

## OWNER'S MANUAL


# Color Video Camera

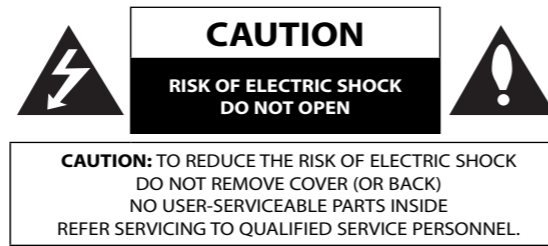
Please read this manual carefully before operating your set and retain it for future reference.

MODEL  
L320-BP/L320-BN/L321-BP/L321-BN  
L320-CP/L321-CP  
L320-DN/L321-DN

P/NO : MFL63745107 (C)

## Important Safety Instructions

- Read these instructions.
  - Keep these instructions.
  - Heed all warnings.
  - Follow all instructions.
  - Do not use this apparatus near water.
  - Clean only with dry cloth.
  - Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
  - Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
  - 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.
  - Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
  - Only use attachments/accessories specified by the manufacturer.
  - 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.
- 
- Unplug this apparatus during lightning storms or when unused for long periods of time.
  - 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.

- A suitable conduit entries, knock-outs or glands shall be provided in the cable entries of this product in the end user.

## Specification

ITEM	L320-BP	L320-CP	L320-BN	L320-DN
Signal System	PAL		NTSC	
Total Pixels No.	470 000 Pixels		410 000 Pixels	
Effective Pixels No.	440 000 Pixels		380 000 Pixels	
Image Device	6 mm Super HAD II CCD			
Signal Process	XDI-S2			
Lens	CS Mount (C Mount using adaptor ring)			
IRIS Control	DC/ELC			
Sync. System	Internal			
Scanning Frequency (H/V)	15.625 kHz / 50 Hz		15.734 kHz / 59.94 Hz	
Horizontal Resolution	620 TV Lines			
S/N Ratio	52 dB			
Minimum Illumination (30 IRE)	Color Mode	0.06 lx @ Sens-up OFF		
	B/W Mode	0.0001 lx @ Sens-up Auto		
Minimum Illumination (30 IRE)	Color Mode	0.0001 lx @ Sens-up Auto		
	B/W Mode	0.03 lx @ Sens-up OFF		
Minimum Illumination (30 IRE)	Color Mode	0.000001 lx @ Sens-up x128		
	B/W Mode	0.000001 lx @ Sens-up x128		
Video Output Signal	1 Vp-p Composite (75 Ω)			
Day & Night	Digital Day / Night / Auto			
Backlight	OFF/BLC/HSBLC			
DNR	3D-DNR (Off/Low/Middle/High)			
Auto Gain Control	Off / Low / Middle / High			
Electronic Shutter Speed	1/50 to 1/90 000		1/60 to 1/90 000	
Electronic Sensitivity	OFF/Auto			

- 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.

**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.

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

ITEM	L320-BP	L320-CP	L320-BN	L320-DN
White Balance	ATW / AWC → PUSH / Manual			
User Color Mode	STANDARD/COOL/WARM/VIVID			
Power Source	AC 24 V, DC 12 V	AC 230 V	AC 24 V, DC 12 V	DC 12 V
Power Consumption	2.9 W	4.4 W	2.9 W	2.4 W
Operation Temp.	-10 °C to 50 °C			
Storage Temp.	-20 °C to 60 °C			
Operation Humidity	0 %RH to 80 %RH			
Storage Humidity	0 %RH to 85 %RH			
Weight	321 g			
Dimension (H x V x D)	67.4 mm x 61.5 mm x 134 mm			

ITEM	L321-BP	L321-CP	L321-BN	L321-DN
Signal System	PAL		NTSC	
Total Pixels No.	470 000 Pixels		410 000 Pixels	
Effective Pixels No.	440 000 Pixels		380 000 Pixels	
Image Device	6 mm Super HAD II CCD			
Signal Process	XDI-S2			
Lens	CS Mount (C Mount using adaptor ring)			
IRIS Control	DC/ELC			
Sync. System	Internal			
Scanning Frequency (H/V)	15.625 kHz / 50 Hz		15.734 kHz / 59.94 Hz	
Horizontal Resolution	620 TV Lines			
S/N Ratio	52 dB			

**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 representative :

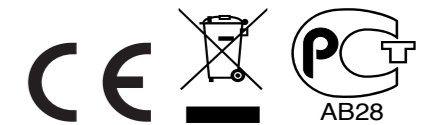
LG Electronics Service Europe B.V.  
Veluwezoom 15, 1327 AE Almere,  
The Netherlands (Tel : +31-(0)36-547-8888)

### Disposal of your old appliance



- 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.
  - 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.
  - The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
  - 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.
- <For Turkey only>**
- EEE Compliance with Directive.  
(EEE Yönetmeliğine Uygundur.)

