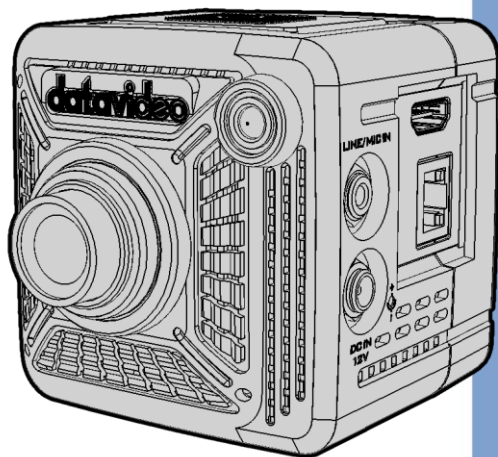


datavideo



4K POV CAMERA

BC-15P

Instruction Manual

www.datavideo.com

Table of Contents

FCC COMPLIANCE STATEMENT	5
WARNINGS AND PRECAUTIONS	5
WARRANTY	7
<i>STANDARD WARRANTY</i>	7
<i>THREE YEAR WARRANTY</i>	7
DISPOSAL	8
1. PRODUCT OVERVIEW	9
FEATURES	9
2. SYSTEM DIAGRAM	10
3. LOCATION AND FUNCTION OF PARTS	11
4. BASIC SETUP	16
POWER-ON	16
VIDEO OUTPUT	16
AUDIO OUTPUT	17
ETHERNET PORT	18
5. OSD MENU	19
ZOOM	28
GAIN LIMIT	28
SHUTTER	29
WHITE BALANCE	30
<i>Auto</i>	30
<i>Indoor</i>	30
<i>Outdoor</i>	31
<i>One-push</i>	31
<i>Color Temperature</i>	31
<i>R/B Gain</i>	32
<i>Lock</i>	32
EXPOSURE	33
<i>Global</i>	34
<i>Center</i>	34

<i>eSport</i>	34
<i>Lock</i>	34
<i>Manual</i>	34
IMAGE SETTING	34
CAMERA SETTING.....	35
<i>Lens Select</i>	35
<i>AGC</i>	36
<i>Gamma Mode</i>	36
<i>3DNR</i>	37
<i>WDR</i>	37
<i>Mirror</i>	38
<i>Rotation</i>	38
<i>Anti-Flicker</i>	39
VIDEO OUTPUT.....	39
STREAMING	40
NETWORK INFO	40
AUDIO	40
<i>Audio Input</i>	40
<i>Soundtrack</i>	41
<i>Audio Standard</i>	41
SYSTEM.....	42
<i>Camera Name</i>	42
<i>Language</i>	42
<i>Preset</i>	42
<i>Tally Mode</i>	44
<i>Button Shortcut</i>	44
<i>Firmware</i>	45
<i>Factory Default</i>	45
6. FIRMWARE UPDATE.....	46
REQUIREMENTS	46
PROCEDURE	46
<i>Connecting directly to the Computer</i>	46
<i>Connect Multiple Cameras via a Router to the Computer</i>	49
7. FREQUENTLY-ASKED QUESTIONS	53
8. DIMENSIONS.....	54

9. SPECIFICATIONS 55

SERVICE AND SUPPORT 60

Disclaimer of Product and Services

The information offered in this instruction manual is intended as a guide only. At all times, Datavideo Technologies will try to give correct, complete and suitable information. However, Datavideo Technologies cannot exclude that some information in this manual, from time to time, may not be correct or may be incomplete. This manual may contain typing errors, omissions or incorrect information. Datavideo Technologies always recommend that you double check the information in this document for accuracy before making any purchase decision or using the product. Datavideo Technologies is not responsible for any omissions or errors, or for any subsequent loss or damage caused by using the information contained within this manual. Further advice on the content of this manual or on the product can be obtained by contacting your local Datavideo Office or dealer.

FCC Compliance Statement

This device complies with part 15 of the FCC 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.

Warnings and Precautions

1. Read all of these warnings and save them for later reference.
2. Follow all warnings and instructions marked on this unit.
3. Unplug this unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this unit in or near water.
5. Do not place this unit on an unstable cart, stand, or table. The unit may fall, causing serious damage.
6. Slots and openings on the cabinet top, back, and bottom are provided for ventilation. To ensure safe and reliable operation of this unit, and to protect it from overheating, do not block or cover these openings. Do not place this unit on a bed, sofa, rug, or similar surface, as the ventilation openings on the bottom of the cabinet will be blocked. This unit should never be placed near or over a heat register or radiator. This unit should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should only be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your Datavideo dealer or your local power company.
8. Do not allow anything to rest on the power cord. Do not locate this unit where the power cord will be walked on, rolled over, or otherwise stressed.

9. If an extension cord must be used with this unit, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord's rating.
10. Make sure that the total amperes of all the units that are plugged into a single wall outlet do not exceed 15 amperes.
11. Never push objects of any kind into this unit through the cabinet ventilation slots, as they may touch dangerous voltage points or short out parts that could result in risk of fire or electric shock. Never spill liquid of any kind onto or into this unit.
12. Except as specifically explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing covers may expose you to dangerous voltage points or other risks, and will void your warranty. Refer all service issues to qualified service personnel.
13. Unplug this product from the wall outlet and refer to qualified service personnel under the following conditions:
 - a. When the power cord is damaged or frayed;
 - b. When liquid has spilled into the unit;
 - c. When the product has been exposed to rain or water;
 - d. When the product does not operate normally under normal operating conditions. Adjust only those controls that are covered by the operating instructions in this manual; improper adjustment of other controls may result in damage to the unit and may often require extensive work by a qualified technician to restore the unit to normal operation;
 - e. When the product has been dropped or the cabinet has been damaged;
 - f. When the product exhibits a distinct change in performance, indicating a need for service.

Warranty

Standard Warranty

- Datavideo equipment are guaranteed against any manufacturing defects for one year from the date of purchase.
- The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.
- The product warranty period begins on the purchase date. If the purchase date is unknown, the product warranty period begins on the thirtieth day after shipment from a Datavideo office.
- All non-Datavideo manufactured products (product without Datavideo logo) have only one year warranty from the date of purchase.
- Damage caused by accident, misuse, unauthorized repairs, sand, grit or water is not covered under warranty.
- Viruses and malware infections on the computer systems are not covered under warranty.
- Any errors that are caused by unauthorized third-party software installations, which are not required by our computer systems, are not covered under warranty.
- All mail or transportation costs including insurance are at the expense of the owner.
- All other claims of any nature are not covered.
- All accessories including headphones, cables, and batteries are not covered under warranty.
- Warranty only valid in the country or region of purchase.
- Your statutory rights are not affected.

Three Year Warranty

- All Datavideo products purchased after July 1st, 2017 are qualified for a free two years extension to the standard warranty, providing the product is registered with Datavideo within 30 days of purchase.
- Certain parts with limited lifetime expectancy such as LCD panels, DVD drives, Hard Drive, Solid State Drive, SD Card, USB Thumb Drive, Lighting, Camera module, PCIe Card are covered for 1 year.



- The three-year warranty must be registered on Datavideo's official website or with your local Datavideo office or one of its authorized distributors within 30 days of purchase.

Disposal



For EU Customers only - WEEE Marking

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.

1. Product Overview

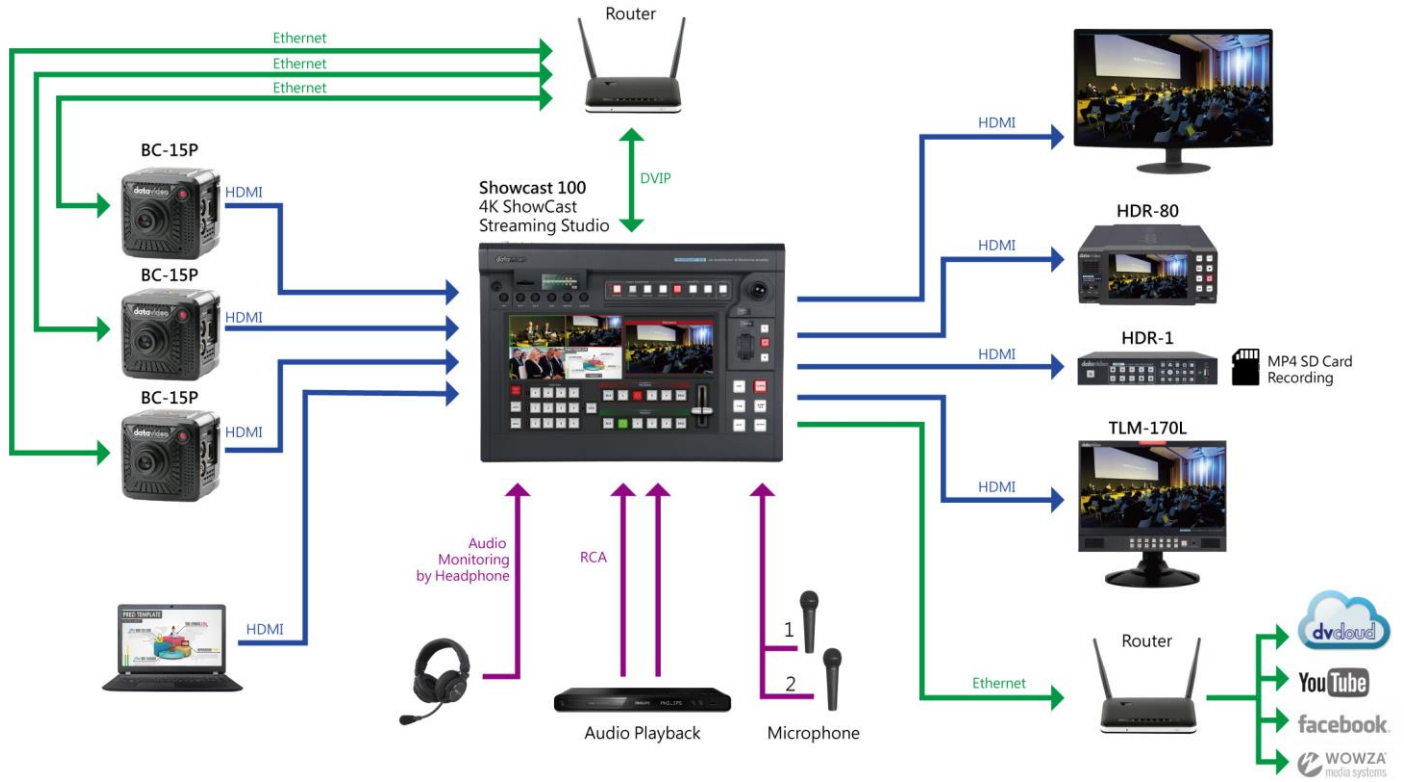
BC-15P is an innovative compact POV camera designed specifically for sports events. The camera is equipped with a 1/2.3" 4K CMOS sensor for capturing high quality images and incredible details that present every subtle expression of the player. Built-in lens saves the user hassles of finding suitable but costly lens. With SRT streaming, video, control signals (DVIP), and power (PoE) are carried on a single Ethernet cable, so that system setup is easy and fast. The three 1/4-20 UNC screw holes add greater versatility to hardware installation.

