

# user's manual



**800**  
**SERIES**

**NVDN-801D**

**NOVUS®**

<http://www.e-camere.ro/camere-supraveghere/Novus/NVDN-801D>

eng

## INFORMATION

---



---

### EMC (2004/108/EC) and LVD (2006/95/EC ) Directives

#### CE Marking

**CE** Our products are manufactured to comply with the requirements of the following directives and national regulations implementing the directives:

- Electromagnetic compatibility EMC 2004/108/EC.
- Low voltage LVD 2006/95/EC with further amendment. The Directive applies to electrical equipment designed for use with a voltage rating of between 50VAC and as well as 75VDC and 1500VDC.

### WEEE Directive 2002/96/EC

#### Information on Disposal for Users of Waste Electrical and Electronic Equipment



This appliance is marked according to the European 1000VAC Directive on Waste Electrical and Electronic Equipment (2002/96/EC) and further amendments. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

The symbol on the product, or the documents accompanying the product, indicates that this appliance may not be treated as household waste. It shall be handed over to the applicable collection point for used up electrical and electronic equipment for recycling purpose. For more information about recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.

### RoHS Directive 2002/95/EC



Out of concern for human health protection and friendly environment, we assure that our products falling under RoHS Directive regulations, regarding the restriction of the use of hazardous substances in electrical and electronic equipment, have been designed and manufactured in compliance with the above mentioned regulations. Simultaneously, we claim that our products have been tested and do not contain hazardous substances whose exceeding limits could have negative impact on human health or natural environment.

#### Information

The device, as a part of professional CCTV system used for surveillance and control, is not designed for self installation in households by individuals without technical knowledge.

The manufacturer is not responsible for defects and damages that result from improper or inconsistent with user's manual installation of the device in the system.

## SAFETY REQUIREMENTS

### WARNING!

THE KNOWLEDGE OF THIS MANUAL IS AN INDESPENSIBLE CONDITION OF A PROPER DEVICE OPERATION. YOU ARE KINDLY REQUESTED TO FAMILIRIZE YOURSELF WITH THE MANUAL PRIOR TO INSTALLATION AND FURTHER DEVICE OPERATION.



### WARNING!

USER IS NOT ALLOWED TO DISASSEMBLE THE CASING AS THERE ARE NO USER-SERVICEABLE PARTS INSIDE THIS UNIT. ONLY AUTHORIZED SERVICE PERSONNEL MAY OPEN THE UNIT

INSTALLATION AND SERVICING SHOULD ONLY BE DONE BY QUALIFIED SERVICE PERSONNEL AND SHOULD CONFORM TO ALL LOCAL REGULATIONS

### WARNING!

PRIOR TO UNDERTAKING ANY ACTION THAT IS NOT DESCRIBED FOR THE GIVEN PRODUCT IN USER'S MANUAL AND OTHER DOCUMENTS DELIVERED WITH THE PRODUCT, OR IF IT DOES NOT ARISE FROM THE USUAL APPLICATION OF THE PRODUCT, MANUFACTURER MUST BE CONTACTED UNDER THE RIGOR OF EXCLUDING THE MANUFACTURER'S RESPONSIBILITY FOR THE RESULTS OF SUCH AN ACTION.

## IMPORTANT SAFEGUARDS AND WARNINGS

1. Prior to undertaking any action please consult the following manual and read all the safety and operating instructions before starting the device.
2. Please keep this manual for the lifespan of the device in case referring to the contents of this manual is necessary;
3. All the safety precautions referred to in this manual should be strictly followed, as they have a direct influence on user's safety and durability and reliability of the device;
4. All actions conducted by the servicemen and users must be accomplished in accordance with the user's manual;
5. The device should be disconnected from power sources during maintenance procedures;
6. Usage of additional devices and components neither provided nor recommended by the producer is forbidden;
7. Mounting the device in places where proper ventilation cannot be provided (e. g. closed lockers etc.) is not recommended since it may lead to heat build-up and damaging the device itself as a consequence;
8. Mounting the camera on unstable surface or using not recommended mounts is forbidden. Improperly mounted camera may cause a fatal accident or may be seriously damaged itself. The camera must be mounted by qualified personnel with proper authorization, in accordance with this user's manual;

