

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

Owner's Manual



Cameras & Domes

GCA-B3322D 1/3" CCD Fixed Dome Camera, Vari-Focal

GCA-B3326D 1/3" CCD Col/B&W Fixed Dome Camera w/ IR LED

GCA-B3322D.44.1.09.02.2012

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1. Available Versions

These instructions apply to the following products. For the different properties of the products please refer to the table.

| | Day/Night | LED | WDR |
|------------|-----------|-----|-----|
| GCA-B3322D | Soft | - | - |
| GCA-B3326D | ICR | ✓ | - |

2. 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 or replacing battery 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.

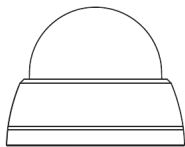
If any unusual smells or smoke comes out of the unit, stop using the product. In this case, immediately disconnect the power source and contact the service center. Continued use in such a condition may cause fire or electric shock.

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.

3. Package Contents

These parts are included:



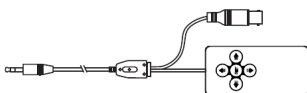
Camera



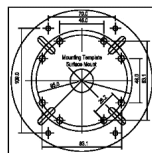
**Screws
(3 pcs)**



**Instruction
Manual**



**Service Monitor and
Control Cable**



**Mounting
Template**

4. Installation

Do not install the product in a location subject to high temperature (over 50°C), low temperature (below -10°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. Avoid aiming the camera directly towards extremely bright objects such as the sun, as this may damage the image sensor.

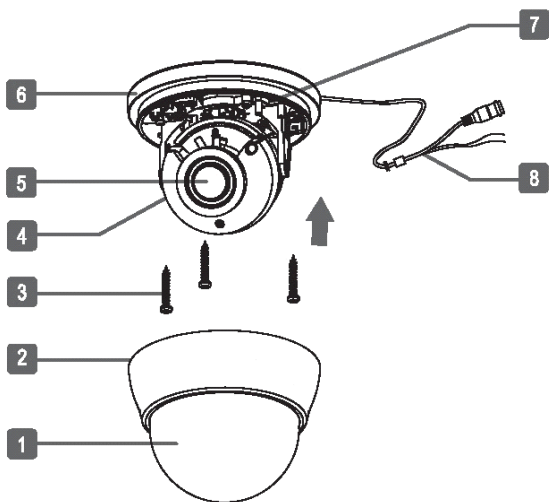
Do not install the unit in humid, dusty or sooty locations. Doing so may cause fire or electric shock. Install it in a place with good ventilation.

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.

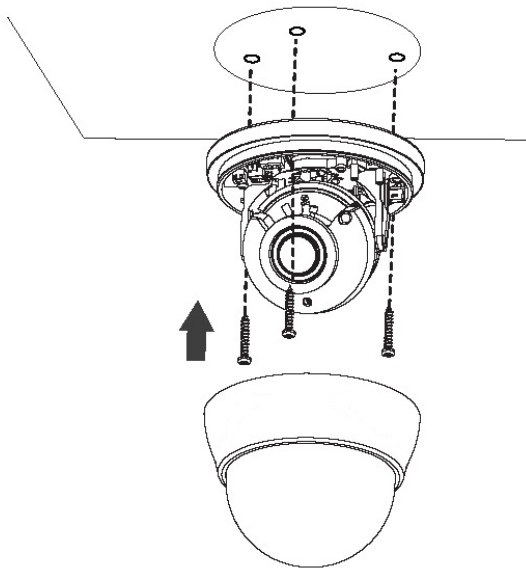
4.1. Part Names

1. Bubble
2. Dome Cover Ring
3. Mounting Screws
4. Camera Module Gimbal Bracket
5. Lens
6. Dome Base
7. Service Monitor Output Port
8. Video Out and Power Cable



4.2. Base Installation

1. Open the dome cover ring at the marked position (e.g. with a flat screw driver).
2. There are three mounting holes on the Dome Base for installation of the unit in any place such as a ceiling, wall and etc. Use the three mounting screws to affix the Dome Base to a sturdy surface. To access all three holes, rotate the camera module.



Caution:

To avoid smear, do not expose the camera directly to a strong light source such as the sun or spot light.

