User's manual

OSD User's Manual

BW-CAM-HDMINI25

BAD WOLF
TECHNOLOGIES

Please keep this manual.

CAUTION

Please read precaution before the using this product.

It is made to prevent from lose of asset and to protect user's safe.

• Those symbols explain the damage or lose if it is not used properly.

⚠ WARNING	**It indicates that there may result in injury or lose if the user violates the notice**.
⚠ CAUTION	**It indicates that there may result in death or critical injury if the user violates the notice.**

Precautions

1. Moisture
Do not install the product in areas with high humidity or rain penetration. There may be the cause of malfunction and fire if the water enters into the camera's internal .

2. Repair
Do not modify or disassemble. There may be the risk of electric shock, etc. In case of a fault , please don't fix it directly,please contact manufacturer.

3. Power
Do not use other than specified power. There may be the electrical shock or the cause of the risk.

4. Conditions
Do not install this camera in too hot or too cold area.
(Recommended use temperature: -5 ℃ ~ 50 ℃)

5. Sun light
If the camera lens is exposed to direct sun or strong light, there may be damage in the product, so please be careful.

6. Shock or vibration
Be careful not to drop the camera or get a strong shock.

7. Installation in unstable places
Do not install the camera on the unstable place, tripod, bracket, table . it can cause people hurted or damage to the product.

8. If the camera is not working properly
If the camera is out of order (for example, a strange noise, Smell or smoke),please stop using it immediately and contact us to get a A/S After turning off the power.

9. cleaning
Turn off the camera during cleaning and wipe with a dry cloth.
If stained part is not cleaned , please use furniture cleaner.
In case of lens,please use lens blower or lens cleaning tissue.
It could be purchased in camera shop.

10. Exposure to the light source
In case that subject includes a light source, around
Horizontal or vertical lines in monitor may appear. This 'smear'
is feature of The semiconductor device itself, not a breakdown.

11. How to ask A/S
Please contact us for repair in the following cases after the camera's power off.
A. If the connector of the power supply is broken,
B. If you get the camera to rain or water,
C. If liquid or strange subject has been spilled into the camera,
D. If it is not activating described in the documentation for this camera
Control adjustment of the camera described in this manual.
(The camera to be operated in a manner not described in the documentation there is a larger danger of damage.)
E. If the camera has been dropped and damaged
F. If there is a distinct change in performance

Even though the warranty period, the damage of product caused by Natural disasters such as lightning strike or inadvertent installation will be repaired at cost.

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Thank you for using this product. If you want to get a better product's functions,please read the user manual carefully when you use the product. Keep the User's Guide.
If a problem occurs during the use, please contact your manufacturer.

1. *features*

This product is 1/3" C-MOS 2.1M progressive FULL HD-SDI High sensitivity color camera for surveillance.

☞ Adopting a 1/3 2.1Mega Pixel Panasonic C-MOS

☞ **Full HD SDI (1920X1080p 25fps,30fps / 1280X720p(50fps,60fps)**

☞ SDI signal Standardization : SMPTE292M (SMPTE274M)

☞ **SDI signal's Jitter measure :(Timing jitter(10Hz) : 0.18UI , Alignment jitter(100kHz) : 0.12UI)**

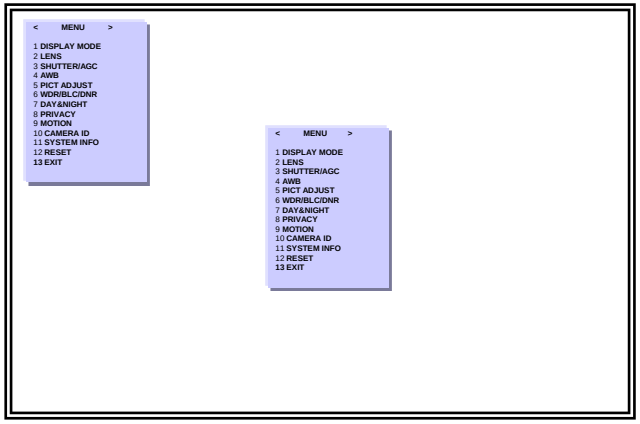
☞ **High sensitivity: High sensitivity at 0.01lx low luminance(F1.2, 50IRE, DSS X2~ 4X)**

☞ White balance for a wide range of light sources Automatically

☞ **OSD control :**
Automatic gain control, electronic shutter speed control ,level of maximum accumulation level adjustment, WDR, BLC, DNR-level Default title and camera ID settings, OSD arbitrary adjustments.

