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# Camera OSD Manual

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Before installing, operating or adjusting this product, please read this instruction booklet carefully and completely.

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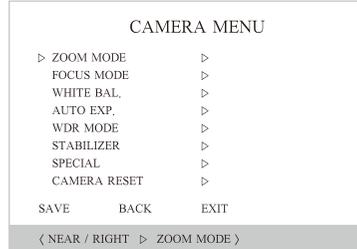
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## 2. CAMERA SPECIFICATION

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# 1. Camera Setting

**Camera menu subject to change without prior notice to upgrade and quality increase and we may use slip sheet for the change. Please check the camera version and the slip sheet if the camera menu and this manual menu is not matched.**

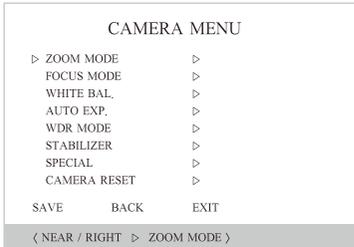


## CAMERA MENU

- Functions can be set-up using the Camera menu.

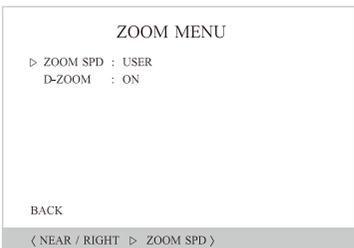
In this menu, user can set the zoom, focus, white balance, auto exposure...etc functions.

### 1.1 ZOOM MODE



Decide using of digital zoom function and select zoom speed.

#### - ZOOM SPD



ZOOM SPD : Select from 1sept to 7 steps, USER (Standard speed)

Select :  JOYSTICK



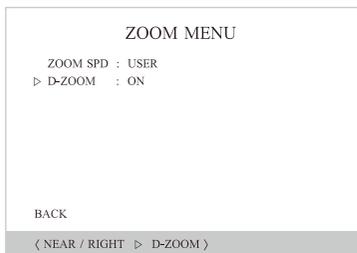
or

Set ON :  JOYSTICK

Set OFF :



## - D-ZOOM

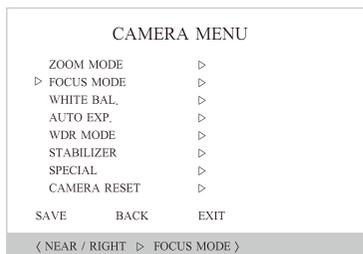


Decide using of digital zoom function.

D-ZOOM: ON/ OFF

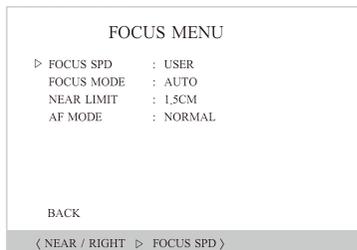


## 1.2 FOCUS MODE



In Focus menu, you can set up the focus speed, focus mode, near limit and AF mode.

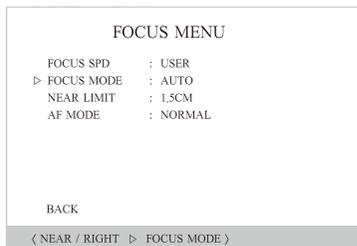
### - FOCUS SPD



Set the speed for camera focusing.



### - FOCUS MODE



**AUTO** : The camera adjusts the focus automatically while monitoring the screen continuously in the auto mode. In the auto focusing mode, zoom key operation is not recognized as the input of the focus key.

**MANUAL** : In the manual mode, users can adjust the camera focus manually.

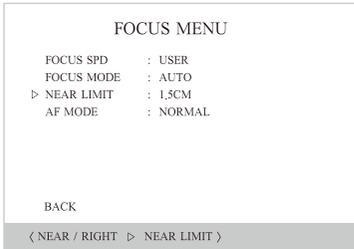
**ONEPUSH** : If user adjust Pan, tilt or zoom, camera will make focus.

**ONEPUSH S** : If user adjust zoom, camera will make focus. (Pan and Tilt operation will not be made focus)

**INFINITY** : infinity focus is the state where a lens forms an image of an object an infinite distance away. This corresponds to the point of focus for parallel rays.



