommend you keep it on to guarantee the account security. If an attacker attempts to log in with a wrong password several times, the corresponding account and source IP address will be locked.

5. Change Default HTTP and Other Service Ports

We suggest you change default HTTP and other service ports into any set of numbers between 1024-62235, reducing the risk of outsiders being able to guess which ports you are using.

6. Enable HTTPS

We suggest you enable HTTPS, so that you visit web services through a secure communication channel.

7. MAC Address Binding

We recommend you bind the IP and MAC address of the gateway to the device, thus reducing the risk of ARP spoofing.

8. Assign Accounts and Privileges Reasonably

According to business and management requirements, reasonably add users and assign a minimum set of permissions to them.

9. Disable Unnecessary Services and Choose Secure Modes

If not needed, it is recommended to turn off some services such as SNMP, SMTP, UPnP, etc., to reduce risk.

If necessary, it is highly recommended that you use safe modes, including but not limited to the following services:

- SNMP: Choose SNMP v3 and set up strong encryption passwords and authentication passwords.
- SMTP: Choose TLS to access a mailbox server.
- FTP: Choose SFTP and set a strong password.
- AP hotspot: Choose WPA2-PSK encryption mode and set a strong password.

10. Audio and Video Encrypted Transmission

If your audio and video data contents are very important or sensitive, we recommend that you use encrypted transmission function, to reduce the risk of audio and video data being stolen during transmission.

Reminder: encrypted transmission will cause some loss in transmission efficiency.

11. Secure Auditing

- Check online users: we suggest that you check online users regularly to see if the device is logged in without authorization.
- Check device log: by viewing the logs, you can know the IP addresses that were used to log in to your devices and their key operations.

12. Network Log

Due to the limited storage capacity of the device, the stored log is limited. If you need to save the log for a long time, it is recommended that you enable the network log function to ensure that the critical logs are synchronized to the network log server for tracing.

13. Construct a Safe Network Environment

To better ensure the safety of device and reduce potential cyber risks, we recommend:

- Disable the port mapping function of the router to avoid direct access to the intranet devices for an external network.
- The network should be partitioned and isolated according to the actual network needs. If there are no communication requirements between two sub networks, it is suggested to use VLAN, network GAP and other technologies to partition the network to achieve the network isolation effect.
- Establish the 802.1x access authentication system to reduce the risk of unauthorized access to private networks.
- Enable IP/MAC address filtering function to limit the range of hosts allowed to access the device.