- **-. White balance mode(WB) : AUTO / AUTOEXT / PUSHING / MANUAL(R-Gain, B-Gain)**
- **-. Back light compensation : compensation (BLC) : OFF ON**
- **-. Back light compensation (WDR) : OFF, ON**
- **-. High light Back light compensation (HL MASK) : OFF, ON**
- **-. Noise remove(DNR): OFF, Low, Middle, High**
- **-. Accumulation mode (DSS) : OFF, 2X~4X**
- **-. Day & night setting (DAY &NIGHT) : AUTO / COLOR / B/W / EXT**
- **-. Privacy masking: OFF, ON**
- **-. Motion detect** : **OFF, ON**
- **-. Zoom(DZOOM): 0~112 level**
- **-. Analog video output: VBS 1.0Vp-p ,NTSC, PAL, 16:9,4:3**
- **-. Sensor defect compensation: ON(PUSH),RIGHT**
- **-. OSD font size adjustment: X1,X2**
- **-. OSD position adjustment : Upper, middle(OSD setting SET KEY at the "MENU")**
- **-. OSD default value temporary adjustment: RESET DEFAULT ON (PUSH)**

2. OSD motivation explanation



<3-1. OSD Menu location >

☞ Caution

Press SET button, the OSD menu will be displayed on the top left corner.
The OSD menu will be displayed in the center if "SET button" is pressed again.
Press "set button" to move into the "SUB menu" in OSD "↲" menu.
Press the button for more than 3 seconds to activate "pushing menu".

3.1 How to display activation of OSD

a. User can check the current activation of OSD when you press "set button".
If there is no another input signal , the activation of OSD disappear.

b. The activation of OSD disappear without camera title.
If you don't want to show camera title, please change inner OSD in camera. (it is optional to use RS-232 communication control.)

c. User can change camera title's location.

3.2 Activate "OSD MENU"

a.Press "set button" to Move to the Menu setting display

b. Press "Up button" to move upper menu or "Down button" to move bottom menu. Selected menu is changed in yellow color.

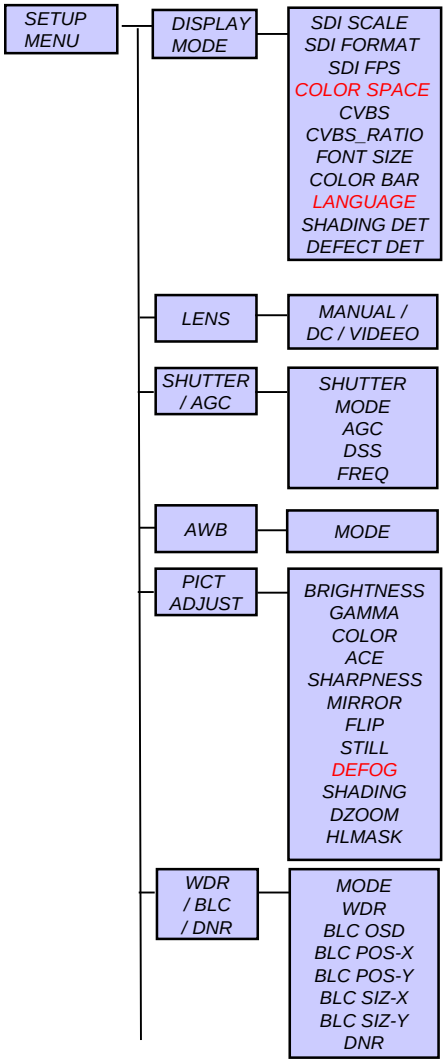
c. Press "right button" to increase data value or "left button" to decrease it.

d. Press right button in "OSD < MENU>" to move into the sub menu bar right away. User can choose 1~13 menu. And vise versa when you press "left button."

