

BG-CYCLOPS-4K

Direktronik art 20124498/99

**Intelligent 4K UHD All-In-One Auto Tracking Video Bar with
HDMI/USB-C and 20W Speakers/6-MEMS Microphones**

User Manual





DIREKTRONIK

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Statement

Please read these instructions carefully before connecting, operating, or configuring this product. Please save this manual for future reference.

Safety Precaution

- To prevent damaging this product, avoid heavy pressure, strong vibration, or immersion during transportation, storage, and installation.
- The housing of this product is made of organic materials. Do not expose to any liquid, gas, or solids which may corrode the shell.
- Do not expose the product to rain or moisture.
- To prevent the risk of electric shock, do not open the case. Installation and maintenance should only be carried out by qualified technicians.
- Do not use the product beyond the specified temperature, humidity, or power supply specifications.
- This product does not contain parts that can be maintained or repaired by users. Damage caused by dismantling the product without authorization from BZBGear is not covered under the warranty policy.
- Installation and use of this product must strictly comply with local electrical safety standards.
- Please use a soft dry cloth to clean the camera. If the camera is very dirty, clean it with diluted neutral detergent; do not use any type of solvents, which may damage the surface.
- Do not rotate the camera head violently, otherwise it may cause mechanical failure.
- This product should be placed on a stable desktop or other horizontal surface. Do not install the product obliquely, otherwise it may display an inclined image.
- Ensure there are no obstacles within the rotation range of the holder.
- Do not power on before completely installation.
- Electromagnetic fields at specific frequencies may affect the video image. This product is Class A. It may cause radio interference in household application. Appropriate measures are required.



Introduction

The BG-CYCLOPS-4K's all-in-one design encompasses several devices in one sleek unit great for video conferencing. The unit features a 4K UHD camera with auto-tracking functionality, a sophisticated 6 MEMS microphone array, high-fidelity speakers, and an automatic electric privacy cover. The BG-CYCLOPS-4K also includes powerful and accurate software for facial recognition, voice localization and tracking, as well as intelligent noise reduction.

The BG-CYCLOPS-4K can automatically adjust the image size based on the number of participants in frame to provide the optimal picture. The unit is also capable of utilizing its complex microphone array to detect the current presenter's position in real time and lock in on the subject to provide a close-up image. This allows users to remain hands-free during its operation and focus on the task at hand.

The BG-CYCLOPS-4K also includes Bluetooth 5.0 capabilities so a mobile device can connect and the unit can be used as a Bluetooth speaker and microphone. It is compatible with a variety of platforms such as Windows 7, Windows 10, Mac OS 10.10 or higher. It is also compatible with most major cloud-based video conferencing platforms such as ZOOM, Skype, Microsoft Teams, etc.



Features

- All-in-One Design: 4K UHD camera, microphone array, high fidelity speakers and electric privacy cover.
- Ultra HD: 0.8 M high quality CMOS image sensor able to capture 4K Ultra HD images providing excellent image clarity.
- Distortion-less Wide-Angle Lens: 120° wide angle lens with no distortion ensures every participant is in the frame with no need to adjust the camera.
- Automatic Privacy Cover: The privacy cover automatically closes when no output device/software is detected.
- Microphone Array: Complex microphone array enables presenters to be tracked in real time.
- Built-in Speakers: Dual 10W high quality studio speakers ensure every participant can hear clearly.
- Audio Processing: The audio processing algorithm adopts a high-fidelity 48K audio sampling rate with lossless audio transmission technology. It supports AEC, AGC, ANS signal processing, providing high-quality audio up to 6 meters away.
- Auto Framing: A face detection algorithm automatically detects participants and provides optimal framing.
- Bluetooth 5.0: Connect a mobile device through Bluetooth for the unit to be used as Bluetooth speaker and microphone.
- Low Noise and High SNR: Low noise CMOS sensor ensures a high signal to noise ratio (SNR) image. The advanced 2D/3D noise reduction technology further decreases noise ensuring the image clarity.
- Compatibility: Compatible with Windows 7, Windows10, Mac OS 10.10 or higher and it is compatible with most major cloud-based video conferencing platforms such as ZOOM, Skype, Microsoft Teams, etc.

