

Digital Color Video Camera Operating Instruction

Thank you for the purchase of the product of our company, in order to obtain optimum effect, please read all instructions on this manual carefully before using, and keeps this manual properly for reference.



CAUTION

Electric shock hazard
Do not open



Note: in order to avoid electric shock hazard, please never remove the protective (or back cover) of the machine. There is no maintainable part inside the machine. The repair work should only be carried out by qualified personnel.



This symbol indicates that uninsulated voltage may exist inside the casing, and there is potential risk of electric shock; if it is not avoided, then low grade or moderate injury may be resulted, which is also a prompt to user for unsafe operation.



This symbol prompts you to pay attention to the important operation and maintenance instruction in attached information.

Warning

- In order to prevent damage result from fire or electric shock etc, never expose the product in water or humid place.
- This equipment will generate or utilize the energy of radio frequency; if correct methods of installation and application are not adopted, that is, the requirements of this manual are not followed strictly, then radio communication will be harmfully interfered.

Warning

1. In order to avoid incident of electric shock, please never use power supply other than stipulation.
2. Never place or install the camera on unstable place, support, tripod, bracket or platform. Otherwise, serious personnel hurt or equipment damage may be resulted.
3. When cleaning is carried out, power off firstly, then use a dry soft cloth to wipe off the dirt on camera; if it is very dirty, then use furniture cleaner to remove the dirt. Never drop water on the component of the product. (Otherwise, electric shock or fire may be resulted).
4. Never install this device at humid, dusty or smoky place, otherwise electric shock or fire may be resulted.

Never place conductor (such as: screwdriver, iron wire or metal) or container filled with water on the camera.

Precautions

1. Never drop the camera on ground or subject to intense impact and vibration, away from intense vibration and place with electromagnetic interference.
2. Never install the equipment in too warm or too cold environment, the recommended using temperature is between -5°C and 60°C.
3. If it is required to move the installed product, please power off before moving and reinstallation.
4. Prevent the camera from direct sun light, otherwise CCD may be damaged.
5. Install the equipment at ventilated place, and prevent hot source.
6. When the camera is installed outdoors, because of temperature difference between indoor and outdoor, moisture may appear inside camera. Therefore, we recommend you to install the camera indoors. When it is necessary to install the camera outdoors, please use camera embedded with fan or heating device.

Repair and failure description

1. Disconnect the power supply of camera, and have the equipment repaired by qualified maintenance personnel under the following conditions:

- a If power cable or plug is damaged.
- b If the camera is wetted by rain or water.
- c If liquid splashes into camera or object drops into camera.
- d If you do not carry out conventional operation to the camera according to the operation instruction (note that only the control mechanism involved in the operation instruction can be adjusted, because if incorrect adjustment is carried out to other control mechanism, then the equipment may be damaged, and it can be restored to normal state only through further repair by qualified technical personnel).
- e If the camera drops to the ground, or the casing is damaged.
- f If the camera has obvious variation in performance.

2. During the process of operation, if abnormal phenomenon (abnormal sound, smell or smoke) or failure (no image etc) occurs, please immediately stop the using of camera and power off, then contact the nearest distributor or the supplier of the area.

3. Please don't dismantle or modify this product by any method. Any variation or modification activity unauthorized by the manufacturer will result in canceling the right of user to operate the equipment. (The problem caused by unauthorized dismantle or repair by user is not covered by guarantee).

4. If there is very bright area on object, then vertical or horizontal bright line will appear on the screen. This is called "flare", which is a common phenomenon occurred in solid camera tube very often, it is not a failure.

Brief introduction

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Product properties:

◆ High definition

Adopt 1/3" SONY Exview HAD II 960H CCD, which has colored 650 lines (black & white 700 lines) high definition, high sensitivity picture quality.

◆ High Light Constraint (HLC)

This function is mainly used to screen the lighting of head lamp of vehicle, so as to achieve correct exposure, so that the machine can shoot well defined car license plate.

◆ Adaptive Tone scale Repetition (ATR)

In the scenery area being shot, carry out automatic brightening compensation to dulling part, so that the whole picture will be more clear and bright.

◆ Noise Reduction (NR)

2D digital noise reduction function, it can effectively eliminate video noise points and color noise points, so that the picture will be cleaner.