## SAFETY REQUIREMENTS

---

9. Device should be supplied only from a power sources whose parameters are in accordance with those specified by the producer in the camera technical datasheet. Therefore, it is forbidden to supply the camera from a power sources with unknown parameters, unstable or not meeting producer's requirements;
10. Signal cables (conducting TV or / and telemetric signal) should be placed in a way excluding the possibility of damaging them by accident. Special attention must be paid to cables getting from the camera and connecting the power supply;
11. To avoid equipment damage, whole TV circuit should be equipped with properly made discharge-, overload- and lightning protection devices. Usage of separating transformers is advised;
12. Electric installation supplying the device should be designed to meet the specifications given by the producer in such a way that overloading is impossible;
13. User cannot repair or upgrade the equipment himself. All maintenance actions and repairs should be conducted only by qualified service personnel;
14. Unplug the camera from the power source immediately and contact the proper maintenance department when the following occurs:
  - ◆ Damages to the power cord or to the plug itself;
  - ◆ Liquids getting inside the device or exposure to strong mechanical shock;
  - ◆ Device behaves in a way not described in the manual and all adjustments approved by the manufacturer and possible to apply by user himself, seem not to have any effect;
  - ◆ Camera is damaged;
  - ◆ Atypical behaviour of the camera components may be seen (heard).
16. In necessity of repairs attention to using only original replacement parts (with their parameters in accordance with those specified by the producer) should be paid. Non-licensed service and non-genuine replacement parts may cause fire or electrocution;
17. After maintenance activities tests should be run to ensure proper operation of all the functional components of the device.

### Attention!

**Technical changes reserved without prior notice and printing errors possible.**

## FOREWORD INFORMATION

### 1. PACKAGE CONTENTS



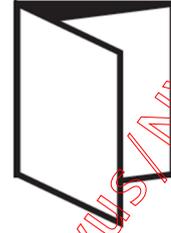
Video camera



Screws 2 pcs.



Cable for connecting additional video output



User's manual



Opener

eng

If any of the listed equipment has been damaged during transport or if the package is incomplete, the contents of package should be packed back to the original box. Contact the local NOVUS distributor for further assistance.

### 2. MAIN CHARACTERISTICS

- Mechanical IR cut filter
- IR operation capability
- Horizontal resolution: up to 700 TVL
- Min. illumination: from 0.00002 lx/F=1/2 (DSS)
- Digital Slow Shutter (DSS)
- Auto iris DC lens: f=2.5 ~ 12 mm
- 3-axis camera module adjustment
- Digital zoom: 16x
- Wide Dynamic Range (SSDR)
- High Light Compensation (HLC)
- Digital Image Stabilizer (DIS)
- Digital Noise Reduction (DNR)
- Privacy zones: 12
- Other functions: various picture effects, motion detection
- Full configuration directly from the camera (user friendly multi-lingual OSD)
- Enclosure color:
  - White: NVDN-801D-white
  - Black: NVDN-801D-black
- Power supply: 12 VDC