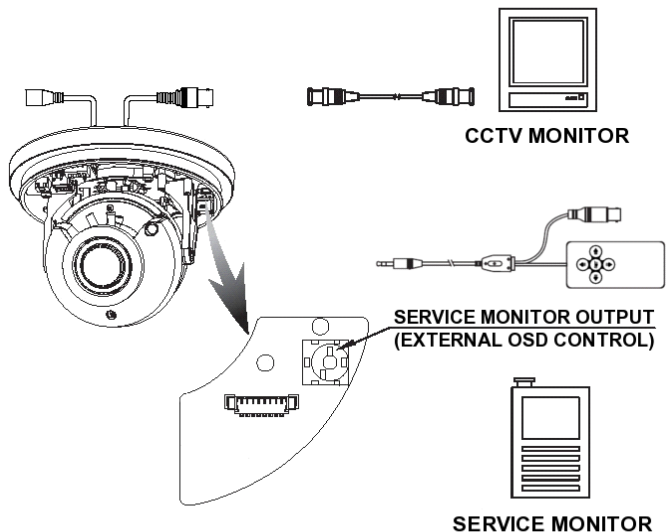
4.3. Connections

- Power connection: Requires a DC 12V or AC 24V input depending on the camera model.

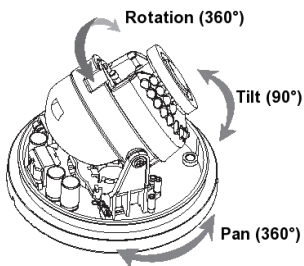
- All camera models are supplied with a service monitor output on the camera module. A control cable is included in the package.

Note:

To set up the OSD menu externally, a control cable is required.



4.4. 3-Axis Gimbal Adjustment



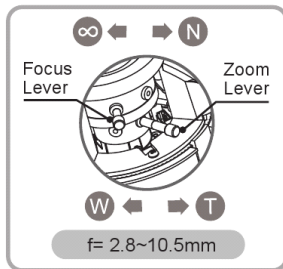
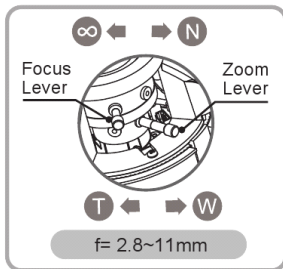
1. Pan: Adjust the pan by turning it manually to the right or left.
2. Tilt: Adjust the tilt by moving it manually up or down.
3. Rotation: Adjust the rotation manually to the desired angle.

4.5. Zoom & Focus Adjustment

1. If you need to make viewing angle/focus adjustments, move the levers as shown below. First loosen the Zoom/Focus levers, and then adjust them as needed.

- Field of View: Telephoto (T) to Wide (W)
- Focus: Near (N) to Infinity (∞)

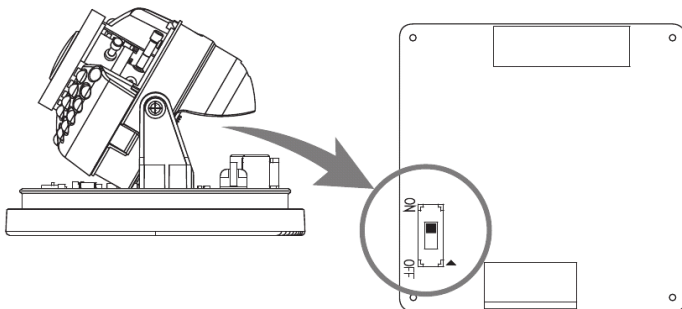
2. After the adjustments are completed, tighten the Zoom/Focus levers.



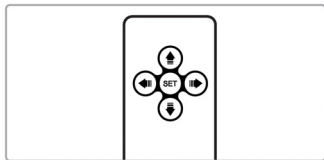
4.6. IR-LED On/Off Switch

For the cameras with IR-LEDs, it is possible to switch off the LEDs. Please turn the switch to ON or OFF according to your needs.

- OFF: Select OFF if the subject in the picture has an extreme IR-LED reflection.
- ON: Select ON if the subject has no IR-LED reflection.



5. OSD Control Keys



- SET key: Accesses the menu mode or confirms the setting.
- UP (\wedge) / DOWN (\vee): Chooses the desired menu.
- LEFT ($<$) / RIGHT ($>$): Sets up the value of the selected menu.