◆ Day/Night switching

You can select auto, color or black & white modes; user can set it by himself to satisfy his requirement.

◆ Color rolling constraint

When camera is used under fluorescent lamp, this function can be used to eliminate circular rolling phenomenon of color from white to blue, pink and then to white again, so as to achieve more stable picture.

◆ Back Light Compensation (BLC)

When the background of the object being shot is very bright, this function can be used to compensate the dulling part of the object being shot resulted from back light, so that the foreground will be brighter.

◆ Privacy area screening

Up to 4 screening areas can be set at the same time, the area range and position can be adjusted, the color and transparency of screening area can be adjusted, mosaic function.

◆ Motion detection

When the range of video obtained by camera is abnormal, a trigger signal will be output as an alarm and switch.

◆ OSD menu

You can set as English, Japanese, German, French, Polish, Portuguese, Spanish, and Chinese.

Brief introduction

Technical parameters

Type		
Imaging device	PAL	NTSC
	1/3" Exview HAD CCDII	
Effective pixel	976×582	976×494
Horizontal definition	650 TVL	
Synchronization system	Internal	
Automatic exposure	DC / Manual	
Automatic white balance	ATW / PUSH / USER / MANUAL	
Automatic gain control	Yes	
Gamma correction	0.45	
Video signal to noise ratio	More than 52dB	
Lowest illumination	0.05 Lux(F1.2)	
Back light compensation	BLC / HLC / OFF (default:OFF)	
Shutter control	Yes	
Day/night mode	Color/BW/Auto Switch	
Mirror image	OFF	
Menu	Yes	
Hidden screening	4 zone	
Motion detection	24×16 blocks	
Video output	Composite 1 Vp-p/75 Ohms	
Power supply input	DC 12V ±10%	
Power consumption	120mA±5%	
Working temperature	-20°C ~ 60°C	
Working humidity	80% RH	

Brief introduction

Technical parameters

Type		
Imaging device	PAL	NTSC
	1/3" Sony Super HAD CCD II	
Effective pixel	752×582	768×492
Horizontal definition	600 TVL	
Synchronization system	Internal	
Automatic exposure	DC / Manual	
Automatic white balance	ATW / PUSH / USER / MANUAL	
Automatic gain control	Yes	
Gamma correction	0.45	
Video signal to noise ratio	More than 52dB	
Lowest illumination	0.05 Lux(F1.2)	
Back light compensation	BLC / HLC / OFF (default:OFF)	
Shutter control	Yes	
Day/night mode	Color/BW/Auto Switch	
Mirror image	OFF	
Menu	Yes	
Hidden screening	4 zone	
Motion detection	24×16 blocks	
Video output	Composite 1 Vp-p/75 Ohms	
Power supply input	DC 12V ±10%	
Power consumption	120mA±5%	
Working temperature	-20°C ~ 60°C	
Working humidity	80% RH	

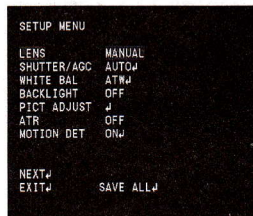
Brief introduction

Technical parameters

Type		
Imaging device	PAL	NTSC
	1/3" Sony Super HAD CCD II	
Effective pixel	512×582	510×492
Horizontal definition	480 TVL	
Synchronization system	Internal	
Automatic exposure	DC / Manual	
Automatic white balance	ATW / PUSH / USER / MANUAL	
Automatic gain control	Yes	
Gamma correction	0.45	
Video signal to noise ratio	More than 52dB	
Lowest illumination	0.05 Lux(F1.2)	
Back light compensation	BLC / HLC / OFF (default:OFF)	
Shutter control	Yes	
Day/night mode	Color/BW/Auto Switch	
Mirror image	OFF	
Menu	Yes	
Hidden screening	4 zone	
Motion detection	24×16 blocks	
Video output	Composite 1 Vp-p/75 Ohms	
Power supply input	DC 12V ±10%	
Power consumption	120mA±5%	
Working temperature	-20°C ~ 60°C	
Working humidity	80% RH	

Description of menu functions

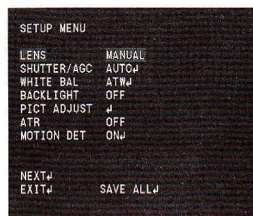
◆ Main menu is as follow:



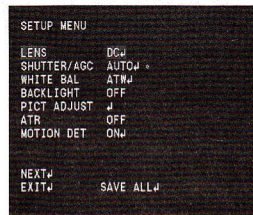
◆ Lens

You can select Manual, Auto lens.