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

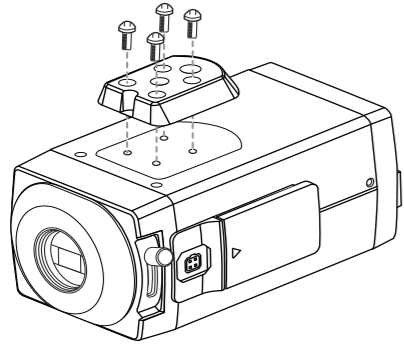


ITEM	L321-BP	L321-CP	L321-BN	L321-DN
Minimum Illumination (30 IRE)	Color Mode	0.05 lx @ Sens-up OFF		
	B/W Mode	0.0001 lx @ Sens-up Auto		
Minimum Illumination (30 IRE)	Color Mode	0.005 lx @ Sens-up OFF		
	B/W Mode	0.000001 lx @ Sens-up x128		
Video Output Signal	1 Vp-p Composite (75 Ω)			
Day & Night	Day / Night / Auto			
Backlight	OFF/BLC/HSBLC			
DNR	3D-DNR (Off/Low/Middle/High)			
Auto Gain Control	Off / Low / Middle / High			
Electronic Shutter Speed	1/50 to 1/90 000		1/60 to 1/90 000	
Electronic Sensitivity	OFF/Auto			
White Balance	ATW / AWC → PUSH / Manual			
User Color Mode	STANDARD/COOL/WARM/VIVID			
Power Source	AC 24 V, DC 12 V	AC 230 V	AC 24 V, DC 12 V	DC 12 V
Power Consumption	4.4 W	4.4 W	4.4 W	2.9 W
Operation Temp.	-10 °C to 50 °C			
Storage Temp.	-20 °C to 60 °C			
Operation Humidity	0 %RH to 80 %RH			
Storage Humidity	0 %RH to 85 %RH			
Weight	376 g			
Dimension (H x V x D)	67.4 mm x 61.5 mm x 134 mm			

# Installation Guide

1

Install the camera and mounting bracket securely.



<한국어> 카메라에 설치 브래킷을 설치하세요.

<日本語> カメラと取付け金具を確実に設置します。

<简体中文> 牢固安装摄像机和安装架。

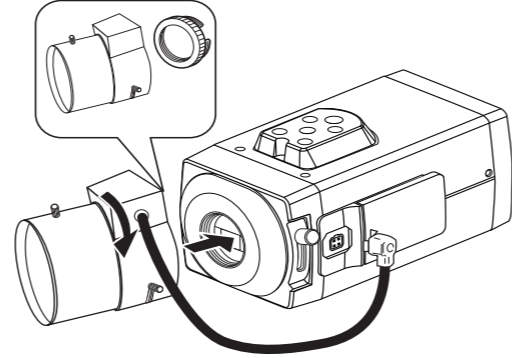
<繁體中文> 確實安裝攝影機與底座托架。

<فارسی> دوربین و پایه نگه دارنده آن را محکم نصب نمایید.

<عربي> ركب الكاميرا مع دعامة التثبيت بإحكام.

2

Install the C or CS mount type lens.



<한국어> C 마운트 또는 CS 마운트 형식의 렌즈를 설치하세요.

<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。

<简体中文> 安装 C 或 CS 型镜头。

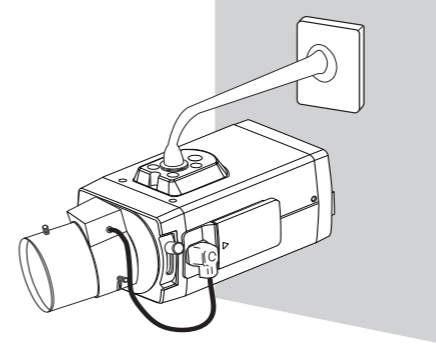
<繁體中文> 安裝 C 或 CS 底座型鏡頭。

<فارسی> لنز های سی و یا سی اس را نصب نمایید.

<عربي> ركب عدسات من نوع C أو CS.

3

Install the camera and mounting arm.



<한국어> 카메라를 벽면에 설치하세요.

<日本語> カメラとマウントアームを設置します。

<简体中文> 安装摄像机和安装臂。

<繁體中文> 安裝攝影機與底座吊臂。

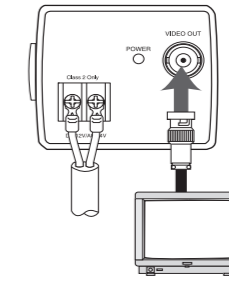
<فارسی> دوربین و بازوی نگه دارنده آن را نصب نمایید.

<عربي> ركب الكاميرا وذراع التثبيت.