Packing List

- 1 x BG-CYCLOPS-4K Video Bar
- 1 x Power Adapter
- 1 x USB Cable
- 1 x User Manual
- 1 x Remote Control (cr2032 3 Volt batteries required but not included)



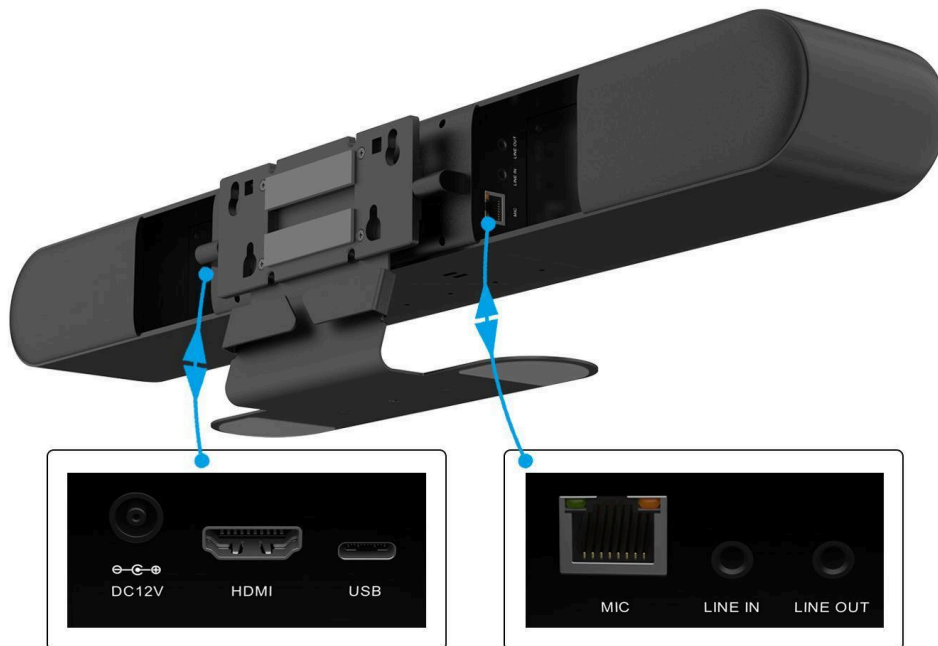
Specifications

Camera	Lens	Field of View	120° (D) /106° (H)/ 72° (V)	
		Iris	F2.0	
		Focal Length	1.89mm	
		Digital Zoom	10X	
	Sensor	High quality CMOS sensor; Effective pixels: 8 million; Aspect Ratio: 16:9		
	Image	Minimum Illumination	0.5 Lux	
		DNR	2D & 3D	
		Focus	Auto/Manual	
		BLC	On/Off	
		Exposure	Parameters can be adjusted, and AE(Auto Exposure) is also available	
	Video Adjustment	Brightness, sharpness, saturation, contrast, white balance, gain, anti-flicker, low brightness compensation, and other parameters can be adjusted		
SNR	≥50dB			
Video Format	HDMI: 4K@30Hz,1080p@60Hz with downscaling USB: 4K@30Hz,1080p@60Hz with downscaling			
Video Compression Format	MJPEG, YUY2, H.264, H.265, NV12			
Privacy Cover	Automatic privacy cover will close when no image output is detected and open when an output is detected.			
Audio	Microphone	Microphone	6 MEMS Microphones	
		Pickup Distance	6 meters (20ft)	
		Frequency Response	120 Hz–16 kHz	
	Speaker	Speakers	Built in dual speakers	
		Voltage	2*10W	
		Output Voice Pressure	80±3 dB 1.0M/1.0W	
		Frequency Response	100 Hz-20 KHz	
Audio Processing	AEC, AGC, ANS			
A.I. Functions	Group Framing	Automatically adjusts the screen size according to the number of participants to provide the best framing		
	Speaker Tracking	Track each speaker in real time and ensure that the speaker is in the center of the screen.		
Remote Control	Remote Control	Infrared remote control		
Physical Interfaces	USB Type-C	USB 3.0 audio/video output interface, Support UVC1.1, UAC1.0 and higher		
	HDMI	HDMI video output interface compatible with HDMI 2.0 standard		
	LINE IN	3.5mm audio line input interface (when an external pickup is connected, the audio input is automatically switched to the external pickup)		
	LINE OUT	3.5mm line output, can be connected to external speakers (when connecting to external speakers, the audio output will automatically switch to external speakers)		
	Expansion Mic Interface	RJ45 interface, connect to expansion microphone.		
	Power Interface	HEC3800 power socket (DC12V), input AC110V-AC220V output DC12V/2.5A		