Select **【Manual】** in Lens type, as follow:

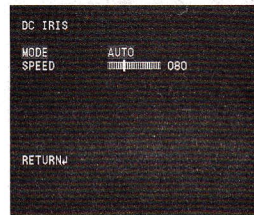


Select **【DC】** in Lens type, as follow:



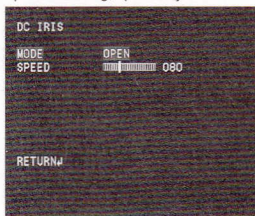
Select DC Lens to enter submenu as follow:

Auto DC iris setting, speed adjust: 0~255.

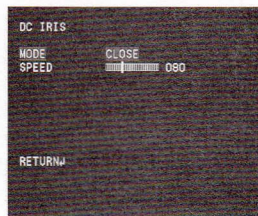


Description of menu functions

Open iris setting, speed adjust: 0-255.



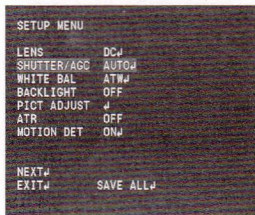
Close DC iris



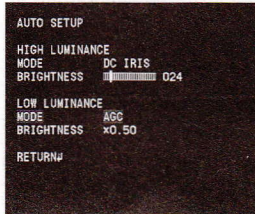
◆ Shutter/Automatic Gain Control

This function can be set as Manual, Auto.

The main menu of setting auto mode is as follow:



Set the submenu of automatic gain as follow:



When the light is dark, adjust gain value to affect the brightness of image.

The higher the gain value, the brighter the image brightness.

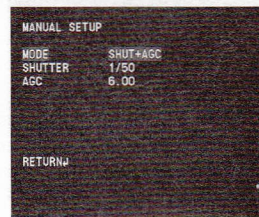
Brightness: x0.25, x0.5, x0.75, x1.00.

Description of menu functions

The main menu of setting manual mode is as follow:



Select [Manual] to enter submenu as follow:



Mode fixing: Shutter + AGC.

Shutter: 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000.
Automatic Gain: 6.00, 12.00, 18.00, 24.00, 30.00, 36.00, 42.00, 44.80.

◆ White balance setting

White balance setting can be adjusted continuously according to the difference of color temperature of object being shot; the white balance will be adjusted automatically according to existing environmental color.

This function can be set as ATW, Push, User 1/2, Anti Color Rolling, Push Lock, and Manual.

The main menu of ATW mode is as follow:



Select [ATW] to enter submenu as follow:



In outdoor environment, the color temperature is between 2500K ~ 9500K, which is suitable to use ATW auto-tracing white balance mode

Speed: 0-255.

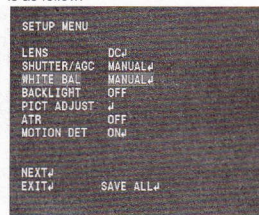
Delay control: 0-255.

Auto-tracing white balance: x0.50, x1.00, x1.50, x2.00

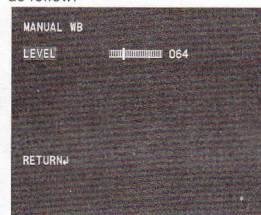
Environmental options: indoor, outdoor.

Description of menu functions

The main menu of setting manual mode is as follow:

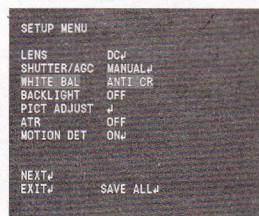


Select **【Manual】** to enter submenu as follow:



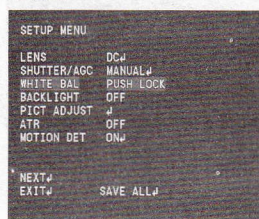
Level: 30~93

The main menu of setting Anti Color Rolling mode is as follow:

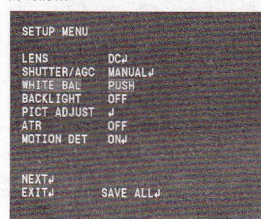


When camera is used under fluorescent lamp, this function can be used to eliminate circular rolling phenomenon of color from white to blue, pink and then to white again, so as to achieve more stable picture.

