

New Generation Hi-Resolution Camera

(Built-in OSD)

USER'S MANUAL

Thank you for purchasing our products. Please read the manual carefully
before operating

Version: YX-ZX412912V02 30#

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Notes

- Do not make the products under great impact or stay away from strong electromagnetic interference and vibration.
- There are some sophisticated parts inside the camera, therefore, during transportation and installation, please avoid the damage cause by stress or severe vibration. For the sake of safety, please do not switch on power before accomplishing all installation.
- Please comply with all electrical safety standards during operation, camera or signal transmission cable should maintain a sufficient distance (50 meters) with high-voltage equipment or cables, if necessary, lighting and thunder protective measures must be taken.
- Please install the camera in well-ventilated environment.
- Please do not make the camera face sunshine or other strong light directly in case of any damage to the lens and the sensor.
- The temperature and humidity range for cameras work are $-10 \sim 50\text{ }^{\circ}\text{C}$, less than 90% separately, please do not start cameras beyond this range.
- To avoid lightning strikes, please make sure the installation of power supply ground line in a good condition.
- To prevent the equipment from damage by shower or splash of water, please do not place the device substances such as liquid.

Warning

- In order to prevent damage caused by fire or electric shock, please do not put cameras exposed in the moist environment or rainwater.
- Please make sure the adapter is consistent with product specifications, otherwise it might cause fire, electric shock or damage
- Pay attention to polarity of the adapter, it might cause some accidents like fires.
- Please don't connect multiple cameras with the same adapter at the same time; overloading of adapter capacity may cause fires.
- Power supply must be firmly fixed so as not to loose to cause fires.
- If the device gets " abnormal smell or smoke", please stop it immediately and contact with our customer service center.
- If the camera doesn't work as usual, please do not dismantle it by yourself. Please contact our local distributor or our maintenance office authorized by our company, otherwise we won't promise warranty.
- Please do not splash water on the product components when cleaning

Safety Precaution

	Warning Don't dismantle without authority, becareful thunder striking.	
Note: To avoid thunder-strking, please don't open the backcover, the maintenance must be made by our authorized serviceman.		



This symbol means that there might exist uninsulated dangerous voltage inside the case, be careful of electric shock.



This symbol reminds you to pay attention to important operation and maintenance instructions in the accompanied information.

I. Features

1、 New Generation SONY CCD and DSP

Adopting the latest CCD and DSP, the camera can receive clear and lucid images even at circumstances with very low illumination.

2、 Adaptive Tone Reproduction

The ATR-EX (Adaptive Tone Reproduction) function provides gradation compensation to improve the contrast of subjects whose gradation has been lost in cases where, for instance, both low-luminance areas and high-luminance areas exist in the same picture.

3、 High Resolution

700TVL。

4、 D/N Switch

Day & Night cameras can switch automatically into color or B/W according to optical changes.

5、 3D DNR

Digital Noise Reduction Technology enhances the ability to handle with signal noise ratio, this technology makes camera can receive more clear and vivid images even under low-light conditions.

6、 Motion Detect

Motion detection function can trigger alarm or recording when sensing moving objects, users can set the sensitivity and multiple detection zones

7、 Privacy Mask

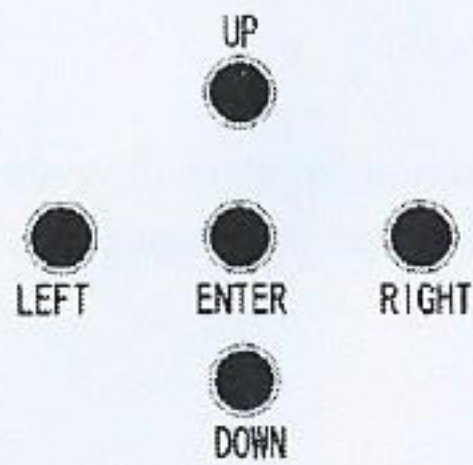
The Privacy Mask can block out sensitive areas from view, covering the areas with a solid block of color, you can adjust the mask position and size