The BC-15P is one of the best choices for capturing eSport players with the wide angle lens that comes with the package. The standard lens fulfills a wide range of applications.

Features


- Supports video streaming over SRT
- Supports Power over Ethernet
- 1/2.3" CMOS Sensor
- Supports up to 4K 50/60p output
- Supports H.264/H.265 streaming
- Built-in Swappable Fixed Lens
- App control
- Built-in Tally Light


2. System Diagram



3. Location and Function of Parts



1	Lens	
	The lens focus can only be adjusted manually by physically rotating the lens.	
	Rotate the lens clockwise to focus near and counter-clockwise to focus far.	
	The BC-15P offers Standard Lens and Wide-Angle Lens. See the table below for differences between the two.	
	Standard Lens	Wide-angle Lens
	Picture	
Lens Number	10112	10110
Equivalent Focal Length	6mm	2.8mm
Field of View	H: 38.6° V: 21.9°	H: 75.5° V: 46.6°
Working Distance	1m ~ ∞	0.5m ~ ∞

	<p>As both lenses are F1.0 fixed IRIS, the depth of field is quite small, especially with closer object.</p> <p>Note: After changing the camera lens, also follow the menu path OSD Menu → Camera Setting → Lens Select to change the lens setting.</p>
2	<p>Tally LED</p> <p>The tally LED will turn on upon receiving a tally signal from a DVIP controller. During initialization, you will see the tally LED colors in the sequence of orange, green and red. The tally LED should turn off after initialized.</p>
Rear of Camera	
 <p>The image shows the rear panel of a black camera. At the top center is a cooling fan. Below it are five buttons arranged in a circle: an up arrow (labeled 'T'), a 'MENU' button, a right arrow (labeled 'GAIN +'), a down arrow (labeled 'W'), and a left arrow (labeled 'GAIN -'). The camera is labeled '4K BC-15P 4K POV CAMERA'. Five red callout lines with numbers 1 through 5 point to the buttons: 1 points to the MENU button, 2 to the up arrow, 3 to the down arrow, 4 to the right arrow, and 5 to the left arrow.</p>	
1	<p>MENU button</p> <p>Press the MENU key to open the OSD menu on the connected monitor. Once the OSD menu is opened, use the MENU key to confirm a selection.</p>
2	<p>UP-Arrow (Zoom In) button</p> <p>Press the up arrow key to move up the OSD menu. When the Button Shortcut is enabled and the OSD menu is shut down, press this key to zoom in.</p>

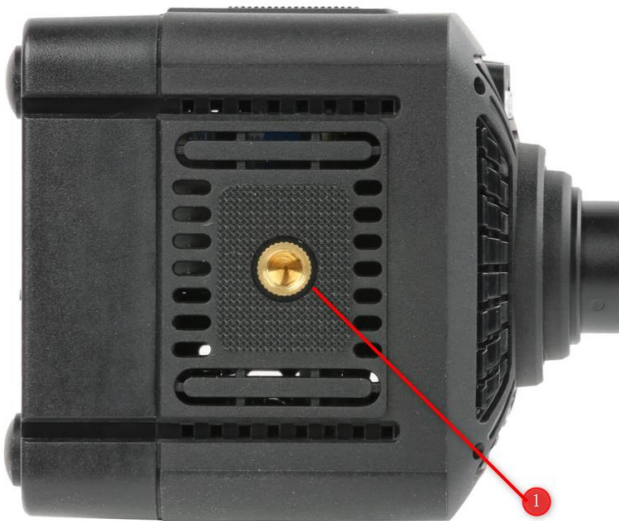
3	<p>Down-Arrow (Zoom Out) button</p> <p>Press the down arrow key to move down the OSD menu. When the Button Shortcut is enabled and the OSD menu is shut down, press this key to zoom out.</p>
4	<p>Right-Arrow (GAIN+) button</p> <p>Press the right arrow key to turn to the next page of the OSD menu or increase the value of a parameter. When the Button Shortcut is enabled and the OSD menu is shut down, press this key to increase the gain.</p>
5	<p>Left Arrow (Gain-) button</p> <p>Press the left arrow key to return to the previous page of the OSD menu or decrease the value of a parameter. When the Button Shortcut is enabled and the OSD menu is shut down, press this key to decrease the gain.</p>

Right Panel of the Camera



1	<p>LINE/MIC IN</p> <p>The 3.5mm headphone jack allows you to connect an external audio source using LINE IN or a stereo microphone using MIC IN. The external audio source is embedded in the output video.</p>
2	<p>DC IN 12V</p> <p>DC in socket connects the supplied 12V PSU. The connection can be secured by screwing the outer fastening ring of the DC In plug to the Socket.</p>
3	<p>HDMI</p> <p>Use an HDMI cable to connect an external monitor or switcher to display the camera image.</p>
4	<p>POE/LAN/DVIP</p> <p>Use an Ethernet cable to connect the camera to a network for video streaming or firmware update. You can also connect DVIP devices such as a camera controller.</p>

Left Panel of the Camera



1	<p>1/4-20 UNC Screw Hole</p> <p>The 1/4-20 UNC screw hole allows you to secure the camera on mounting devices such as a tripod.</p>
---	--

Top of the Camera



- 1 **1/4-20 UNC Screw Hole**
The 1/4-20 UNC screw hole allows you to secure the camera on mounting devices such as a tripod.

Bottom of the Camera



- 1 **1/4-20 UNC Screw Hole**
The 1/4-20 UNC screw hole allows you to secure the camera on mounting devices such as a tripod.

4. Basic Setup

Power-On

Connect the DC 12V power adapter to the DC IN socket.



Connect the DC 12 V
power adapter

Video Output



Connect HDMI devices
such as TLM series
monitors, ShowCast
100, iCast 10NDI, and
HDR-80/90.

Via an HDMI cable, the HDMI interface will then be able to deliver the camera image to an HDMI display such as an HDMI monitor (TLM series monitors), a switcher (ShowCast 100/iCast 10NDI) or a recorder (HDR-80/90).

See [OSD MENU](#) → [Video Output](#) for setting the camera video resolution.

Audio Output



The 3.5mm headphone jack allows you to connect an external audio source using LINE IN or a stereo microphone using MIC IN. The external audio source is embedded in the output video.

Ethernet Port



Connect the
POE/LAN/DVIP port to
a router.

Connect the Ethernet interface to a router. The IP address can be found in [Network Info](#) of the OSD menu.

5. OSD menu

Chapter 5 describes the OSD menu.



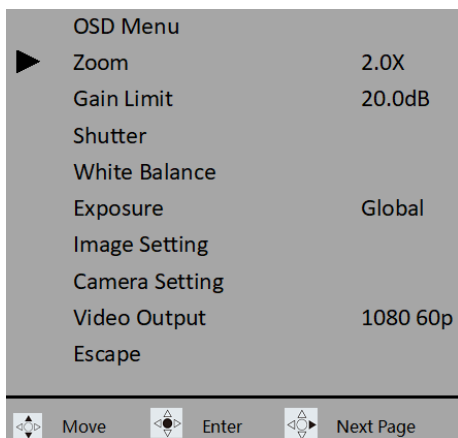
The OSD menu allows the user to modify various camera settings. Press the “**MENU**” key to open the OSD menu on the connected HDMI display.

Once the OSD menu is opened, press the up and down arrow keys to **cycle through** the menu, the left and right arrow keys to switch pages and the menu key to select.

Use the left and right arrow buttons to change the value of a parameter. Press the right arrow key to increase and the left arrow key to decrease. Press the menu key to save the change and return to the previous menu level.

To exit without saving changes, simply select “Escape”.

Please note that the current setting is highlighted in blue and indicated by an arrow icon.



The table below summarizes the main options and their sub-options.

Main Options													
	Zoom	Gain Limit	Shutter	White Balance	Exposure	Image Setting	Camera Setting	Video Output	Streaming	Network Info	Audio	System	Escape
Sub Options	Zoom	Gain Limit	Shutter	Auto	Global	Contrast	Lens Select	Video Output	TS over TCP/UDP	Camera IP	Audio Input	Camera Name	
	Escape	Escape	Escape	Indoor	Center	Brightness	AGC	Escape	RTSP	DHCP	Soundtrack	Language	
				Outdoor	eSport	Saturation	Gamma Mode		RTMP/RTMPS	Reset IP	Audio Standard	Preset	
				One-Push	Lock	Hue	3DNR		HLS	Escape	Escape	Tally Mode	
				Color Temp.	Manual	Sharpness	WDR		SRT			Button Shortcut	
				R/B Gain	Escape	Escape	Mirror		Off			Firmware	
				Lock			Rotation		Escape			Factory Default	
				Escape			Anti-Flicker					Escape	
							Escape						

Details of the OSD menu options are listed in the table below.