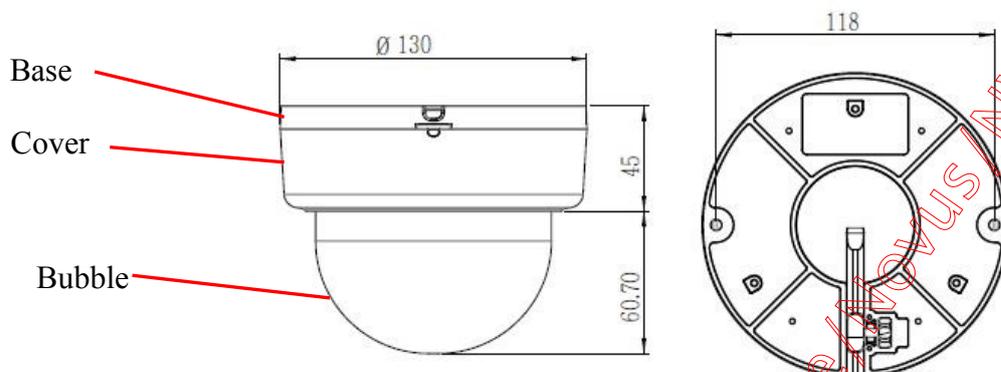
## FEATURES AND SPECIFICATION

### 2. SPECIFICATION

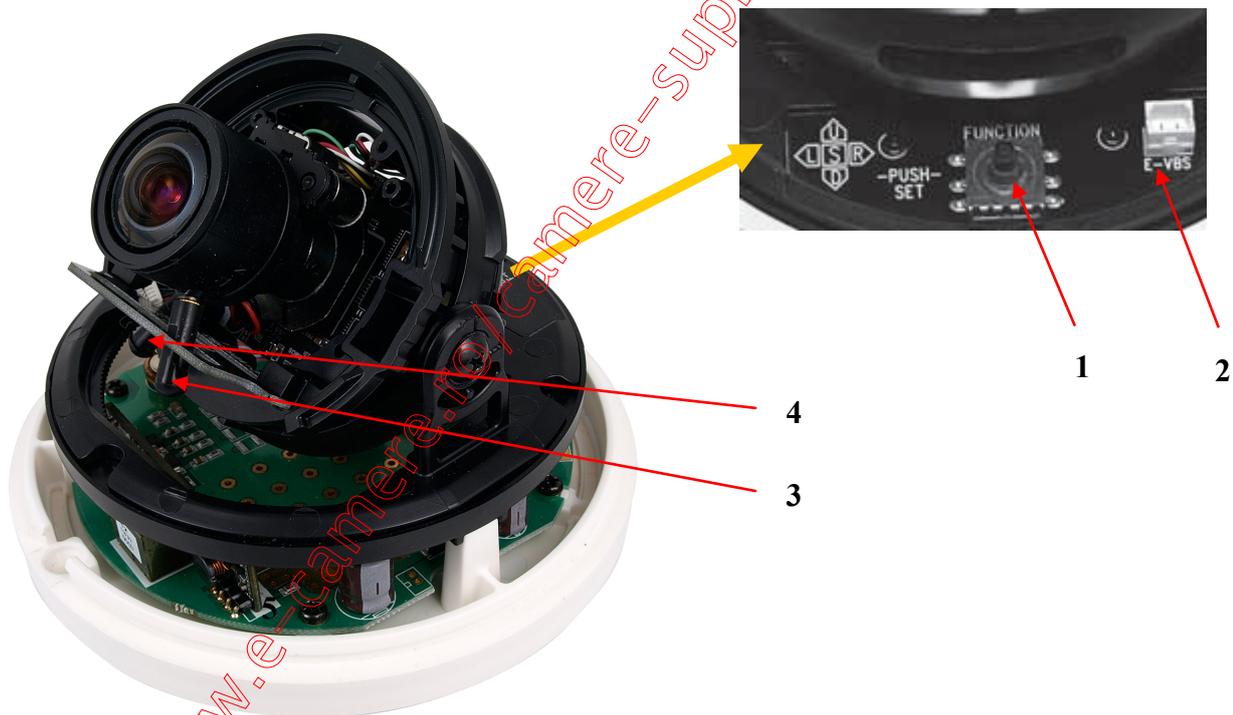
Model	NVDN-801D
Pick-up Element	1/3" SONY EXview HAD II CCD imager
Horizontal Resolution	650 TVL – color mode, 700 TVL – B/W mode
Min. Illumination	0.1 lx/F=1.2 - color mode (1/50 s), 0.01 lx/F=1.2 - B/W mode (1/50s), 0.0002 lx/F=1.2 - color mode DSS, 0.00002 lx/F=1.2 - B/W mode DSS
S/N Ratio	52 dB (AGC off)
Electronic Shutter	Auto (AES): 1/50 s ~ 1/120 000 s
Digital Slow Shutter (DSS)	1/25 s ~ 10.24 s
Auto Gain Control (AGC)	On/Off (2 levels)
White Balance	5 modes: Manual/AWC/Outdoor/Indoor/ATW
Wide Dynamic Range (SSDR)	On/Off
Backlight Compensation (BLC)	On/Off (3 modes)
High light Compensation (HLC)	On/Off
Synchronization	Internal
Day/Night Switching	Auto/Manual
Filter Delay	3 s/5 s/7 s/10 s/15 s/20 s/30 s/40 s/60 s
Flickerless Function	On/Off
Privacy Zones	12
Lens Type	Auto-iris DC: f=2.5 ~ 12 mm
Angle of View (H)	28° ~ 102°
Video Output	1.0 Vp-p, 75 Ohm (BNC)
Digital Zoom	16 x
Set-Up	Multi-lingual On Screen Display (OSD)
Other Functions	Digital Image Stabilizer (DIS), Digital Noise Reduction (DNR), Motion detection, Various picture effects: Mirror (horizontal) and 180° image rotation, Image sharpness adjustment
Power Supply	12 VDC ± 10%
Power Consumption	2.2 W
Operating Temperature	-10°C ~ 50°C
Dimensions (mm)	130 (Ø) x 105.7 (H)
Weight	430 g