8、 OSD

On Screen Display Menu

II Interface

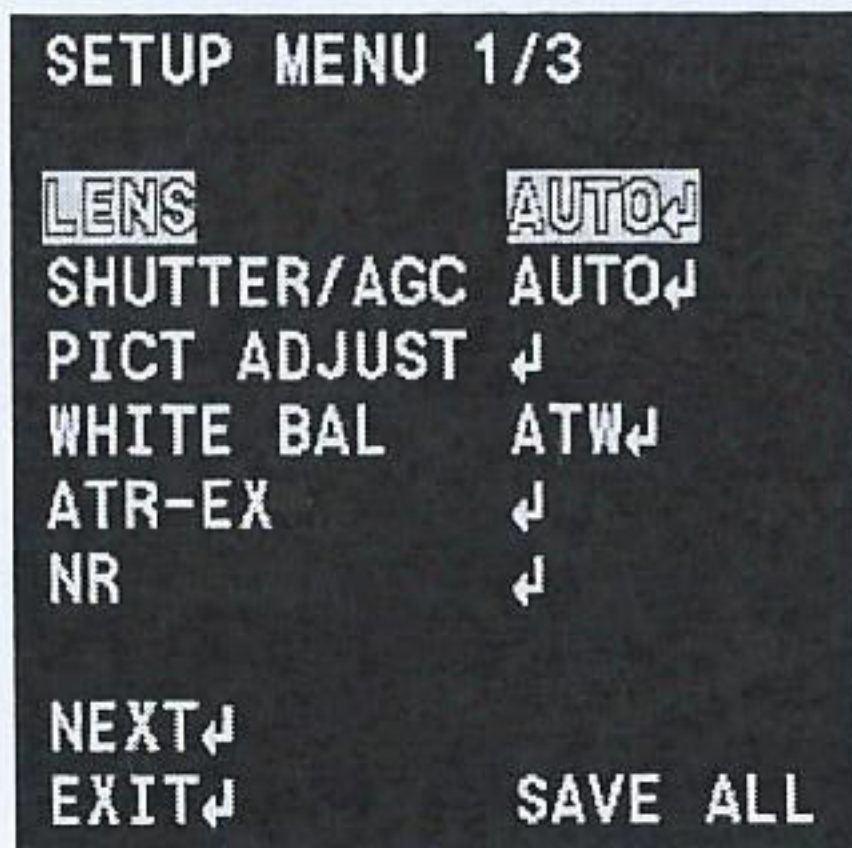
2.1 Interface



ENTER	Enter and Exit the menu
UP/DOWN	Moving up and down
LEFT/RIGHT	Modify the parameters

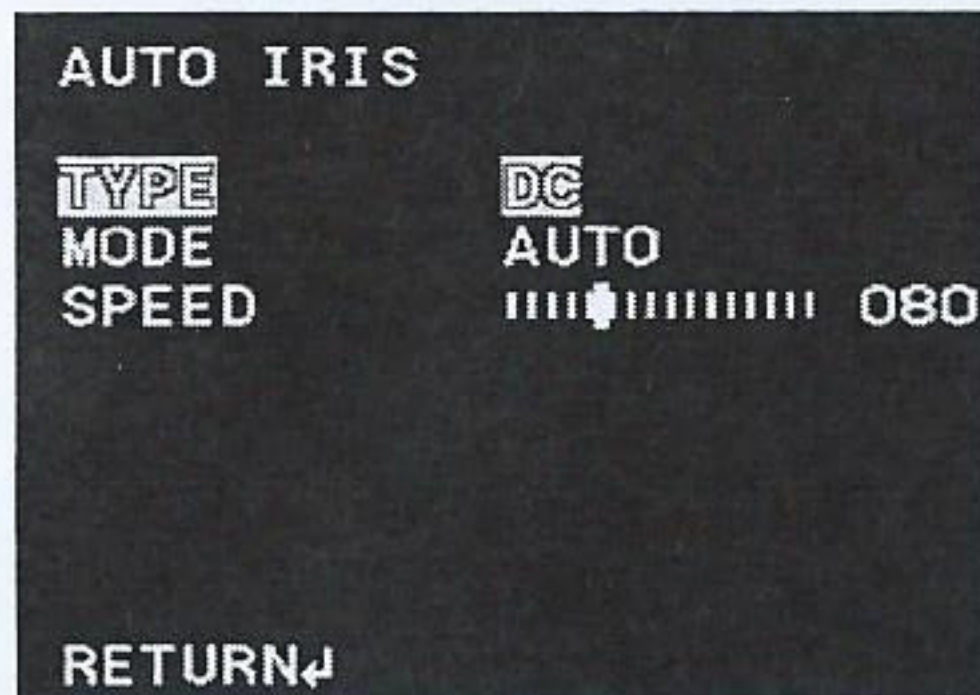
III OSD

Press enter for 2 seconds to enter main menu (as shown in picture 1),



3.1 Lens

Auto/Manual, chose different mode according to the type of lens used on the camera