Main Menu	Sub Menu	Options	Descriptions
Zoom	Zoom	1.0X (no zoom)	New setting will be applied without having to press the menu key.
		1.1X	
		1.2X	
		1.3X	
		1.4X	
		1.5X	
		1.6X	
		1.7X	
		1.8X	
		1.9X	
	2.0X		
	Escape		
Gain Limit	Gain Limit	1.0dB	New setting will be applied without having to press the menu key.
		2.0dB	
		3.0dB	
		4.0dB	
		5.0dB	
		6.0dB	
		7.0dB	
		8.0dB	
		9.0dB	
		10.0dB	
		11.0dB	
		12.0dB	
		13.0dB	
		14.0dB	
		15.0dB	
		16.0dB	
		17.0dB	
		18.0dB	
		19.0dB	
	20.0dB		
21.0dB			
22.0dB			
23.0dB			
24.0dB			
25.0dB			
26.0dB			
27.0dB			
	Escape		
Shutter	Shutter	1/60	
		1/90	
		1/120	
		1/150	
		1/180	
		1/210	
		1/600	

		1/1200		
		1/2400		
		1/4800		
		1/9000		
	Escape			
White Balance	Auto			
	Indoor			
	Outdoor			
	One-Push			
	Color-Temp.	Color Temp.	2500K	Manually configured color temperature will be overridden when white balance mode is set to non-manual modes.
			2600K	
			2700K	
			2800K	
			2900K	
			3000K	
			3100K	
			3200K	
			3300K	
			3400K	
			3500K	
			3600K	
			3700K	
			3800K	
			3800K	
			3900K	
			4000K	
			4100K	
			4200K	
			4300K	
			4400K	
			4500K	
			4600K	
			4700K	
4800K				
4900K				
5000K				
5100K				
5200K				
5300K				
5400K				
5500K				
5600K				
5700K				
5800K				
5900K				
6000K				
6100K				
6200K				
6300K				
6400K				
6500K				

		6600K	
		6700K	
		6800K	
		6900K	
		7000K	
		7100K	
		7200K	
		7300K	
		7400K	
		7500K	
		7600K	
		7700K	
		7800K	
		7900K	
		8000K	
		8100K	
		8200K	
		8300K	
		8400K	
		8500K	
		8600K	
		R/8700K	
		8800K	
		8900K	
		9000K	
	Escape		
R/B Gain	RGain	0	<p>New setting can be previewed on the monitor and will be applied only after pressing the menu key. Please note that R Gain will be applied along with B Gain.</p> <p>Manually configured R Gain will be overridden when white balance mode is set to non-manual modes.</p>
		8	
		16	
		24	
		32	
		40	
		48	
		56	
		64	
		72	
		80	
		88	
		96	
		104	
		112	
		120	
		128	
		136	
		144	
		152	
		160	
		168	
		176	
		184	
		192	

			200	
			208	
			216	
			224	
			232	
			240	
			248	
			256	
		BGain	0	<p>New setting can be previewed on the monitor and will be applied only after pressing the menu key. Please note that B Gain will be applied along with R Gain.</p> <p>Manually configured B Gain will be overridden when white balance mode is set to non-manual modes.</p>
			8	
			16	
			24	
			32	
			40	
			48	
			56	
			64	
			72	
			80	
			88	
			96	
			104	
			112	
			120	
			128	
			136	
			144	
			152	
			160	
			168	
			176	
			184	
		192		
		200		
		208		
		216		
		224		
		232		
		240		
		248		
		256		
		Escape		
	Lock			
	Escape			
Exposure	Global			
	Center			
	eSport			
	Lock			
	Manual			
	Escape			
Image	Contrast	Contrast	0	New setting can be

Setting			1	previewed on the monitor and will be applied only after pressing the menu key.
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
			10	
		Escape		
Brightness	Brightness		0	New setting can be previewed on the monitor and will be applied only after pressing the menu key.
			1	
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
		10		
	Escape			
Saturation	Saturation		0	New setting can be previewed on the monitor and will be applied only after pressing the menu key.
			1	
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
		10		
	Escape			
Hue	Hue		0	New setting can be previewed on the monitor and will be applied only after pressing the menu key.
			1	
			2	
			3	
			4	
			5	
			6	
			7	
			8	
			9	
		10		
	Escape			
Sharpness	Sharpness		0	New setting can be previewed on the monitor and will be applied only after pressing the menu key.
			1	
			2	
			3	

			4	
			5	
			6	
			7	
			8	
			9	
			10	
		Escape		
	Escape			
Camera Setting	Lens Select	Standard Lens		
		eSport Lens		
		Escape		
	AGC	ON		
		Off		
		Escape		
	Gamma Mode	Standard		
		Mode1		
		Mode2		
		Mode3		
	3D NR	Escape		
		ON		
		Off		
		Escape		
	WDR	ON		
		Off		
		Escape		
	Mirror	Off		
		H		
		V		
		H+V		
	Rotation	Escape		
		0		
		90		
		270		
	Anti-Flicker	Escape		
		Off		
50HZ				
60HZ				
Escape				
Escape				
Video Output	Video Output	2160 60p		
		2160 59.94p		
		2160 50p		
		2160 30p		
		2160 29.97p		
		2160 25p		
		1080 60p		
		1080 59.94p		
		1080 50p		
		1080 30p		
		1080 29.97p		

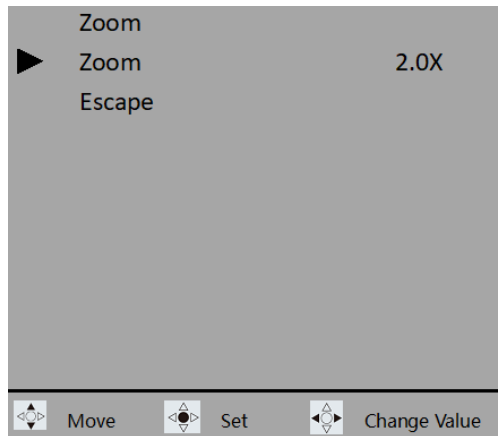
		1080 25p	
	Escape		
Streaming	TS over TCP/UDP		Currently not available
	RTSP		
	RTMP/RTMPS		
	HLS		
	SRT		
	Off		
	Escape		
Network Info	Camera IP		Currently not available
	DHCP		
	Reset IP	No Yes	
	Escape		
Audio	Audio Input	Line IN	
		Mic IN	
		Escape	
	Soundtrack	Stereo	
		Mono	
		Escape	
	Audio Standard	SMPTE	
		EBU	
		Escape	
Escape			
System	Camera Name	BC-15P	
		Escape	
	Language	English	
		Traditional Chinese	
		Simplified Chinese	
		Escape	
	Preset	Preset Default	
		Load User1	
		Load User2	
		Save User1	
		Save User2	
		Escape	
	Tally Mode	Red/Green	
		Red	
		Green	
		Off	
		Escape	
	Button Shortcut	On	
		Off	
		Escape	
	Firmware	Version	
Update Info		Get	
		Escape	
Update		No	
		Yes	

		Escape	
	Factory Default	No	
		Yes	
	Escape		
Escape			

Zoom

A digital zoom is when a camera recreates the effect of zooming in with a lens by capturing the image from an increasingly smaller area of the camera’s sensor, and then blowing up that image to the regular size.

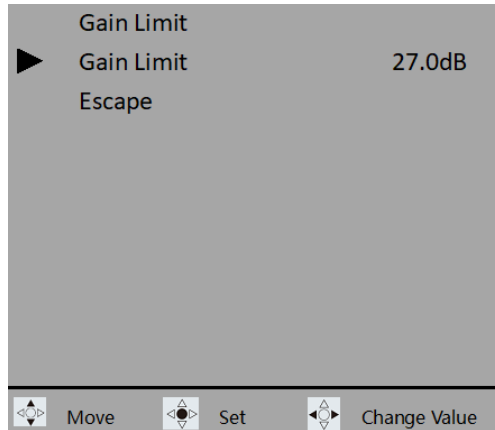
The available zoom ratios are 1.0X (no zoom), 1.1X, 1.2X, 1.3X, 1.4X, 1.5X, 1.6X, 1.7X, 1.8X, 1.9X and 2.0X.



Gain Limit

At a higher gain, the brightness becomes more appropriate in dim scenes, but the noise increases. To limit the noise level, you can select the upper limit for the Gain from the list below.

1.0 dB/2.0 dB/3.0 dB/4.0 dB/5.0 dB/6.0 dB/7.0 dB/8.0 dB/9.0 dB/10.0 dB/11.0 dB/12.0 dB/13.0 dB/14.0 dB/15.0 dB/16.0 dB/17.0 dB/18.0 dB/19.0 dB/20.0 dB/21.0 dB/22.0 dB/23.0 dB/24.0 dB/25.0 dB/26.0 dB/27.0 dB

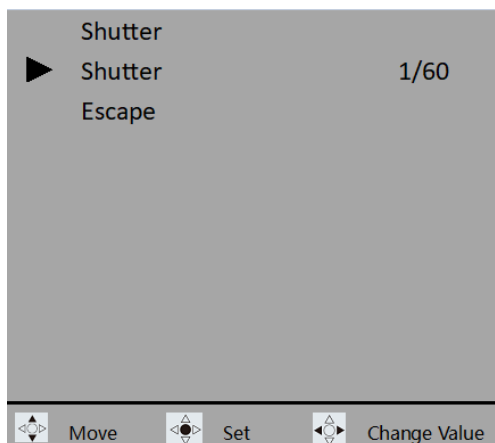


Shutter

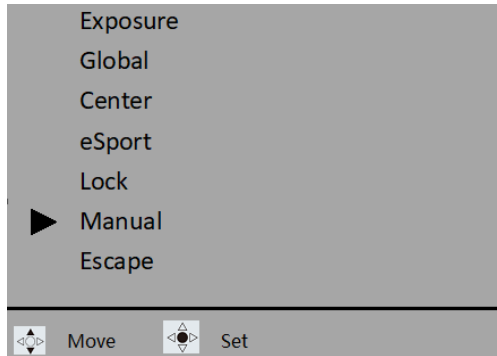
Shutter speed is the length of time the camera shutter is open, exposing light onto the camera sensor.

Shutter speeds are typically measured in fractions of a second when they are under a second. For example, $1/4$ means a quarter of a second, while $1/250$ means one-two-hundred-and-fiftieth of a second (or four milliseconds).