6. OSD Menu

1. Press the SET key and hold it for a while to access the menu mode.
2. Select the desired feature by using the UP/DOWN keys (\wedge / \vee) on the control.
3. If there is a setting for this feature on the the right side of the screen, use the LEFT/RIGHT keys to switch between the settings and confirm your choice by pressing the SET key. If an ENTER arrow (\rightarrow) is displayed, press SET to access the according submenu.
4. When the settings are completed, go to SAVE ALL and press the SET key to save the settings. If you have not done this and the power is turned off, the changes in the settings will not be kept.
5. In the sub-menu, please press with the SET key on RETURN to return to the previous menu.
6. To exit the menu, please press with the SET key on EXIT in the main menu.

| | |
|-------------|----------|
| SETUP MENU | |
| LENS | AUTO↵ |
| SHUTTER/AGC | AUTO↵ |
| WHITE BAL | ATW↵ |
| PICT ADJUST | ↵ |
| NR | ↵ |
| ATR | OFF |
| BACKLIGHT | OFF |
| | |
| NEXT↵ | |
| EXIT↵ | SAVE ALL |

LENS: Here you can configure the lens setting.

SHUTTER/AGC: This function is used to control the light exposure.

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

PICT ADJUST: You can set different picture related settings like mirroring, brightness, contrast, hue and gain.

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

ATR: This function is used to improve the contrast of the image (similar to WDR).

BACKLIGHT: You can control the backlight compensation here.

NEXT: Choose this option to view the second menu page.

| | |
|--------------|----------|
| SETUP MENU | |
| CAMERA ID | OFF |
| DAY/NIGHT | AUTO↵ |
| MOTION DET | OFF |
| PRIVACY | OFF |
| SYNC | INT |
| LANGUAGE | ENGLISH |
| CAMERA RESET | |
| | |
| BACK↵ | |
| EXIT↵ | SAVE ALL |

CAMERA ID: Here you can assign a unique name or title to the camera.

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

PRIVACY: You can mask specific areas in the monitoring area here.

SYNC: This function refers to the Internal Synchronisation.

LANGUAGE: Here you can choose your preferred language.

CAMERA RESET: This function is for resetting the camera to factory default.

BACK: Choose this option to view the first menu page again.

EXIT: Here you can exit the menu.

SAVE ALL: Choose this option to save all changes in the settings.

6.1. LENS

You can select MANUAL or AUTO mode for this function, depending on the lens type.

| | |
|---------------------|------------------|
| AUTO IRIS | |
| TYPE | DC |
| MODE | AUTO |
| SPEED | ▬▬▬▬▬▬▬▬▬▬▬▬ 049 |
| RETURN [Ⓜ] | |

AUTO:

Here you can set the operation mode of the lens and adjust the iris speed.

- TYPE [DC, VIDEO] : Please do not select VIDEO mode. This camera has a built-in DC Auto iris lens.
- MODE [AUTO, OPEN, CLOSE] : Choose whether the lens iris should be controlled automatically or be fixed to open or close.
- SPEED [000~255] : Sets the convergence speed of the lens iris. If the value is too high, the iris might operate improperly.

MANUAL:

Select this item for the manual iris lens or the fixed iris lens.

6.2. SHUTTER/ AGC

This function is used to control the light exposure. You can either select AUTO for the auto iris lens (here you can set the shutter value and the brightness level depending on the lighting conditions) or you can choose MANUAL for the manual iris lens (here you can set up the electronic shutter speed and the AGC value manually).

| | |
|---------------------|------------------|
| AUTO SETUP | |
| HIGH LUMINANCE | |
| MODE | SHUT+AUTO IRIS |
| BRIGHTNESS | ▬▬▬▬▬▬▬▬▬▬▬▬ 037 |
| LOW LUMINANCE | |
| MODE | AGC |
| BRIGHTNESS | x0.50 |
| RETURN [Ⓜ] | |

AUTO:

Here you can set the auto exposure mode in two different lighting conditions (HIGH LUMINANCE for middle/high-bright lighting conditions and LOW LUMINANCE for low-bright lighting conditions).