3.2 Shutter/AGC

Auto/Manual

a. Auto Setup

Mode: with auto iris lens, chose Auto Iris

with Fixed iris lens, chose Auto Iris+Shutter

Brightness: 0-255

AUTO SETUP

HIGH LUMINANCE

MODE SHUT+AUTO IRIS

BRIGHTNESS ||||| 128

LOW LUMINANCE

MODE AGC→SLOW

BRIGHTNESS -

RETURN↵

b. Manual Setup

user can adjust the Shutter Mode Shutter Speed and AGC

MANUAL SETUP

MODE

SHUT

SHUT

1/53

(S)

AGC

6

(DB)

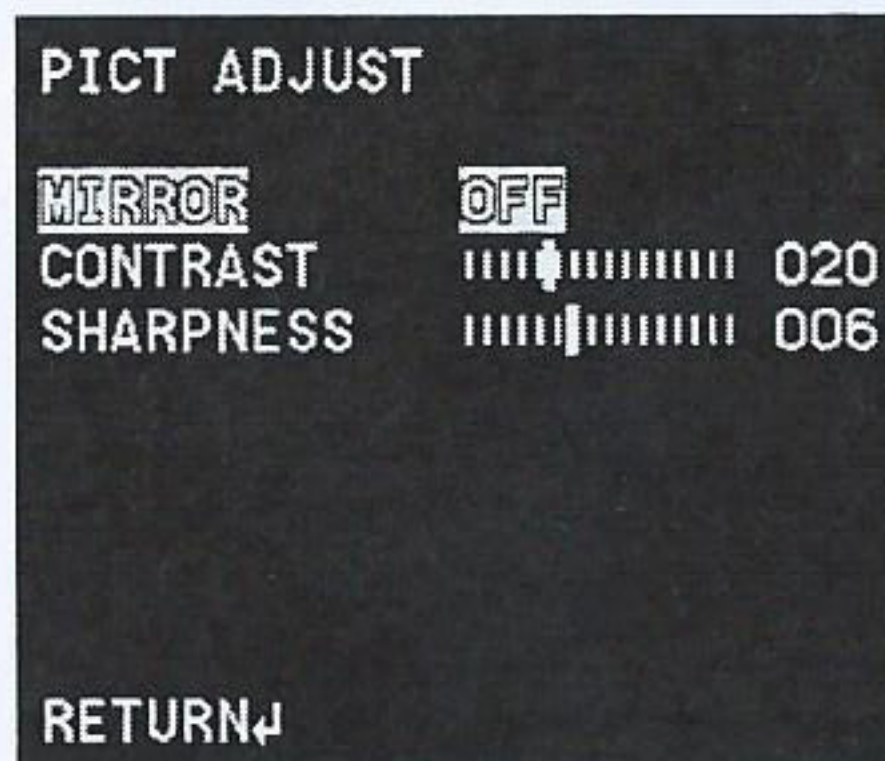
RETURN↵

3.3 Picture Adjustment

Mirror: Off/V-FLIP/H-FLIP/HV-FLIP

Contrast: 0-63

Sharpness:0-15

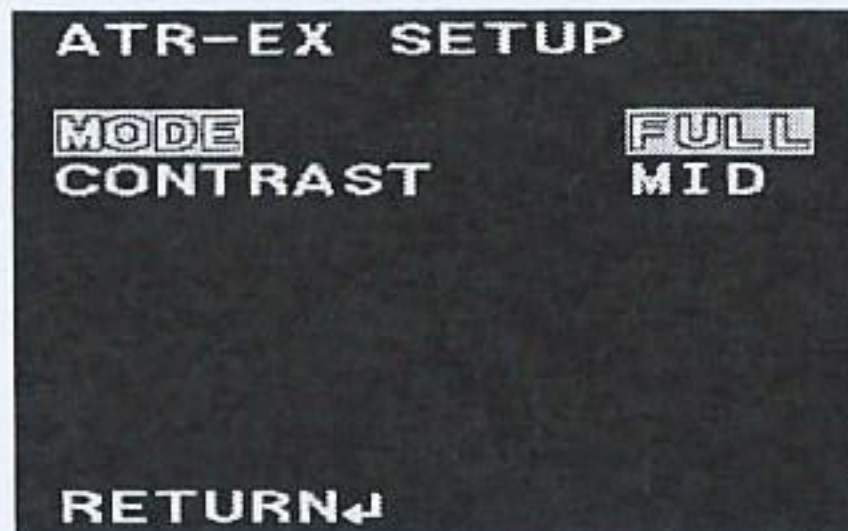


3.4 White Balance

It can restore the authenticity of the color when it is affected by the change of temperature. The user can choose different white balance mode accordingly,
ATW/PUSH/USER1/USER2/ANTI CR/MANUAL/PUSH LOCK.

3.5 Adaptive Tone Reproduction

The ATR-EX (Adaptive Tone Reproduction) function provides gradation compensation to improve the contrast of subjects whose gradation has been lost in cases where, for instance, both low-luminance areas and high-luminance areas exist in the same picture.



3.6 DNR

Digital Noise Reduction Technology, can reduce the noise in low illumination condition. Off, Low, Mid-low, Middle, Mid-high, High Optional.

```

SETUP MENU 1/3

LENS          AUTO↵
SHUTTER/AGC   AUTO↵
PICT ADJUST   ↵
WHITE BAL     ATW↵
ATR-EX        ↵
NR            ↵

NEXT↵
EXIT↵         SAVE ALL

```

3.7 HLC/BLC

```

SETUP MENU 2/3

HLC/BLC       ↵
DAY/NIGHT     AUTO↵
EZOOM         ↵