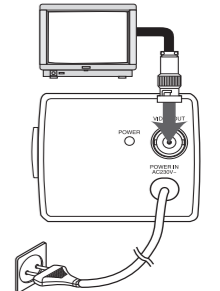
4

Connect the power and monitor.

<L320-BP/L321-BP/L320-BN/  
L321-BN/L320-DN/L321-DN>



<L321-CP/L320-CP>



<한국어> 전원 및 모니터를 연결하세요.

<日本語> 電源とモニターを接続します。

<简体中文> 连接电源和监视器。

<繁體中文> 連接電源及顯示器。

<فارسی> منبع برق و همچنین مانیتور را وصل کنید.

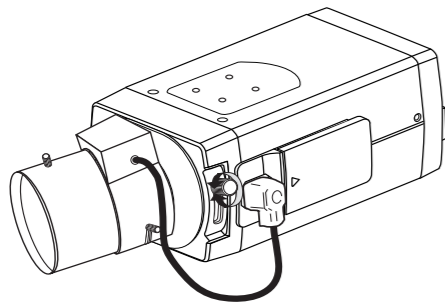
<عربي> وصل التيار الكهربائي والشاشة.

# Flange-back Adjustment

## L321 series

1

Loosen the flange-back fixing lever.



<한국어> Flange-back 고정레버를 풀어주세요.

<日本語> フランジバック固定レバーを緩めます。

<简体中文> 松开法兰距固定杆。

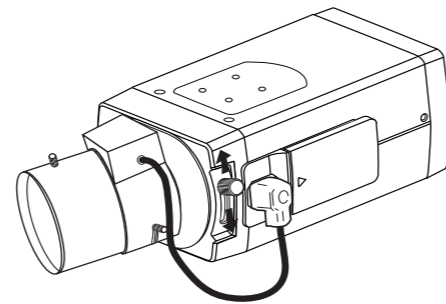
<繁體中文> 鬆開鏡後固定桿。

<فارسی> اهرم ثابت کننده دارای لبه عقب را شل کنید.

<عربي> فك ذراع تثبيت الشفة الخلفية.

2

Up and down the flange-back adjusting lever to obtain a focused point



<한국어> 영상을 보면서 Flange-back 조절레버를 이용하여 초점을 맞추세요.

<日本語> フランジバック調整レバーを上下させてピントを調節します。

<简体中文> 上下调节法兰距固定杆以获得焦点。

<繁體中文> 上下移動鏡後調整桿，以確實對焦

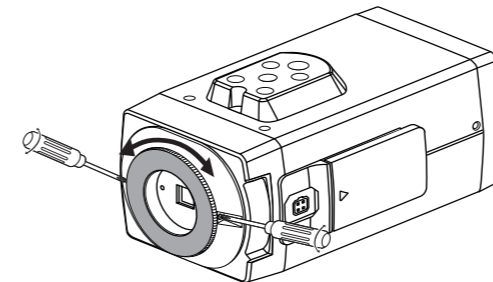
<فارسی> اهرم تنظیم کننده دارای لبه عقب را جهت پیدا کردن نقطه فوکوس بالا و پایین بپرسد

<عربي> اجذب ذراع ضبط الشفة الخلفية لأعلى ولأسفل للحصول على بؤرة مركزة.

## L320 series

1

Loosen the flange-back fixing screws.



<한국어> Flange-back 고정나사를 풀어주세요.

<日本語> フランジバック固定ネジを緩めます。

<简体中文> 松开法兰距固定螺丝。

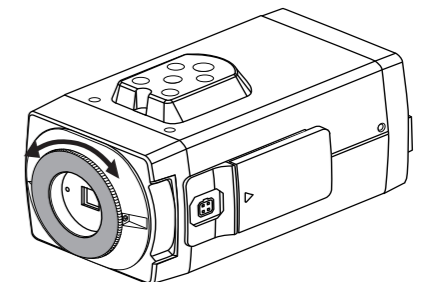
<繁體中文> 鬆開鏡後固定螺絲。

<فارسی> پیچ های ثابت کننده دارای لبه عقب را شل کنید.

<عربي> فك المسامير اللولبية المثبتة للشفة الخلفية.

2

Use the flange-back adjusting ring to obtain a focused point.



<한국어> 영상을 보면서 Flange-back 조절링을 이용하여 초점을 맞추세요.

<日本語> フランジバック調整リングでピントを調節します。

<简体中文> 使用法兰距调节环以获得焦点。

<繁體中文> 使用鏡後調整環以進行對焦。

<فارسی> از حلقه تنظیم کننده دارای لبه عقب جهت پیدا کردن نقطه فوکوس استفاده کنید.

<عربي> استخدم حلقه ضبط الشفة الخلفية للحصول على بؤرة مركزة.