

FOR A GOOD **REASON**  
**GRUNDIG**

**Owner's Manual**

**EN**

**HD Video Cameras**

---

GCT-K2305B      2 Megapixel Full HD-TVI Box Camera ICR  
WDR

---

GCT-KGHE Ó.182.1.18.07.2016  
© ASP AG



---

---

**Content:**

<b>1. Important Safety Instructions</b>	<b>1</b>
<b>2. Package Contents</b>	<b>2</b>
<b>3. Rear View</b>	<b>2</b>
<b>4. Installation</b>	<b>3</b>
1. Lens Mounting	3
<b>5. Control Stick</b>	<b>3</b>
<b>6. OSD Menu</b>	<b>4</b>
1. LENS	4
2. EXPOSURE	5
3. WHITE BAL (White Balance)	5
4. BACKLIGHT	6
5. DNR (Digital Noise Reduction)	7
6. DAY/NIGHT	8
7. IMAGE	9
8. MOTION	11
9. SYSTEM	11
10. EXIT	12

---

**1. Important Safety Instructions**

Be sure to use only the standard adapter that is specified in the specification sheet. Using any other adapter could cause fire, electrical shock, or damage to the product. Incorrectly connecting the power supply may cause explosion, fire, electric shock, or damage to the product. Do not connect multiple products to one single adapter. Exceeding the capacity may cause abnormal heat generation or fire.

Do not place conductive objects (e.g. screwdrivers, coins or any metal items) or containers filled with water on top of the product. Doing so may cause personal injury due to fire, electric shock, or falling objects.

---

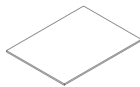
If any unusual smells or smoke comes out of the unit, stop using the product. In this case, immediately disconnect the power source and contact the service center. Continued use in such a condition may cause fire or electric shock.

If this product fails to operate normally, contact the nearest service center. Never disassemble or modify this product in any way. (GRUNDIG is not liable for problems caused by unauthorised modifications or attempted repair.)

To prevent fire or electric shock, do not expose the inside of this device to rain or moisture.

## 2. Package Contents

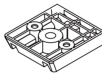
These parts are included:



Manual



Iris Jack



Bracket



C Mount Adapter

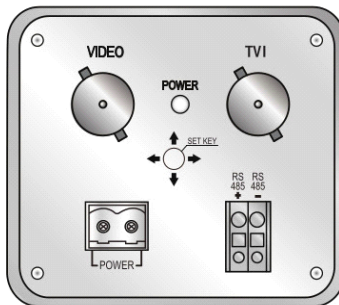


Screw



Terminal Block

## 3. Rear View



---

## 4. Installation

Do not install this product in a location subject to high temperature (over 55°C), low temperature (below -25°C), or high humidity. Doing so may cause fire or electric shock. Keep out of direct sunlight and heat radiation sources. This may cause fire.

Do not install the unit in humid, dusty or sooty locations. Doing so may cause fire or electric shock. Install it in a place with good ventilation.

When installing the unit, fasten it securely and firmly. A falling unit may cause personal injury.

If you want to relocate the already installed product, be sure to turn the power off and then move or reinstall it.

### 4.1. Lens Mounting

Lens Mounting for C/CS Mount Lens Model:

It is possible to attach all CS-Mount lenses with manual or DC controlled iris on the camera. Please remove the camera's plastic covering first and then attach the CS-Mount lens onto the camera. If you would like to use a C-Mount lens, you need a 5 mm C/CS Mount Adapter between the camera and the C-Mount lens, as shown in the illustration below.

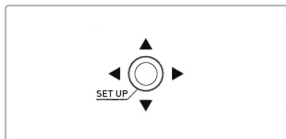


C/CS Mount Adapter (on Camera)



Completion

## 5. Control Stick



- Pressing the SET UP stick: Accesses the menu mode or confirms the setting.
- UP / DOWN: Chooses the desired menu.
- LEFT / RIGHT: Sets up the value of the selected menu and changes the settings.