The available shutter speeds are $1/60$, $1/90$, $1/120$, $1/150$, $1/180$, $1/210$, $1/600$, $1/1200$, $1/2400$, $1/4800$ and $1/9000$.

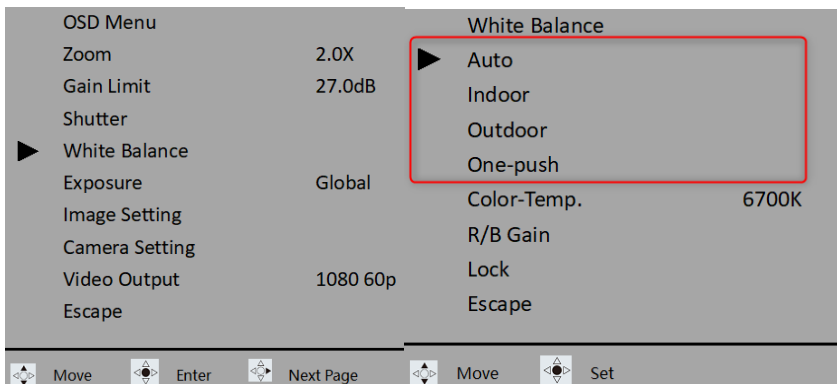


Please note that the exposure mode must be set to manual before you can adjust the shutter speed.



White Balance

Certain light conditions can cause discoloration of your image. White balance allows you to adjust the color balance in order to produce the best image quality. The BC-15P offers auto and manual modes for white balance adjustment. Various modes will be described in this section.



Auto

If Auto is selected, the most accurate colors will be selected automatically for the current scene. The white balance will be adjusted automatically when lighting conditions change. **Auto** is the most recommended mode for most situations or when you have to move frequently between different scenes.

Note: Select “Lock” if you want to fix the current white balance setting.

Indoor

If Indoor is selected, the white balance will be adjusted to the following scenes:

- Indoors
- At party scenes or studios where the lighting conditions change quickly
- Under video lamps in a studio, or under sodium lamps or incandescent-like color lamps
- Shooting outdoor at dawn or dusk
- Shooting outdoor on cloudy days or at night with incandescent-like color lamps

Outdoor

If Outdoor is selected, the white balance will be adjusted to the following scenes:

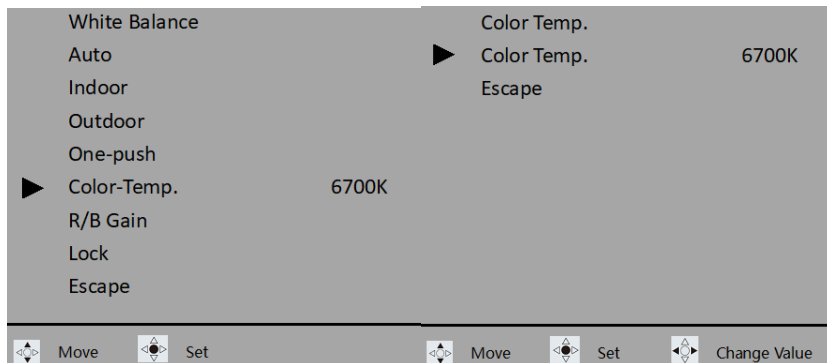
- Outdoors using sunlight as the light source
- Mixed light sources (sunlight and artificial light)
- Night views, neon signs and fireworks
- Sunrise or sunset
- Under daylight fluorescent lamps

One-push

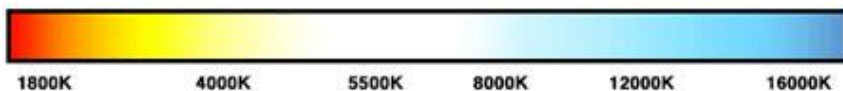
The one-push mode, when selected, adjusts the white balance once according to the ambient light. If the lighting condition changes, you will need to recalibrate the white balance setting by selecting the one-push mode again.

Color Temperature

Set the color temperature to manually adjust the white balance setting.



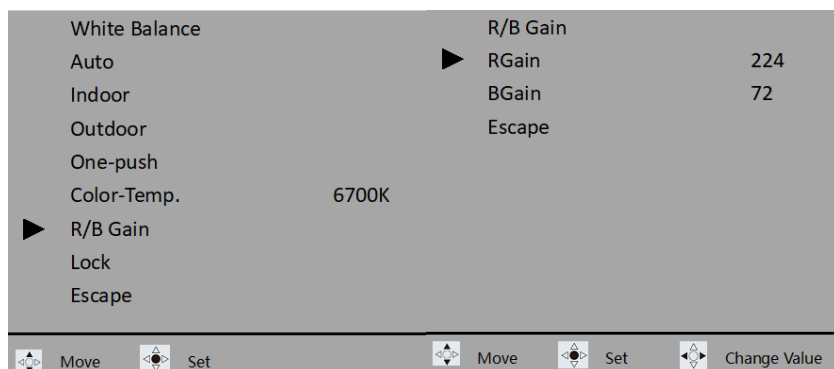
See the table below for color temperatures of the corresponding light sources:



Lighting Source	Color Temperature Value
Sunlight (Sunrise/Sunset)	3200 °K
Tungsten/Halogen Lights	2800-3400 °K
Sunlight (noon)	5500 °K
HID Lights	5500-7500 °K
Sunlight (cloudy day)	6500-7500 °K

R/B Gain

The “R/G Gain” allows you to adjust the video’s red and blue components.

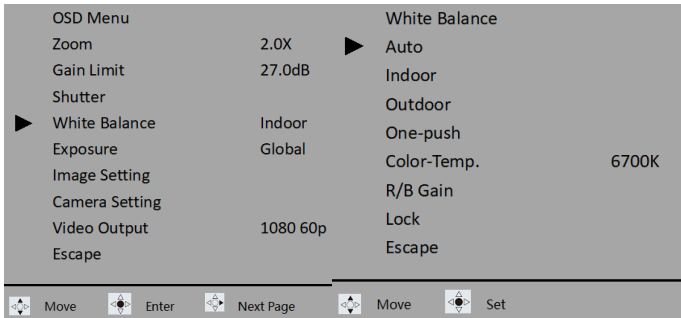


Lock

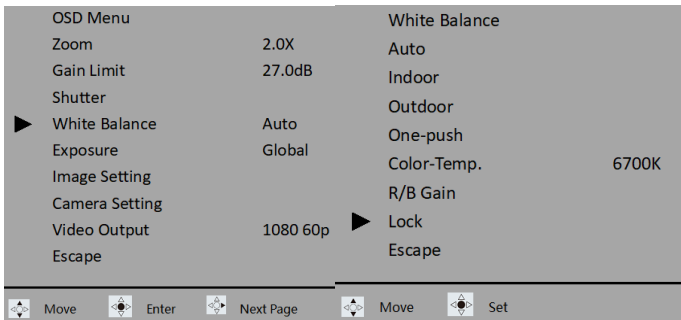
In **Auto** mode, you can select “**Lock**” to fix the white balance setting after the most accurate colors have been selected for the current scene.

Follow the procedure below to lock the current white balance setting in **Auto** mode:

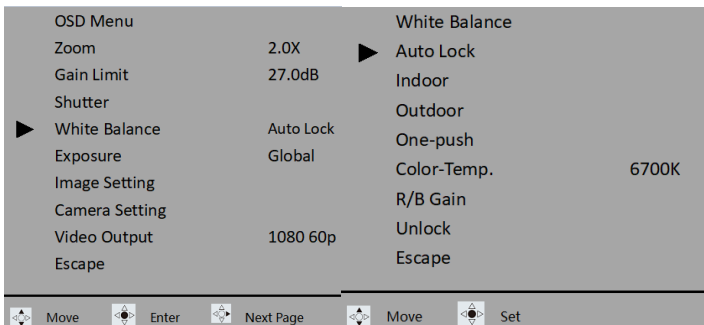
1. Open OSD menu, then select White Balance → Auto to enable auto white balance after which you will return to the main menu.



2. On the main menu, select White Balance → Lock.



3. The current white balance setting is locked when Auto mode appears as Auto Lock as shown below.



To re-enable **Auto** mode, simply select **Unlock**.

Exposure

The Exposure basically controls the amount of light that reaches the camera sensor. You can allow the camera to adjust the exposure automatically or do it manually.

Global

Auto mode; light intensity is evenly distributed across the entire video image.

Center

Auto mode; light intensity is concentrated in a circular area in the center of the video.

eSport

This auto exposure mode is designed specifically for the eSport games.

Lock

When selected, the current exposure setting will be locked.

Manual

Enable **Manual** mode to manually adjust the exposure by changing the shutter speed in **Shutter** sub menu.