DIS           OFF
PRIVACY       ↵
MOTION DET    ON↵

BACK↵         NEXT↵
EXIT↵         SAVE ALL

```

HLC is for strong light inhibition, turn on this function when used in road monitor. The traffic violating vehicles

will be clearly monitored.

“CLIP” is between 0-255, the bigger the value, the stronger light inhibition effect

“Scale” is between “0-15”, the bigger the value, the brighter the image

```
HLC/BLC
HLC      OFF
CLIP LEVEL 000
SCALE      010
BLC      -
RETURN↵
```

3.8 Day/Night

a. Auto Mode

Image would be color during daytime, turn into black&white at night automatically.

```
DAY/NIGHT SETUP

BURST      OFF
DELAY CNT  | | | | | | | | | | 000
DAY→NIGHT  | | | | | | | | | | 016
NIGHT→DAY  | | | | | | | | | | 080
IR OPT     OFF
EXTON      OFF

RETURN↵
```

b. Color mode

Image would always be color regardless of the changing of the lighting.

3.9 Ezoom

User can adjust the size and position of image

```

EZOOM SETUP

MAG          ||||| 000
PAN          ||||| 512
TILT         ||||| 256

RETURN

```

3.10 Dis

This function is to shut down Ezzoom function

```

SETUP MENU 2/3

HLC/BLC      ↵
DAY/NIGHT    AUTO↵
EZOOM        ↵
DIS          OFF
PRIVACY      ↵
MOTION DET   ON↵

BACK↵        NEXT↵
EXIT↵        SAVE ALL

```

3.11 Privacy

15 areas optional, user can adjust the size, position, color, transparency of the chosen area

3.12 Motion Detection

Detection Sensitivity: 0-127.

Block Display: On/Off, the block would show up when function is turned on.

