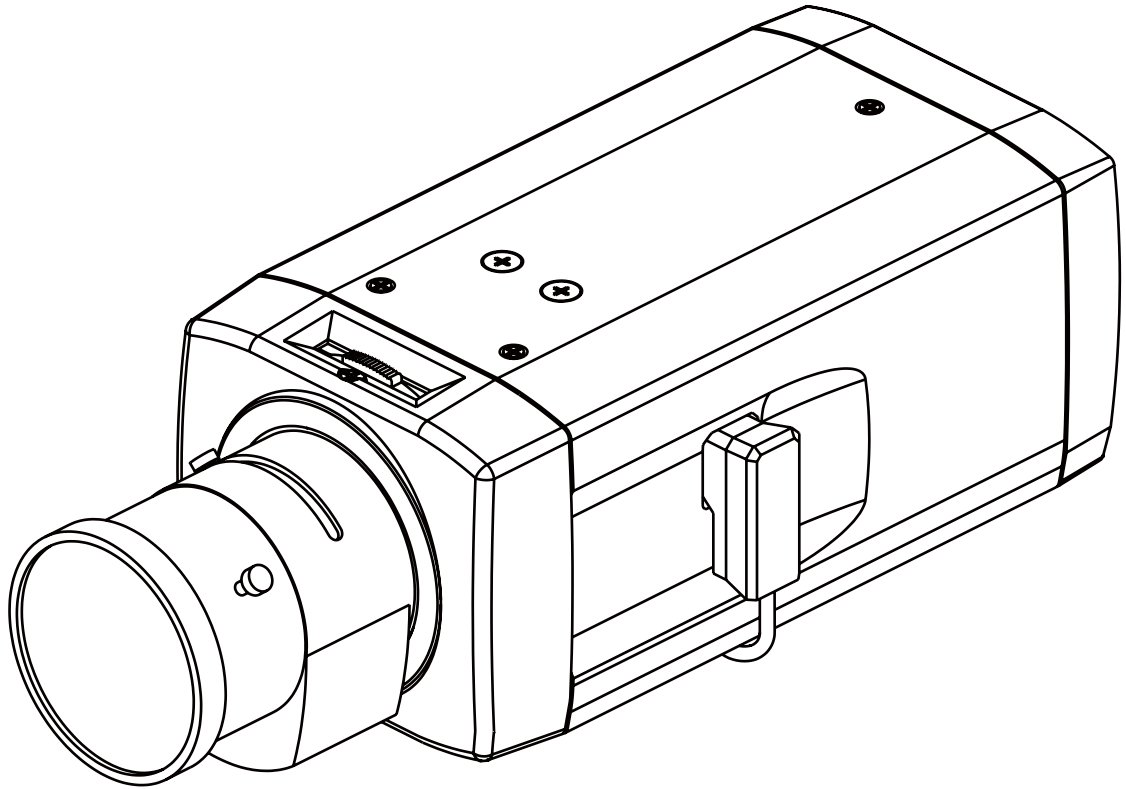


Day&Night Hi-Res Colour CCD Camera



ZEIM-0050696G A.3

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IMPORTANT SAFETY INSTRUCTIONS

1. CAUTIONS

- 1) Do not touch the imaging surface of sensor. Use soft cloth moistened with alcohol to clean the surface if it is touched accidentally.
- 2) Ensure the supply voltage is correct as specified for the particular variant of camera before operation.
- 3) Do not expose the camera to rain, moisture or to temperature outside the specified limit, without a suitable housing.
- 4) Avoid focusing directly on the sun.
- 5) Do not attempt to service this unit yourself unless you are authorised to do so. Opening the camera may expose you to dangerous voltages or other hazards. Refer all servicing to qualified personnel only.

- 6) If connected to the mains :
THIS APPARATUS MUST BE EARTHED.
The wires on the mains lead are in accordance with the following code :
GREEN/YELLOW -----Earth
BLUE -----Neutral
BROWN -----Live
- 7) Warranty void if the S/N label on camera is removed.