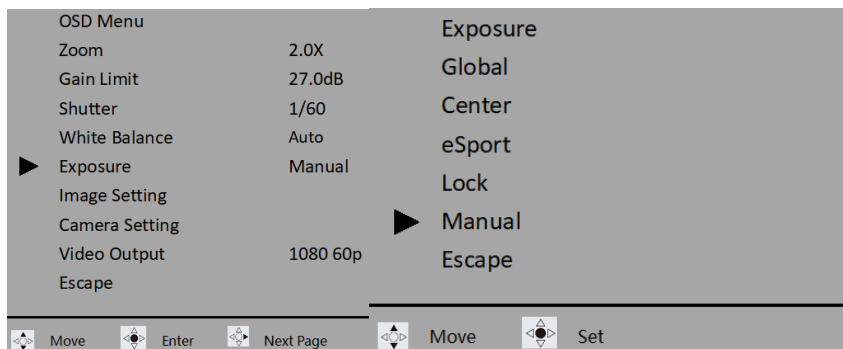
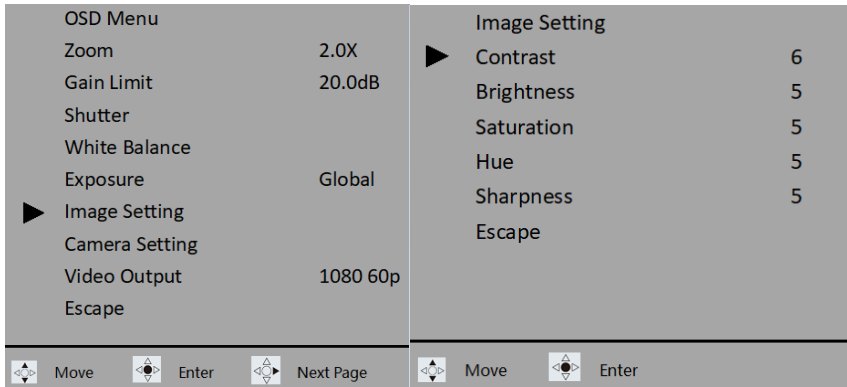


Image Setting

BC-15P allows you to adjust the following image parameters:

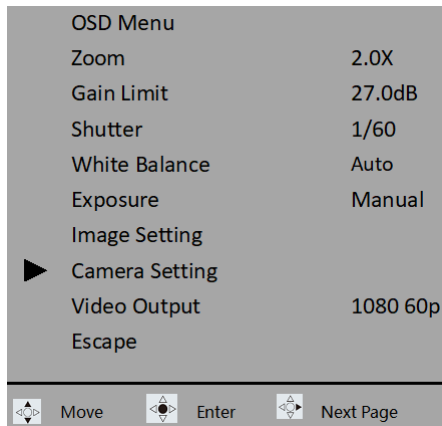
- Contrast: 0/1/2/3/4/5/6/7/8/9/10
- Brightness: 0/1/2/3/4/5/6/7/8/9/10
- Saturation: 0/1/2/3/4/5/6/7/8/9/10
- Hue: 0/1/2/3/4/5/6/7/8/9/10
- Sharpness: 0/1/2/3/4/5/6/7/8/9/10

Note: New setting can be previewed on the monitor and will be applied only after pressing the menu key.



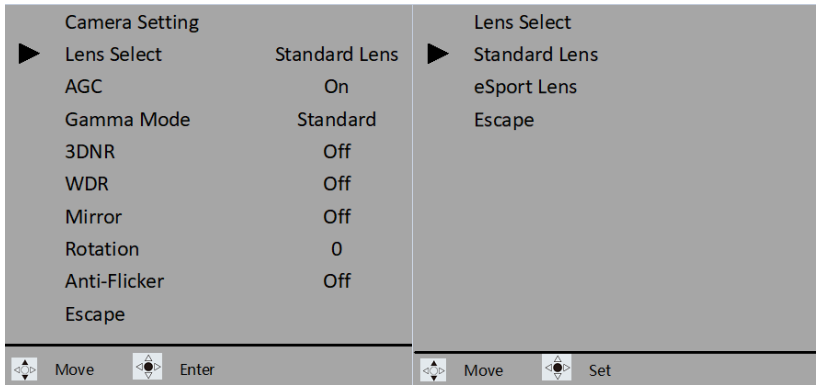
Camera Setting

Various camera setting options will be described in this section.



Lens Select

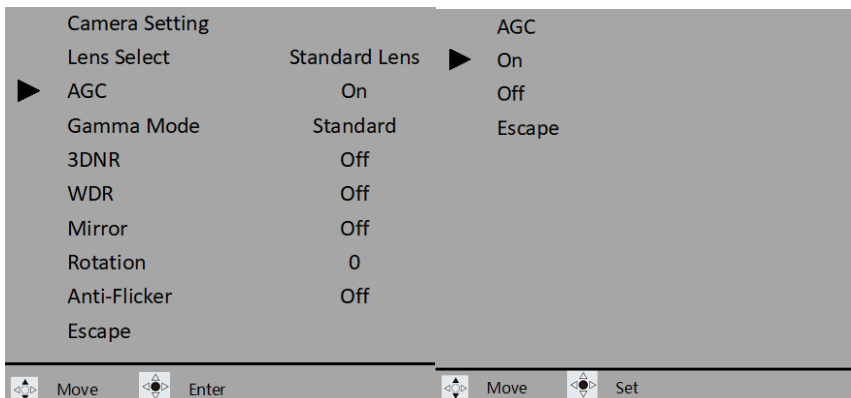
Depending on the lens used, you can either select Standard or eSport (wide angle) lens.



AGC

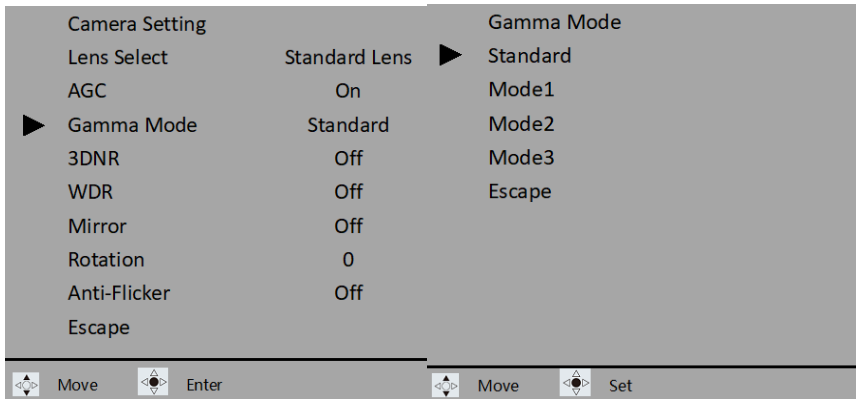
Automatic Gain Control or AGC, when turned on, allows the camera to automatically boost the image received so that objects can be seen more clearly. When enabled, you will not be able to manually adjust the gain and shutter speed.

Please note that at a higher gain, the brightness becomes more appropriate in dim scenes, but the noise increases. At a lower gain, the noise decreases, but the shutter speed becomes slower to compensate for the lack of brightness, causing camera-shake or subject blur.



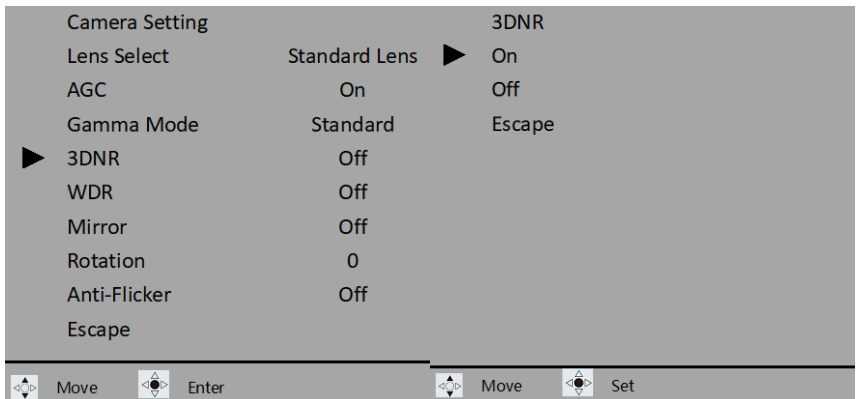
Gamma Mode

The gamma modes include Standard, Mode1, Mode2 and Mode3.



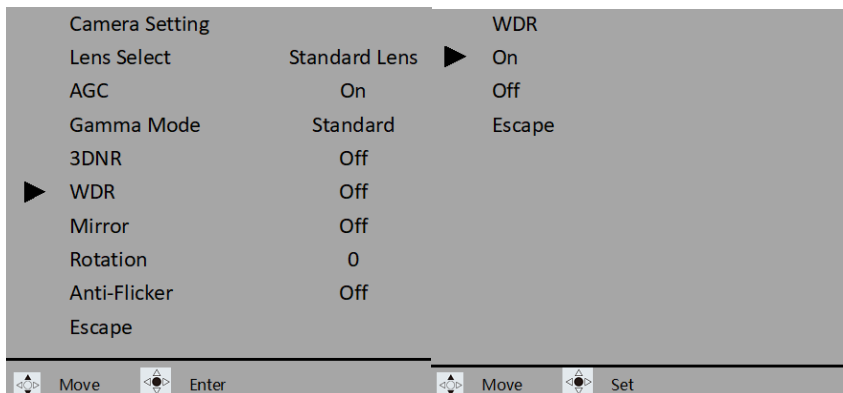
3DNR

3DNR stands for 3D Noise Reduction. Enable to remove image noise from the camera video.



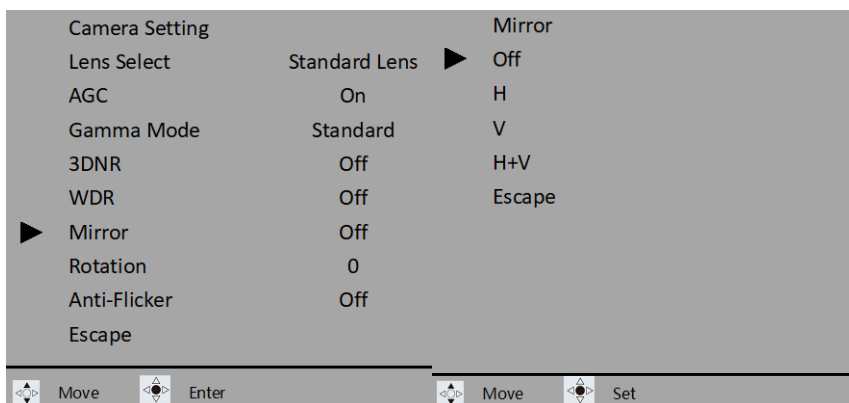
WDR

WDR, short for Wide Dynamic Range, refers to high dynamic range imaging. Enable WDR to improve your image quality.



Mirror

Use the mirror function to flip your video. With horizontal mirror, you create a mirror image of the original clip so what's on the left will appear on the right. With vertical mirror, the video appears upside down. If you select H+V, horizontal and vertical mirrors will be enabled at the same time.



Rotation

You can rotate your video by 90 or 270 degrees. 0 means no rotation.