The main menu of setting Push Lock is as follow:

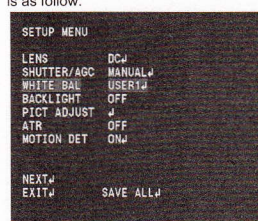


The main menu of setting Push is as follow:



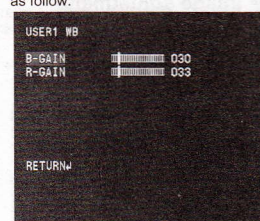
Description of menu functions

The main menu of setting User Customize as follow:



You can set 2 users.

Select **【User 1/2】** to enter submenu as follow:

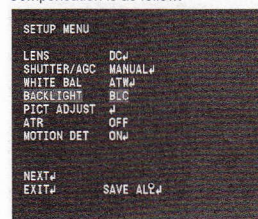


User can adjust blue/red gain according to existing environment.
B gain adjust: 0~255.
R gain adjust: 0~255.

◆ Back light setting

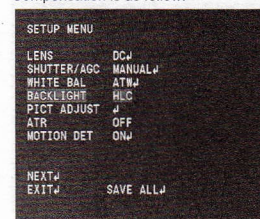
If the scenery is in the environment with strong background light, then you can select "Back light compensation" to carry out back light compensation setting to automatically adjust the brightness of scenery, so that the scenery will not be too dark, so as to achieve well defined image. If the object being shot has very strong light, then you can select "High light compensation" to reduce the exposure rate of the object, so as to achieve well defined image. Note: "Brightness compensation" is mainly used to constraint the strong light of car lamp at night. This function can be set as back light compensation, high light compensation.

The main menu of setting Back Light Compensation is as follow:



When the background of the object being shot is very bright, this function can be used to compensate the dulling part of the object being shot resulted from back light, so that the foreground will be brighter.

The main menu of setting High Light Compensation is as follow:

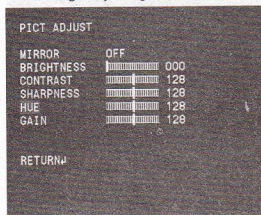


This function is mainly used to screen the lighting of head lamp of vehicle, so as to achieve correct exposure, so that the machine can shoot well defined car license plate.

Description of menu functions

◆ Image adjustment

You can make adjustment through the following options: Mirror, Brightness, Contrast, Sharpness, Hue, Gain.
Enter image adjusting submenu as follow:

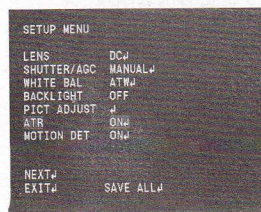


Mirror adjust: ON, OFF. (horizontal adjust)
Brightness adjust: 0~255.
Contrast adjust: 0~255.
Sharpness adjust: 0~255.
Hue adjust: 0~255.
Gain adjust: 0~255 (color saturation adjust)

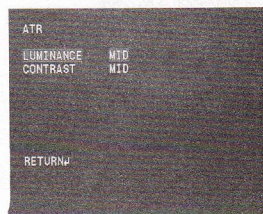
◆ Adaptive Tone scale Repetition

In the scenery area being shot, carry out automatic brightening compensation to dulling part, so that the whole picture will be more clear and bright.

Open the main menu of Adaptive Tone scale Repetition as follow:



Enter 【Adaptive Tone scale Repetition】 submenu as follow:



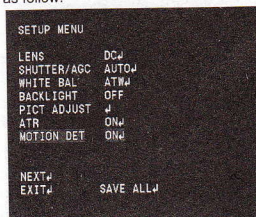
Luminance: high, low, middle
Contrast: high, middle, low
middle, middle on the right

Description of menu functions

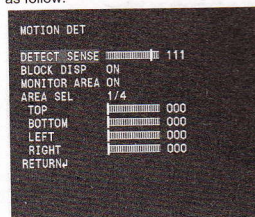
◆ Motion detection setting

When the range of video obtained by camera is abnormal, a trigger signal will be output as an alarm and switch.

