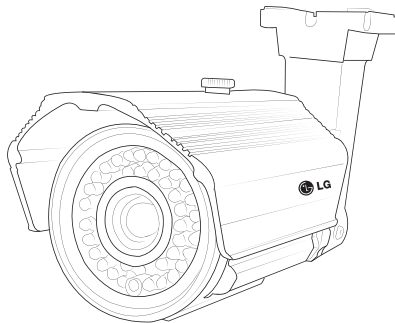




Color IR Camera

Owner's Manual

Model : LSR700



** Before installing or adjusting please read installation guide that accompany this product. Failure to follow warning notices and instructions may result in property damage. Improper installation and/or operation will void the warranty.

Before Using or Installing.

Please do not make any attempt to disassemble the camera.

Do not attempt to open camera.

There is no space for consumers to construct or execute.

Please consult to professional installer.

Please do not use strong chemicals or detergent.

Use dry towel to wipe off the camera, to clean off the stain use weak cleaning detergent.

Before operation please check the temperature, humidity, and level of the power.

Please operate camera between temperature levels of -10°C ~ 50°C .

Please do not disclose the camera, if there is lot of smoke or gas.

Please do not disclose the camera under direct sunlight.

Do not aim camera directly at bright object.

By doing so, this action will cause blooming or smear.

Please handle camera with care.

Do not put camera near fire, as this may cause fire.

Please do not hit, or shake the camera.

This could cause camera to malfunction. Improper care or use of the camera could damage the camera.

Please do not make childrens handle or operate camera. It may cause children's accidents or camera's malfunction.

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Feature

- Sony 1/3" SUPER HAD COLOR CCD
- Resolution 540TVL(Color), 570TVL(B/W)
- DAY & NIGHT Auto Change
- Varifocal DC AUTO IRIS 6~50mm F1.4
- 45 IR LED
- Max. 70m IR LED Valid Distance
- Min. Illumination 0LUX (LED ON)
- 3 AXIS BRACKET
- Zoom & Focus adjustment Levers
- DC IRIS adjustment Lever
- OSD Control Button
- Water / Dust Proof (IP 66)DC IRIS LEVEL
- Use of DC 12V

How to Use & Installations Warnings

Use of DC 12V. (Use DC12V, 1A adapter)

Using improper power supply could lead to fire, electronic shock, and malfunction of camera.

Prevent water, liquid, metal or foreign object getting inside the Camera.

Use dry towel to clean camera instead of the abrasive.

(This could bring low quality screen view of camera.)

Do not misplace the camera. And prevent any malfunction.

Do not use camera in humid or wet area.

Do not disclose camera to direct sunlight

Do not expose camera to massive electric wave.

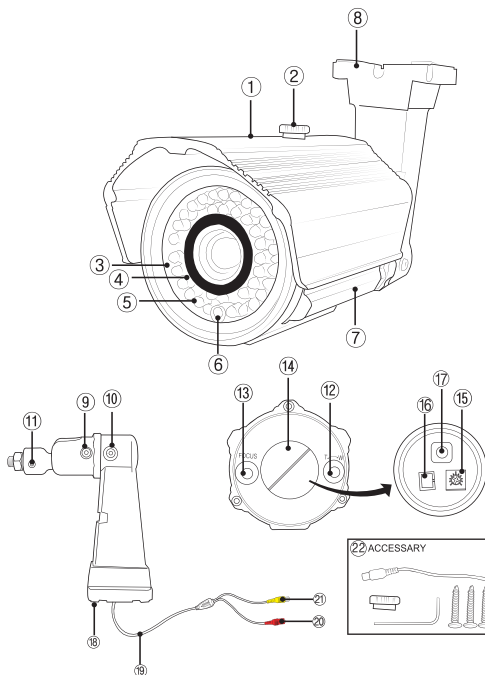
Do not install camera location with lot of vibration.

Do not install product near very high temperature or very low temperature area.

(Please refer to our operation manual on operation temperature & storage temperature.)

Focus in darkness, and you can see clear image at daytime & nighttime.