## FEATURES AND SPECIFICATION

### 3.1 Dimensions



### 3.2. View of the camera, layout of the camera items



- 1 - joystick implementing UP, LEFT, RIGHT, DOWN, SET commands
- 2 - extra video output (extra-VBS)
- 3 - focus adjustment screw
- 4 - zoom adjustment screw

## INSTALLATION

---

The camera module is mounted on the bracket that enables the possibility of 3-axis camera module adjustment.



### 4. INSTALLATION

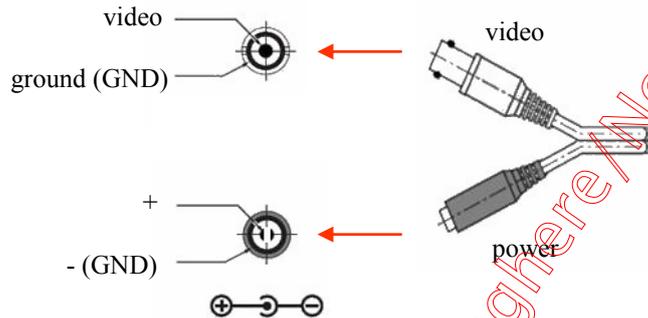
Prior to installation please familiarize yourself with the product, its parameters and installation process.

To install the camera please follow the instructions below:

- Rotate the camera cover and set a groove in the cover on a level with a gap in the base.
- Insert the opener, from the package, to a slot in the base of the camera and gently twist it.
- Remove the camera cover.
- Place base of the camera in a desired place and use its mounting holes as a drilling pattern.
- Drill holes for screws and cables.
- Screw the camera onto desired surface using included screws or different mounting kit (not included) if necessity arises.
- Adjust the position of the camera module. If required, loosen the screw blocking camera module.
- Adjust focal length and focus, using dedicated knobs.
- If needed, adjust the desired settings in the camera menu, using function buttons.
- Put the camera cover onto the base and press it, till distinctive unlocking “click” can be heard. Please ensure that masking shield does not block the field of view of the camera.

## 4.1 Connections

The camera is equipped with a video and power cable finished with 2 plugs, one for video output (yellow one), the other for power supply 12VDC±10% (red one). Images below show plug polarization.



The following connecting order should be kept:

- connect video cable to the BNC plug
- connect power supply to the power plug

**ATTENTION:** Prior to connecting the power supply make sure that all required parameters (output voltage, output current and polarization) are correct. Using improper power supply may cause malfunction or camera damage. In such a case, warranty is void.

### 4.1.1 Extra video output connection

Camera has an additional video output which is very useful during installation or camera maintenance. To use the Extra Video output please connect the included cable (mentioned in the chapter 1 equipment list) to the Extra Video connector presented in the chapter 3.2.

## SETTINGS

### 5. SETTINGS

NVDN-801D camera is equipped with an OSD menu. During camera operation, status information can be displayed on the screen.

As mentioned before, a joystick is placed near the camera module for navigating and changing menu settings:



In order to enter the menu press the joystick, which results in executing **SET** command. For choosing the submenus please move the joystick into **UP**, **DOWN** positions. If a **↵** symbol is present, enter particular sub-menu by pressing the **SET** button. To change the parameters use the **LEFT** and **RIGHT** joystick positions.

In order to leave the menu select **EXIT** and press **SET**. Depending on the value of the parameter located to the right of the **EXIT** text, different actions are taken on exit:

- selecting **SAVE** and pressing **SET** means that the changes that have been made are saved and are kept even when the camera restarts.
- selecting **NOT SAVE** and pressing **SET** means that the changes that have been made are temporary and will be cancelled once the camera restarts.
- selecting **RESET** and pressing **SET** results in restoring factory defaults.