Open the main menu of Motion Detection as follow:



Set Motion Detection submenu as follow:

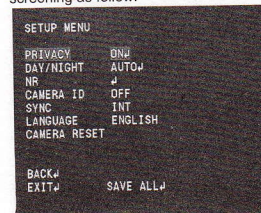


Detection sensitivity: 0~127.
Block display: ON, OFF.
Monitor area: ON, OFF.
Area select: up to 4 areas can be set.
Top: 0~288. Bottom: 0~288.
Left: 0~468. Right: 0~468.

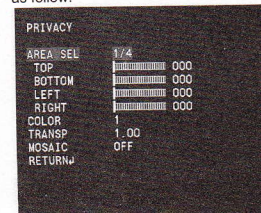
◆ Privacy area screening

You can set to hide part area. Up to 4 screening areas can be set at the same time, the area range and position can be adjusted, the color and transparency of screening area can be adjusted, mosaic function.

Open the main menu of Privacy area screening as follow:



Set Privacy area screening submenu as follow:



Area select: up to 4 areas can be set.
Top: 0~288. Bottom: 0~288.
Left: 0~468. Right: 0~468.
Color: 1~8.
Transparency of screening: 0.5, 0.75, 1.00.
Mosaic: ON, OFF.

Description of menu functions

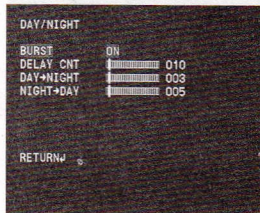
◆ **Day/Night mode**

You can select auto, color or black & white modes; user can set it by himself to satisfy his requirement.

Set auto mode as follow:



Auto mode submenu is shown as follow:



Auto mode can be used to switch the image at night or in low illumination condition to black & white mode.

Burst: ON, OFF.

Delay control: 0~255.

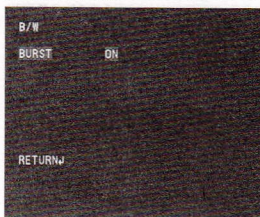
Day Night: 0~255.

Night Day: 0~255.

The main menu of setting Black/White mode is as follow:



The main menu of setting Black/White mode is as follow:



Burst: ON, OFF.

Description of menu functions

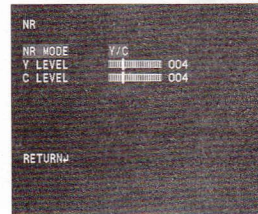
The main menu of setting Color mode is as follow:



◆ Noise Reduction

2D digital noise reduction function, it can effectively eliminate video noise points and color noise points under the extreme light condition of low illumination, so that the picture will be cleaner.

Enter 2D Noise Reduction menu as follow:



Adjust the levels of C and Y.

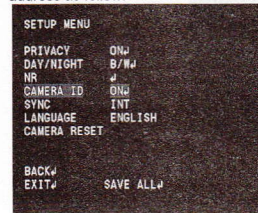
Noise reduction mode: Y/C, Y, C, OFF.

Y Level: 0~15

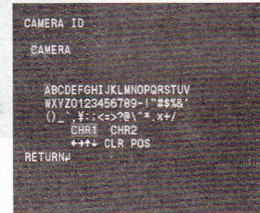
C Level: 0~15

◆ Camera identification code

Open the main menu of Camera ID
address as follow:



The submenu of setting Camera ID address is as follow:

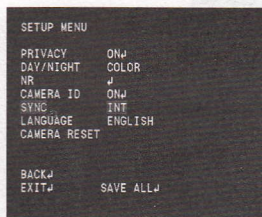


User defined ID address, CLR POS (clear ID)

Description of menu functions

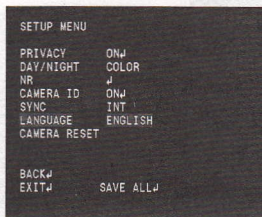
◆ Synchronization mode (internal synchronization)

Power supply synchronization mode, more stable in multiple cameras switching, colorless rolling, and AC24V optional. As shown below:



◆ Language setting

You can set as English, Japanese, German, French, Polish, Portuguese, Spanish, and Chinese. As shown below:



Description of menu functions

◆ Camera reset

When Camera Reset is selected, the camera will be restored to factory setting. As shown below:



Note: