

Before operating this unit, please read this manual thoroughly and retain it for future reference.

## User's Manual

# **GKB Analog Camera 2 Series & 64**

Vandalproof Dome Camera with  
Varifocal / Fixed Lens



Making Security Easier.

**GKB** 

## About this Manual

This user manual is for use with the GKB 2 Series and 64 Series Analog Camera. This document contains important information and instructions detailing proper operation and maintenance of GKB 2 Series and 64 Series Analog Camera.

Be aware that GKB 2 Series and 64 Series must be installed and used in accordance with the instructions given in this manual. Before installing or operating the unit, please read all safety notes and warnings provided in this manual.

GKB 2 Series and 64 Series Analog Camera is a surveillance device for use in security systems that assist in the management of security. GKB is not liable nor can be held responsible for any material loss and/or personal injuries cause by robbery, fire, natural disaster or problems of any kind resulting from the use of this device.



Do not dispose this camera as general waste. This product must be treated as a recyclable product. Contact your local government recycling program or the supplier of the product to confirm the proper method of disposal.

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# Warning and Precaution

## Warning

This information is provided to ensure your safety and to prevent loss either physical or financial. Read carefully before using the product. Read all sections of this manual where the following marks are shown.



Ignoring this may result in material loss and/or serious personal injury including death.



Ignoring this may result in material loss and/or slight personal injuries.



Do not disassemble

### Precaution



**Do not expose the camera to radioactivity and mount facing strong light sources.**

Exposing the camera to radioactivity or strong light over long periods of time will damage the camera's sensor.



**Do not supply voltage higher than GKB 2 series and 64 series regulated voltage.**



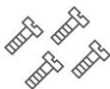
**Do not install the camera under unstable light conditions.**

Installing GKB 2 Series and 64 Series in environments with unstable light conditions may cause the camera to function abnormally.

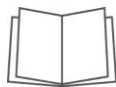
## Package Content



Dome Camera

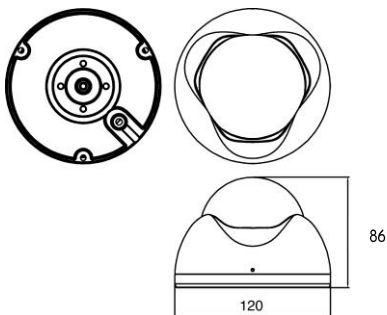


Screw Driver Pack



User's Manual

## Product Overview



## Features

- 1/3" Latest Sony CCD, presents 550/420 TV Lines of Resolution.
- Equipped with 3.7-12mm Vari-Focal Lens or 3.6mm/4.0mm Fixed Lens.
- Vandalproof Construction.
- For both indoors or outdoors application, meets all of your surveillance need.
- 3-Axis Mechanical Design for both Wall/Ceiling Mount, provides maximum versatility on Installation.

## Installation Instructions

To connect the camera's power and video as the following.

1. Open the camera by loosening two screws on the dome cover; position the camera at the desire location and fix the camera on the wall or ceiling.
2. Adjust the zoom in/out and focus of the camera lens. (\*For Vari-Focal Lens model only)
3. Adjust the camera 3-Axis bracket angle so the lens can point in the desired direction.
4. Replace the dome cover to the dome base, and make sure the screws on the dome cover are tightened.
5. Connect the power supply jack to 12V DC and the BNC Video Output to the desired video line.

## Operation (For GKB 6401 series only)

### Operating the OSD Menu

The button provides five separated actions: UP, DOWN, LEFT, RIGHT and ENTER.

Press ENTER to go to the OSD Menu Page.

Press UP, DOWN, LEFT or RIGHT to select items on the menu and begin configuration.