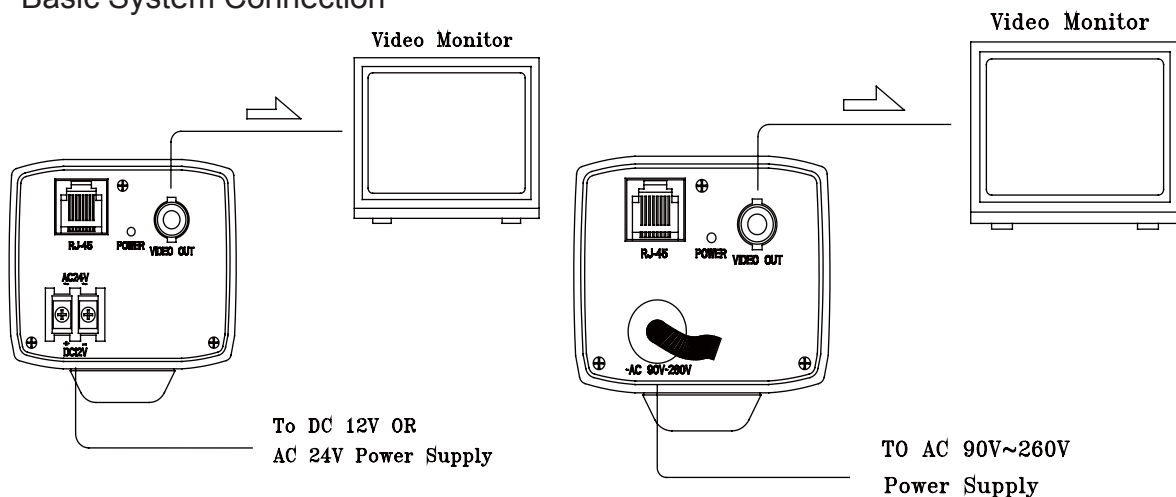
2. SYSTEM COMPONENTS

Camera -----	1
Instruction Manual -----	1
Lens Mounting Cap -----	1
Hexagonal Wrench -----	1
AI Lens 4-pin Plug -----	1

