



OWNER'S MANUAL

Color Video Camera

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

MODEL
LCB5500-BN
LCB5500-BP



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.



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.



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



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 by DC 12 V or AC 24 V Certified/Listed, class 2 power supply only.

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.

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

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.

To disconnect power from mains, pull out the mains cord plug. When installing the product, ensure that the plug is easily accessible.

Specification

Item		LCB5500-BN	LCB5500-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) Super HAD CCD II	
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)	
Minimum Illumination (30 IRE, F1.2)	Color	0.2 lx (Sens-up Off), 0.00 3 lx (Sens-up Auto), 0.000 1 lx (Sens-up X512)	
	B / W	0.02 lx (Sens-up Off), 0.000 3 lx (Sens-up Auto), 0.000 01 lx (Sens-up X512)	
White Balance		ATW / AUTO / AWC ➡ SET / 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	

CE 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, 2006/95/EC, and 2009/125/EC.
European Standards Centre:
Krijgsman 1, 1186 DM Amstelveen The Netherlands

Disposal of your old appliance



1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.
3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.

EEE Compliance with Directive. (for Turkey only)

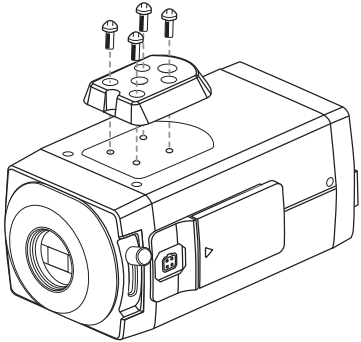
이 기기는 업무용(A급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.

Item	LCB5500-BN	LCB5500-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	OFF/WDR/BLC/HSBLC	
Motion Detection	8 Zones	
Privacy Masking	14 Mask Zones	
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)	67.36 mm x 61.50 mm x 133.90 mm	
Weight	362 g	

Installation

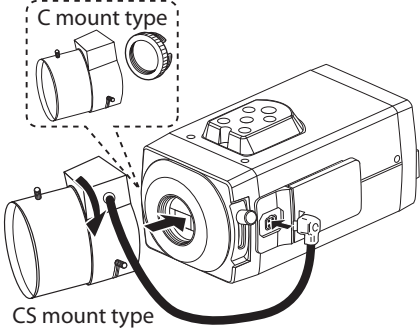
1.

Install the camera and mounting bracket securely.



2.

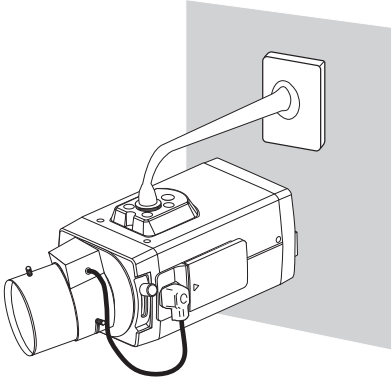
Install the C or CS mount type lens.



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

3.

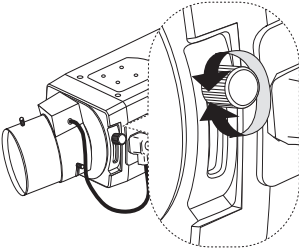
Install the camera and mounting arm.



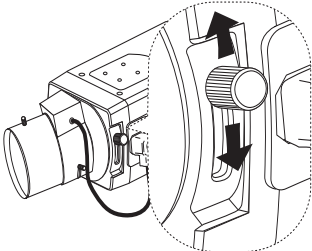
4.

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.>



<日本語>

カメラと取付け金具を確実に設置します。

<한국어>

카메라에 설치 브래킷을 설치하세요.

<فارسی>

دوربین و پایه نگه دارنده آن را محکم نصب نمایید.

<عربي>

ركب الكاميرا مع دعامة التثبيت بإحكام.

<עברית>

חבר את המצלמה ואת מסגרת החיבור באופן בטוח.

<日本語>

C マウントレンズまたは CS マウントレンズを取り付けます。

<한국어>

C 마운트 또는 CS 마운트 형식의 렌즈를 설치하세요.

<فارسی>

لنز های سی و یا می اس را نصب نمایید.

<عربي>

ركب عدسات من نوع C أو CS.

<עברית>

חבר עדשות עם חיבור מסוג C או CS.

<日本語>

カメラとマウントアームを設置します。

<한국어>

카메라를 벽면에 설치하세요.

<فارسی>

دوربین و بازوی نگه دارنده آن را نصب نمایید.

<عربي>

ركب الكاميرا وذراع التثبيت.

<עברית>

חבר את המצלמה ואת זרוע החיבור.