### OSD Menu Structure

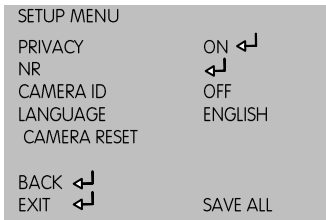
LENS	MANUAL			
	AUTO	TYPE	DC, VIDEO	
		MODE	AUTO, OPEN, CLOSE	
		SPEED	0~255	
SHUTTER/A GC	AUTO	HIGH LUMINANCE	MODE	AUTO IRIS, SHUT+AUTO IRIS
			BRIGHTNESS	0~255
	LOW LUMINANCE	MODE	AGC, OFF	
		BRIGHTNESS	X0.25~X1.00	
	MANUAL	MODE	SHUT+AGC	
		SHUTTER	1/50~1/10000	
	AGC	6~44.8		
WHITE BAL	ANTI CR			
	MANUAL	LEVEL	19-44	
	PUSH LOCK			
	ATW	SPEED	0~255	
		DELAY CNT	0~255	
		ATW FRAME	X1, X1.5, X2	
		ENVIRONMENT	INDOOR, OUTDOOR	
	PUSH			
	USER 1	B-GAIN	0~255	
		R-GAIN	0~255	
	USER 2	B-GAIN	0~255	
R-GAIN		0~255		
BACKLIGHT	BLC, HLC, OFF			
PICT ADJUST	MIRROR	ON, OFF		
	BRIGHTNESS	0~255		
	CONTRAST	0~255		
	SHARPNESS	0~255		
	HUE	0~255		
	GAIN	0~255		
ATR	OFF			
	ON	LUMINANCE	HIGH, MID, LOW	
		CONTRAST	HIGH, MIDHIGH, MID, MIDLOW,	

			LOW
MOTION DET	OFF		
	ON	DETECT SENSE	0~127
		BLOCK DISP	ON, OFF, ENABLE
		MONITOR AREA	OFF, ON
	AREA SEL	TOP, BOTTOM, LEFT, RIGHT	
PRIVACY	OFF		
	ON	AREA SEL	TOP, BOTTOM, LEFT, RIGHT
		COLOR	1~8
		TRANSP	0~1
	MOSAIC	ON, OFF	
NR	NR MODE	Y/C, Y, C, OFF	
	Y LEVEL	0~255	
	C LEVEL	0~255	
CAMERA ID	ON, OFF		
LANGUAGE	ENGLISH, CHINESE, SPANISH, PORTUGUESE, RUSSIAN, FRENCH, GERMAN, JAPANESE		
CAMERA RESET			

## Camera Menu

Camera menu allows the adjustment of different configurations to obtain the optimal image clarity and color realism.

SETUP MENU	
LENS	AUTO ↵
SHUTTER/AGC	AUTO ↵
WHITE BAL	PUSH
BACKLIGHT	OFF
PICT ADJUST	↵
ATR	ON ↵
MOTION DET	OFF
NEXT ↵	
EXIT ↵	SAVE ALL



**Note :** If there is a “↵” sign after the option, you could enter into the subdirectory to do more settings.

## 2.1 LENS

According to the lens type, choose AUTO or MANUAL mode to have the appropriate setting.

If choosing AUTO option, enter into subdirectory to adjust the AUTO IRIS TYPE DC or VIDEO.

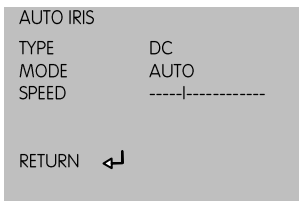
It supports 3 different IRIS actions: AUTO, OPEN, CLOSE

**AUTO:** Auto adjust the iris level according to the light condition.

**OPEN:** Keep the iris open.

**CLOSE:** Keep the iris close.

Adjust the response speed of iris from 0~255. The bigger the faster.



## 2.2 SHUTTER/AGC

SHUTTER/AGC setup allows control of the shutter speed and AGC level to match various light conditions, and control flicker.

It allows users to choose from AUTO or MANUAL mode.