Detect area: setting related area for motion detection

Monitor area: 4 areas optional, user can adjust the position of the area.

```
MOTION DET
DETECT SENSE 111111111111111111 111
BLOCK DISP OFF
DETECT AREA ↵
MONITOR AREA ↵

RETURN↵
```

3.13 Sync Mode

Chose Next to go to the new page of Menu

```
SETUP MENU 2/3

HLC/BLC      ↵
DAY/NIGHT    AUTO↵
EZOOM        ↵
DIS          OFF
PRIVACY      ↵
MOTION DET   ON↵

BACK↵        NEXT↵
EXIT↵        SAVE ALL
```

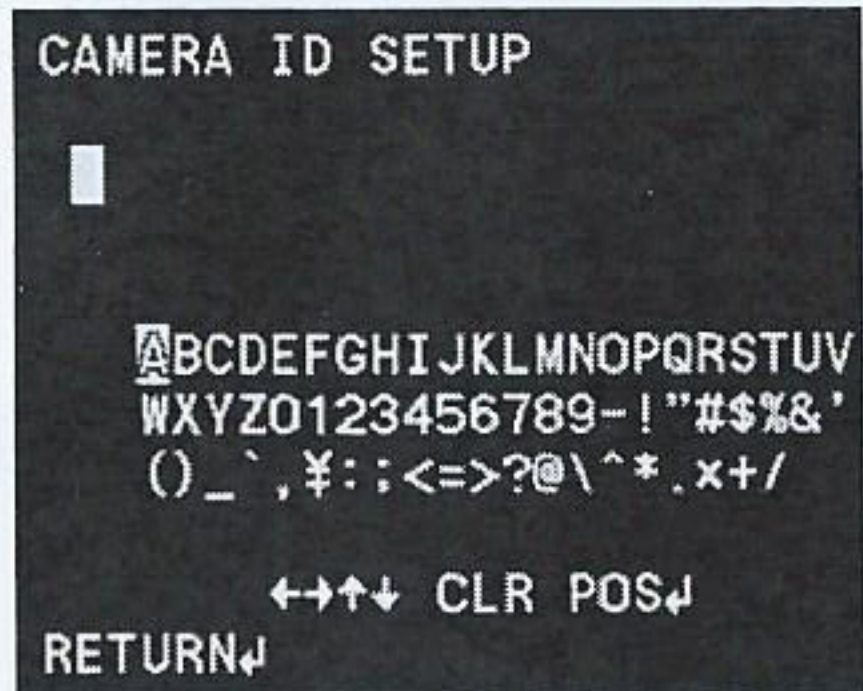
Sync Mode: default setting Internal Sync

```
SETUP MENU 3/3

SYNC          INT
CAMERA ID     ON↵
LANGUAGE      ENGLISH
CAMERA RESET
SBC ADJ       ↵

BACK↵
EXIT↵        SAVE ALL
```

3.14 Camera ID Set UP



You can set the camera code as numbers, uppercase letters, and related symbols..

“←→↑↓→” Cursor for left and right

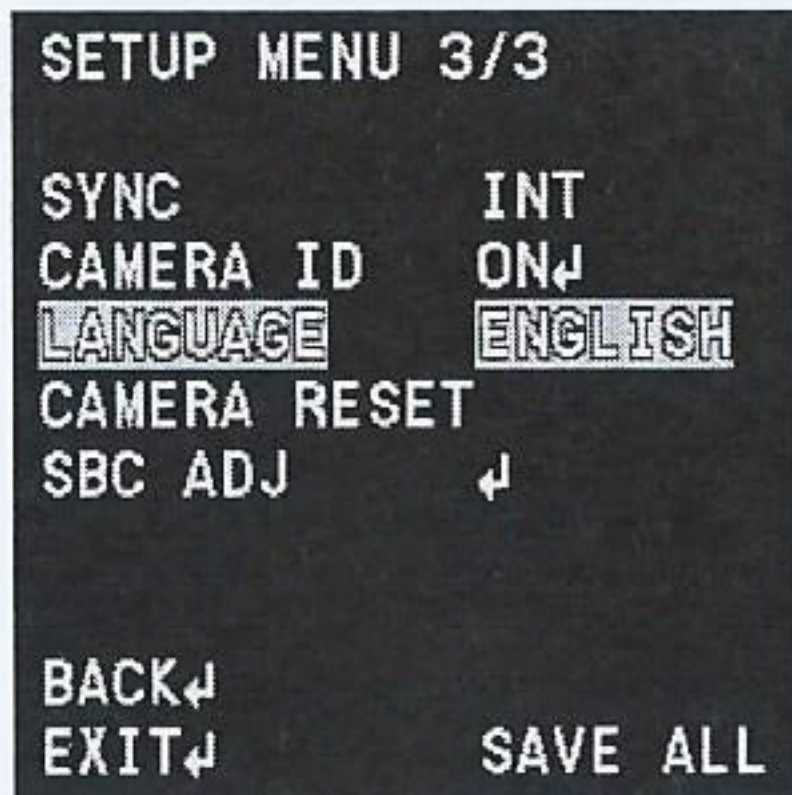
“CLR” Clear camera name

“POS” for position.