NOTES OF USE

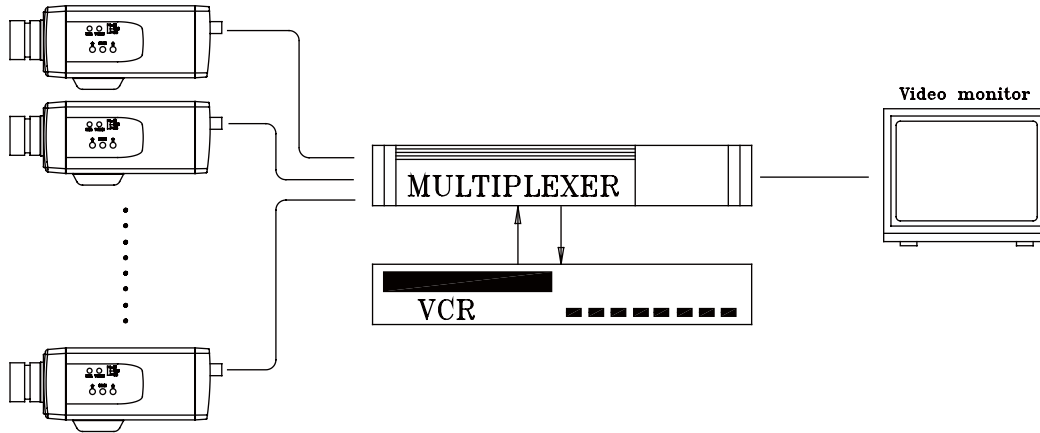
3. SYSTEM CONNECTION

3.1 Basic System Connection



NOTES OF USE

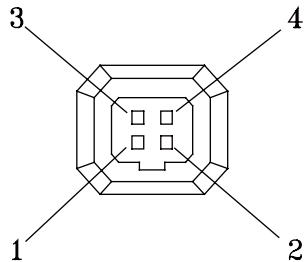
3.2 Extended System Connection



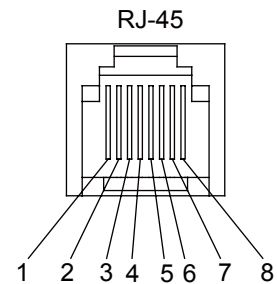
4 PIN CONNECTIONS

IRIS PIN DEFINITIONS

	VIDEO	DC
1	+12V	DAMP - (y)
2	NC	DAMP + (r)
3	VIDEO	DRIVER + (wh)
4	GND	DRIVER - (g)



Pin	Function
1	DATA + (RS-485)
2	DATA - (RS-485)
3	PREDTMS
4	C/L
5	GND
6	B/W
7	GND
8	POWER(+5V)



5. PARTS NAMES & FUNCTIONS

- 1) Lens Mount (CS Mount) :
For installation of CS Mount lenses only.
- 2) Tripod Stand :
Application for camera mounting onto the camera holder. Effective for general camera tripods.
- 3) Exposure Control :
 - a. Auto IRIS mode (two types of lens are appropriate for this function):

DC IRIS lens :
Set the IRIS slide switch to the DC position and adjust the LEVEL control on the side panel to obtain a clear picture.