< MENU >

1 DISPLAY MODE
2 LENS
3 SHUTTER/AGC
4 AWB
5 PICT ADJUST
6 WDR/BLC/DNR
7 DAY&NIGHT
8 PRIVACY
9 MOTION
10 CAMERA ID
11 SYSTEM INFO
12 RESET
13 EXIT

<3-2. Setting start menu display>



<picture 3-3 Menu tree >

3.3 How to start “OSD SUB MENU”

1. DISPLAY MODE

① SDI SCALE: SDI output signal’s ratio between compression or not
FULL: SDI FULL Range output(0-255)
COMP: SDI compression Range output(16-235)

② SDI FORMAT : Select the SDI output resolution.
1080P (1920X1080) or 720P(1280X720)

③ SDI FPS: Select SDI signal’s output frame.
30fps or 25fps

④ *COLOR SPACE* **: HD-CbCr,SD-CbCr,YUV**

⑤ CVBS: Select analog output signal’s type.
NTSC / PAL

⑥ CVBS_*RATIO:* Select analog output signal’s display ratio
16;9 / 4:3

⑦ FONT_SIZE: Select the size of OSD menu.
X1 / X2

⑧ COLOR BAR: print out COLOR BAR pattern.
SDI and CVBS output simultaneously

⑨ **LANGUAGE: Support Eng/CHH1/CHH2/JAP**

⑩ **SHADING DET**: Compensate for differences in the screen brightness by Lens bending .
Illuminate the full screen in white paper with ON, compensated date is stored.
Using the "PIC TADJUST" with "SHADING" ON, the stored data is running.

⑪ **DEFECT DET**: Compensate sensor’s (white dot) dead cell defect.
After cover the lens to make the screen dark , press right key(ON).
If the value changed from "THRS_0000006” to“THRS_0000030”, make the RIGHT KEY(off). After that press SET KEY again, there will be dead cell defect on compensation. Press the power ON/OFF so store the compensated date.
(but , it become default when the DEFECT DET function activated.)

2. Lens select mode (LENS)

① **MANUAL***:* AE MODE (NORMAL/DEBLUR)
select in using normal fixed focus lens.
(Manual iris lens is similar to the ELC mode in common.)
* DEBLUR : Compensate bluring in capturing the moving images.

② **DC**: AE MODE (INDOOR/OUTDOOR/DEBLUR)
DC IRIS in using activate lens
(Automatic iris lens is similar to the ALC mode in common.)

③ **VIDEO**: VIDEO IRIS in using activate lens
(It is used in C/CS MOUNT lens partly in common.)

☞ caution

Do not change the adopting the lens suited for product’s feature.
(It is changed in factory settings at “reset”)

3. Full gain and Exposure select mode (SHUTTER / AGC)

① SHUTTER: Control shutter speed to adjust brightness.
(It is not available to adjust it in “Auto” at the “Shutter mode”.) **MANUAL SHUTTER 1/30(1/25) → 1/30000**

② MODE: It is for vey/focus iris best solution.

INDOOR:

It just varys iris without rolling effect in indoor.
(It is useful in dark zone.)

OUTDOOR:

It is solution mode for low quality display because of closed iris at outdoor.
(It improve losing focus in strong sum beam at outdoor.)

③ AGC: Full gain value setting (AGC).
0 ~ 11 steps (OFF ~32dB)

④ DSS: Accumulation mode
It is used for dark place.
It needs to adjust maximum Accumulation field value for more bright and dynamic image.
The display become slow if the maximum accumulation field value is increased.
OFF,X2~X4

⑤ FREQ: select AC type power frequency.
60HZ,50HZ

4. White balance mode setting(AWB)

① **AUTO**: auto accumulation mode
Automatically adjust the color in environmental change.
Operating range of 2,300 º K ~ 8,000 º K.

② AUTOEXT: Outdoor and special lighting tracking mode,
White detection for special lighting such as mercury
Operating range of 2,300 º K ~ 2,800 º K.

③ **PRESET**: It is for finding the best wb in current surveillance area
Hold “SET button ” to activate , or fixed

④ **MANUAL**: Adjust color in manual.
◆ KELVIN (LOW,MIDDLE,HIGH)
KELVIN mode’s normal color temperature value
LOW : 3700 º, MIDDLE: 5100 º, HIGHT : 9500 º
◆ R-GAIN (0 ~ 20 steps)
. ◆ B-GAIN (0 ~ 20 steps)

☞ Caution

During setting box in BLC back light area,
upper left corner is point at BLC mode.

