

OWNER'S MANUAL Color Video Camera

Please read this manual carefully before operating your set and retain it for future reference.

MODEL

LCB5300-BN
LCB5300-BP
LCB5300 Series



Important Safety Instructions

1. Read these instructions.
 2. Keep these instructions.
 3. Heed all warnings.
 4. Follow all instructions.
 5. Do not use this apparatus near water.
 6. Clean only with dry cloth.
 7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
 8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
 9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
 10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
 11. Only use attachments/accessories specified by the manufacturer.
 12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
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13. Unplug this apparatus during lightning storms or when unused for long periods of time.
 14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



This lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

FCC WARNING: This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

REGULATORY INFORMATION: FCC Part 15

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Power Supply

This camera must always be operated AC 24 V or DC 12 V. Certified/Listed Adaptor which comply with LPS.

Handling of the unit

Be careful not to spill water or other liquids on the unit. Be cautions not to get combustible or metallic material inside the body. If used with foreign matter inside, the camera is liable to fail or to get cause of fire or electric shock.

- Remove dust or dirt on the surface of the lens with a blower.
- Use a dry soft cloth to clean the body. If it is very dirty, use a cloth dampened with a small quantity of neutral detergent then wipe dry.
- Avoid the use of volatile solvents such as thinners, alcohol, benzene and insecticides. They may damage the surface finish and/or impair the operation of the camera.

Operating and storage location

Avoid viewing a very bright object (such as light fittings) during an extended period. Avoid operating or storing the unit in the following locations.

- Extremely hot or cold places (operating temperature -10 °C to 50 °C, however, we recommend that the unit be used within a temperature range of 0 °C to 45 °C)
- Damp or dust place
- Places exposed to rain
- Places subject to strong vibration
- Close to generators of powerful electromagnetic radiation such as radio or TV transmitters.

- A suitable conduit entries, knock-outs or glands shall be provided in the cable entries of this product in the end user.
- Caution: Danger of explosion if battery is incorrectly replaced. Replaced only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.
- Holes in metal, through which insulated wires pass, shall have smooth well rounded surfaces or shall be provided with brushings.

Warning: Do not install this equipment in a confined space such as a bookcase or similar unit.

Warning: Wiring methods shall be in accordance with the National Electric Code, ANSI/NFPA 70.

Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Warning: To reduce a risk of fire or electric shock, do not expose this product to rain or moisture.

Warning: The product has been dropped or the case is broken, turn off the power and unplug the power cord. (This may cause fire, electric shock, or injury.)

Warning: If the product has no video out or sound, please stop using. Unplug the power cable immediately and contact the service center. (This may cause fire or electric shock.)

Caution: This installation should be made by a qualified service person and should conform to all local codes.

Caution: To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Caution: The apparatus shall not be exposed to water (dripping or splashing) and no objects filled with liquids, such as vases, shall be placed on the apparatus.

Caution: Prevent the power cable from being severely bent or having pressure exerted on it by a heavy object.

Specification

Item	LCB5300-BN	LCB5300-BP
Signal System	NTSC	PAL
Total Pixels number	520 000 Pixels	610 000 Pixels
Effective Pixels number	480 000 Pixels	570 000 Pixels
Image Sensor	6 mm (1/3 Type) Exview HAD II CCD	
ISP	XDI-V	
Lens	C / CS Mount	
Horizontal Resolution	Color	650 TV Lines
	B / W	700 TV Lines
S/N Ratio	50 dB	
Day & Night	ICR (AUTO / DAY / NIGHT / EXT)	
Sens-up	OFF / AUTO(x2, ... x512) / MANUAL(x2, ... x512)	
Minimum Illumination (F1.2, 30 IRE)	Color	0.03 lx (Sens-up Off), 0.000 3 lx (Sens-up Auto), 0.000 1 lx (Sens-up X512)
	B / W	0.002 lx (Sens-up Off), 0.000 03 lx (Sens-up Auto), 0.000 001 lx (Sens-up X512)
White Balance	ATW / AUTO / AWC → SET KEY / MANUAL	
Digital Zoom	X16	
IRIS Control	DC	
Scanning Frequency (H/V)	15.734 kHz / 59.94 Hz	15.625 kHz / 50 Hz
Sync. System	Internal / Line Lock	



LG Electronics hereby declares that this/these product(s) is/are in compliance with the essential requirements and other relevant provisions of Directive 2004/108/EC and 2011/65/EU.

Contact office for compliance of this product:

LG Electronics Inc.
EU Representative, Krijgsman 1,1186 DM Amstelveen, The Netherlands

- Please note that this is NOT a Customer Service contact point. For Customer Service Information, see Warranty Card or contact the dealer that you purchased this product.