## - NEAR LIMIT

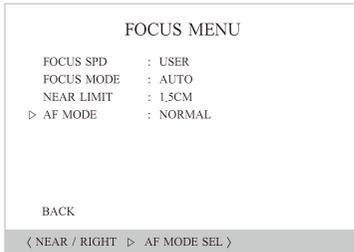


Infinity focus is the state where a lens forms an image of an object an infinite distance away. This corresponds to the point of focus for parallel rays.

( Over Infinity ~ 1.0CM)

Select :  or  Set ON :  Set OFF : 

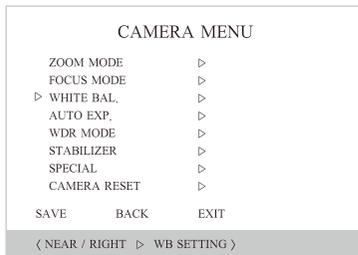
## - AF MODE



Set the AUTO FOCUS MODE position

Select :  or  Set ON :  Set OFF : 

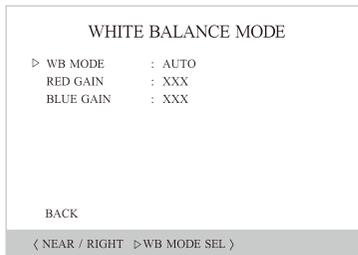
### 1.3 WHITE BALANCE Set the white balance of camera.



White balance setting is a function revising color temperature to resolve the problem that screen's colors change by the color temperature's difference according to time.



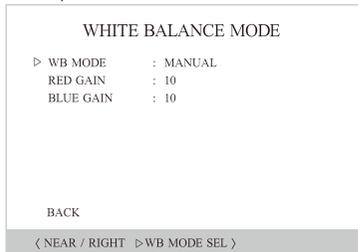
#### - WB MODE



WB MODE: Set the color depend on white balance.  
WB MODE : Select AUTO, INDOOR, OUTDOOR, ONEPUSHAWB or MANUAL.



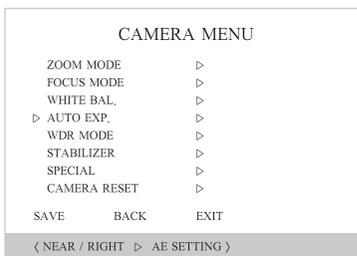
#### - RED, BLUE MODE



Adjust color level (RED, BLUE : 00~ 20)  
Standard level : RED -> 10 BLUE->10

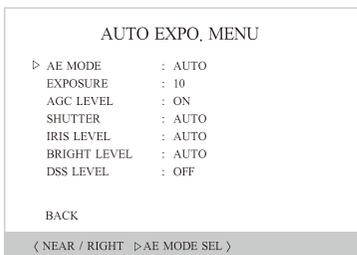


## 1.4 AUTO EXPOSURE



AE setting is a function adjusting shutter speed according to subject's brightness to get standard amount of exposed light.

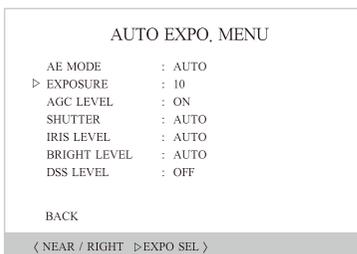
### - AE MODE



Select AUTO, MANUAL, SHUTTER, IRIS or BRIGHT.



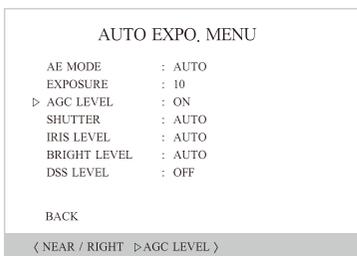
### - EXPO MODE



Set the exposure.(00 ~20)



### - AGC LEVEL



Auto level control function  
: select ON / OFF



## - SHUTTER

AUTO EXPO. MENU	
AE MODE	: SHUTTER
EXPOSURE	: 10
AGC LEVEL	: ON
▷ SHUTTER	: 1/30
IRIS LEVEL	: AUTO
BRIGHT LEVEL	: AUTO
DSS LEVEL	: XXX
BACK	
◀ NEAR / RIGHT ▷ SHUTTER SEL ▶	