Video IRIS lens : Set the IRIS slide switch to the VIDEO position and adjust the LEVEL and ALC controls on the lens to obtain a clear picture.

- b. Automatic Electronic Shutter (AES) :
Set the IRIS slide switch to the AES position to automatically adjust the shutter speed according to the subjects brightness.
- 4) V-PHASE Adjustment
When using two cameras or more, the image on the monitor may roll vertically when switching sources. This rolling can be minimized by adjusting this controller.

NOTES OF USE

5) DC IRIS LEVEL Adjustment

If using a DC type auto-iris lens, you will need to set the LEVEL volume. Turn counterclockwise (L) for a darker picture. Turn clockwise (H) for a brighter picture.

b. Focus Adjustment :

Adjust this dial to obtain correct back-focus whilst using a CS mount lens.

6) Back-Focus Adjustment :

a. Back Focus Screw :

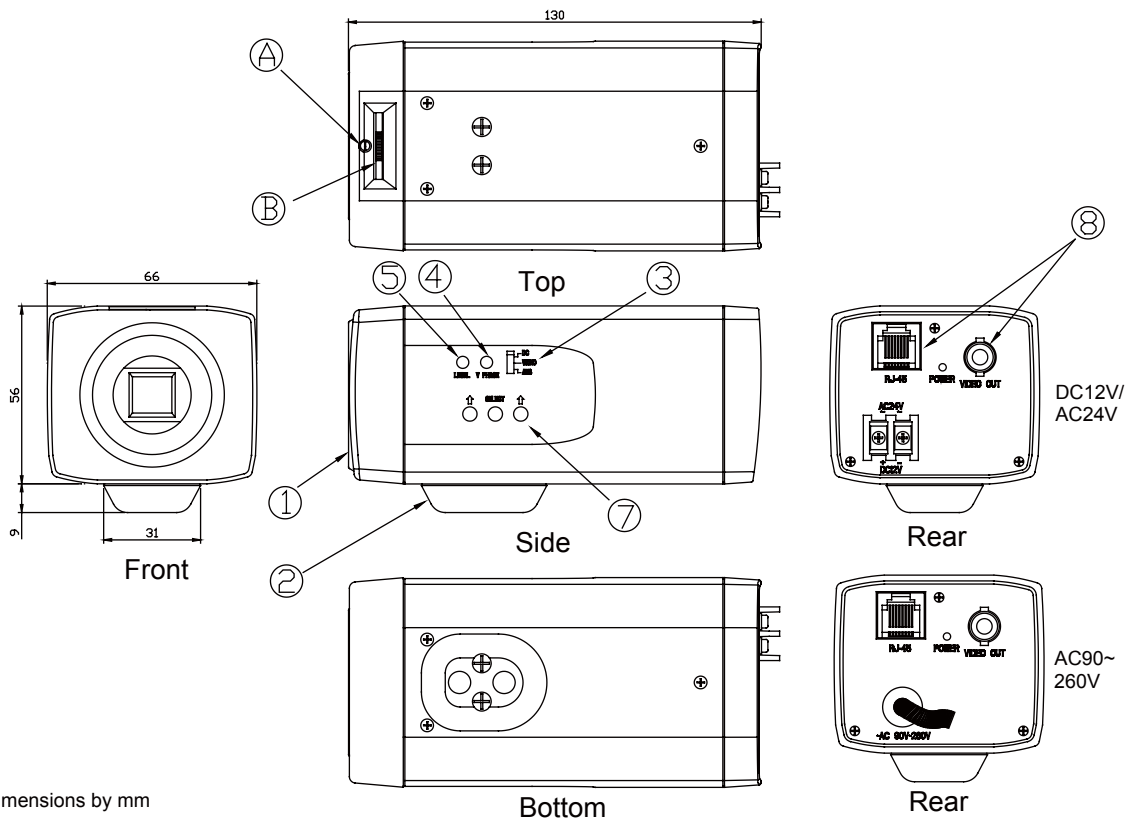
Loosen this screw before using the Focus Adjustment and to maintain correct focus afterwards ensure it is tightened.