Disposal of your old appliance

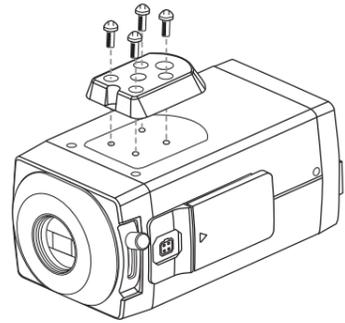


1. This crossed-out wheeled bin symbol indicates that waste electrical and electronic products (WEEE) should be disposed of separately from the municipal waste stream.
2. Old electrical products can contain hazardous substances so correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health. Your old appliance may contain reusable parts that could be used to repair other products, and other valuable materials that can be recycled to conserve limited resources.
3. You can take your appliance either to the shop where you purchased the product, or contact your local government waste office for details of your nearest authorised WEEE collection point. For the most up to date information for your country please see www.lg.com/global/recycling

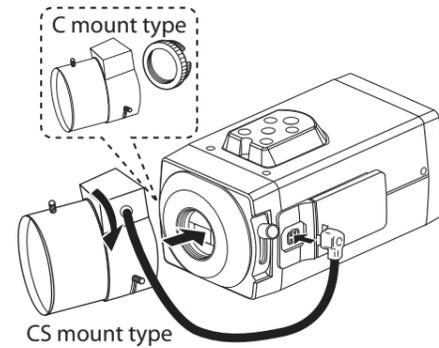
Item	LCB5300-BN	LCB5300-BP
Auto Gain Control	OFF/ LOW/ MIDDLE/ HIGH	
Exposure	ALC / ELC	
Video Output	1 Vp-p Composite (75 Ω)	
Electronic Shutter	1/60 to 1/120 000	1/50 to 1/120 000
Protocol	RS-485 : LG, Pelco-D, Pelco-P	
Backlight Compensation	BLC / HSBLC / OFF	
Motion Detection	8 Zones	
Privacy Masking	14 Mask Zones	
3D-DNR	2D + 3D-DNR	
Digital Effect	Off / V-Flip / Mirror / Rotate	
Control Method	RS-485, Coaxial Communication	
Power Source	DC 12V / AC 24V	
Power Consumption	240 mA	
Operating Temperature/ Humidity	-10 °C to 50 °C / 0 % RH to 80 % RH	
Storage Temperature/ Humidity	-20 °C to 60 °C / 0 % RH to 85 % RH	
Dimension (W x H x D)	68.6 mm x 54.0 mm x 121.5 mm	
Weight	362 g	

Installation

1. Install the camera and mounting bracket securely.



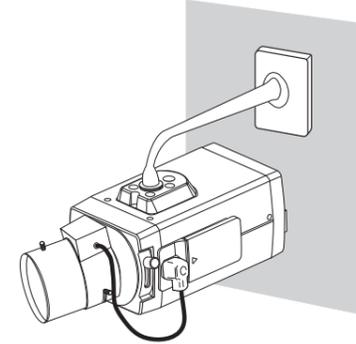
2. Install the C or CS mount type lens.



Note:

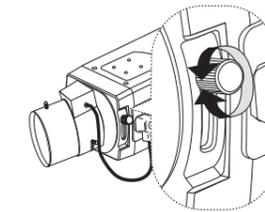
Turn off the camera essentially before the lens connection or replacement.

3. Install the camera and mounting arm.

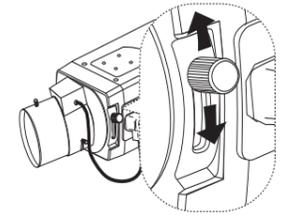


4. Loosen the flange-back fixing lever. Up and down the flange-back adjusting lever to obtain a focused point.

<To loosen the lever.>



<To adjust the focus.>



<ITALIANO> Montare la videocamera alla staffa in maniera sicura.

<ESPAÑOL> Monte la cámara y el soporte.

<PORTUGUÉS> Instale a câmera e o suporte de montagem firmemente.

<РУССКИЙ> Надежно установить камеру и монтажный кронштейн.

<TÜRKÇE> Kamera ve kamera bağlantı parçasını sağlam bir şekilde monte edin.

<ITALIANO> Installare un obiettivo di tipo C o CS.

<ESPAÑOL> Instale un objetivo C o CS.

<PORTUGUÉS> Instale as lentes de montagem do tipo C ou CS.

<РУССКИЙ> Установить оправы объектива типа C или CS.

<TÜRKÇE> C ve CS tipi lens takın.

<ITALIANO> Montare la videocamera al braccio.

<ESPAÑOL> Monte la cámara y el brazo de soporte.

<PORTUGUÉS> Instale a câmera e o braço de montagem.

<РУССКИЙ> Установить камеру и монтажный кронштейн.

<TÜRKÇE> Kamera ve kamera bağlantı parçası kolunu monte edin.

<ITALIANO> Allentare la leva per il fissaggio della flangia posteriore. Sollevare e abbassare la leva di regolazione della flangia posteriore per ottenere un punto di messa a fuoco.

<ESPAÑOL> Afloje la palanca de fijación. Suba o baje la palanca de ajuste para obtener un punto de enfoque.