Indicator	Bar- shaped Indicator	Displays current working status and can also be lit to show where the speaker's voice detection is originating from.
Bluetooth	Bluetooth 5.0	Can be connected to a mobile phone or other device via Bluetooth as a Bluetooth microphone and speaker
Compatibility	Available System	Windows 7, Windows 8, Windows 10, Mac OS X, Linux, Android
Power Supply Method	AC power	Supply power through power adapter
Working Condition	Storage Temperature	-10°C ~ +70°C
	Storage Humidity	20% ~ 95%
	Working Temperature	-10°C ~ +50°C
	Working Humidity	20% ~ 80%
	Environment	Indoor
Installation Method	Walling Mount	Walling mount bracket included. When wall mounting, the camera needs to be as close to the wall as possible.
	Desktop	Desktop mounting bracket included
	Installed on monitor	Bracket for monitor installation(optional)

Interface



Interfaces	
USB	USB Type-C Audio & Video Output
HDMI	HDMI Video Output
LINE IN	3.5mm Stereo Mini Input
LINE OUT	3.5mm Stereo Mini Output
Extension Mic	RJ45 Extension Mic
Power	HEC3800 power socket (DC12V), Input AC110V-AC220V, Output DC12V/2A



Device Startup

Power on

Connect the BG-CYCLOPS-4K to power using the provided DC12V power adapter.

Status Indicator Light

Green Lights Run Continuously from Left to Right	Boot initialization in progress
Blue Light Flashing	Bluetooth pairing mode
Blue Light On (3 Sec)	Bluetooth pairing completed
Solid Green Light	All lights turn green when auto-framing and voice tracking is off Partial lights turn green when auto-framing and voice tracking is on
Flashing Green Light	Standby mode
Solid Red Light	Microphone is muted
Green Indicators Light Up/Off	Volume up/down
Partial Light Turns Green	Partial light turns green according to the voice source

Video Output

1. USB: Connect the BG-CYCLOPS-4K to a computer using the provided USB Type-C cable. Open the video software on the computer and select the BG-CYCLOPS-4K as the video source.
2. HDMI: Connect the BG-CYCLOPS-4K to a display device using an HDMI cable. Select the correct input source on the display device to output.

Audio Input

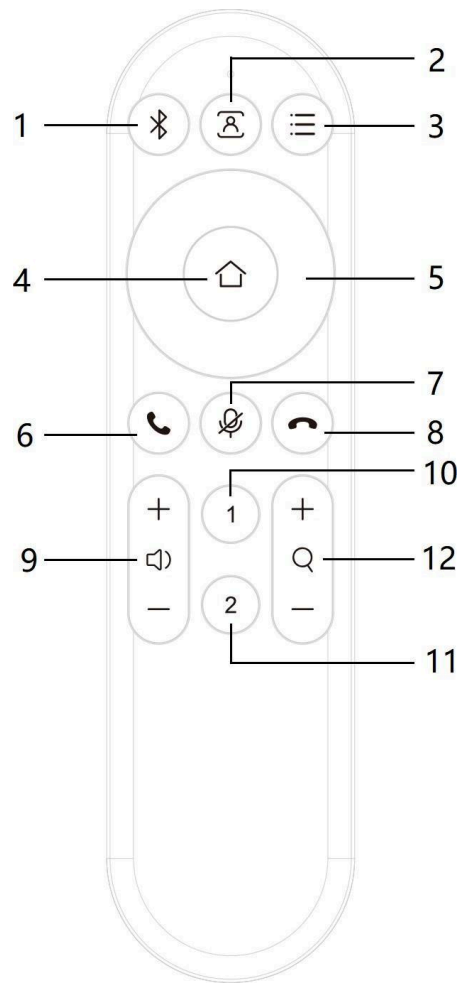
1. Built-in microphone: The BG-CYCLOPS-4K will use its built-in microphones by default.
2. Audio input through the 3.5mm stereo mini jack: Connect the BG-CYCLOPS-4K to an external microphone using a 3.5mm audio cable. The audio input will automatically switch to the external microphone.