If you set SHUTTER in the AE MODE, you can control shutter speed.  
(x2, x3, x4, 1/30000, 1/10000, 1/7000, 1/5000, 1/2500, 1/1600, 1/1100, 1/700, 1/250, 1/120, 1/60)

Select :  or  Set ON :  Set OFF : 

## - IRIS LEVEL

AUTO EXPO. MENU	
AE MODE	: IRIS
EXPOSURE	: 10
AGC LEVEL	: ON
SHUTTER	: AUTO
▷ IRIS LEVEL	: 10
BRIGHT LEVEL	: AUTO
DSS LEVEL	: OFF
BACK	
◀ NEAR / RIGHT ▷ AE MODE SEL ▶	

If you set IRIS in the AE MODE, you can set the IRIS level from 00 to 13

Select :  or  Set ON :  Set OFF : 

## - BRIGHT LEVEL

AUTO EXPO. MENU	
AE MODE	: BRIGHT
EXPOSURE	: XXXX
AGC LEVEL	: XXX
SHUTTER	: AUTO
IRIS LEVEL	: XXXX
▷ BRIGHT LEVEL	: AUTO
DSS LEVEL	: XXX
BACK	
◀ NEAR / RIGHT ▷ BRIGHT LEVEL ▶	

To change bright level, select BRIGHT in AE MODE and set by NEAR key.  
Set from 0 ~ 23

Select :  or  Set ON :  Set OFF : 

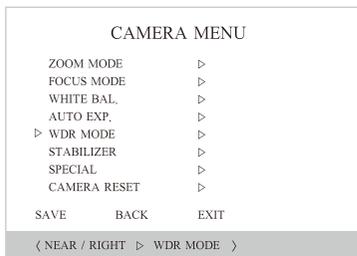
## - DSS LEVEL

AUTO EXPO. MENU	
AE MODE	: AUTO
EXPOSURE	: 10
AGC LEVEL	: ON
SHUTTER	: AUTO
IRIS LEVEL	: AUTO
BRIGHT LEVEL	: AUTO
▷ DSS LEVEL	: X2
BACK	
◀ NEAR / RIGHT ▷ DSS LEVEL ▶	

Digital Slow Shutter: Control digital show shutter speed.  
(X2, X3, X4, OFF)

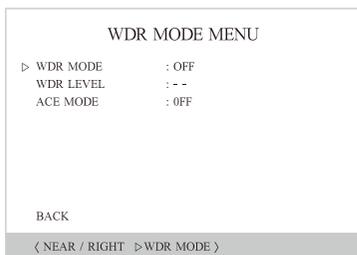
Select :  or  Set ON :  Set OFF : 

## 1.5 WDR MODE



Set WDR function  
WDR(Wide Dynamic Range)

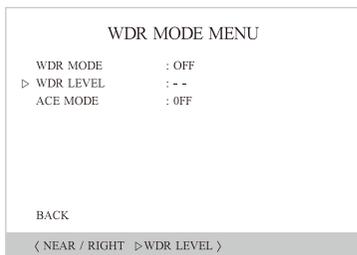
### - WDR MODE



Select ON or OFF.



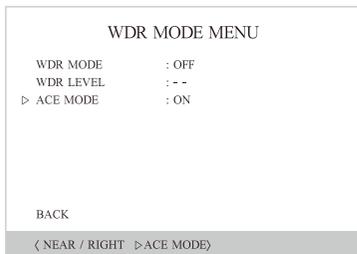
### - WDR LEVEL



Select from 00 to 04.