<日本語>

フランジバック固定ネジを緩めます。フランジバック調整リングでピントを調整してください。

<한국어>

Flange-back 고정나사를 풀어주세요. 영상을 보면서 Flange-back 조절링을 이용하여 초점을 맞추세요.

<فارسی>

فك میسمار تثبیت المفصلة. واستخدم حلقة ضبط المفصلة للحصول على نقطة التركيز.

<عربي>

شل فلنج پشت پیچ ثابت. استفاده از حلقه فلنج عقب تنظیم یک نقطه متمرکز شده است برای به دست آوردن.

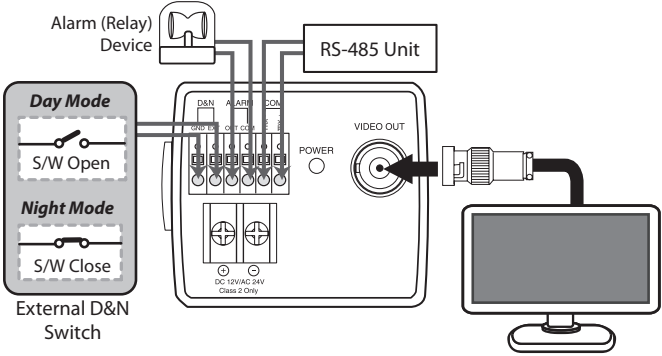
<עברית>

שחרר את הברגים בגב האוגן. השתמש בטבעת ההתאמה של האוגן כדי להשיג נקודה ממוקדת.

Connections

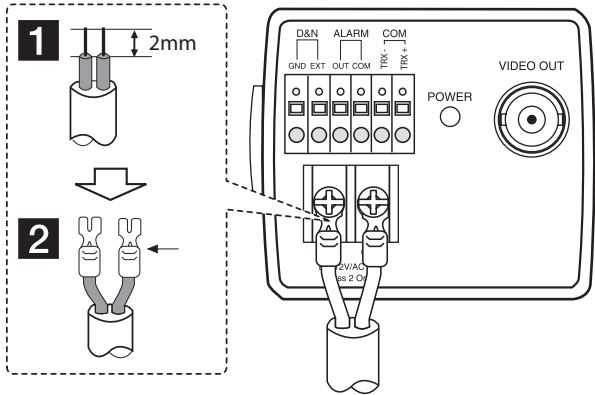
1.

Connect the display device and external device.



2.

Connect to the DC 12 V / AC 24 V UL Listed, Class 2 Power Supply only on the unit.



<日本語>

ディスプレイ装置を接続します。外部装置と接続します。

<한국어>

디스플레이 장치를 연결하세요. 외부 장치와 연결하세요.

<فارسی>

قم بتوصیل جهاز العرض. وصل الجهاز الخارجي.

<عربي>

اتصال صفحه نمایش دستگاه. اتصال دستگاه های خارجی.

<עברית>

חבר את התקן התצוגה. החבר את ההתקן החיצוני.

<日本語>

カメラ側のみ、ULリスト・クラス2のDC12Vまたは AC12V 電源コードに接続します。

<한국어>

카메라에 극성에 맞게 전원선을 연결하세요.

<فارسی>

قم بالتوصیل بمصدر طاقة بجهد 12 فولت من التيار المباشر / أو 24 فولت من التيار المتردد، من الفئة 2.

<عربي>

اتصال به دی سی 12 ولت / ولت 24 برق مستقیم UL فهرست، کلاس 2 تنها منبع تغذیه در واحد.

<עברית>

חבר לשקע רמה 2, רישום 12 V/24V, UL, שעל היחידה.

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

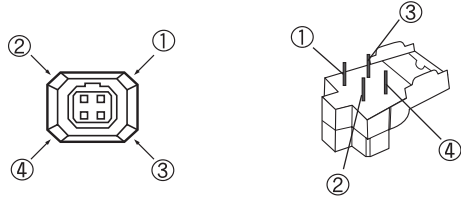
- The data of total 6 bytes is transmitted from the external RS-485 device to the camera.
- BYTE 6 : The value of Check Sum from 'BYTE 1 'to 'BYTE 5 ' :
ex) In case of transmission, 0xC5, 0x5F, 0x02, 0x00, 0x0A"
C.S. = 0xC5 +0x5F +0x02 +0x00 +0x0A = 0x0130
therefore, C.S. = 0x30

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

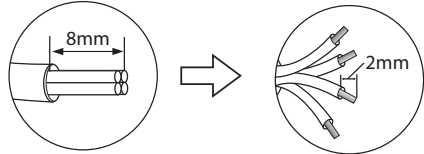
Pin layout for the lens iris output connector.



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.