HIGH LUMINANCE

- MODE [AUTO IRIS, SHUT+AUTO IRIS] :

When choosing AUTO IRIS, the electronic shutter is fixed, and the exposure is controlled using the mechanical iris. When choosing SHUT+AUTO IRIS, the auto exposure is controlled by using the electronic shutter in middle-bright light conditions, and using the mechanical iris in high-bright conditions.

- BRIGHTNESS [000~255] :

Sets the value of auto exposure operations. As the value increases, the screen gets brighter.

LOW LUMINANCE

- MODE [AGC, OFF] :

When choosing AGC, the auto exposure is controlled by using AGC.

- BRIGHTNESS [x0.25, x0.50, x0.75, x1.00] :

Sets the value of auto exposure operations. As the value increases, the screen gets brighter.

| | |
|--------------|----------|
| MANUAL SETUP | |
| MODE | SHUT+AGC |
| SHUTTER | 1/50 |
| AGC | 6.00 |
| RETURN | |

MANUAL:

Here you can set the SHUTTER value and the AGC value.

- MODE [SHUTTER+AGC] : The mode is fixed to SHUTTER+AGC.

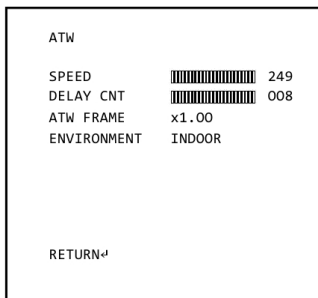
- SHUTTER [NTSC: 1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000; PAL: 1/50, 1/120, 1/250 ~ 1/100000] :

Choose the desired value.

- AGC [6.00, 12.00, 18.00, 24.00, 30.00, 36.00, 42.00, 44.80] : 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. Adjust the functions PUSH, ANTI CR, PUSH LOCK or select a submenu (MANUAL, ATW, USER1, USER2).



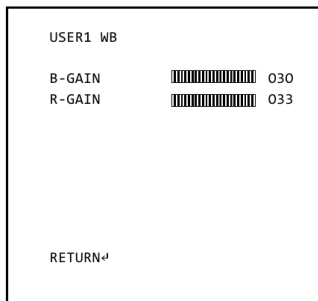
ATW:

In this mode, the camera automatically tracks changes in the colour temperature, and adjusts the white balance according to the ambient conditions.

- SPEED [000~255] : Sets the speed of searching for White Balance when the colour temperature changed.
- DELAY CNT [00~255] : This sets the delay time of searching for White Balance, when the colour temperature changed.
- ATW FRAME [x0.5, x1.0, x1.5, x2.0] : Adjust ATW by increasing or decreasing the colour temperature is possible.
- ENVIRONMENT [INDOOR, OUTDOOR] : Choose INDOOR when the camera is installed indoors (this is mainly for sodium vapor lamps or indoor lighting conditions, it means ATW is set to Low Colour Temperature/warm) or choose OUTDOOR when the camera is installed outdoors (this is mainly for sunlight conditions, it means ATW is set to High Colour Temperature/cool).

PUSH:

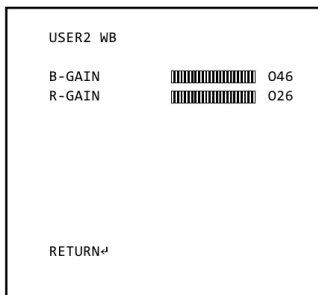
Adjusts the white balance regardless of the conditions.



USER1:

This mode is the fixed outdoor gain mode and is fitted for outdoor lighting conditions.

- B-GAIN: Adjusts the White Balance for the colour Blue.
- R-GAIN: Adjusts the White Balance for the colour Red.



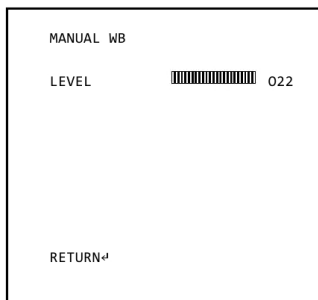
USER2:

This mode is the fixed fluorescent light gain mode and is fitted for indoor lighting conditions.

- B-GAIN: Adjusts the White Balance for the colour Blue.
- R-GAIN: Adjusts the White Balance for the colour Red.

ANTI CR:

With this function you can minimise the problems related to colour rolling caused by the flickering of fluorescent lights.