Audio Output

1. Built-in Speakers: The BG-CYCLOPS-4K will use its built-in speakers by default.
2. Audio output through the 3.5mm stereo mini jack: Connect the BG-CYCLOPS-4K to an external speaker using a 3.5mm audio cable. The audio output will automatically switch to the external speaker.



How to Use



No.	Function Description
1	Bluetooth
2	Auto Framing & Voice Tracking
3	Menu
4	HOME
5	Up, down, left, right
6	Answer call
7	Microphone muted
8	Hang up the incoming call
9	Volume up/down
10	Set/call out preset #1 (Long press 3 sec to set preset, short press to call out preset)
11	Set/call out preset #2 (Long press 3 sec to set preset, short press to call out preset)
12	Zoom in/out



Accessing the Remote Batteries





1. **Position the Remote:** Turn the remote over so that the back panel is facing upwards.
2. **Remove the Back Panel:** Press firmly on the panel and slide it downwards to remove it.

Note: The remote requires CR2032 3-volt batteries, which are not included.



Menu Setting

Main Menu


Press the menu key  on the remote control and use up/down arrows to point to an item to be selected. Press the home key  to enter.

1. Language

Move the arrow to “Language” and press[← →]to change the options.



2. Setup

Move the arrow to “Setting” and press  to enter the interface.

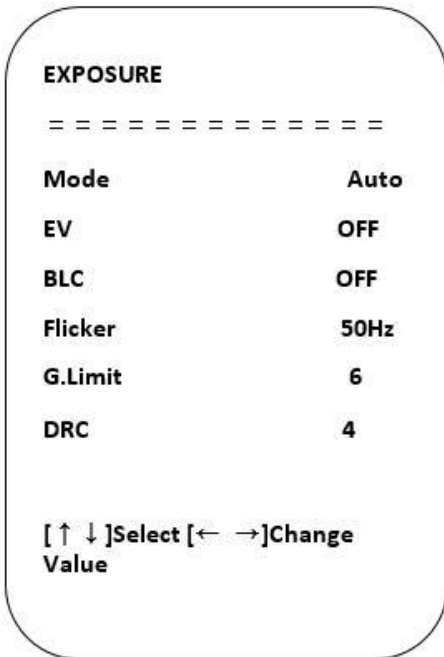


- Image Style:** Default/standard/clear/bright/soft
- Auto Framing:** On/off
- Auto Framing Sen:** High/medium/low
- Max Framing:** 3X/5X/10X
- Voice Tracking:** On/off
- Voice Tracking Sen:** High/medium/low
- Locate Mode:** Smart mode/pan mode/movie mode/discussion mode
- Prompt Info:** On/off
- Menu Mirror:** On/off
- Transfers Mode:** Bulk/synchronization



3. EXPOSURE

Move the arrow to (exposure), press to enter the exposure interface.



Exposure mode: Auto/manual/shutter priority/bright priority

Exposure Compensation(EV): On/off

Compensation Level: -7 – 7 (only available in EV mode on)

BLC: On/off (only available in auto mode)

Anti-Flicker: 50Hz, 60Hz, off (only available in auto, iris priority, bright priority mode)

Gain Limit: 0 – 15 (only available in auto, iris priority, bright priority mode)

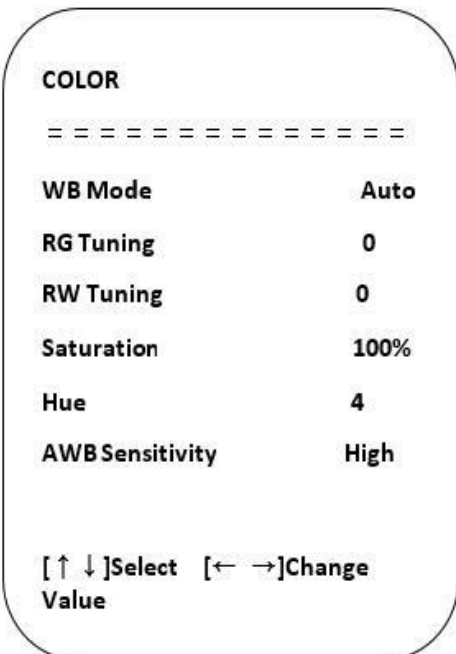
Dynamic Range: 1 – 8, off

Shutter Priority: 1/30, 1/50, 1/60, 1/90, 1/100, 1/120, 1/180, 1/250, 1/350, 1/500, 1/1000, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000(only available in manual, and shutter priority mode)

Bright: 0 – 23 (only available in bright priority)

4. COLOR

Move the arrow to (color), and press to enter the color page.