5. Set the step of display. (PICT ADJUST)

① BRIGHTNESS: Set the basic brightness of display.
0 ~ 20 steps

② GAMMA: Set the gamma value of display.
0.5, 0.6, 0.65, 0.7, 0.75

③ COLOR GAIN: Set the color value of display.
0 ~ 11 steps

④ ACE: Auto adjust brightness mode.
OFF/ON

⑤ SHARPNESS: Set the clearness of display.
0 ~ 15 steps

⑥ MIRROR: Change the left and right position.
OFF/ON

⑦ FLIP : Change the up and left position.
OFF/ON

⑧ **STILL: Stop the display.**

⑨ **DEFOG: Compensate the fog.**

⑩ DZOOM: Set the magnification of display.
0~112 steps(1X~8X)

⑪SHADING: Correct the differences between the display brightness in lens curve
OFF/ON

⑫HLMASK: High light back light compensation.(make part of the brightness dark.)
OFF/ON
◆ color : CYN / GRN / MAG / RED / BLU / BLK / WHT / YEL

6. Set the back light compensation and noise staus. (WDR /BLC / DNR)

① MODE : Set the back light mode of display. **OFF/ WDR/ BLC**

② WDR_WGT: Set the back light compensation level in WDR mode.
0~4

③ BLC OSD: Turn box notice at back light zone of display ON/OFF.
OFF/ON

④ BLC POS—X :Set to move BLC back light area box into left and right. (**0 ~ 20)**

⑤ BLC POS—Y :Set to move BLC back light area box into up and down. **(0 ~ 20)**

⑥ BLC SIZ —X: Set BLC back light area box ‘s size into right and left.
(**0 ~ 20)**

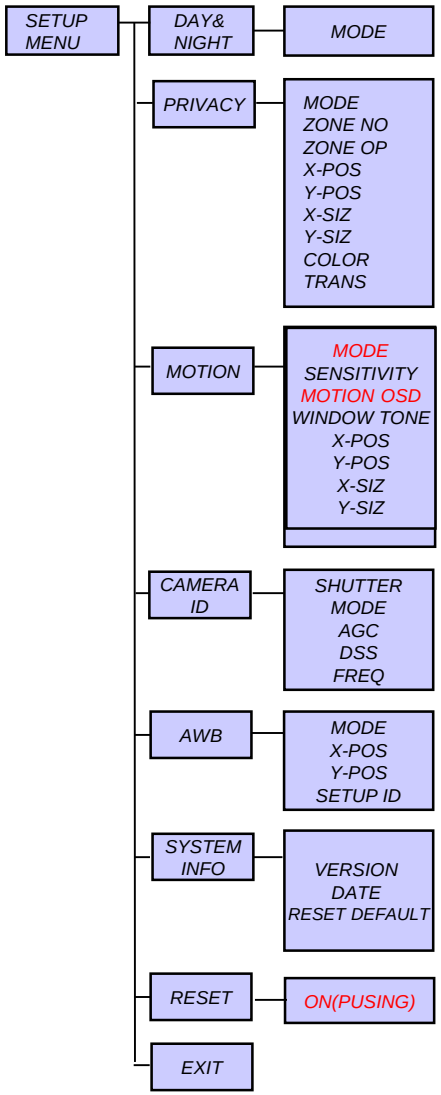
⑦ BLC SIZ —Y: Set BLC back light area box ‘s size into up and down. (**0 ~ 20)**

⑧ DNR:Set the display noise remove condition (AGC) at low luminance **OFF / LOW / MIDDLE / HIGH**

☞ Caution

It isn’t available to support analog output (CVBS) in WDR mode.
(No WDR supported in Manual shutter mode.)