**AUTO SETUP** – Shutter speed is adjusted automatically according to the light conditions.

```
AUTO SETUP
HIGH LUMINANCE
MODE          SHUT+AUTO IRIS
BRIGHTNESS   --|-----

LOW LUMINANCE
MODE          AGC
BRIGHTNESS   X0.50

RETURN  ↩
```

### High Luminance

MODE: Select from SHUT+AUTO IRIS or AUTO IRIS mode

SHUT+AUTO IRIS: Auto Electronic Shutter works with Auto Iris.

AUTO IRIS: Only Auto Iris works.

BRIGHTNESS: Adjust the brightness level from 0 to 255.

### Low Luminance

MODE: AGC can be turned ON or OFF.

BRIGHTNESS: Adjust the brightness from X0.25 to X1.00.

**MANUAL SETUP** – Shutter speed is adjusted automatically according to the light conditions.

```
MANUAL SETUP
MODE          SHUT+AUTO IRIS
SHUTTER       1/120
AGC           6.00

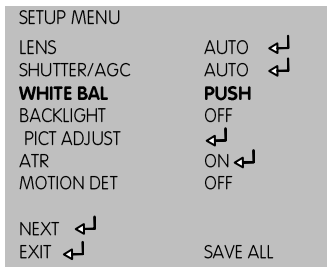
RETURN  ↩
```

MODE: It is fixed at SHUT+AUTO IRIS

SHUTTER: Can be set at 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000

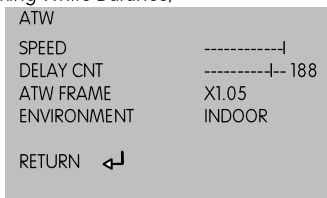
AGC: AGC is always on, can be set from 6.00~44.8

## 2.3 WHITE BALANCE



Adjust the image color in accordance with lighting conditions by selecting one of different white balance modes:

ATW (Auto Tracking White Balance)



**SPEED:** Adjust the ATW response speed from 0~255.

**DELAY CNT:** Adjust from 0~255

**ATW FRAME:** Adjust from X0.5~X2.0

**ENVIRONMENT:** Choose from Indoor or Outdoor.

PUSH (Automatically adjust the white balance faster than ATW)

USER1 (Customize the white balance by adjusting the Blue and Red gain.)

USER2 (Customize the white balance by adjusting the Blue and Red gain)

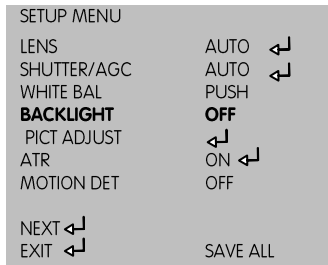
ANTI CR (Anti-Color Rolling)

MANUAL (Manually adjust the white balance level, the lower the level, the lower the color temperature)

PUSH LOCK (Hold the white balance to a certain value)

## 2.4 BACKLIGHT SETTING

BLC mode improves image detail of foreground objects in excessive background light conditions. Choose "OFF" to deactivate the BLC function.

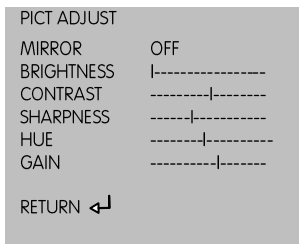


BLC (Back Light Compensation)

HSBLC(Highlight Suppression BLC)

HSBLC function could cut off the strong light like the headlight of the vehicle.

## 2.5 PICT ADJUST



### MIRROR

The image can be mirrored by switching on the Mirror Image View mode.

**BRIGHTNESS SETUP**

Adjust image brightness by selecting a brightness level from 0 to 255. The higher the brightness level the brighter the image.

**CONTRAST**

Adjust image contrast by selecting a contrast level from 0 to 255.

**SHARPNESS**

Adjust image sharpness by selecting a sharpness level from 0 to 255. The higher the sharpness level the sharper the image.

**HUE**

Adjust image hue by selecting a hue level from 0 to 255.