---

## 6. OSD Menu

1. Press the SET UP stick to access the menu mode.
2. Select the desired feature by using UP/DOWN.
3. If there is a setting for this feature on the right side of the screen, use LEFT/RIGHT to switch between the settings and confirm your choice by pressing the stick. If an ENTER (↵) is displayed, press the stick to access the according submenu.
4. In the sub-menus, please press with the stick on RETURN to return to the previous menu.
5. To exit the menu, please press the stick on EXIT in the main menu.

When you press the SET UP stick for the first time, the MENU page will be displayed on the monitor.

MENU	
1. LENS	DC↵
2. EXPOSURE	↵
3. WHITE BAL	AUTO
4. BACKLIGHT	OFF
5. DNR	MIDDLE
6. DAY & NIGHT	EXTERN↵
7. IMAGE	↵
8. MOTION	OFF
9. SYSTEM	↵
10. EXIT	↵

LENS: You can choose between Indoor or Outdoor mode.

EXPOSURE: This function is used to control the light exposure.

WHITE BAL: You can control the white balance under different lighting conditions here.

BACKLIGHT: You can control the backlight compensation here.

DNR: This noise reduction function is to decrease the noise which can be generated under low light conditions.

DAY&NIGHT: This function is used to improve the camera's sensitivity at night or when the brightness level of the ambient environment is low.

IMAGE: You can set different picture related settings like mirroring, sharpness, hue and gain.

MOTION: This function is used to detect moving objects in the monitoring area.

SYSTEM: Configures camera related functions and data.

EXIT: Here you can exit the menu.

### 6.1. LENS

Here you can configure the lens setting.

LENS [DC, MANUAL] :

If you are using a lens with manual Iris, set this item to MANUAL. If you are using a DC controlled lens, set it to DC.

- DC [INDOOR, OUTDOOR, DEBLUR]: You can select a mode depending on the installation environment.
- MANUAL [NORMAL, DEBLUR]: You can select a mode depending on the installation environment.

## 6.2. EXPOSURE

This function is used to control the light exposure.

2. EXPOSURE	
BRIGHTNESS	10
SHUTTER	AUTO
SENS-UP	x16
AGC	20
RETURN	

**BRIGHTNESS [0~20] :**  
Sets the value of auto exposure operations. As the value increases, the screen gets brighter.

**SHUTTER [AUTO, MANUAL, FLICKER] :**

Adjust the electronic shutter speed by selecting one of the modes. If you select MANUAL, the following sub-menu will appear.

SHUTTER	
SPEED	1/25
RETURN	

- SPEED [for 25 fps: 1/25~1/30,000 / for 30 fps: 1/30~1/30,000]: Control the image brightness by adjusting the shutter speed.

**SENS-UP [x2~x32] :**

This feature ensures clear images at night or under low light conditions.

**AGC [0~20] :**

This function is used to create brighter images. As the AGC value increases, the overall screen gets brighter but the level of noise is also increasing.

## 6.3. WHITE BAL (White Balance)

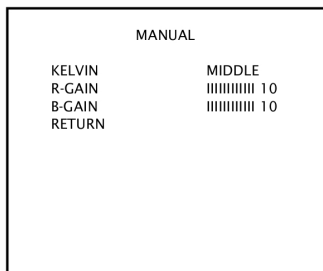
This function is used to control the white balance under different lighting conditions. Adjusting the setting calibrates the camera for correct and natural colour rendering.

---

WHITE BAL [ATW, AWB, AWC→SET, MANUAL] :

- ATW: Select this mode when the colour temperature is between 1,800°K and 10,500°K.  
- AWB: This function is used to search for colours that match the ambient environment well. Select this mode when the colour temperature is between 3,000°K and 7,000°K.

- AWC→SET: To find the optimal luminance level for the current environment, point the camera towards a sheet of white paper and press the SET UP stick. If the environment changes, re-adjust this setting.



- MANUAL: Select this option to fine-tune the White Balance manually. Set the White Balance first by using the ATW or the AWC mode. After that switch to MANUAL mode and press the SET UP stick. Fine-tune the White Balance (KELVIN) and change the BLUE and RED values to meet the best result.

**NOTE:**

The White Balance may not work properly under the following conditions. If that is the case, select the ATW or AWB mode (automatic mode).

1. When the colour temperature of the environment surrounding the subject is out of the control range (e.g. clear sky or sunset).
2. When the ambient illumination of the subject is dim.
3. When the camera is directed towards a fluorescent light or is installed in a place where the illumination changes dramatically, the White Balance operation may become unstable.

#### 6.4. BACKLIGHT

To overcome difficult light situations, this GRUNDIG camera features different options to improve the image quality. You can choose between HLC, BLC, WDR, OFF.

This function is used for backlight compensation. Please choose from OFF, WDR, BLC and HLC.

OFF: Deactivated.



	HLC	
LEVEL		IIIIIIII 10
MODE		ALL DAY
RETURN		

**HLC (High Light Compensation):**  
This function is used to suppress or mask a strong light source (for example, headlights of cars during night-time) so that other subjects can be seen in more detail.

- LEVEL: Adjust the brightness level from which on the light source is to be masked out.
- MODE: Choose the mode.

	BLC	
H-POS		6
V-POS		4
H-SIZE		5
V-SIZE		3
RETURN		

**BLC (Back Light Compensation):**  
This function is used to counterbalance the screen image by increasing the brightness so that a subject which appears dark due to a strong backlight can be displayed in more detail. If you select BLC, a submenu appears where you can make finer adjustments.

- H-POS/ V-POS/ H-SIZE/ V-SIZE: Define the position and size of the area of interest by changing the position & size.

	WDR	
WEIGHT		HIGH
RETURN		

**WDR:**  
The WDR (Wide Dynamic Range) function works to correct excessive light within the frame to produce a usable image. When the image has simultaneous bright and dark areas, it makes both areas distinct. If you select WDR, a submenu appears where you can make finer adjustments.

- WEIGHT [MIDDLE, HIGH, LOW]: Select the WDR level of the camera.

**NOTE:** The WDR function might lead to a reduced framerate and "ghost" effects in areas with very bright background.

### 6.5. DNR (Digital Noise Reduction)

This function is used to improve the picture quality by filtering the noise which is generated under low bright light conditions. You can set 3 different levels [LOW, MIDDLE, HIGH] here.

**DNR [OFF, LOW, MIDDLE, HIGH] :**

Using DNR (Digital Noise Reduction), you can control the noise on the screen. This is especially useful when the image is very noisy due to low light.

---

NOTE: If the DNR function is used, the cancellation of the noise will be excellent. The higher the compensation proportion is raised, the better the effect of noise cancellation will be, but a ghost effect may also occur.

## 6.6. DAY/NIGHT

This function is used to improve the camera's sensitivity at night or when the brightness level of the ambient environment is low.

DAY & NIGHT [AUTO, COLOR, B/W, EXTERN] :

- EXTERN: The Day and Night function will be adjusted by the built-in Light Sensor.

6. DAY&NIGHT	
SMART IR	0
EXTERN S / W	LOW
DELAY	LOW
RETURN	

> SMART IR [0~20] : This option controls the IR LED (bright portion base), saturation is not expected.

> EXTERN S / W [HIGH, LOW]: Set the setting of the external Switch to HIGH or LOW.

> DELAY [LOW, MIDDLE, HIGH]: Set the working time of the D/N filter.

6. DAY&NIGHT	
SMART IR	0
AGC THRES	10
AGC MARGIN	10
DELAY	LOW
RETURN	

- AUTO: This mode switches to 'Colour' in a normal environment, but switches to 'B/W' mode when the ambient illumination is low. To set up the switching time for AUTO mode, press the SET UP stick. In B/W mode, you can turn the BURST signal ON or OFF.

> SMART IR [0~20]: This option controls the IR LED (bright portion base), saturation is not expected.

> AGC THRES [0-20]: Execute the Day/Night switch depending on the AGC level that is used to increase the brightness of the image. Higher values require a darker illumination to execute the switch.

> AGC MARGIN [0-20]: Define the difference between the Day/Night & Night/Day switch based on AGC THRES. Higher values will increase this distance and can help to prevent continuous switching between Day & Night mode.

> DELAY [LOW, MIDDLE, HIGH]: Set the working time of the D/N filter.

- COLOR: The picture will be always displayed in colour.

- B / W: The picture will be always displayed in black & white. In B/W mode, you can turn the BURST signal ON or OFF.

6. DAY&NIGHT	
SMART NR	IIIIIIIIII 0
RETURN	

> SMART IR [0~20]: This option controls the IR LED (bright portion base), saturation is not expected.

## 6.7. IMAGE

7. IMAGE	
SHARPNESS	IIIIIIIIII 10
GAMMA	0.55
COLOR GAIN	IIIIIIIIII 10
MIRROR	ON
FLIP	ON
D-ZOOM	1.0X
ACE	OFF
DEFOG	OFF
SHADING	OFF
PRIVACY	OFF
RETURN	

Here you can optimise the image quality by adjusting different options.

**SHARPNESS [0 ~ 20] :**  
Adjusts the image sharpness. If the level goes up excessively, it may affect the video image and generate a noise.

**GAMMA [0.45 ~ 0.65] :**  
Changes the gamma curve of the camera.

**COLOR GAIN [0 ~ 20] :**  
Control the saturation of colour of the video image.

**MIRROR [ON, OFF] :**  
Mirrors the image horizontally on the screen.

**FLIP [ON, OFF] :**  
Flips the image vertically on the screen.

**D-ZOOM [1.0x~8.0x] :**  
You can use the up to x8 bi-cubic linear digital zoom.

**NOTE:** Please note that the higher the digital zoom magnification is, the lower the resolution will be.

**ACE [OFF, LOW, MIDDLE, HIGH] :**  
This is an intelligent light level control to over come even strong backlight conditions. If strong back light occurs, please set accordingly a higher value.

**DEFOG [ON, OFF] :**  
This function helps to improve the image in a foggy or dusty weather condition. If you choose ON, a sub-menu will appear. Here you can adjust the position, level and size of the area where the defogging will be adjusted.

DEFOG	
MODE	AUTO
LEVEL	MIDDLE
RETURN	

- MODE [AUTO, MANUAL] : Please choose a mode for the DEFOG function.
- LEVEL [LOW, MIDDLE, HIGH] : Please choose a level for the DEFOG function.

SHADING	
WEIGHT	100 %
RETURN	

- SHADING [ON, OFF] :  
Compensates the shading effects of lenses when the lens is set to a very wide angle. This function will reduce the brightness difference between the centre and the edges. If you select ON, a submenu appears where you can make finer adjustments.
- WEIGHT [0%~100%] : You can set different levels here.

PRIVACY	
ZONE NUM	0
ZONE DISP	OFF
H-POS	12
V-POS	2
H-SIZE	2
V-SIZE	3
Y LEVEL	10
CR LEVEL	10
VB LEVEL	10
RETURN	

- PRIVACY [ON, OFF] :  
Masks areas that you want to hide on the screen. Switch between ON and OFF to activate or deactivate this function.

- ZONE NUM [0 ~ 15]: Select a mask out of the 15 mask areas and set the options below for the selected mask.
- ZONE DISP [ON, OFF]: Choose ON to activate privacy masks and press OFF to deactivate masks.
- H-POS [0 ~ 60]: Define the horizontal start position of the privacy mask.
- V-POS [0 ~ 33]: Define the vertical start position of the privacy mask.
- H-SIZE [0 ~ 60]: Define the horizontal size of the privacy mask.
- V-SIZE [0 ~ 33]: Define the vertical size of the privacy mask.
- Y LEVEL [0 ~ 20]: Define the brightness of the mask colour.
- CR LEVEL [0 ~ 20]: Define the red amount of the mask colour.
- CB LEVEL [0 ~ 20]: Define the blue amount of the mask colour.

---

## 6.8. MOTION

8. MOTION	
SENSITIVITY	IIIIIIIIII 10
WINDOW TONE	0
WINDOW USE	OFF
WINDOW ZONE	0
DET H-POS	1
DET V-POS	1
DET H-SIZE	28
DET V-SIZE	15
ALARM	OFF
RETURN	

This function is used to detect moving objects in the monitored area.

- > SENSITIVITY [0~20]: Set the sensitivity of the motion detection.
- > WINDOW TONE [0~6]: Here you can set up the tone of the mask area.
- > WINDOW USE [0~3]: Here you can set up the zone of the mask area.
- > WINDOW ZONE [ON, OFF]: Here you can set the usage of the mask area to ON or OFF.
- > DET H-POS [0~60]: Moves the Detection area horizontally.
- > DET V-POS [0~34]: Moves the Detection area vertically.
- > DET H-SIZE [0~60]: Defines the horizontal size of the Detection area.
- > DET V-SIZE [0~34]: Defines the vertical size of the Detection area.
- > ALARM [ON, OFF]: No function in this camera model.

NOTE: After the area setting is done, you can change back the WINDOW TONE to '0' so that the border does not show. Setting the area to Full screen is highly recommended.

## 6.9. SYSTEM

9. SYSTEM	
COM.	⌘
IMAGE RANGE	USER⌘
OUTPUT MODE	1080P
COLOR SPACE	HD-CbCr
FRAME RATE	25 FPS
CVBS	PAL
LANGUAGE	ENG
COLORBAR	OFF
RESET	ON
RETURN	

Here you can configure camera related functions and data.

COM.:

If you select COM in the menu SYSTEM, a submenu will appear where you can set up the communication status when controlling the camera through an external control device.

- CAM ID (0~255): Select the camera number for the RS485 connection.
- BAUD RATE (2400, 4800, 9600, 57600, 115200): Set the data speed of the camera. (You need to set the same BAUDRATE for the remote controller.)

---

**IMAGE RANGE [FULL, COMP, USER] :**

This is a control function for the video signal for monitors. Here you can adjust the rate of the YC signal to 100%(FULL), 75%(COMP) or 100%~75%(USER). Through adjusting this function, you can find the most suitable signal value for your monitor type. When selecting "USER", you can make finer adjustments in a sub-menu that will appear.

**OUTPUT MODE [720P, 720P CROP, 1080P] :**

This camera model supports the following resolutions for the video output: 1920x1080(1080p) & 1280x720(720p). Choose a suitable output type (resolution) for the screen you want to use.

**COLOR SPACE [YUV, SD-CBCR, HD-CBCR] :**

Select a suitable colour setting to obtain a warmer or a colder image.

**FRAME RATE [25 FPS, 30 FPS] :**

Choose a frame rate.

**CVBS [PAL, NTSC] :**

The TV system can be manually switched to 'PAL' or 'NTSC' under the menu item "CVBS" (Composite Video Blanking and Sync).

**LANGUAGE [ENG] :**

Currently only the English language is available for the OSD menu.

**COLORBAR [OFF, ON] :**

Check the current condition of the monitor with the colour bar.

**RESET [ON↓] :**

All settings will be restored to factory default.

**6.10. EXIT**

Exits the menu setting.

---

## EC Declaration of Conformity



GCT-K2305B      2 Megapixel Full HD-TVI Box Camera ICR WDR

It is hereby certified that the products meet the standards in the following relevant provisions:

EC EMC Directive 2004/108/EC

Applied harmonised standards and technical specifications:

EN 55022: 2010 / AC: 2011

EN 61000-3-2: 2014

EN 61000-3-3: 2013

EN 50130-4: 2011

### ASP AG

Max-Planck-Str.15c

40699 Erkrath

Germany

Erkrath, 22.07.2016

# GRUNDIG

-----  
Ludwig Bergschneider  
CEO