WB Mode: Auto/manual/one-push/specified temperature

RG Tuning: -10~10

Saturation: 0~127

Blue Tuning: -10~10

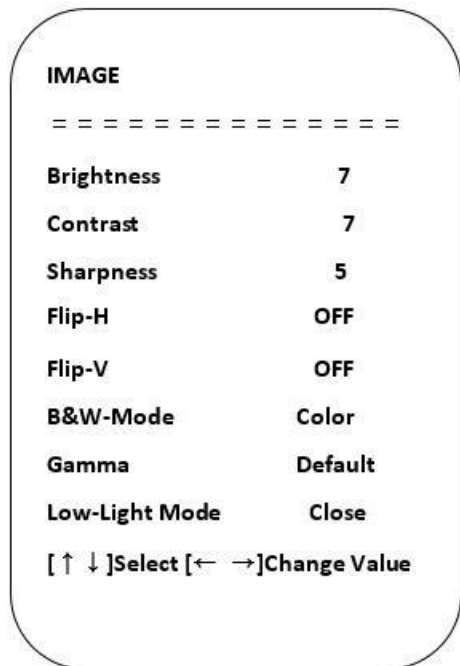
AWB Sensitivity: High/medium/low(only available in auto mode)

Hue: 0~8



5. IMAGE

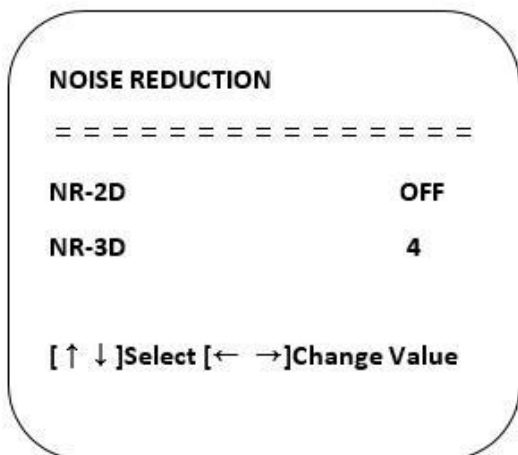
Move the arrow to (image), and press to enter the page.



Brightness: 0~14
Contrast: 0~14
Sharpness: 0~15
Flip-H: On/off
Flip-V: On/off B&W-Mode: Color/B&W
Gamma: Default, 0.34,0.39, 0.47, 0.50
Low-Light Mode: On/off

6. NOISE REDUCTION

Move the arrow to “Noise Reduction”, and press to enter the page.