Menu / Set-up Buttons :

For menu access and adjustment.

Video Output Terminal (BNC) :

Used to give out the video signal. Connected to the video input terminal of a monitor, switcher, etc. (to be terminated with 75 ohm impedance).



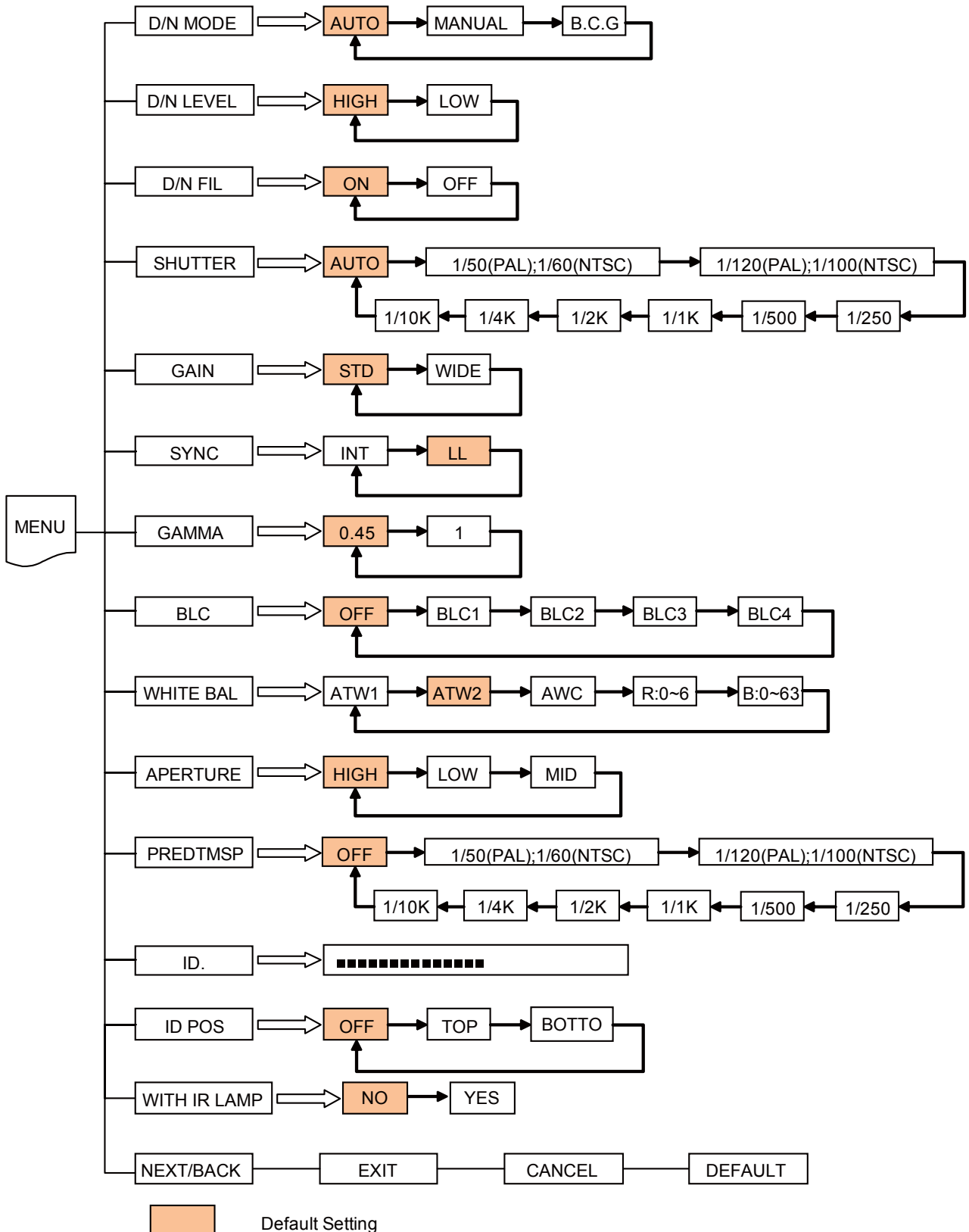
All dimensions by mm

6. PUSH BUTTONS AND THEIR FUNCTIONS

Switch Name	Main Function
↑	Function / Adjustment select (UP)
↓	Function / Adjustment select (DOWN) Continue to press more than 2 seconds to access SUB MENU
Select	Menu access, function select