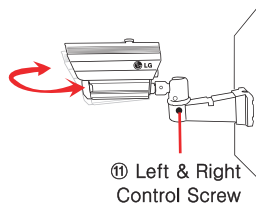
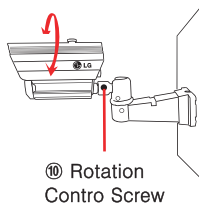
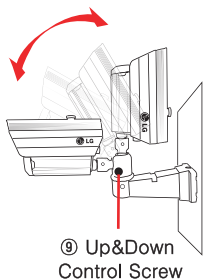
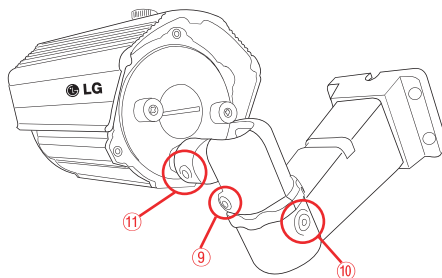
Product composition & Parts names



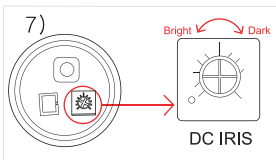
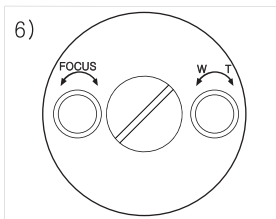
- 1) Sun Shield
- 2) Sun Shield station screw
- 3) Window Glass
- 4) Window Glass Film Cover
- 5) IR LED
- 6) CDS Sensor
- 7) Camera Body
- 8) Bracket
- 9) Up & Down control screw
- 10) Rotation Control Screw
- 11) Left & Right Control Screw
- 12) Zoom Control Level
- 13) Focus Control Level
- 14) Back Cover
- 15) DC IRIS Control Level
- 16) Video Out Connector
- 17) OSD Button
- 18) Bracket Stationary
- 19) Cable
- 20) Power DC-12V – Red
- 21) Video RCA Jack – Yellow
- 22) Accessory
 - Portable monitor
 - connector cable
 - "L" wrench
 - Bracket Station Screw
 - Sun Shiel

Product composition & Parts names

3 Axis adjust bracket

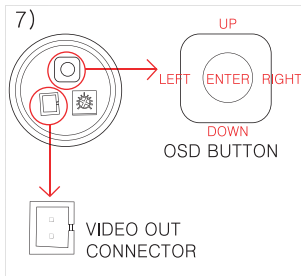


INSTALLATION & CONNECTION



- 1) Locate Installation Area. Select area where it would hold the camera for long time.
- 2) Station 3-Axis Bracket on the wall or ceiling with "L" Wrench and screw given and select the area you would like to monitor.
- 3) Using Sunshield bolt tighten the sunshield
- 4) Connect Power (Red) DC12V and Video (Yellow). Or in toVideo Input of DVR.
- 5) Manually turn the level behind camera and set camera view to close range or distanced range, as well as setting up the focus of the camera.
 - ** For Zoom-out turn the knob to W direction, to Zoom-in turn the knob to T direction.
 - ** Until the camera focus is clear turn the focus level to N (close range) or F (distanced range).
- 6) Using a flat screw driver open the cover behind camera.

INSTALLATION & CONNECTION



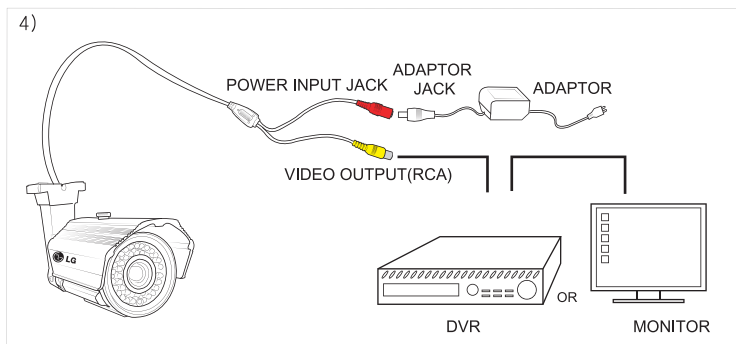
7) OSD button function in the back cover is as followings.

** DC-IRIS Volume Switch : To view brighter screen, turn the switch to counter-clockwise direction using a screw driver.

Also to see the darker drive turn the switch clockwise.

** OSD function key you should be able to control screen configuration. You are also able to use this camera with video port.

8) After done with setting camera configuration to prevent any smear of water seal the back cover tight.



Trouble Shooting

If you are not able to view anything from the screen.

Check power, video, strength of signal.

Check monitor input/output.

Check camera connection number with monitor.

For Fuzzy Screen

-Check camera lens for dust or dirt. If so wipe them off with dry towel or brush.

-Check cover to see if it's clean. If so wipe them off with dry towel or brush.

-Check for direct sunlight exposure towards camera.