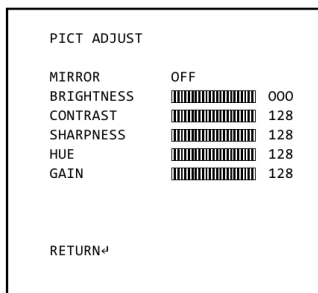
MANUAL:

This function allows the white balance to be adjusted manually. An increased level produces a strong blue tone on the screen and a decreased level produces a strong red tone on the screen.

PUSH LOCK:

This mode is set to the current white balance conditions and keeps its value. Select this mode and then press the SET key. If there is a change in location or light source, please repeat this procedure.

6.4. PICT ADJUST (Picture Adjustment)



MIRROR [ON, OFF] :

This function is used to inverse the camera picture.

BRIGHTNESS [000~255] :

This function is used to adjust the brightness of the camera picture.

CONTRAST [000~255] :

This function is used to adjust the contrast of the image (the difference between light and dark areas on the screen).

SHARPNESS [000~255] :

This function is used to adjust the sharpness of the displayed image.

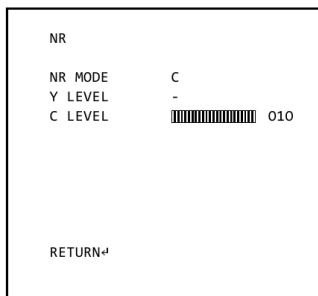
HUE [000~255] :

This function is used to adjust the colour tone of the displayed image.

GAIN [000~255] :

This function is used to adjust the saturation of the displayed image.

6.5. NR (Noise Reduction)

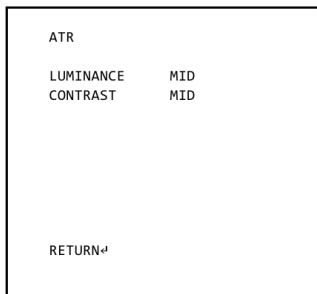


NR MODE [OFF, Y, C, Y/C] :

This function is used to improve the picture quality by filtering the noise which is generated under low bright light conditions. You can set up Y (luminance), C (chroma) and Y/C mode as well as adjust the the filtering level/s for each mode.

6.6. ATR (Adaptive Tone-Curve Reproduction)

When both low-luminance and high-luminance areas exist in the same picture, this function can improve the visibility of the entire picture by providing a tone-curve correction (similar to WDR). When selecting ON, the following submenu will appear.



LUMINANCE [LOW, MID, HIGH] :
This improves the visibility of bright areas.

CONTRAST [LOW, MIDLOW, MID,
MIDHIGH, HIGH] :
This improves the visibility of dark areas.

6.7. BACKLIGHT

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

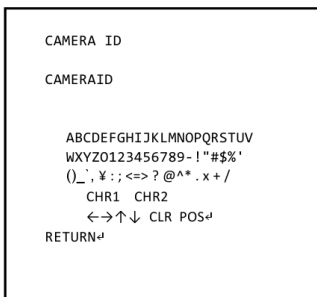
BLC (Back Light Compensation):

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.

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.

6.8. CAMERA ID



This menu is used to assign a unique name to a camera. You can enter up to 52 alphanumeric or special characters for the CAMERA ID. Select POS and press the SET key to be able to move the display position of the CAMERA ID.

Programming the Camera ID:

1. Turn on the CAMERA ID mode and enter the submenu.
2. Using the four direction keys, switch between the characters. Press the SET key to make a desired figure.
3. Press CLR if you need to delete letters.

6.9. 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 | |
| BURST | OFF |
| DELAY CNT | ████████████████████ 003 |
| DAY→NIGHT | ████████████████████ 000 |
| NIGHT→DAY | ████████████████████ 005 |
| RETURN↵ | |

AUTO [BURST, DELAY CNT, DAY→NIGHT, NIGHT→DAY] :

This mode automatically switches the video signals between COLOR and B/W when the according ambient illumination/brightness is reached.

- BURST: Set this option to ON to output a burst signal in B/W mode.
- DELAY CNT: Sets the delay time for switching between COLOR and B/W mode.
- DAY→NIGHT: Sets the brightness level for switching from COLOR to B/W mode.
- NIGHT→DAY: Sets the brightness level for switching from B/W to COLOR mode.