SETUP PROCEDURES

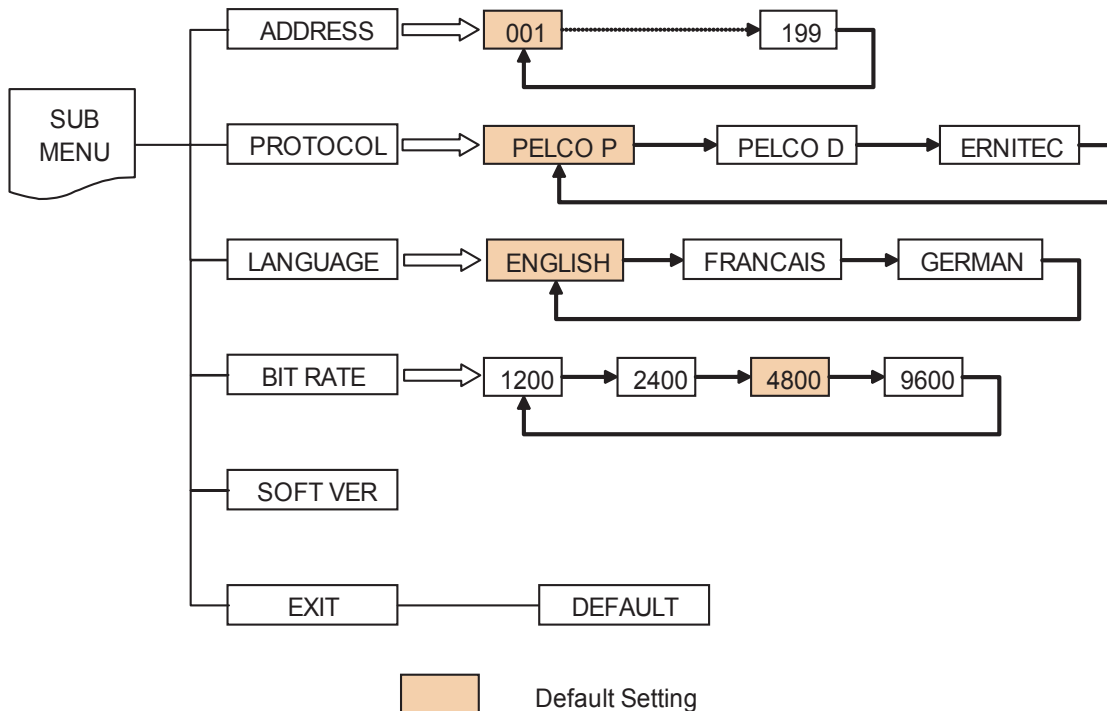
7. SETTING MENU



SETUP PROCEDURES

8. SUB MENU

Press and hold the ↑ button on the side of the camera body for about 2 seconds until the menu appears on the monitor. The blinking area represents the option to be set.



Note :

All of functions in SUB MENU are used for connection with remote control box (Optional) or PC Software.

9. OSD FUNCTION DESCRIPTION

SETTING MENU

1) D/N MODE :

AUTO : When set to this mode, the camera will change to COLOUR mode and B/W mode automatically according to a subject's brightness.

MANUAL : When set to this mode, the camera will remain in COLOUR or B/W mode by MANUAL selection.

B.C.G : When set to this mode, the camera will change to COLOUR mode and B/W mode manually according to a RJ-45 B,C,G commands.

2) D/N LEVEL :

Set up a switch-over point from B/W mode to COLOUR mode. Use the SELECT button to select HIGH or LOW Under the AUTO mode, the switchover point of brightness from COLOUR mode to B/W is 1.5 lux.

LOW : The switchover point of brightness from B/W to COLOUR mode is 4.5 lux.

HIGH : The switchover point of brightness from B/W to COLOUR mode is 7.5 lux.

(To switch between Colour mode and B/W mode within a short time, use this setup.)

SETUP PROCEDURES

3) D/N FIL :

ON : Y-signal filter of CCD output is narrow in B/W mode. In this position, the horizontal resolution is 480TV lines.

OFF : Y-signal filter of CCD output is wide in B/W mode. In this position, the horizontal resolution is 600TV lines. (If there is horizontal noise in B/W mode, set to ON)

4) SHUTTER :

Selection of shutter speed from AUTO to 1/10K. Sequentially contains AUTO, 1/50(PAL) or 1/60(NTSC), 1/120(PAL) or 1/100(NTSC), 1/250, 1/500, 1/1K, 1/2K, 1/4K, 1/10K.

When the slide switch is set to :

AES Mode : Shutter will be able to select from AUTO to 1/10K.

DC/VIDEO Mode : Shutter will be able to select from 1/50(PAL) or 1/60(NTSC) to 1/10K.

5) GAIN :

STD :Standard position, GAIN=22dB.

WIDE :High-sensitivity position, GAIN=30dB.

6) SYNC :

INT : The camera is in the internal SYNC mode.

LL : The camera is in the LineLock Mode. Adjusting degrees by V-PHASE control on the side panel.

7) GAMMA :

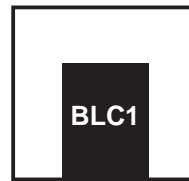
Selection of GAMMA curvature for GAMMA correction. 0.45 and 1 are able to select.

8) BLC :

Selection of backlight compensation mode.

OFF : The BLC function is off.

Backlight compensation window is like



(Bottom-Centre Window)



(Centre Window)



(Bottom Window)



(Top Window)

9) WHITE BAL :

ATW1(INDOOR) :

TTL auto trace white balance algorithm is designed to implement a perfect colour reproduction. Colour temperature range is 2600°K~6000°K.

ATW2(OUTDOOR) :

TTL auto trace white balance algorithm is designed to implement a perfect colour reproduction. Colour temperature range is 2500°K~9500°K.

The white balance is automatically adjusted, within 3 seconds, to the correct colour temperature of the environment.

MANUAL :

Manually adjust the R and B (red&blue) values.