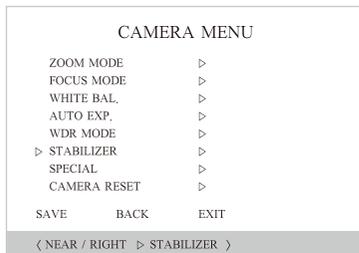
### - ACE MODE



Select ON or OFF



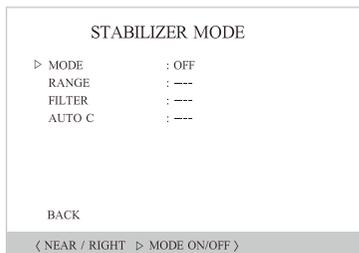
## 1.6 STABILIZER



Select Digital Image Stabilizer mode

\* Stabilizer function is not applied for some models.

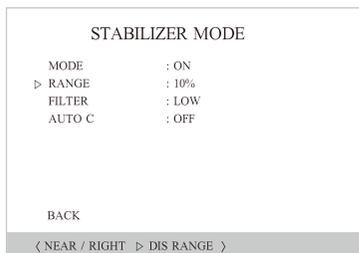
### - STABILIZER MODE



Set the Stabilizer mode.(ON/OFF)



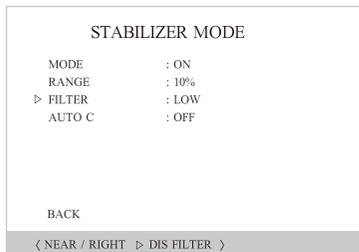
### - RANGE



Setting the image compensation range.  
(10%, 20%, 30%)



### - FILTER



Setting the sensitivity to hold DIS function in worst case.  
(LOW, MIDDLE, HIGH)



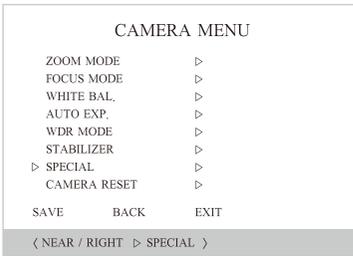
- AUTO C

STABILIZER MODE	
MODE	: ON
RANGE	: 10%
FILTER	: LOW
▷ AUTO C	: OFF
BACK	
◀ NEAR / RIGHT ▷ DIS AUTO CEN ▶	

Setting Auto Centering mode.(OFF, HALF, FULL)

Select :  or  Set ON :  Set OFF : 

## 1.7 SPECIAL



In the Special menu, it's available to set special function of the camera



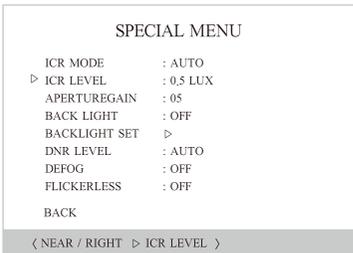
### - ICR MODE



Select AUTO, DAY and NIGHT.



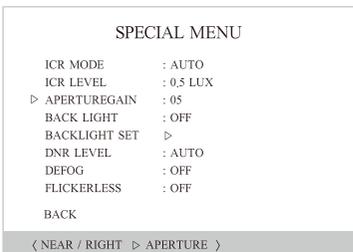
### - ICR LEVEL



Set ICR Value. ( 0.5~20.0 lux)



### - APERTURE GAIN



APERTURE GAIN: Select aperture gain



- BACK LIGHT

SPECIAL MENU	
ICR MODE	: AUTO
ICR LEVEL	: 0.5 LUX
APERTUREGAIN	: 05
▷ BACK LIGHT	: OFF
▷ BACKLIGHT SET	▷
DNR LEVEL	: AUTO
DEFOG	: OFF
FLICKERLESS	: OFF
BACK	
◀ NEAR / RIGHT ▷ BACK LIGHT ▶	

Select ON/OFF in the BACK LIGHT function.

Select :  or  Set ON :  Set OFF : 

- BACK LIGHT

SPECIAL MENU	
ICR MODE	: AUTO
ICR LEVEL	: 0.5 LUX
APERTUREGAIN	: 05
BACK LIGHT	: OFF
▷ BACKLIGHT SET	▷
DNR LEVEL	: AUTO
DEFOG	: OFF
FLICKERLESS	: OFF
BACK	
◀ NEAR / RIGHT ▷ BACK LIGHT SET ▶	

Setup BACKLIGHT area.