**GAIN**

Adjust image hue by selecting a hue level from 0 to 255.

**2.6 ATR(Adaptive Tone Reproduction)**

ATR function lowers the contrast between dark and bright areas, presents a clear and details image even under strong contrast environment.

```
ATR
LUMINANCE   HIGH
CONTRAST    HIGH

RETURN ↵
```

LUMINANCE can be adjusted to HIGH, MID, LOW.  
CONTRAST can be adjusted to HIGH, MID, LOW.

## 2.7 MOTION SETTING

Motion configuration allows the user to set the motion detection areas up to 4 zones; once the object in selected area is moving, the camera screen would show "MOTION DETECTION".

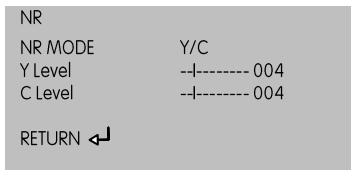
MOTION DET	
DETECT SENSE	----- 115
BLOCK DISP	OFF
MONITOR AREA	OFF
AREA SEL	1/4
TOP	-----  288 8
BOTTOM	-----  288
LEFT	-- ----- 178
RIGHT	---- ----_278
RETURN	↩

## 2.8 PRIVACY SETTING

Privacy Configuration allows the masking of up to 8 different surveillance-free zones of the camera picture.

PRIVACY	
AREA SELECT	1/8
TOP	-----  288
BOTTOM	-----  288
LEFT	-- ----- 178
RIGHT	---- ----_278
COLOR	8
TRANSP	0.75
MOSAIC	ON
RETURN	↩

## 2.9 NR(Noise Reduction)



With NR (Noise Reduction) embedded, camera produces extremely clear picture quality even under low light condition for 24/7 surveillance.

## 2.1 CAMERA ID

CAMERA ID provides the ability for the camera name to appear on-screen, and to set the camera name.

To display the camera name on screen, set the "CAMERA ID" to ON.

Select a camera name by selecting one letter/number at a time using the menu at the bottom of the screen.

**Note :** Consider assigning a Camera Name that highlights the location of the camera such as Lobby, Main Hall, Passageway 1, etc.

Press "CLR" to clear all letters, press "POS" to choose the position of camera title.

## 2.10 LANGUAGE SETTING

There are 9 different languages for options: Simplified Chinese, English, Japanese, French, German, Portuguese, Spanish and Russian.

## 2.11 CAMERA RESET

All configurations can be reset back to default at the CAMERA RESET option.

## 2.12 EXIT

Select "EXIT" to exit the OSD menu.

# Specification

<b>GKB 208VF Analog Camera</b>		
Video	Image Sensor	1/3" Sony CCD
	Number of Effective Pixels	NTSC: 768(H)×494(V) PAL: 752(H)×582(V)
	Resolution	550 TV Lines
	Min. Illumination	0.3 lx, F1.4 / 0.01 lx, F1.4
	Gamma	0.45
	S/N Ratio	More than 48dB
	Sync. Mode	Internal Sync.
	Scanning System	2:1 Interlace
	Horizontal Sync. Frequency	<NTSC> 15.734KHz / <PAL>15.625KHz
	Shutter Control	<NTSC>1/60~1/100,000 sec <PAL>1/50~1/100,000 sec
	BNC Video Output	Composite video 1.0Vpp, 75 Ohm
	On-Screen Display	-
	ICR(IR-Cut Filter)	-
	Auto Electronics Shutter	On
	Auto Gain Control	On
	Back Light Compensation	On
White Balance	ATW	
Power	Power Supply	DC 12V
	Power Consumption	3W
Lens	3.7~12mm Varifocal Auto-iris Lens	
Weatherproof	IP 66	
Dimension	86(H) * 120(Ø) mm	
Weight	0.8 kg	
Mounting	Surface Mount	
Operating Temperature	-10°C ~+60°C	