-Check and see if protection film from camera cover is removed.

-Check for camera focus.

For Dark Screen

Check for Monitor Brightness.

Unbalanced Black & White on the Monitor.

-Check Monitor

-Adjust the cameras position or angle of lens when screen is bright

-Turn BLC off.

When screen is not clear with IR LED functioning.

-Check glass cover for dust : If there is dust clean them with dry towel or brush.

If problem still remains please contact our Technical Support Department.

OSD MENU

	SET MENU
SHUTTER	AUTO(0~255 Step) / FIXED(1/60 or 1/50~1/100,000 sec) / MANUAL(0~255 Step)/FLK
BLC	ON/OFF
AGC	ON/OFF
WHITE BAL.	ATW (AWB / FIXED / MANUAL)
DAY&NIGHT	AUTO(BW/COLOR)
PRIVACY	ON/OFF
GAMMA	0.05~1.00
ADJUST	CONTRAST / SHARPNESS / CB_GAIN / CR_GAIN
RESET	
EXIT	

OSD(SCREEN CONTROL) - Setting

with OSD function you could control UP&DOWN to select your desire mode.

SETUP	
SHUTTER	FIXED
BLC	OFF
AGC	ON
WHITE BAL.	ATW
DAY NIGHT	AUTO
PRIVACY	OFF
GAMMA	0.45
ADJUST	
RESET	
· EXIT	

** OSD function provide convenience for consumers to set their own setting from the outside of the camera.

Behind back cover of the camera you can control UP & Down , Left & Right with 1 OSD function key.

1. Click on Enter Button (Press down) - Setup Start.
Setup Menu will appear.
2. Use OSD key to UP, Down to your desire selection.
3. To change current setting to different push to LEFT or Right to change current configure.
4. Select Exit and Enter.
Then the configuration is successfully saved.

OSD(SCREEN CONTROL) Menu - SHUTTER

SETUP	
SHUTTER	FIXED ↙
BLC	OFF
AGC	ON ↙
WHITE BAL.	ATW
DAY NIGHT	AUTO ↙
PRIVACY	OFF
GAMMA	0.45
ADJUST	↙
RESET	↙
· EXIT	

* Fixed

- Fixed Shutter: Control shutter speed manually
- Configure Range: 1/60 ~ 1/100,000 Sec(NTSC)
1/50 ~ 1/100,000 Sec(PAL)

* Manual

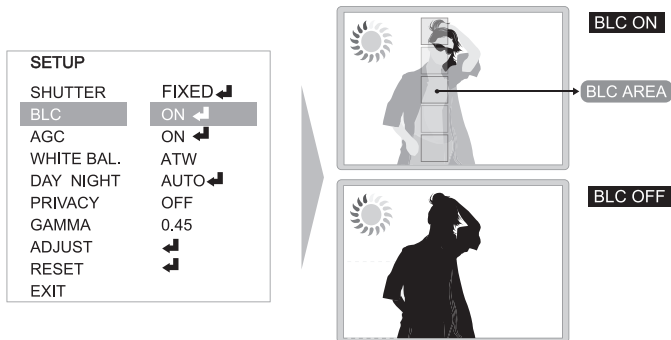
- Shutter: Manually controls the speed of shutter
(Configure Range: 0~255 Range)

* FLK

- Fuzzy Screen Prevention: In case of unbalanced surrounding light & electric frequency.
When screen is fuzzy "FLK", it will function and reset the mode.

OSD(SCREEN CONTROL) Menu - BLC(Back Light Compensation)

with OSD function you could control UP&DOWN to select your desire mode.



Select your desire mode to push OSD key to Left or Right.

- On: Allows you to control Gamma & Back Light Compensation. If there is a strong light behind an objective, With Back Light Compensation it provide you clear image. When "ON" is selected and entered, BLC can be controled.

BLC AREA: Select area where you would like to observe.

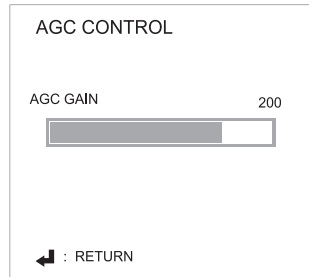
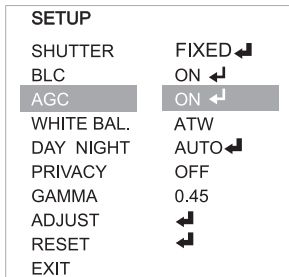
BLC RATIO: Controls Brightness. It control Objects brightness could be increase from 0 and decrease to 63.

- Off: Back Light Compensation is not effective.

OSD(Screen Control) Menu

-AGC (Auto Gain Control)

with OSD function you could control UP&DOWN to select your desire mode.



* ON

-AGC controls brightness from 0 ~ 255 Range







* OFF

-When AGC function is off, Day/Night & IR on/off functions do not operate.

OSD(Screen Control) Menu

- WHITE BAL. (White Balance)

with OSD function you could control UP&DOWN to select your desire mode.

SETUP	
SHUTTER	FIXED 
BLC	ON 
AGC	ON 
WHITE BAL.	ATW
DAY NIGHT	AUTO 
PRIVACY	OFF
GAMMA	0.45
ADJUST	
RESET	
EXIT	

● Auto Tracking White Balance

This Mode operate when color temperature goes out of range between 2500K ~ 9500K.

● AWB (AUTO WHITE BALANCE)

AWB detects white color balance on the screen and based on sensor white balance functions automatically between the range of 2500K ~ 9500K.

● Fixed : White Balance could be manually controlled, by using UP & DOWN key..

Mode1: 2500K

Mode2:3200K

Mode3:5100K

Mode4:9500K

● Manual

This mode could be used manually when you are wishing to configure color of Red & Blue.

OSD(Screen Control) Menu - Day & Night

with OSD function you could control UP&DOWN to select your desire mode.

SETUP	
SHUTTER	FIXED ↵
BLC	ON ↵
AGC	ON ↵
WHITE BAL	ATW
DAY NIGHT	AUTO ↵
PRIVACY	OFF
GAMMA	0.45
ADJUST	↵
RESET	↵
EXIT	

-Auto : With cameras illumination it automatically change Day & Night.
If the Illumination is high it changes to Color & If
illumination is low it changes to black & white.

-Delay : This function allow you to set delay time of when to
change camera to Day & Night mode..

-Start Level : Set the start brightness control from the location.
0(High Light) ~ 255(Low Light)

-End Level : Set the end brightness control from the location
0(High Light) ~ 255(Low Light)

※ Remarks

If changing the setting value of START LEVEL or
END LEVEL, the Lux of IR on changes accordingly

OSD(Screen Control) Menu - Day & Night

- Color: This function keeps camera on COLOR mode.
- Black / White : This function allow you to set your setting to Black / White Mode.
 - Burst On: This turn on Burst mode to on
 - Burst Off : This turn off Burst mode to off.

※ OPERATING CONDITION.

- 1) Because Burst Control is related to Auto Gain Control when AGC is off Burst function will not be active.
- 2) Please set Delay time to minimum of 3 second.
(If the setting is set at "0" Day Mode will operate)
- 3) Because Start Level is related to AGC, Start Level must be less than AGC level.
- 4) Start Level MUST be above End Level.

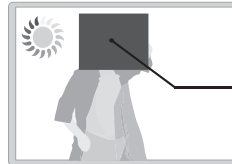
OSD (Screen Control) Menu - Privacy

with OSD function you could control UP&DOWN to select your desire mode.

SETUP	
SHUTTER	FIXED ↵
BLC	ON ⬅
AGC	ON ⬅
WHITE BAL.	ATW
DAY NIGHT	AUTO ↵
PRIVACY	OFF ↵
GAMMA	0.45
ADJUST	⬅
RESET	⬅
EXIT	



PRIVACY OFF



PRIVACY ON

PRIVACY ZONE

- OFF : Cancel Privacy Mode.
- ON : Start Privacy Mode.

* Select "On" button and select menu button and enter to start your setup for privacy.

-From 4 given areas, select your area where you wish to use privacy function.

-Select on button and select the area where you would like privacy function to work and expand if necessary.

-From the color menu use Left/Right button to control the color.

-By using Left/Right/Up/Down button and resize the area where you would like privacy to function & press menu button to save and exit.

OSD (Screen Control) Menu - Gamma

with OSD function you could control UP&DOWN to select your desire mode.