Camera Setting		Rotation
Lens Select	Standard Lens ▶	0
AGC	On	90
Gamma Mode	Standard	270
3DNR	Off	Escape
WDR	Off	
Mirror	Off	
▶ Rotation	0	
Anti-Flicker	Off	
Escape		

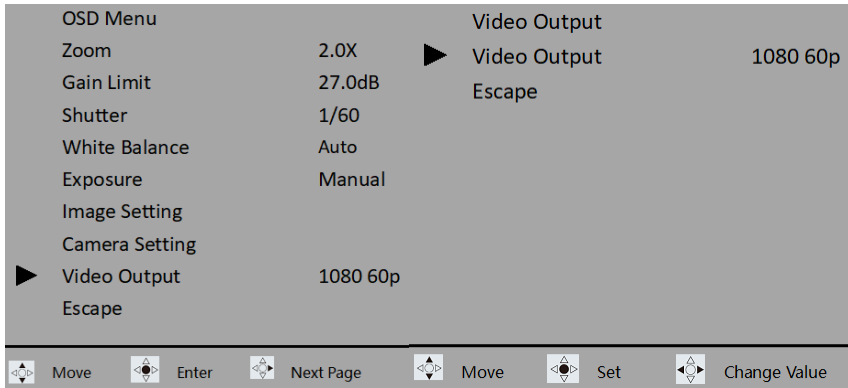
Anti-Flicker

BC-15P's anti-flicker mode has been designed to work with light flicker occurring at 50Hz and 60Hz frequencies.

Camera Setting		Anti-Flicker
Lens Select	Standard Lens ▶	Off
AGC	On	50HZ
Gamma Mode	Standard	60HZ
3DNR	Off	Escape
WDR	Off	
Mirror	Off	
Rotation	0	
▶ Anti-Flicker	Off	
Escape		

Video Output

Set the camera's output resolution in **Video Output**. The available resolutions include 1080 25p, 1080 29.97p, 1080 30p, 1080 50p, 1080 59.94p, 1080 60p, 2160 25p, 2160 29.97p, 2160 30p, 2160 50p, 2160 59.94p, and 2160 60p.



Streaming

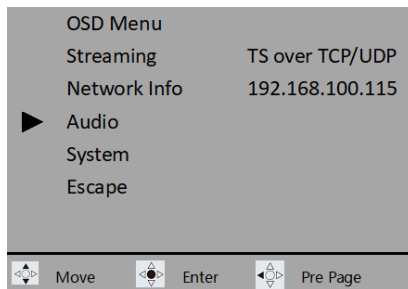
Currently not available.

Network Info

Currently not available.

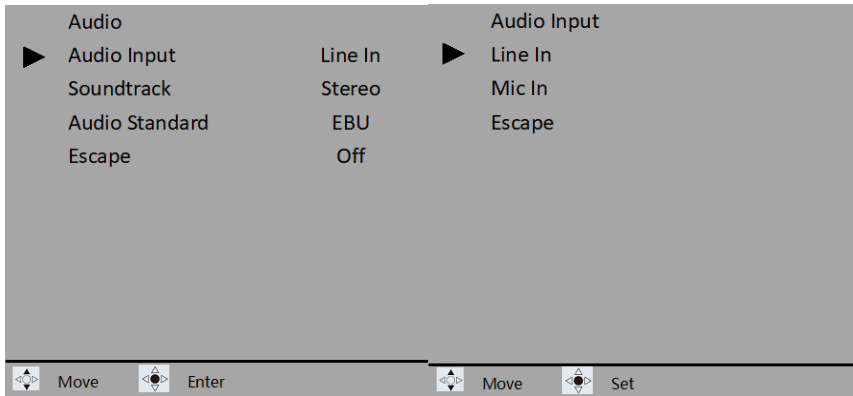
Audio

Select audio input and set output audio format and standard in **Audio**.



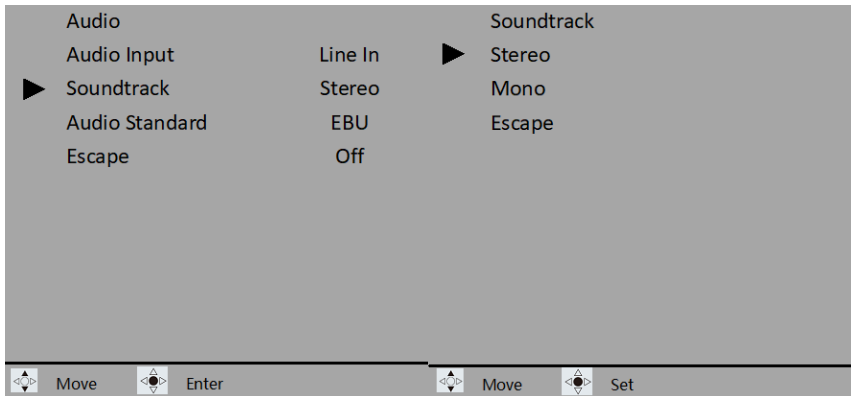
Audio Input

You can either select “**Mic In**” or “**Line In**” as the audio input.



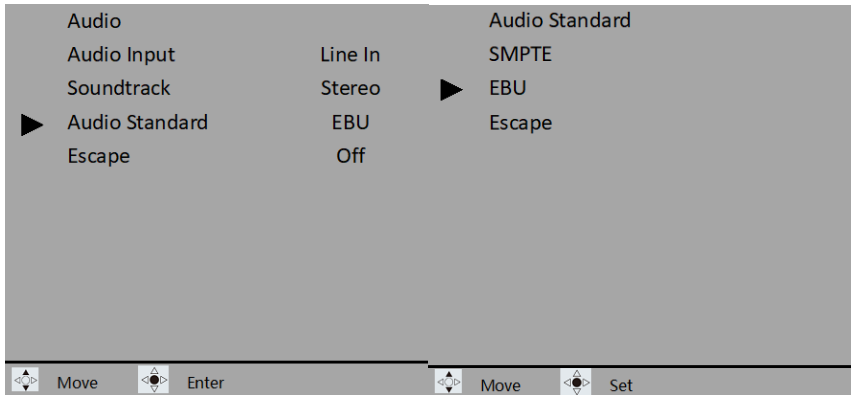
Soundtrack

Set the output audio format to either **“Stereo”** or **“Mono”**.



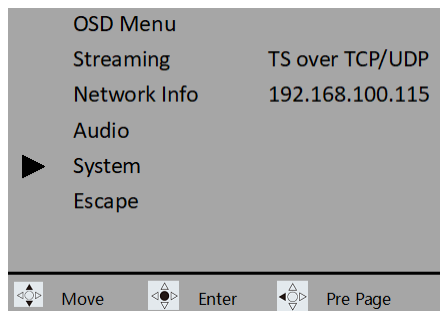
Audio Standard

The audio standard options are **EBU** or **SMPTE**.



System

System parameters include **Camera Name**, **Language**, **Preset**, **Tally Mode**, **Button Shortcut**, **Firmware** and **Factory Default**.



Camera Name

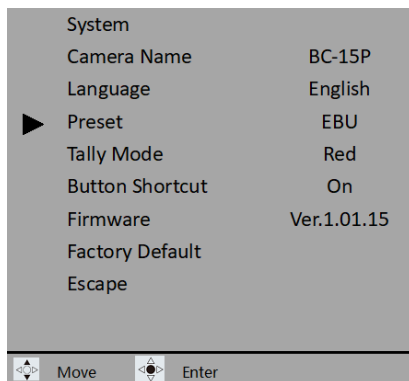
Currently not available.

Language

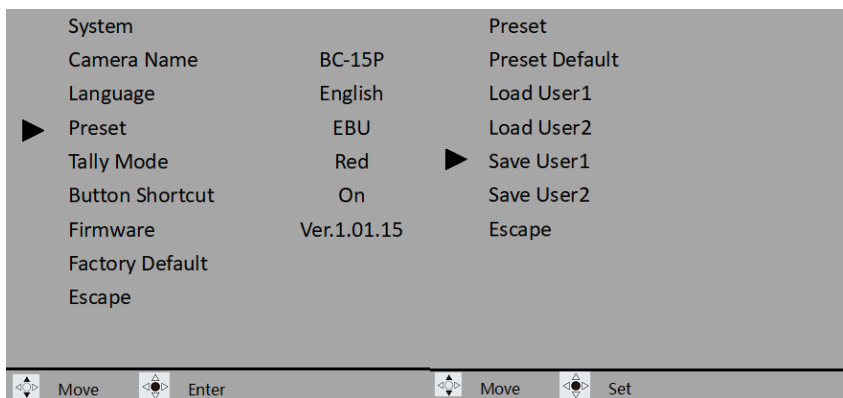
Currently not available.

Preset

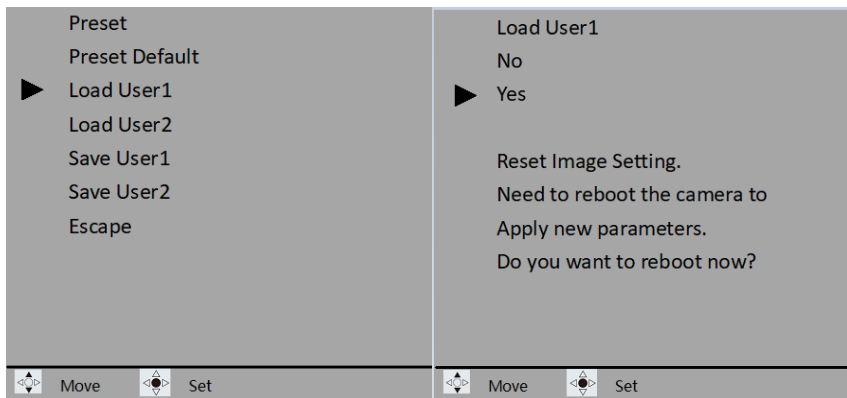
BC-15P provides two presets for saving camera settings. These presets can be loaded for later use. They allow you to quickly apply a set of camera settings, which is useful when switching between different setups or environments.



Once you've finished configuring your camera settings, enter Preset sub menu then select either User1 or User 2 to save the camera settings as a Preset.



To load a preset, simply select the corresponding user preset (Load User1 or Load User2). The camera will reboot itself after the preset is loaded successfully.