To exit submenu please select **RETURN** position, and when **Press SET to Return** message is displayed at the bottom part of the screen press **SET** button to leave the menu .

After one minute of inactivity in the menu camera will automatically exit from the programming mode.

#### 5.1 Main menu

In order to enter the menu press the **SET** . The following main menu is displayed on the screen:

MAIN SETUP	
▶ 1.LENS	DC↵
2.EXPOSURE↵	
3.WHITE BAL	ATW
4.SSDR	OFF
5.BACKLIGHT	HLC↵
6.DNR3	ON↵
7.DAY/NIGHT	COLOR
8.SPECIAL↵	
9.EXIT	SAVE

### 5.1.1 LENS submenu

This submenu allows for setting the lens parameters.

**LENS** Lens operating mode.

**MANUAL** Manual settings of the lens operating mode. For that setting a submenu that allows for adjusting the **BRIGHTNESS** level in the range from 1 to 70 is available.

**DC** Automatic lens mode. For that setting a submenus that allow for adjusting the **BRIGHTNESS** level in the range from 1 to 70, the iris speed **IRIS SPEED** and the precise setting of image sharpness **FOCUS ADJ** are available.

### 5.1.2 EXPOSURE submenu

This submenu allows for choosing and changing the settings of the parameters connected with AE and controlling the iris.



**BRIGHTNESS** Selection of brightness level in the range from 1 to 70.

**SHUTTER** Selection of shutter mode.

--- Automatically sets the shutter speed according to present light conditions. This option is available when **DC** or **VIDEO** option is selected in the **LENS** submenu.

**A.FLK (FLICKERLESS)** The mode of flicker reduction in variable light conditions is equal to the shutter speed of 1/120s. This mode is available for any setting selected in the **LENS** position.

**ESC** This option will control the shutter speed automatically depending of the light conditions. For that setting a submenu that allows for setting **MIN** and **MAX** speed of the shutter is available.

**MANUAL** Manual setting of the shutter speed. For that setting a submenu that allows for setting the shutter speed (**SHUTTER**) in the range from 1/120000s to 512x(1/50s) is available.

## SETTINGS

---

**AGC** Automatic Gain Control function. When **OFF** is selected, the function is switched off. When **NORMAL** is selected, the function is working with camera sensitivity smaller than the light intensity changes. When **HIGH** is selected, the function is providing bigger camera sensitivity than the light intensity changes. Please remember that increasing gain results in increasing brightness and noise level as well.

**SENS - UP** Low shutter mode function. **OFF** - the function is switched off, **AUTO** - in low light conditions function automatically sets low shutter speed. After pressing **SET** button in this mode it is possible to set the multiplier of the basic shutter speed (1/50s in **AUTO** mode) in the range from x2 to x512.

This function is switched off when AGC is off or shutter mode is **A.FLK** or **MANUAL**.

Please remember that together with selecting higher values from the low shutter range the image becomes brighter but simultaneously the noise level goes up and moving objects become blurred.

### 5.1.3 WHITE BAL submenu

This feature allows for setting appropriate color settings in various color temperature conditions.

**WHITE BAL** White balance mode

**ATW** This mode (Auto Tracking White Balance) can be used in the 1700°K ~ 11000° color temperature range.

**MANUAL** Manual mode settings. In case of inappropriate color settings for **ATW**, **AWC** modes it is possible to set **RED** and **BLUE** color values manually. The range of changes is from 0 to 900 and is displayed as a line. The changes are seen immediately. The lines of changes are active only in WB manual mode.

**AWC→SET** This mode (Auto White balance Control) allows for adaptive setting of white balance. In order to obtain the optimum state under the current illumination, direct the camera at a sheet of white paper and press **SET** button. When lighting parameters change ( e.g. light bulbs changed to halogen lamps, daylight to artificial light etc ), procedure mentioned above should be repeated.

**OUTDOOR** This mode (Auto Tracking White Balance) can be used in the 1700°K ~ 11000°K color temperature range (e.g. when using sodium vapour lamps).

**INDOOR** This mode (Auto Tracking White Balance) can be used in the 4500°K~8500°K color temperature range (e.g. when using the camera inside the house).

### 5.1.4 SSSDR submenu (Wide dynamic range)

This function allows to effectively observe the scene with different illumination level. Function can be enabled (**ON**) or disabled (**OFF**). When **ON** is selected, a submenu that allows for setting the function intensity level in the range from 1 to 15 becomes available.

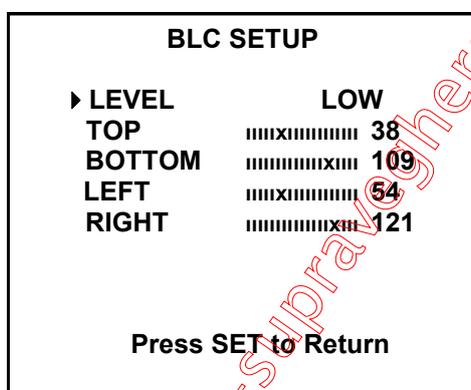
### 5.1.5 BACKLIGHT submenu

These compensation functions allow for enhancing visibility of the objects located in the foreground, surrounded by strongly illuminated background (BLC) or for enhancing visibility of the objects located near the strong light source (HLC).

**BACKLIGHT** Backlight compensation mode.

**OFF** Function OFF.

**BLC** BLC function allows for enhancing visibility of the objects located in the foreground, surrounded by strongly illuminated background. After pressing **SET** button in this mode submenu depicted below appears:



Submenu presented above allows for setting the size and location of the area where the **BLC** function will be active, furthermore it allows for setting the sensitivity of the function.

**LEVEL** Select the intensity of the function from available: **LOW, MIDDLE, HIGH**

**TOP** Move upper part of the area up or down.

**BOTTOM** Move bottom part of the area up or down

**LEFT** Move left part of the area left or right side.

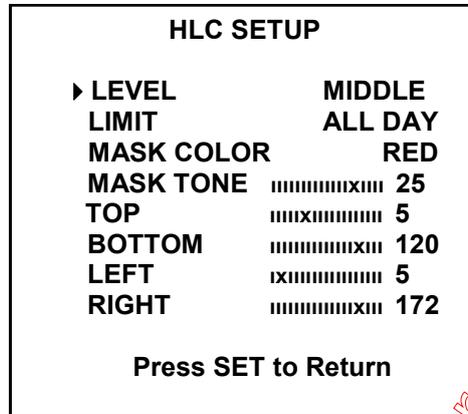
**RIGHT** Move right part of the area left or right side.

**HLC** High light compensation function. It allows for enhancing visibility of the objects located near the strong, point light source. If a strong, point light source appears on the screen, function will mask it allowing for effective observation of the scene itself (this function is best used to, for example, observe licence-plates of the cars).

eng

## SETTINGS

Press the **SET** please, to display below submenu.



Submenu allows to set the size and location of the area in which the HLC function analyzes the level of illumination and sets the other HLC function options described below.

**LEVEL** Adjust level of the HLC function from available: **LOW, MIDDLE HIGH.**

**LIMIT** Sets the lighting threshold that, when exceeded, activates the function.

**ALL DAY** Threshold is set to low variations in illumination level.

**NIGHT ONLY** Threshold is set to high variations in illumination level.

**MASK COLOR** Select the colour of the masking area from available: **RED, BLUE, CYAN, MAGENTA, BLACK.**

**MASK TONE** Adjusts opacity of masking area.

**TOP** Moves upper part of the area up or down.

**BOTTOM** Moves bottom part of the area up or down

**LEFT** Moves left part of the area left or right side.

**RIGHT** Moves right part of the area left or right side.

**Note:** **HLC** function works only in the low-light conditions. It is activated automatically when level of the light is low enough for the function to execute properly and when a strong point light source appears on the screen.

Because the effectiveness of **HLC** function relies mostly on the amount of light area in the screen, optimize the installation angle for the best **HLC** performance.

### 5.1.6 DNR3 (Digital Noise Reduction) submenu

This submenu allows for changing digital noise reduction settings.

- DNR** Digital Noise Reduction function.
- ON** Digital Noise Reduction function ON.
- OFF** Digital Noise Reduction function OFF.

After selecting **ON** press the **SET** please, to display submenu allowing for adjustment of the digital noise reduction level, as depicted below.