“RETURN”return to the upper menu.

3.15 LANGUAGE

Chinese/English/Japanese/Espanol /Pyccknn/Deutsch /Francaise/Portuguese Optional



3.16 Camera Reset

This function is to clear all parameters that has been saved, and return t all parameters to default setting. This process should be double confirmed by the user before resetting.

```
SETUP MENU 3/3

SYNC          INT
CAMERA ID     ON↵
LANGUAGE      ENGLISH
CAMERA RESET
SBC ADJ       ↵

BACK↵
EXIT↵        SAVE ALL
```

3.17 SBC ADJ

Dead Pixel Complete.

3.18 Return to front page

3.19 EXIT / SAVE ALL

IV Specification

Chipset	1/3" SONY DOUBLE SCAN CCD+EFFIO-P 4129 DSP
Pixels	PAL:976(H)×582(V) NTSC:976(H)×494(V)
System	PAL/NTSC
WDR	FULL FUNCTION/NORMAL/LIGHT
SYNC	INNER SYNC
Shutter	1/50~1/10000s;
AGC	AGC/ AGC + Slow shutter
S/N Ratio	>50dB (AGC OFF)
Video output	1.0Vp-p,75Ω
Resolution	700TVL
Minimum Illumination	Color 0.1Lux(F1.2,50IRE,AGC ON), B/W:0.001Lux(F1.2,50IRE,AGC ON)
D/N Switch	Color /Auto

D/N Switch time	0~255
Lens style	Manual/Auto
Privacy Zones	1~15zones
Motion Detect	4 Zones
Video output	BNC
White Balance	ATW /PUSH/User1/ User 2/ Manual/ANTI CR/PUSH LOCK
Mirror	Vertical/ Horizontal / Vertical + Horizontal /Off
Title	Can be set
Title Position	Any position on the screen
DNR	High/Medium to high/Medium/Low to medium/Low/Off
OSD	CHINESE/ENGLISH/JAPANESE/ESPANOL /PYCCKNN/DEUTSCH/FRANCAISE/PORTUGUESE
Pic contrast	0-63
Pic sharpness	0-15
Power	DC12V±10% (AC24V optional)

Operating Temperature	-10℃～50℃
Operating Humidity	<90%
Storage Temperature	-40 ⁰ ℃～+60 ⁰ ℃
Storage Humidity	20～95%

V FAQ

1. Q: No image after installation?

A: a. Check to connect the power supply correctly, whether the indicating led is always on or not;
b. Check the video cable, make sure it is workable.
c. Check if the monitor has been open.

2. Q: Image interference after installation

A: a. Check the power quality, if the adapter can't work, please replace another one.
b. Check if electromagnetic interference exists in the surroundings, please use some anti-interference devices.

3. Q: RS485 can't control menu?

A: a. Please check the controller issued code is correct;
b. Please check if the control circuit is smooth;
c. Please verify the communication address, baud rate well-matched;
d. Please check if the connection interface is loose.

4. Q: Camera image can't switch into B/W at night?

A: Please open the camera menu to see if "Day/Night Switch" is set as AUTO, if not, please change into AUTO.

5. Q: Noise is very obvious at night with low illumination.

A: please make sure AGC ON.

6. Q: The image color is abnormal.

A: a. please make sure if the white balance is correctly set as Auto White Balance.
b. Please enter the menu to restore factory settings.

7. Q: Image appears to be whiter than usual after installation?

A: a. Please check whether the lens aperture was adjusted too large, so that the image appears whiter.
b. Please verify the camera rear panel, if the regulator potentiometer is adjusted too large.