COLOR:

If set to COLOR, the camera will be fixed to COLOR mode regardless of the ambient conditions.

| | |
|--------------|--------------------------|
| B/W | |
| BURST | OFF |
| IR OPTIMIZER | ON |
| MODE | CENTER |
| LEVEL | ████████████████████ 005 |
| RETURN↵ | |

B/W [BURST, IR OPTIMIZER, MODE, LEVEL] :

If set to B/W, the camera will be fixed to B/W mode regardless of the ambient conditions.

- BURST: Set this option to ON to output a burst signal in B/W mode.
- IR OPTIMIZER: Set the IR OPTIMIZER to ON to control the screen overexposure caused by the camera's bright LED light in dark ambient conditions.
- MODE: Choose CENTER if the subjects which can cause overexposure are located near the centre of the monitored area. Choose AUTO if the subjects which can cause overexposure are scattered on the monitored area.
- LEVEL: Sets the reference level of the IR OPTIMIZER. If the value is too high, the screen may be overexposed.

EXT1*:

This option enables auto switching between COLOR and B/W mode using the brightness level detected by the photocell.

NOTE: Setting the EXT1 option in DAY/NIGHT mode is highly recommended for the camera model GCA-B3326D.

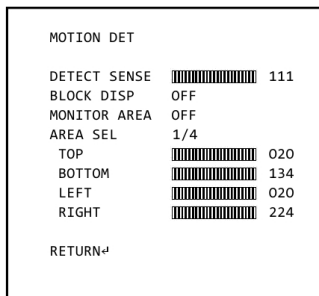
EXT2*:

Not available.

* The functions EXT1 and EXT2 only appear on the OSD menu of the camera model GCA-B3326D.

6.10. MOTION DET (Motion Detection)

This function is used to detect moving objects in the monitored area. There are 4 predefined boxes representing the areas that can be monitored for motion.



DETECT SENSE [000~127] :

Sets the motion detection sensitivity.

BLOCK DISP [OFF, ON, ENABLE] :

Controls the ON/OFF status of the motion detection block display.

- ON, OFF: Turns the block display on/off.

- ENABLE: If the BLOCK DISPLAY is set to ON, you can choose in this setting with the SET key areas where the motion detection (in block format) should not be displayed. Using this option is only possible when MONITOR AREA is set to ON. To exit this setting, press the SET key and hold it for a while.

MONITOR AREA [OFF, ON] :

If you choose ON, the areas for motion detection monitoring will be shown on the screen.

AREA SEL [1/4 ~ 4/4] :

Here you can select the setting for each monitoring area.

- TOP: Sets the top side of the selected monitoring area.
- BOTTOM: Sets the bottom side of the selected monitoring area.
- LEFT: Sets the left side of the selected monitoring area.
- RIGHT: Sets the right side of the selected monitoring area.

6.11. PRIVACY

| | | |
|----------|----------------------|-----|
| PRIVACY | | |
| AREA SEL | 1/4 | |
| TOP | ████████████████████ | 000 |
| BOTTOM | ████████████████████ | 128 |
| LEFT | ████████████████████ | 128 |
| RIGHT | ████████████████████ | 128 |
| COLOR | 1 | |
| TRANSP | 1.00 | |
| MOSAIC | OFF | |
| RETURN | | |

When selecting ON, a submenu will appear where you can set the privacy masks and their colours. This function is used to mask specific areas within the frame of the camera.

AREA SEL [1/8 ~ 8/8] :

Here you can select the setting for each of the 8 mask areas. If MONITOR AREA in the MOTION DET menu has been set to ON, four areas will be selected.

- TOP: Sets the top side of the selected mask area.
- BOTTOM: Sets the bottom side of the selected mask area.
- LEFT: Sets the left side of the selected mask area.
- RIGHT: Sets the right side of the selected mask area.

COLOR [1~8] :

Choose one of 8 colours for the mask areas.

TRANSP [0.00, 0.5, 0.75, 1.0] :

Choose one of 4 transparency levels for the mask areas.

MOSAIC [OFF, ON] :

Set the mosaic function for the mask areas to OFF or ON. The mosaic will be shown in the mask areas when TRANSP is set to lower than 1.00.