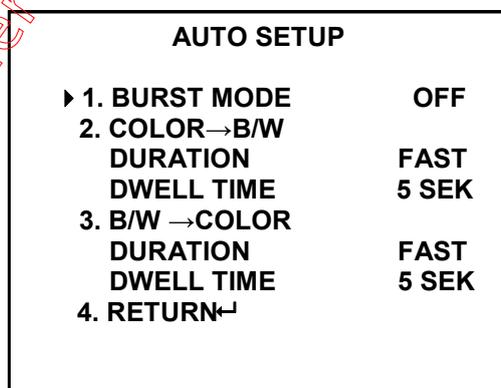


**Note:** While working in DNR mode, image quality might slightly worsen. Digital noise reduction function is disabled when the **AGC** function is off.

### 5.1.7 DAY / NIGHT submenu

- DAY / NIGHT** Selects operating mode of the IR cut filter.
- AUTO** Camera switches between night (b/w) and day (color) mode automatically, depending on current illumination conditions.

After pressing **SET** button the submenu depicted below appears.



**BURST MODE** Enable (**ON**) or disable (**OFF**) the BURST (color burst) signal.

eng

## SETTINGS

**COLOR→B/W** Allows for configuring the switching from b/w to color mode.

**DURATION** Selects color to b/w switching speed from available: **FAST, SLOW**

**DWELL TIME** Sets the delay between color and b/w mode switching. Values range from 3 to 60 sec.

**B/W→COLOR** Allows for configuring the switching from b/w to color mode.

**DURATION** Selects b/w to color switching speed from available: **FAST, SLOW**

**DWELL TIME** Sets the delay between b/w and color modes switching. Values range from 3 to 60 sec.

**EXTERN** Not available.

**COLOR** Camera works permanently in color mode.

**B/W** Camera works permanently in B/W mod. For that setting a submenu that allows for enabling or disabling the **BURST MODE** is available.

### 5.1.8 SPECIAL submenu

This submenu allows for setting the additional functions available in the camera.

SPECIAL	
1. IMAGE ADJ↵	
2. CAM TITLE	OFF
3. SYNC	INT
4. MOTON	OFF
5. PRIVACY	OFF
6. DIS	OFF
7. PROFILE	USER
8. COMM ADJ↵	
9. RETURN↵	

**IMAGE ADJ.** Allows for enabling the additional picture effects.

**MONITOR** Allows for configuring camera picture parameters, depending on the type of monitor used.

**LCD** Allows for configuring the camera to enhance its LCD monitor cooperation capabilities, pressing **SET** displays additional submenu which allows for adjustment the LCD monitor display settings.

**USER** Allows for configuring the camera to enhance its monitor (of non-standard types) cooperation capabilities, pressing **SET** displays additional submenu which allows for adjustment the display settings.

**CRT** Allows for configuring the camera to enhance its CRT monitor cooperation capabilities, pressing **SET** displays additional submenu which allows for adjustment the CRT monitor display settings.

**REVERSE** flips the picture:

**OFF** - Function off.

**V - REV** Flips the picture vertically,

**H - REV** Flips the picture horizontally (Mirror)

**HV - REV** Rotate 180 degree the picture;

**PIP** - (Picture in Picture) Function displays a full-size image in the thumbnail. Used in digital zoom mode. The position of the thumbnail is adjustable.

**D - ZOOM** Digital zoom function. After selecting **ON**, pressing the **SET** displays additional submenu which allows for adjusting the digital zoom level, ranging from x0.1 to x16, **OFF** - function off.

**FONT COLOR** Selects the OSD font color

**SHARPNESS** Screen sharpness function. After selecting **ON**, pressing **SET** displays additional submenu which allows for sharpness level adjustment, ranging from 1 to 20. **OFF** - function off. If the **SHARPNESS** level is too high the picture may become distorted or noisy.

**LANGUAGE** Selects OSD language from available: ENGLISH, GERMAN, ITALIAN, FRENCH, SPANISH, RUSSIAN, CZECH, ROMANIAN, SERBIAN, SWEDISH, DANISH, TURKISH, PORTUGUESE, THAI.

**CAM TITLE** After selecting **ON** and pressing **SET**, a sub-menu appears, allowing for entering a string of characters that later is displayed on the screen, e.g. as camera title. Title may consist of up to 15 characters. Please select desired characters from the virtual keyboard, which becomes available after pressing **SET**.



Screen contains mainly alphanumerical characters, which may be used in camera's title. Select desired character and please apply it by pressing **SET** key. Currently edited title is visible at the bottom of the screen. A line just above it contains buttons for editing the title. To enable particular functions, please highlight them as normal characters and confirm by pressing **SET** key. Button functions are described below:

← Moves character highlight cursor left.

→ Moves character highlight cursor right

**POS** Allows for adjusting the position of entered characters.

**CLR** Erases the whole title.

**END** Exits title editing menu.

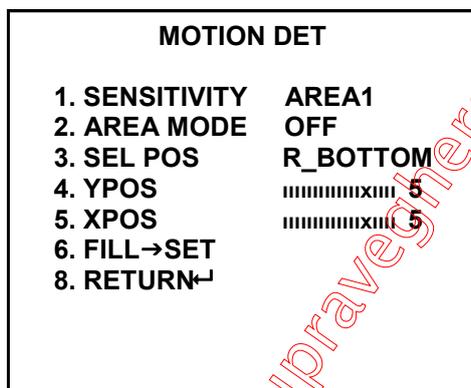
## SETTINGS

**SYNC** Selects synchronization mode.

**INT** Internal synchronization.

**MOTION** This menu allows (provided, that **ON** option is selected) for turning a built-in motion detection feature on or off. Motion detection may simultaneously be conducted in eight independent zones (with their size and location selectable by user). Detection of motion with **MOTION DET** turned on results in **Motion Detected** message being displayed on the screen.

After selecting **ON** and pressing SET the submenu below is displayed, which allows for adjusting the motion detection function parameters.



**SENSITIVITY** Selects one of eight available motion detection zones (**AREA1**, **AREA2**, **AREA3**, **AREA4**). Each zone has different sensitivity level. The higher number, the higher sensitivity.

**AREA MODE** Turns motion detection in selected zone on or off.

**SEL POS** Selects edge of the area so its position can be changed.

**L\_BOTTOM** Left bottom area corner.

**R\_BOTTOM** Right bottom area corner.

**L\_TOP** Left top area corner.

**R\_TOP** Right top area corner.

**YPOS** Change the selected area corner position toward vertical axis.

**XPOS** Change the selected area corner position toward horizontal axis.

**FILL->SET** After pressing **SET** button actually selected area will appear on the first plan.

**Note:** Disabling privacy zones prior to setting motion detection parameters is advised.

**PRIVACY** Allows for enabling privacy zones (when turned **ON**). If this option is turned on, desired part of the screen is masked using four rectangular zones.

Pressing **SET** displays submenu which allows for adjusting privacy settings.

eng

PRIVACY AREA SETUP	
1. AREA	AREA1
2. MODE	ON
3. MASK COLOR	GRAY
4. MASK TONE	x      4
5. TOP	x      39
6. BOTTOM	x      79
7. LEFT	x      13
7. RIGHT	x 52
8. RETURN	

**AREA SEL** Selects one of twelve available privacy zones: **AREA1, AREA2... AREA12.**

**MODE** Turns selected privacy zone displaying on or off. After selecting **ON** and pressing **SET** displays submenu allowing for selected privacy zone location and size adjustment.

**MASK COLOR** Allows for setting the color of all privacy zones. Available colours: **GREEN, RED, BLUE, BLACK, WHITE, GRAY.**

**MASK TONE** Allows for adjusting brightness of masking zones in the range from 1 to 10.

**TOP** Moves upper part of the area up or down.

**BOTTOM** Moves bottom part of the area up or down

**LEFT** Moves left part of the area left or right side.

**RIGHT** Moves right part of the area left or right side.

**DIS** Digital image stabilization function. It eliminates any picture movement which may occur due to external factors, such as wind. **ON** - function on, **OFF** function off.

**Note:** Turning on the **DIS** function narrows the camera's field of view. When using **DIS** function a decrease in resolution is possible, due to fact that the function uses digital zoom

**PROFILE** Predefined mode according to the picture condition

**BASIC** - Profile optimized to the most common environment condition.

**DAY/NIGHT** - Profile optimized to the day or night conditions, respectively.

**BACKLIGHT** - Profile optimized to distinguish the object from the background in a backlighting scene.

**ITS** - Profile optimized to the traffic conditions.

**INDOOR** - Profile optimized to a regular indoor lighting condition.

**USER** - Profile for custom user settings.

**COMM ADJ** Not available.