<picture 5-2. default menu setting display >



<picture 3-4 menu tree >

7. Day and Night setting on display (DAY & NIGHT)
   ① MODE: Set the Day and Night on display
      AUTO /B/W /COLOR /EXT
   ◆ AUTO: Artificially judge Day&Night through the inner AGC value of SET
   ◆ B/W: keep the display in black regardless of day& night.
   ◆ COLOR: keep the display in color regardless of day& night.
   ◆ EXT: Artificially judge Day&Night by external censor.
      (but, DELEY value is applied same in AUTO and EXT mode.)
   ② IR LED(OFF/ON) : LED ON/OFF Signal output
   ③ AGC THRS: Set the level of the day&night judgement detection.
      0 ~ 20 steps
   ④ MARGIN: Set the level range of the day&night judgement detection(margin)
0 ~ 20 steps
   ⑤ DELEY: delay the time from day to night.
      0 ~ 10 steps(per second)

8. Set the range of privacy protection zone. (PRIVACY)
   ① MODE :Turn privacy protection zone's box check ON/OFF
      OFF/ ON
   ② ZONE NO: select the range of the protection zone.
      0~7
   ③ ZONE OP: turn selected privacy protection zone ON/OFF seperately.
      OFF/ON
   ④ BLC POS—X : move the entire selected box range to the left or right.
      0 ~ 20
   ⑤ BLC POS—Y : move the entire selected box range to the up or down.
      0 ~ 20
   ⑥ BLC SIZ —X: Set size of the entire selected box range in left and right.
      0 ~ 20
   ⑦ BLC SIZ —Y: Set size of the entire selected box range in up and down.
      0 ~ 20
   ⑧ COLOR: Set the color of the entire selected box.
      CYN / GRN / MAG / RED / BLU / BLK / WHT / YEL
   ⑨ TRANS: Set strongness of the color of the selected area box
      0 ~ 4

☞ caution

The outline box of the OSD entire menu is not supported in privacy zone box check on.
MOTION or BLC will be applied also in that setting.

9 set the activation of Motion detection and area. (MOTION)

① MODE : Select ON to activate motion detection , surveillance box on/off. **OFF/ ON**
② SENSITIVITY: Select the level of sensitivity detected in surveillance.
0~20 steps
③ MOTION OSD : ON/OFF the detection box(on/off)
④ WINDOE TONE: Select the strength of external color of surveillance box. **0~6steps**
⑤ WINDOE USE: Turn on or off box of surveillance area being setted.
OFF/ON
⑥ BLC POS—X : Set the box of selected entire area move left and right.
0 ~ 20
⑦ BLC POS—Y : Set the box of selected entire area move up and down.
0 ~ 20
⑧ BLC SIZ —X: Set the left and right size of the selected area's box.
0 ~ 20
⑨ BLC SIZ —Y: Set the up and down size of the selected area's box.
0 ~ 20

☞ caution

Detect output is available with GPIO 22pin of ISP,
not supported with some model.(Normal: 0V, Action: 3.3V)

10. Display the title on screen of the camera .. (CAMERA ID)

① MODE: turn on/off the display of the title on the camera screen.
OFF / ON
② X — POS: set the title box to move left and right.
0 ~ 120 steps
③ Y — POS : set the title box to move up and down.
0 ~ 44 steps
④ SETUP ID: press "↲" key to move "SETUP-ID"menu.
◆ If you set the title, the white box will be displayed on the screen. Exit from the OSD menu Completely, it will be the position of the title displayed on the screen after setting.
◆The number of title character is supported up to 11 characters.

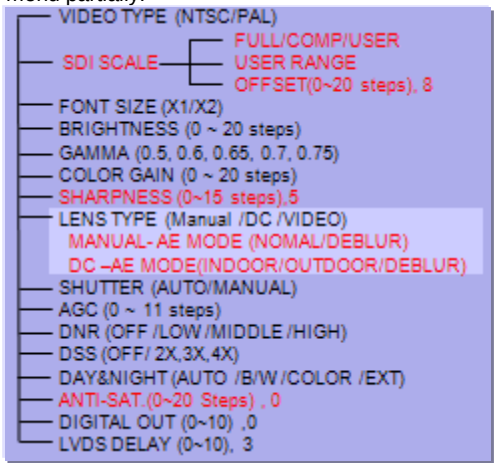
SETUP - ID

A	B	C	D	E	F	G	H
I	J	K	L	M	N	O	P
Q	R	S	T	U	V	W	X
Y	Z	0	1	2	3	4	5
6	7	8	9	<	>	-	.