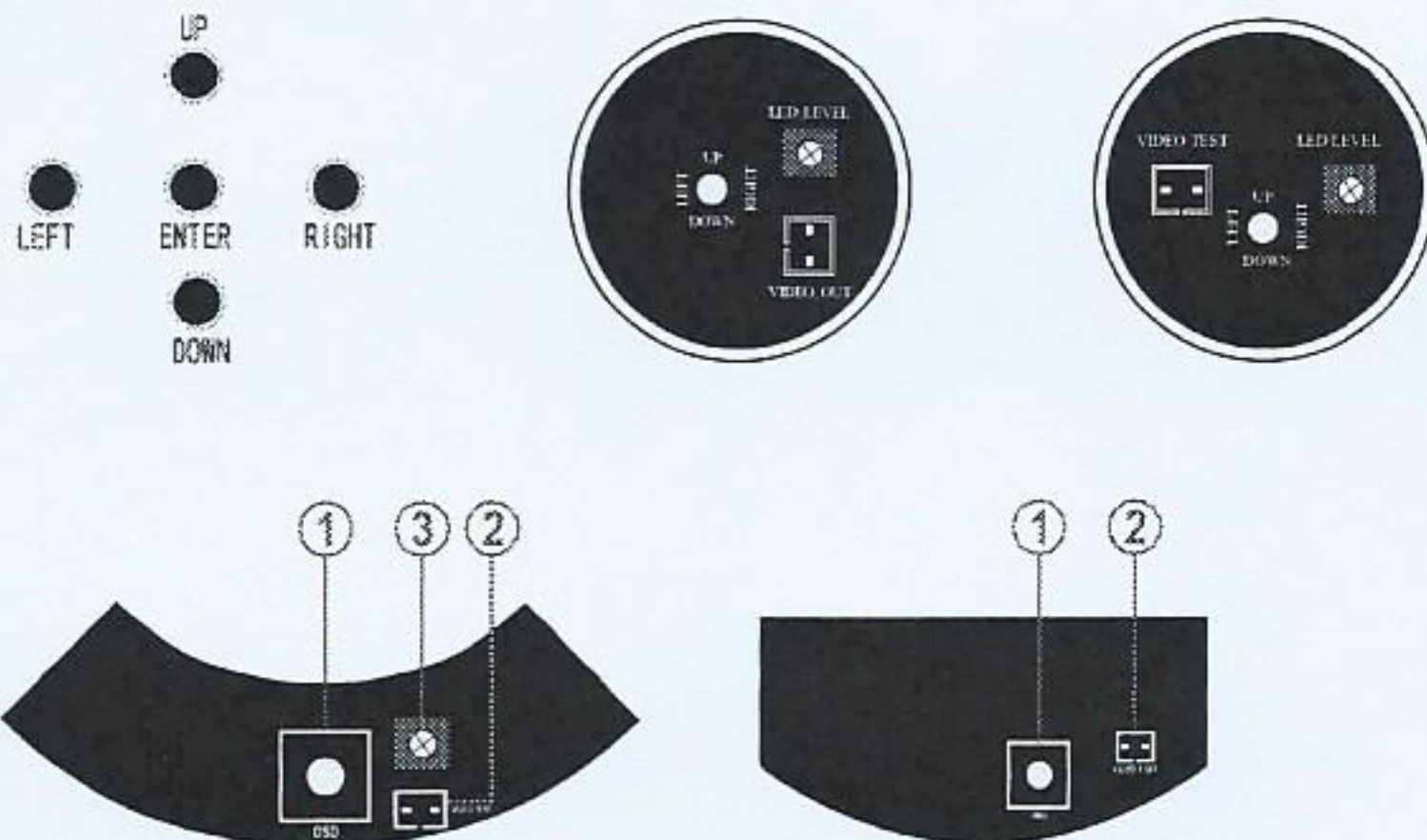
c. Check if the brightness of the monitor is too large.

8. Q: When installation, image is not clear or exist dark corners?

A: a. Please adjust focus and zoom of the lens. Make sure the focus should be adjusted in a proper way.

b. Please check if the lens is clean.

Interface Function Introduction



1	ENTER	Push the joystick down to enter OSD menu.
	UP/DOWN	Select the desired feature by using Joystick with Up / Down direction.
	LEFT/RIGHT	Change the status of the selected feature by using Joystick with Left / Right direction.
2	VIDEO TEST/ VIDEO_OUT	Additional video out for installation.
3	LED LEVEL	Adjusting brightness of IR LEDs.