6.12. SYNC

This camera model is set to fixed INT (Internal Synchronisation).

6.13. LANGUAGE

The camera supports 7 different languages. Select your preferred language from the list.

6.14. CAMERA RESET

All the settings will be restored to factory default.

6.15. NEXT / BACK

When you select NEXT, the second main menu page will be shown. When you select BACK, the first main menu page will be shown.

6.16. EXIT

Exits the menu without saving any changes in the settings.

6.17. SAVE ALL

Saves the changes in the settings.

Specifications GCA-B3322D

| | |
|-------------------------------|--|
| Image Sensor | 1/3" CCD Sony 960H Ex-view HAD II |
| Scanning System | PAL, 50Hz, 625L (V), 2:1 Inter Line Transfer |
| Pixels - Effective | 976(H) x 582(V) |
| Resolution | 700 (H) lines colour |
| Col/B&W | Auto (Electrical) / Color / B/W |
| Sensitivity Colour | 0.1 Lux (50IRE) @ F1.2 |
| S/N Ratio | >52dB (AGC off) |
| Lens Drive Type | Auto iris (DC) |
| Lens Focal Length | 2.8 ~ 10.5 mm (TAMRON) |
| Number of Privacy Zones | 4 |
| High Speed Shutter | 1/50 ~ 1/100.000 sec, auto |
| BLC | BLC / HLC / off |
| AGC | Off, On (x0.25/x0.5/x0.75/x1) |
| Digital Noise Reduction (DNR) | Off, On 2D |
| Additional Features | H Reverse, High Light Compensation |
| Motion Detection | On/Off |
| OSD | Yes (DE,EN,ES,FR,RU,PT,JP) |
| Camera ID | 52 character, 2 lines |
| White Balance | ATW/PUSH/Anti CR/Manual/User 1/User 2 |
| Video Outputs | 1 CVBS 1 Vpp (BNC) & 1 test monitor out |
| Humidity | less than 90% |
| Operating Temperature | -10°C ~ +50°C |
| Supply Voltage | 12 VDC/24 VAC |
| Power Consumption | 1.7 W |
| Weight | 0.32 kg |
| Dimensions (wxhxd) | Ø 122 x 95 mm |

Specifications GCA-B3326D

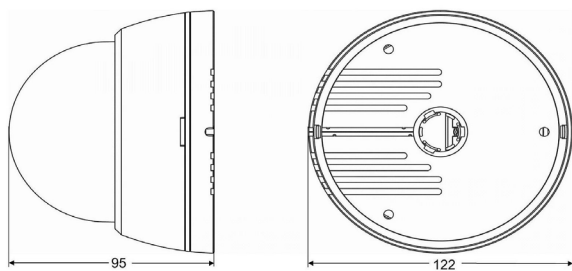
| | |
|---------------------|--|
| Resolution | 700 (H) lines colour, 750 (H) lines b&w |
| Col/B&W | Auto, IR-cut filter removable (ICR) |
| Sensitivity B&W | 0 Lux LED IR on |
| Lens Focal Length | 2.8 ~ 11 mm |
| Additional Features | H Reverse, High Light Compensation |
| IR LED | 24 pcs. |
| Optical Wavelength | 850 nm |
| Max. IR Distance | 15/25 m (according to scene reflexion) |

| | |
|-------------------|--------------------|
| Power Consumption | 1.7 (4.1 LED on) W |
|-------------------|--------------------|

| | |
|--------|--------|
| Weight | 0.5 kg |
|--------|--------|

| | |
|--------------------|---------------|
| Dimensions (wxhxd) | Ø 122 x 95 mm |
|--------------------|---------------|

Dimensions



EC Declaration of Conformity

GCA-B3322D 1/3" CCD Fixed Dome Camera, Vari-Focal

GCA-B3326D 1/3" CCD Col/B&W Fixed Dome Camera w/ IR LED

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

EC EMC Directive 2004/108/EC
Low Voltage Directive 2006/95/EC

Applied harmonised standards and technical specifications:

EN 55022: 2006 + A1: 2007
EN 50130-4: 1995 + A1:1998 + A2: 2003

ASP AG

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Remscheid, 09.02.2012



Ludwig Bergschneider
CEO