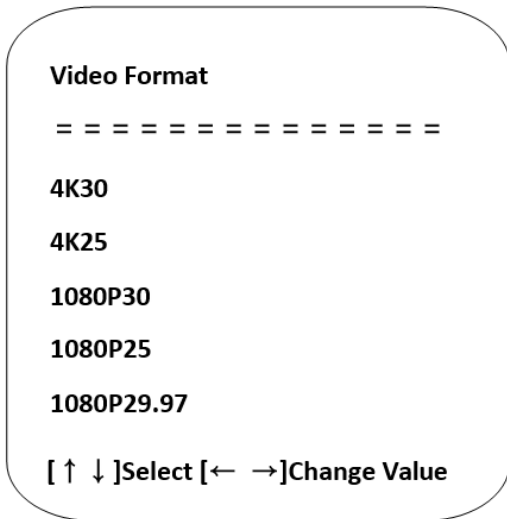


2D NR: Auto, manual 1~7
3DNR: Off, 1~8



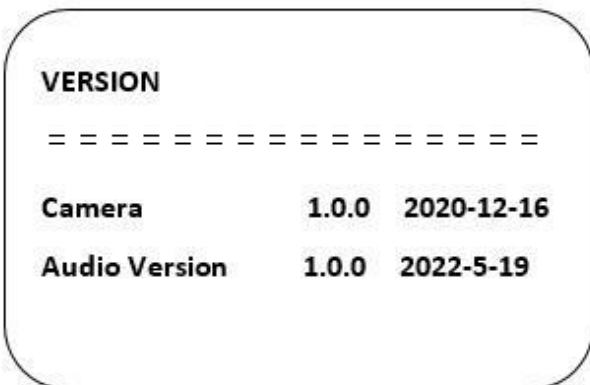
7. Video Format

Move the arrow to “Video Format” and press to enter the page to select a camera resolution.



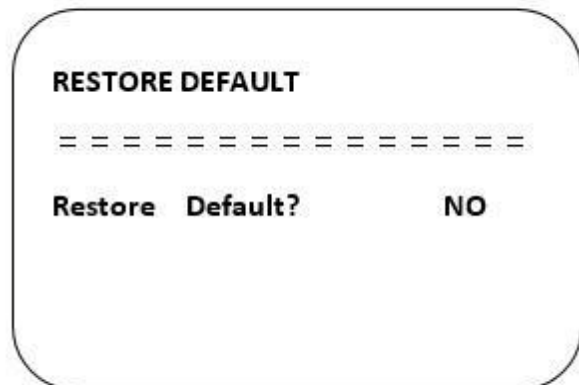
8. VERSION

Move the arrow to “Version” and press to view the current camera firmware versions.



9. RESTORE DEFAULT

Move the arrow to “Restore Default”, and press to enter the page.



Restore Default: Restore the unit to factory default settings. Yes/No

Note: Color Style and Video Format will not be restored.



Maintenance and Troubleshooting

Maintenance:

1. If the camera will not be used for a long time, please turn off the power switch.
2. Use a soft cloth or lotion-free tissue to clean the camera body.
3. Use a soft dry lint-free cloth to clean the lens. If the camera is very dirty, clean it with a diluted neutral detergent. Do not use any type of solvent or harsh detergent, which may damage the surface.

Troubleshooting:

No image

1. Check whether the power cord is connected, voltage is OK, power LED is lit.
2. Check whether the camera can “self-test” after startup
3. Check that the rotary dial on rear works normally
4. Check that the HDMI/USB cable is connected correctly

Image is shaky or vibrating.

1. Check that the video output/video monitor cable is working normally.

Remote controller does not control the camera

1. Check that the battery of the remote control is placed properly and has a charge
2. Check that the working state of the device is normal
3. Check whether the menu has been exited. Only after exiting the menu can the remote control work normally; if an output image is detected then the menu will automatically exit and the remote control will work after 30 seconds.



Tech Support

Have technical questions? We may have answered them already!

Please visit BZBGear's support page (bzbgear.com/support) for helpful information and tips regarding our products. Here you will find our Knowledge Base (bzbgear.com/knowledge-base) with detailed tutorials, quick start guides, and step-by-step troubleshooting instructions. Or explore our YouTube channel, BZB TV (youtube.com/c/BZBTVchannel), for help setting up, configuring, and other helpful how-to videos about our gear.

Need more in-depth support? Connect with one of our technical specialists directly:

Phone

1.888.499.9906

Email

support@bzbgear.com

Live Chat

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Limited Product Warranty Terms

Pro Line: 5-year warranty from the date of purchase for AV/Broadcasting products bought on or after August 1, 2024.

Essential Line: 3-year warranty from the date of purchase for AV/Broadcasting products bought on or after August 1, 2024.

Cables: Lifetime Limited Product Warranty.

For complete warranty information, please visit bzbgear.com/warranty.

For questions, please call 1.888.499.9906 or email support@bzbgear.com.



Mission Statement

BZBGear is a breakthrough manufacturer of high-quality, innovative audiovisual equipment ranging from AVoIP, professional broadcasting, conferencing, home theater, to live streaming solutions. We pride ourselves on unparalleled customer support and services. Our team offers system design consultation, and highly reviewed technical support for all the products in our catalog. BZBGear delivers quality products designed with users in mind.

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