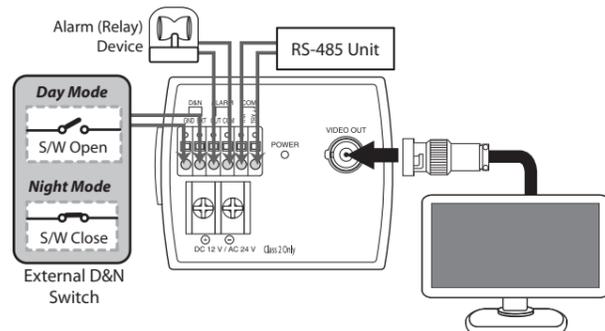
<PORTUGUÉS> Afrouxe o nivelador de fixação da flange traseira. Suspenda e abaixe o nivelador de fixação da flange traseira para obter o ponto do foco.

<РУССКИЙ> Ослабить крепежные винты заднего фланца. Использовать регулирующее кольцо заднего фланца для достижения точки фокуса.

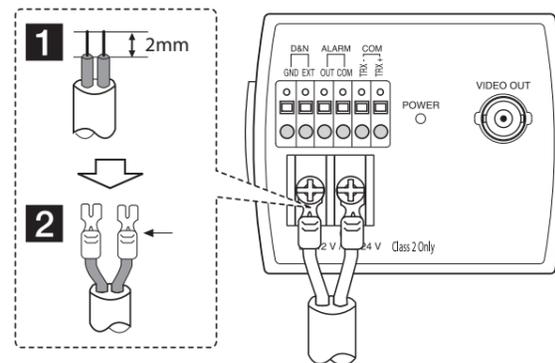
<TÜRKÇE> Flanş arka kolu tutan vidaları gevşetin. Flanş arka ayar halkasını kullanarak odak noktasını belirleyin.

Connections

1. Connect the display device and external device.



2. Connect the power source.



<ITALIANO> Collegare il dispositivo del display. Collegare il dispositivo esterno.

<ESPAÑOL> Conecte el dispositivo de visualización. Conecte el aparato externo.

<PORTUGUÉS> Ligue o visor. Ligue o dispositivo externo.

<РУССКИЙ> Подключите устройство отображения. Подключение внешнего устройства.

<TÜRKÇE> Görüntüleme aygıtını bağlayın. Harici aygıtı bağlayın.

<ITALIANO> Collegare l'alimentazione elettrica.

<ESPAÑOL> Conecte la fuente de energía.

<PORTUGUÉS> Conecte a fonte de alimentação.

<РУССКИЙ> Подключите источник питания.

<TÜRKÇE> Güç kaynağını bağlayın.

Additional Information

RS-485 Protocol

Data Communication Format

- Data Length: 1 Byte (8 Bit)
- Start/Stop Bit: 1 Bit
- Parity Bit: None
- Baud rate: 9 600 bps

Format

BYTE1	BYTE2	BYTE3	BYTE4	BYTE5	BYTE6
0xE5	0x86	Camera ID	CODE1	CODE2	*C.S.

*C.S. = Check Sum

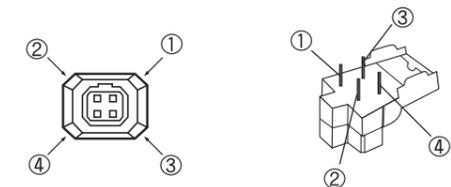
- The data of total 6 bytes is transmitted from the external RS-485 device to the camera.
- BYTE 6 : The value of Check Sum from 'BYTE 1 ' to 'BYTE 5 ' :
ex) In case of transmission, 0xC5, 0x5F, 0x02, 0x00, 0x0A"
C.S. = 0xC5 + 0x5F + 0x02 + 0x00 + 0x0A = 0x0130
therefore, C.S. = 0x30

Commands

Function	Command
OSD Menu ON/OFF	E5, 86, ID, 41, 02, C.S.
LEFT Button	E5, 86, ID, 12, 80, C.S.
Right Button	E5, 86, ID, 12, 90, C.S.
Up Button	E5, 86, ID, 11, 80, C.S.
Down Button	E5, 86, ID, 11, 90, C.S.
Menu Button	E5, 86, ID, 41, 01, C.S.

Lens iris output connector

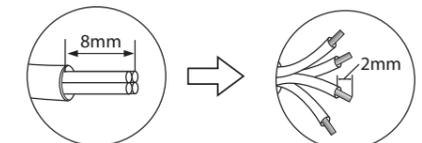
Pin layout for the lens iris output connector.



No.	DC type lenses
1	Damping -
2	Damping +
3	Drive +
4	Drive -

Rewire the lens iris plug

1. Cut off the plug of the lens cable, cut off approximately 8 mm of the insulation, and then strip approximately 2 mm of the ends of the cable sheaths.



2. Solder the ends of the cable wires to the ends of the pins, and then attach the cover of the lens iris plug.