\* Specifications are subject to change without prior notice

<b>GKB 209VF Analog Camera</b>		
Video	Image Sensor	1/3" Sony CCD
	Number of Effective Pixels	NTSC: 510(H)×492(V) PAL: 512(H)×582(V)
	Resolution	420 TV Lines
	Min. Illumination	0.3 lx, F1.4 / 0.01 lx, F1.4
	Gamma	0.45
	S/N Ratio	More than 48dB
	Sync. Mode	Internal Sync.
	Scanning System	2:1 Interlace
	Horizontal Sync. Frequency	<NTSC> 15.734KHz / <PAL>15.625KHz
	Shutter Control	<NTSC>1/60~1/100,000 sec <PAL>1/50~1/100,000 sec
	BNC Video Output	Composite video 1.0Vpp, 75 Ohm
	On-Screen Display	-
	ICR(IR-Cut Filter)	-
	Auto Electronics Shutter	On
	Auto Gain Control	On
Back Light Compensation	On	
White Balance	ATW	
Power	Power Supply	DC 12V
	Power Consumption	3W
Lens	3.7~12mm Varifocal Auto-iris Lens	
Weatherproof	IP 66	
Dimension	86(H) * 120(Ø) mm	
Weight	0.8 kg	
Mounting	Surface Mount	
Operating Temperature	-10°C ~+60°C	

\* Specifications are subject to change without prior notice

## GKB 208 Analog Camera

Video	Image Sensor	1/3" Sony CCD
	Number of Effective Pixels	NTSC: 768(H)×494(V) PAL: 752(H)×582(V)
	Resolution	550 TV Lines
	Min. Illumination	0.3 lx, F1.4 / 0.01 lx, F1.4
	Gamma	0.45
	S/N Ratio	More than 48dB
	Sync. Mode	Internal Sync.
	Scanning System	2:1 Interlace
	Horizontal Sync. Frequency	<NTSC> 15.734KHz / <PAL>15.625KHz
	Shutter Control	<NTSC>1/60~1/100,000 sec <PAL>1/50~1/100,000 sec
	BNC Video Output	Composite video 1.0Vpp, 75 Ohm
	On-Screen Display	-
	ICR(IR-Cut Filter)	-
	Auto Electronics Shutter	On
	Auto Gain Control	On
	Back Light Compensation	On
White Balance	ATW	
Power	Power Supply	DC 12V
	Power Consumption	2W
Lens	3.6mm Fixed Lens	
Weatherproof	IP 66	
Dimension	86(H) * 120(Ø) mm	
Weight	0.8 kg	
Mounting	Surface Mount	
Operating Temperature	-10°C ~+60°C	

\* Specifications are subject to change without prior notice

## GKB 209 Analog Camera

Video	Image Sensor	1/3" Sony CCD
	Number of Effective Pixels	NTSC: 510(H)×492(V) PAL: 512(H)×582(V)
	Resolution	420 TV Lines
	Min. Illumination	0.3 lx, F1.4 / 0.01 lx, F1.4
	Gamma	0.45
	S/N Ratio	More than 48dB
	Sync. Mode	Internal Sync.
	Scanning System	2:1 Interlace
	Horizontal Sync. Frequency	<NTSC> 15.734KHz / <PAL>15.625KHz
	Shutter Control	<NTSC>1/60~1/100,000 sec <PAL>1/50~1/100,000 sec
	BNC Video Output	Composite video 1.0Vpp, 75 Ohm
	On-Screen Display	-
	ICR(IR-Cut Filter)	-
	Auto Electronics Shutter	On
	Auto Gain Control	On
	Back Light Compensation	On
White Balance	ATW	
Power	Power Supply	DC 12V
	Power Consumption	2W
Lens	3.6mm Fixed Lens	
Weatherproof	IP 66	
Dimension	86(H) * 120(Ø) mm	
Weight	0.8 kg	
Mounting	Surface Mount	
Operating Temperature	-10°C ~+60°C	