CLR RETURN
CAMERA TITLE

< Picture 3-5 camera ID setting display >

11. Camera information version(SYSTEM INFO)
① VERSION : display the version of camera software.
0. 9. 2.E
② DATE: display the date of updated firmware version of camera software.
2012 / 09 / 30
③ RESET DEFAULT ON: press to move back to the factory default value.
ON(PUSHING)
◆ It is available to change the value of factory default of OSD menu partially.

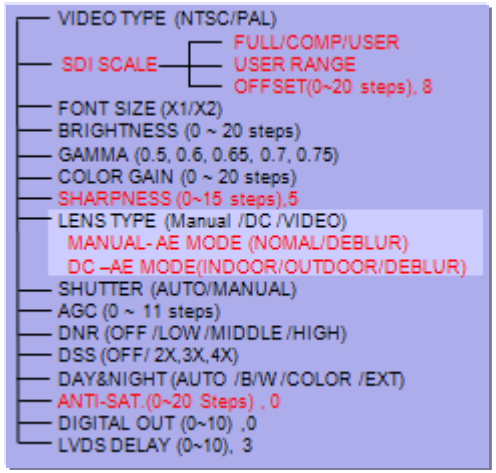


12. Set the OSD menu factory default.(RESET)
RESET
13. exit from the OSD menu , and save the setted value. (EXIT)
EXIT

13. Activate "RESET DEFAULT" ON

① press the "RESET DEFAULT ON" button for at least 3 seconds in the 11.SYSTEM INFO Menu, to move into "RESET DEFAULT".

RESET DEFAULT



②Press "return key" to exit to the main menu after changing "RESET DEFAULT" menu above.

③ 12. Press "RESET ON" button for at least 3 seconds , to change OSD menu from factory default value to RESET DEFAULT value.

④ 13.get out from the "EXIT OSD Menu" to initialize RESET DEFAULT value changed from it and saved in memory perfectly.

☞ caution

In case of activating "RESET DEFAULT ON" stopped at ③step with turning off the power, it doesn't save the changed value in memory and get back to the previous value.

☞ caution

If the user sets the NTSC/PAL in RESET DEFAULT of OSD menu, it is changed simultaneously.

In case of selecting "**NTSC**"

- SDI FPS: it will be changed to **30fps**.
- CVBS: it will be changed to **NTSC**.
- FREQ: it will be changed to **60HZ** A.

In case of selecting "**PAL**"

- SDI FPS: it will be changed to **25fps**.
- CVBS: it will be changed to **PAL**.
- FREQ: it will be changed to **50HZ** A.

☞ caution

Please don't change any value of "LVDS DELAY & DIGITAL OUT". The Variable of an development environment may cause the problems on display.

3. Precaution of installment

1. It showed HD-SDI display in blue or black.
   If the SDI OUT connection is bad or wrong.
   If the resolution setting is not suit for device.
   Or it is not normal CABLE or limit transmission distance.
- ◆ Check SDI OUT connection & BNC JACK connection.
- ◆ Check the resolution of Camera and device.

2. HD-SDI display shows not properly.
   There will be defect on display because of the dismatching Impedence
   If user don't use 75Ω BNC cable for HD- SDI
- ◆please check Camera output's BNC ,CABLE and both connected jack and also DVR's output, connected device's BNC is also all 75 Ω product.
- ◆ Change the cable and the part for HD-SDI
- ◆ please use 75 Ω in BNC adaptor for extension cable.
- ◆ HD-SDI CABLE's limited range.
  5C-HFBT(Maximum up to 200m), RG59(,Maximum up to 100m)

3. There is cross line , breaking and disconnection On HD-SDI display.
If SDI OUT BNC's connection is bad , the short circuit of cable , not proper cable, or excess the limited range.
- ◆please check it is proper cable for HD- SDI, Cable distance is normal.
- ◆please check the connection of bnc between HD- SDI and BNC(bad connection, connected condition)

4. If the HD-SDI display's output is not on the correct location right of left.
If the resolution mode setting is not proper when user connects it to the receiver directly or monitor's resolution setting is not correct.
- ◆please check the resolution output value of camera.
- ◆please check the monitor and DVR resolution setting value.
- ◆ some of monitor can't support 1080 30P resolution.