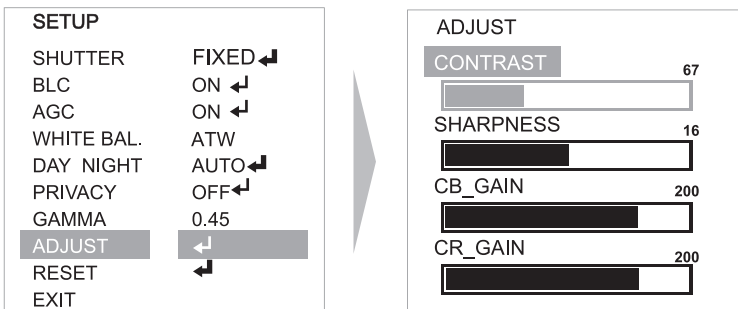
SETUP	
SHUTTER	FIXED ←
BLC	ON ←
AGC	ON ←
WHITE BAL.	ATW
DAY NIGHT	AUTO ←
PRIVACY	OFF ←
GAMMA	0.45
ADJUST	←
RESET	←
EXIT	

When MENU shows "GAMMA", you can control the value to use OSD key to left or right.

Brightness control could be functioning from 0.05 ~ 1.

OSD (Screen Control) MENU - ADJUSTMENT

with OSD function you could control UP&DOWN to select your desire mode.



- Contrast: You could configure the level from 0~255.
- Sharpness: If the sharpness level increase the image of video will be more clear, but if level is too high it will affect the view and increase noise.
- CB_Gain: This will help gain better blue color level (0~255 steps)
- CR_Gain: This will help gain better red color level (0~255 steps)

※ Blue, Red

If the value is too high, it will be affected with the image quality and increase noise.

Product Specification

Specification	NTSC	PAL
Image Sensor	1/3" INTERLINE Color CCD(Super HAD)	
Picture Elements	768(H) x 494(V)/380K	752(H) x 582(V)/440K
Scanning System	525Lines, 2:1 Interlace	625 Lines, 2:1 Interlace
Electronic Frequency	15.834KHz(H),59.94Hz(V)	15.625KHz(H), 50Hz(V)
Horizontal Resolution	540tvI(color), 570TVL(B/W)	
Shuuter speed	1/60~1/100,000	1/50~1/100,000
S/N Ratio	More Than 48dB (AGC Off)	
sync System	Internal	
Minimum Lux	0Lux(AGC High), IR LED 45ea	
White Balance	ATW(AWB/FIXED/MANUAL)	
Video Output	CVBS 1Vp-p (75Ω)	
Lens	6~50mm Day & Night Varifocal , DC Auto Iris Lens(F1.4)	
Power Consumption	DC12V±10%	
Used Electronicity	Max 100mA(IR OFF), Max 700mA(IR ON)	
Operation Temperature	-10℃~50℃,0%RH~80%RH	
Storage Temperature	-20℃~60℃,0%RH~80%RH	
Size	96 x 160 mm	
Weight	1450g	

WARRANTY

Product Name : _____

Model Name : _____

Purchase Date : _____

Customer Name : _____ Tel : _____ Address : _____

Store Name : _____ Tel : _____ Address : _____



Please keep this warranty document until your service requirement for LG Electronics

1. This product will receive its warranty under the warranty policy
2. Warranty service will start as of the purchase date. Please acquire purchase date from the store. (If the product purchase date is unavailable, warranty date will start 3month after the manufacture date.)
3. If house supply is used for commercial purpose or if it's a commercial product the warranty date will be decrease down to 1/2. (Major parts included)
4. This warranty document will not be reissued.
5. If sub-part were supply and under condition of other contract, the warranty will be effected under flexible warranty condition.

Major Supply Storage Term.

*Refrigerator, TV, Audio, Microwave, Room Air-condition, Commercial Refrigerator, Fan	----- 7 years.
*Car set	----- 6 years.
*VTR, Video Camera, DVD Player, MP3 Player, Gas Oven, Pan Heater, Fan, Air Refresher	----- 5 years.
*Rice Cooker, PC and other accessory	----- 4 years.
*Cell Phone, Gas Stove	----- 3 years.

**And all the similar above product.

Major Supply Warranty Term.

*Refrigerator, Air condition compressor, TV CPT, Monitor CDT	----- 4 years.
*Wash Machine Motor, Micro Wave Magnetron, VTR Head Drum, Fan Heater, Rotary Heater, Burner, PC Main Board (Mother Board)	----- 3 years.
*LCD TV, PDP TV, LCD Monitor Panel (Notebook Monitor is excluded)	----- 2 years.

** Even though Product Warranty still exist if the use time of 10,000 hours for MONITOR CDT exceed warranty is voided. For LCD TV, PDP TV, LCD Monitor panel exceed use time of 5,000 will void the warranty

MEMO

A large, empty rectangular box with rounded corners, designed for writing. It contains 12 horizontal lines spaced evenly down the page, providing a structured area for notes or a memo.