\* Specifications are subject to change without prior notice

<b>GKB 6401 Analog Camera</b>		
Video	Image Sensor	1/3" Sony EXview-HAD CCD II
	Effective Number of Pixels	NTSC: 976(H) * 494(V) PAL: 976(H) * 582(V)
	Resolution	700 TVL
	Min. Illumination	Color: 0.03lx, F1.0 B/W: 0.01lx, F1.0; 0.005lx, F1.0(with ICR)
	Gamma	0.45
	S/N Ratio	More than 52dB
	Sync. Mode	Internal Sync.(DC)
	Scanning System	2:1 Interlace
	Horizontal Sync. Frequency	NTSC: 15.734 KHz / PAL: 15.625 KHz
	Shutter Control	NTSC: 1/60~1/100,000 sec PAL: 1/50~1/100,000 sec
	BNC Video Output	1.0 Vp-p, 75 ohm
	ICR (IR-Cut Filter)	Optional
	Electronics Shutter	AUTO: 1/60(1/50)~1/100,000 MANUAL
	Auto Gain Control	ON(Level Programmable), OFF
	Back Light Compensation	BLC, HSBLC, OFF
	White Balance	ATW, PUSH, USER1, USER2, MANUAL, PUSH LOCK, ANTI CR
	ATR	ON(Level Programmable), OFF
	NR	ON/OFF
	Motion Detection	ON(4 Selectable Areas)/OFF
	Mirror	ON/OFF
Privacy	ON(8 Selectable Areas)/OFF	
Power	Power Supply	DC 12V
	Power Consumption	2W
Lens	4mm, F1.5 Fixed Megapixel Lens	
Weatherproof	IP 66 Rating	
Dimension	86(H) * 120(ø) mm	
Weight	0.8 kg	
Operating Temperature	-10°C ~ 60°C / 30% ~ 80% RH	

<b>GKB 6401 VF Analog Camera</b>		
Video	Image Sensor	1/3" Sony EXview-HAD CCD II
	Effective Number of Pixels	NTSC: 976(H) * 494(V) PAL: 976(H) * 582(V)
	Resolution	700 TVL
	Min. Illumination	Color: 0.03lx, F1.0 B/W: 0.01lx, F1.0; 0.005lx, F1.0(with ICR)
	Gamma	0.45
	S/N Ratio	More than 52dB
	Sync. Mode	Internal Sync.(DC)
	Scanning System	2:1 Interlace
	Horizontal Sync. Frequency	NTSC: 15.734 KHz / PAL: 15.625 KHz
	Shutter Control	NTSC: 1/60~1/100,000 sec PAL: 1/50~1/100,000 sec
	BNC Video Output	1.0 Vp-p, 75 ohm
	ICR (IR-Cut Filter)	Optional
	Electronics Shutter	AUTO: 1/60(1/50)~1/100,000 MANUAL
	Auto Gain Control	ON(Level Programmable), OFF
	Back Light Compensation	BLC, HSBLC, OFF
	White Balance	ATW, PUSH, USER1, USER2, MANUAL, PUSH LOCK, ANTI CR
	ATR	ON(Level Programmable), OFF
	NR	ON/OFF
	Motion Detection	ON(4 Selectable Areas)/OFF
	Mirror	ON/OFF
Privacy	ON(8 Selectable Areas)/OFF	
Power	Power Supply	DC 12V
	Power Consumption	3W
Lens	3.7~12mm auto Iris Lens (ICR is optional)	
Weatherproof	IP 66 Rating	
Dimension	86(H) * 120(ø) mm	
Weight	0.8 kg	
Operating Temperature	-10°C ~ 60°C / 30% ~ 80% RH	

## Warranty Policy

### **Warranty Period**

For detailed information on product warranties and warranty claim, please contact your local GKB distributor or agent.



**CE FC RoHS ISO 9001**

CR100000164

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