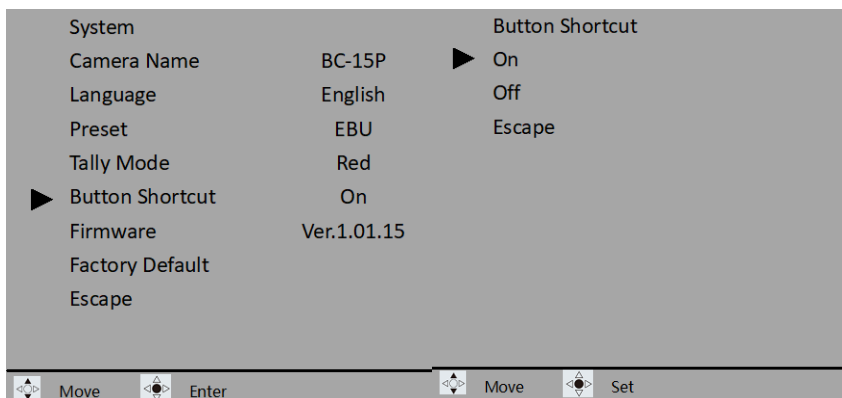
Select **Preset Default** to restore the preset defaults. Please note that only default settings related to **Streaming, Network Info, Audio** and **System** will be restored.

Tally Mode

Currently not available.

Button Shortcut

You are allowed to enable the button shortcuts.



Once the button shortcuts are enabled, you can press the left and right arrow keys to increase and decrease the gain respectively. Press the up arrow key to zoom in and down arrow key to zoom out.



Firmware

The current firmware version is shown.

See [Firmware Update](#) for firmware upgrade instructions.

Factory Default

Select Factory Default to reset the camera to its default values except **Video Output, Audio Standard** and **Language**.

The camera needs to be rebooted to complete the system reset.

System		Factory Default
Camera Name	BC-15P	No
Language	English	▶ Yes
Preset	EBU	
Tally Mode	Red	
Button Shortcut	On	Need to reboot the camera to apply new parameters.
Firmware	Ver.1.01.15	
▶ Factory Default		Do you want to reboot now?
Escape		

Move
 Enter
 Move
 Set

6. Firmware Update

Datavideo usually releases new firmware containing new features or reported bug fixes from time to time. Customers can either download the firmware as they wish or contact their local dealer or reseller for assistance.

This section outlines the firmware upgrade process which should take *approximately few minutes to complete*.

The existing settings should persist through the *firmware upgrade process, which should not be interrupted once started* as this could result in a non-responsive unit.

Requirements

- BC-15P Unit
- 12V DC adapter x 1
- RJ-45 Ethernet Cable x 1
- Laptop or PC x1 (Windows 10 is recommended)
- Latest firmware & firmware update tool
Download from: <https://www.datavideo.com/product/BC-15P>
- Router x 1 (optional; for multiple BC-15P devices)

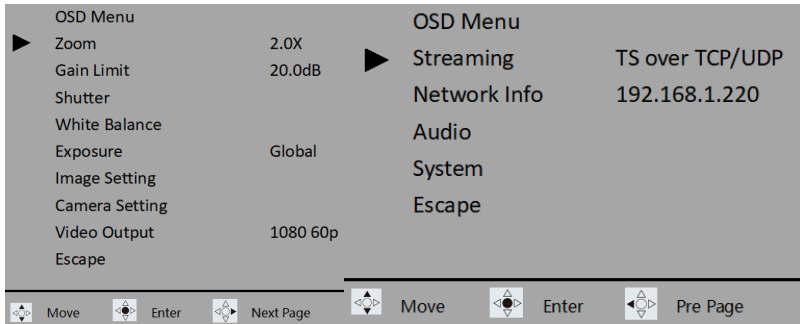
Procedure

Before you start the firmware upgrade, make sure the BC-15P's latest firmware and firmware update tool have been downloaded to the hard drive of your laptop or PC. The file can be found on Datavideo's official website (www.datavideo.com/product/BC-15P). Unzip the file and install the firmware update tool on the computer.

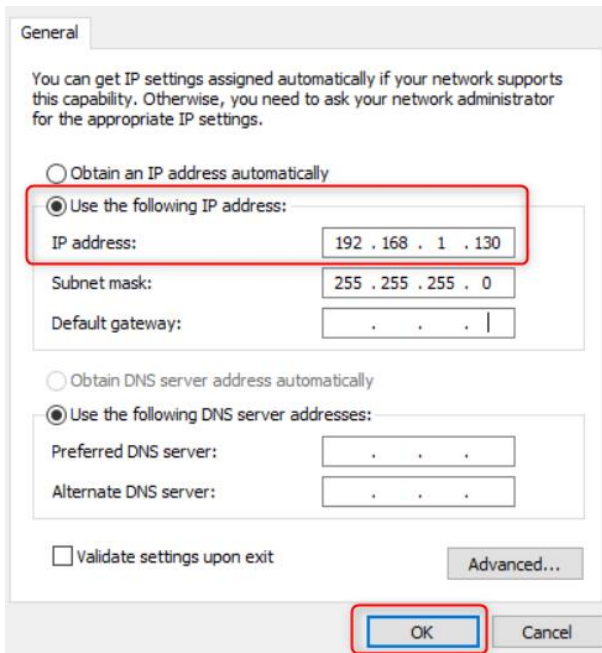
Connecting directly to the Computer

1. Power ON your BC-15P then connect via the Ethernet interface to the computer with the firmware update tool installed.
2. Open the BC-15P's OSD menu and on the main menu, move down to **Network Info** where you will find the camera's IP address.

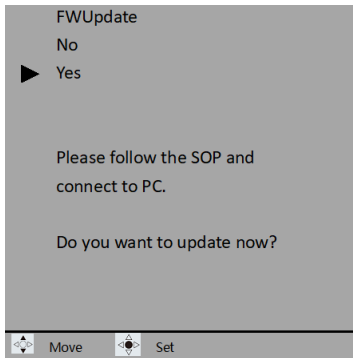
Note: The camera's default IP address 192.168.100.115.



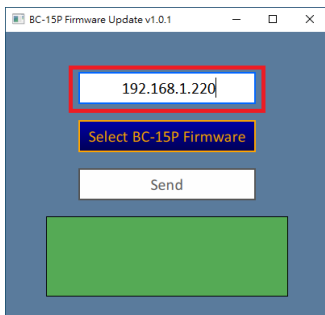
3. Since the camera's IP address is 192.168.1.220 in this case, so set the computer's IP address to 192.168.1.XXX where the fourth octet can be any number except 220 and between 2 and 255. Here, we've manually assigned 192.168.1.130 to the computer.



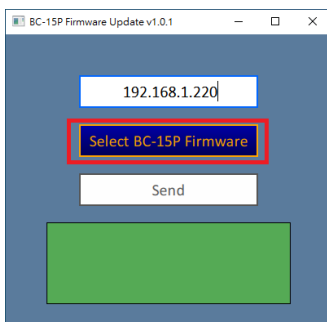
4. Now go back to the BC-15P's OSD menu, follow the menu path **System** → **Firmware** then select **Update** and you will be prompted to proceed with the firmware upgrade. Simply select **Yes**.



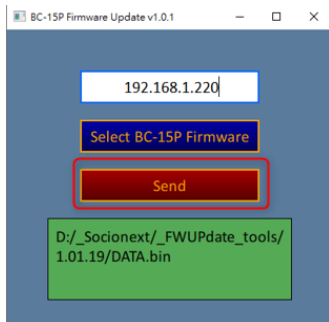
5. Open the BC-15P's firmware update tool on the computer then as shown in the diagram below enter the IP address 192.168.1.220.



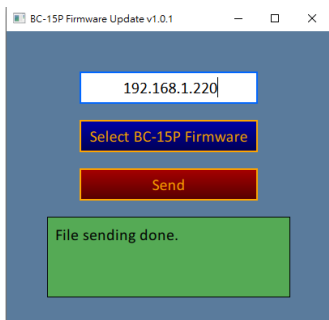
6. Click **"Select BC-15P Firmware"** to browse the hard disk for the latest firmware file. Double click the file once found.



7. Click **"Send"** to start uploading the file to BC-15P.



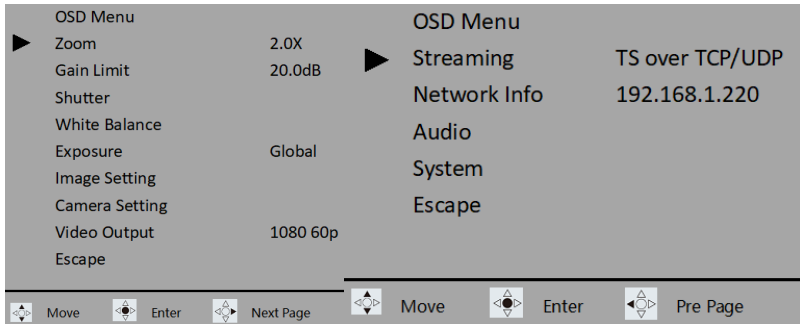
8. You will be prompted after the file has been successfully uploaded to BC-15P. Wait till the BC-15P reboots itself after which the firmware update is complete.



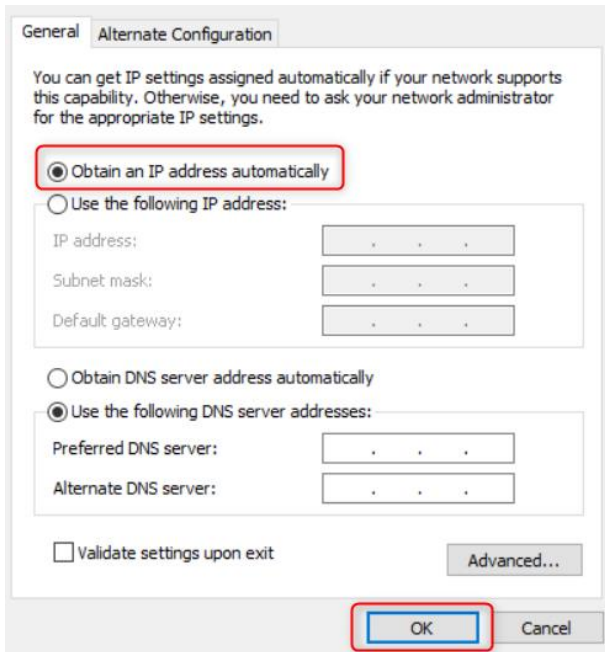
Connect Multiple Cameras via a Router to the Computer

1. Power ON all your BC-15P cameras then via a router connect them to the computer with the firmware update tool installed.
2. Open each BC-15P's OSD menu and on the main menu, move down to **Network Info** where you will find the camera's IP address. Make sure all connected cameras have different IP addresses to avoid IP conflict. You can either set them to DCHP or manually assign different IP addresses to them. In this case, the IP address of the camera is 192.168.1.220.

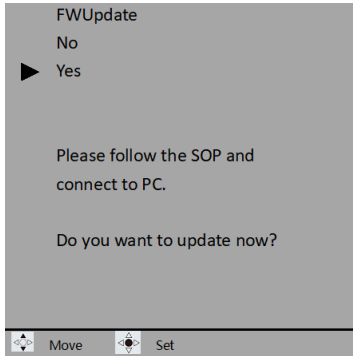
Note: The camera's default IP address 192.168.100.115.



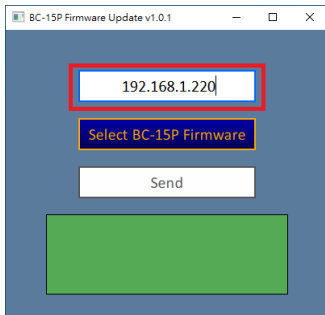
3. Set the computer to DHCP mode so its IP address is assigned by the router.



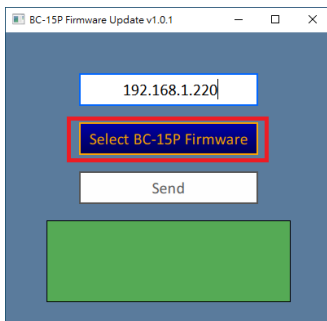
4. Now go back to one of the BC-15P's OSD menu, follow the menu path **System** → **Firmware** then select **Update** and you will be prompted to proceed with the firmware upgrade. Simply select **Yes**.



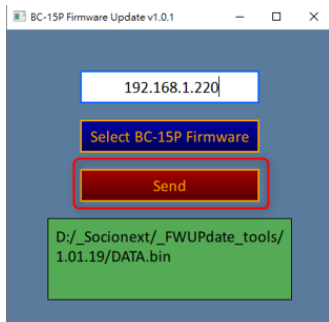
5. Open the BC-15P's firmware update tool on the computer then as shown in the diagram below enter the IP address 192.168.1.220.



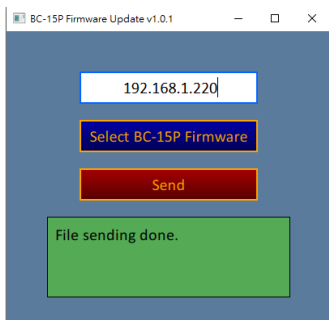
6. Click **"Select BC-15P Firmware"** to browse the hard disk for the latest firmware file. Double click the file once found.



7. Click **"Send"** to start uploading the file to BC-15P.



8. You will be prompted after the file has been successfully uploaded to BC-15P. Wait till the BC-15P reboots itself after which the firmware update is complete.



9. Repeat Steps 5 to 8 to upgrade the rest of the cameras.

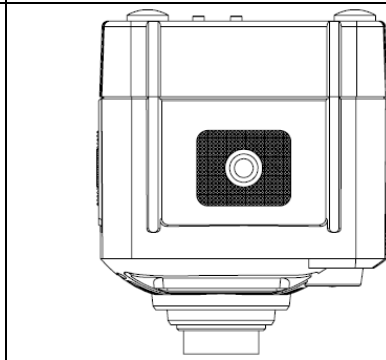
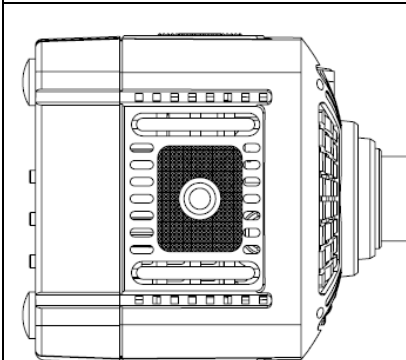
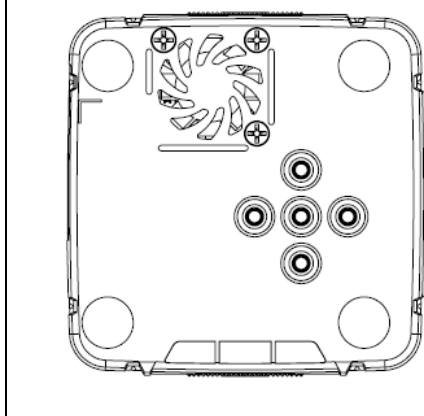
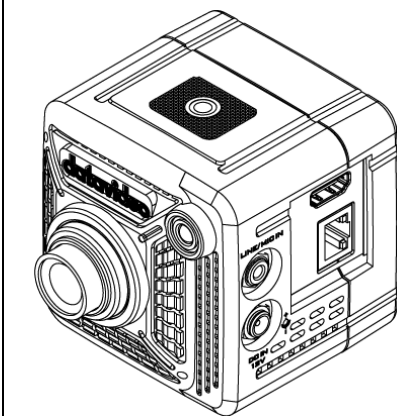
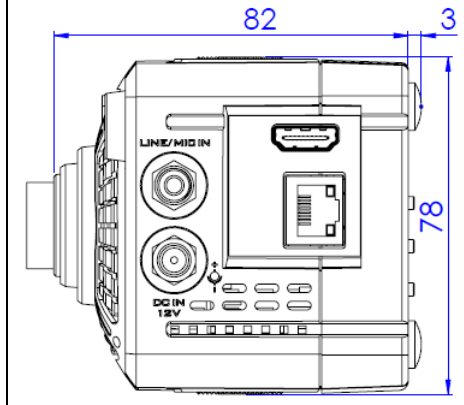
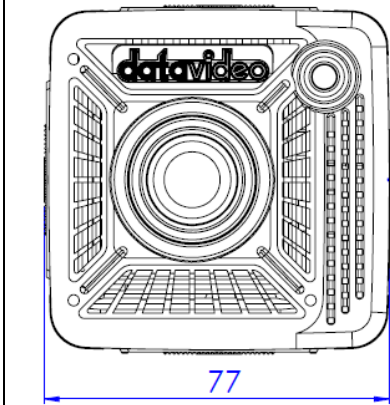
7. Frequently-Asked Questions

This section describes problems that you may encounter while using BC-15P. If you have any questions, please refer to related sections and follow all suggested solutions. If the problem still exists, please contact your distributor or the service center.

No.	Problems	Solutions
1.	The tally LED displays orange color all the time.	Remove the HDMI connection then reboot the camera. Reconnect the HDMI cable after the camera boot is complete.

8. Dimensions

Unit : mm



9. Specifications

Camera Parameters	
Product Model	BC-15P
Product Name	4K POV Camera
Video Format/Resolution	2160p 60/59.94/50/30/29.97/25 1080p 60/59.94/50/30/29.97/25
Image Sensor	1/2.3" CMOS
Effective Pixels(approx.)	12.3Mega Pixels
S/N Ratio	50 dB
Min. Illumination	0.5Lux (F1.0, AGC ON)
Electronic Shutter	1/25(1/30), 1/50(1/60), 1/75(1/90), 1/100(1/120), 1/125(1/150), 1/150(1/180), 1/200(1/210), 1/500(1/600), 1/1000(1/1200), 1/2000(1/2400), 1/4000(1/4800), 1/8000(1/9000) sec
Zoom Ratio	2x Digital Zoom
Gamma Control	Standard/ Mode1/ Mode2/ Mode3
Iris Control	Fixed Iris (F1.0)
Digital Noise Reduction	2D/3D
OSD Language	English/Simplified Chinese/Traditional Chinese
White Balance	Auto, Indoor, Outdoor, OnePush, Color Temp., R/B Gain, Lock
ACG/Gain Control	Auto (AGC) / Manual / Lock (Follow Exposure Mode)
Mirror/Flip Image	Yes
Focus Mode	Full Manual
Focal Length (Equivalent)	Standard Lens: 6mm Wide Lens: 2.8mm
Field of View (Horizontal, Wide)	Standard Lens: H: 38.6, V:21.9, D: 44.1 Wide Lens: H: 75.5, V:46.6, D:82.7
Image Compensation	Auto
Video Output	HDMI 2.0 x1 RJ45 x1
Audio Input	3.5mm Line in/Mic in (Stereo)
Tally LED	Dual Color (Red, Green)
Lens Filter	IR cut built-in
Control Protocol	DVIP

Remote Control Interface	RJ-45: for IP control (DVIP)
Video Compression Format	H.264, H.265, Dual stream output
Audio Compression Format	AAC
Audio Bitrate	128Kbps
IP Interface	10/100/1000M
Streaming Protocols	TS over TCP/UDP, RTMP(S), HLS, SRT
First Stream Supported Resolution	1920x1080 1280x720 1024x576 960x540 640x480 640x360
Second Stream Supported Resolution	1920x1080 1280x720 1024x576 960x540 640x480 640x360
Video Bitrate	1Mbps ~ 7Mbps (Single Stream) 1Mbps ~ 7Mbps (Copy Stream) 1Mbps ~ 4Mbps (Dual Stream)
Video Bitrate Mode	VBR, CBR
Encoding Frame rate	50Hz: 1-25fps 60Hz: 1-30fps
PoE	IEEE802.3af
F/W Update	Ethernet
Camera Control Unit	RMC-300 series/BC View Assist APP
Tripod Mount	1/4-20 UNC
Color	Black
Dimension (LxWxH)	77mm (W) x 82mm (D) x 78mm (H)
Weight	200g
Operating Temp.	0~40 °C
Power	DC 12V 9W

Notes

Notes

Notes

Service & Support

It is our goal to make your products ownership a satisfying experience. Our supporting staff is available to assist you in setting up and operating your system. Please refer to our web site www.datavideo.com for answers to common questions, support requests or contact your local office below.

Please visit our website for latest manual update.

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