- To enable BACKLIGHT function, press the [NEAR] key on the BACKLIGHT menu than make it ON using joystick.
- To select BACKLIGHT position, press the [NEAR] key on the BACKLIGHT SET menu than select the POSITION using joystick than press [NEAR] key to escape the menu.

- DNR LEVEL

SPECIAL MENU	
ICR MODE	: AUTO
ICR LEVEL	: 0.5 LUX
APERTUREGAIN	: 05
BACK LIGHT	: OFF
▷ BACKLIGHT SET	▷
▷ DNR LEVEL	: AUTO
DEFOG	: OFF
FLICKERLESS	: OFF
BACK	
◀ NEAR / RIGHT ▷ DNR LEVEL ▶	

Select the DNR level from AUTO, LEV1, LEV2, LEV3 and OFF.

Select :  or  Set ON :  Set OFF : 

- DEFOG

SPECIAL MENU	
ICR MODE	: AUTO
ICR LEVEL	: 0.5 LUX
APERTUREGAIN	: 05
BACK LIGHT	: OFF
▷ BACKLIGHT SET	▷
DNR LEVEL	: AUTO
▷ DEFOG	: OFF
FLICKERLESS	: OFF
BACK	
◀ NEAR / RIGHT ▷ DE-FOG MODE ▶	

Defogging foggy video image.  
Select ON/OFF.

Select :  or  Set ON :  Set OFF : 

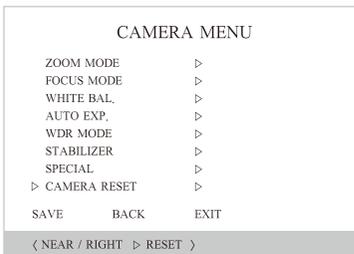
- FLICKERLESS



Occurs flicker correction function in the Power frequency is different areas(50Hz/60Hz)

Select :  or  Set ON :  Set OFF : 

## 1.8 CAMERA RESET



Make initialize the setting value which is set in CAMERA MENU.

Select :  or  Set ON :  Set OFF : 

## 2. Camera Specification

### 2.1 x20 Camera

Image Sensor	1/3" Panasonic CMOS Sensor
Total Pixels	1956 (H) x 1266 (V) = 2.48M Pixels
Active pixels	1944 (H) x 1092 (V) = 2.12M Pixels
Scanning system	Progressive Scan
Sync. System	Internal
Resolution	Digital : 1080p/30(25)fps, 1080p/60(50)fps(Optional), 720p/30(25)fps, 720p/60(50)fps Analog : 700TVL
Min. illumination	Color(1/30s) : 0.5 lux , BW(1/30s) : 0.1lux Color DSS(1/7.5s) : 0.125 lux , BW DSS(1/7.5s) : 0.025 lux
Video Output	HD : Digital(LVDS) Analog SD : VBS(without WDR)
S/N Ratio	more than 50dB (AGC off)
Lens type	x20 Day & Night Zoom Lens
Zoom Ratio	Optical x20, Digital x32 Zoom
Focal Length	f = 4.7 mm ~ 94.0 mm
Aperture Ratio	F1.6 (wide) ~ F3.5 (tele)
Focus	Mode / Distance / Zoom Speed / Lens Refresh / E.Zoom
Mode	Auto / One Push / Manual
Distance	0.1 / 1.0 / 3.0 / 6.0 / 10.0 m
Lens Refresh	One Push / 1 ~ 10Day
E.Zoom	Off / MAX x2 ~ x32
Exposure	AUTO / IRIS.P / SHUT.P / MANUAL
Shutter Speed	1/30(25) ~ 1/30,000 sec
Iris	0 ~ 20
Digital Slow Shutter (DSS)	Off / x2 / x4 ( / x8 : 60 or 50 fps mode only)
WDR/BLC	OFF / WDR / BLC
Day&Night	Auto / Day / Night / Ext-in
White Balance	AUTO / One Push / Manual / Indoor / Outdoor
DNR	Auto / Off / Low / Middle / High
System	NTSC / PAL
HD Format	1080p/30(25)fps / 1080p/60(50)fps(Optional) / 720p/30(25)fps / 720p/60(50)fps

\* Design and specifications are subject to change without notice.