10) APERTURE :

Selection of picture sharpness (HIGH, LOW, MID).

11) PREDTMSP :

(Pre-determined shutter speed)

Preset of shutter speed. When external controller active this function, shutter speed will be change to preset value.

(Manually according to a RJ-45 PREDTMSP command.)

SETUP PROCEDURES

- 12) ID. :
16 characters Max. (alpha-numeric).
Using to name each camera.
- 13) ID POS :
OFF : No ID display.
TOP : Display the ID in the top left of screen.
- 14) WITH IR LAMP
Use enter to get into the submenu.
Using LEFT/RIGHT button, to choose YES or NO.
*When the environment with extra IR lights, the ICR filter may hunt continually. If it occurs, turning this function YES is able to fix this issue.
**The default setting is NO.
- 15) NEXT BACK :
Selection of next page and last page.
- 16) EXIT :
Save all settings and exit.

- 17) CANCEL :
Reset back to original settings.
- 18) DEFAULT :
Recall factory settings.

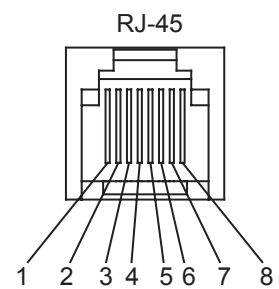
10. SYSTEM EXTENSIONS

10.1 Connection with Remote Control Box (Optional)

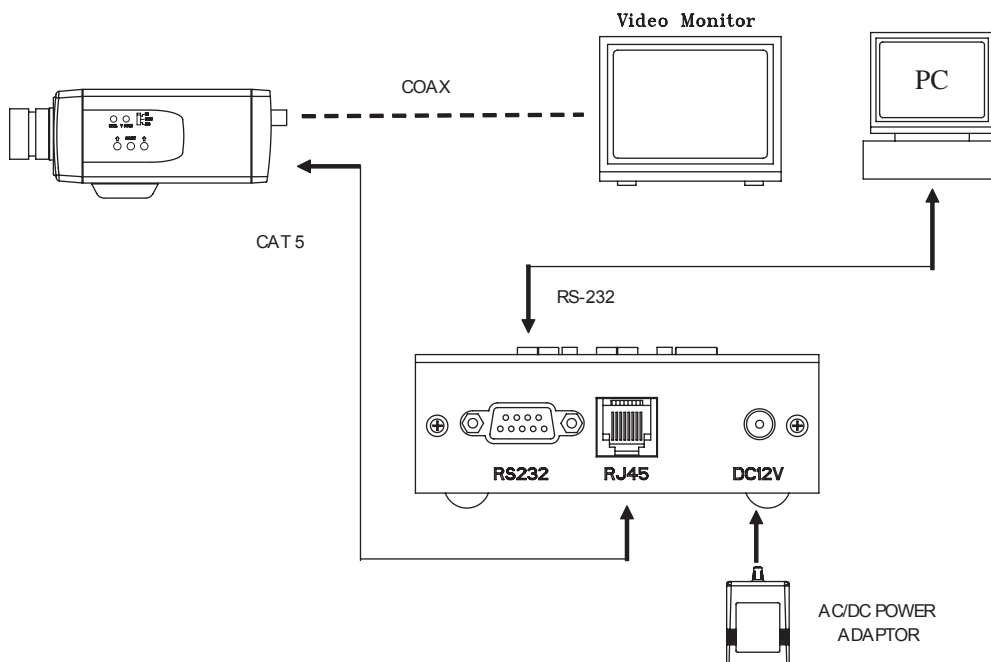
To connect this camera with Remote Control Box to obtain more function. (B.C.G Control, PREDTMSP, 4 Alarm-In, 2 Alarm-Out ...etc.)

10.1-1 Camera & Control Box RJ-45 Pin define :

Pin	Function
1	DATA + (RS-485)
2	DATA - (RS-485)
3	PREDTMSP
4	C/L
5	GND
6	B/W
7	GND
8	POWER(+5V)

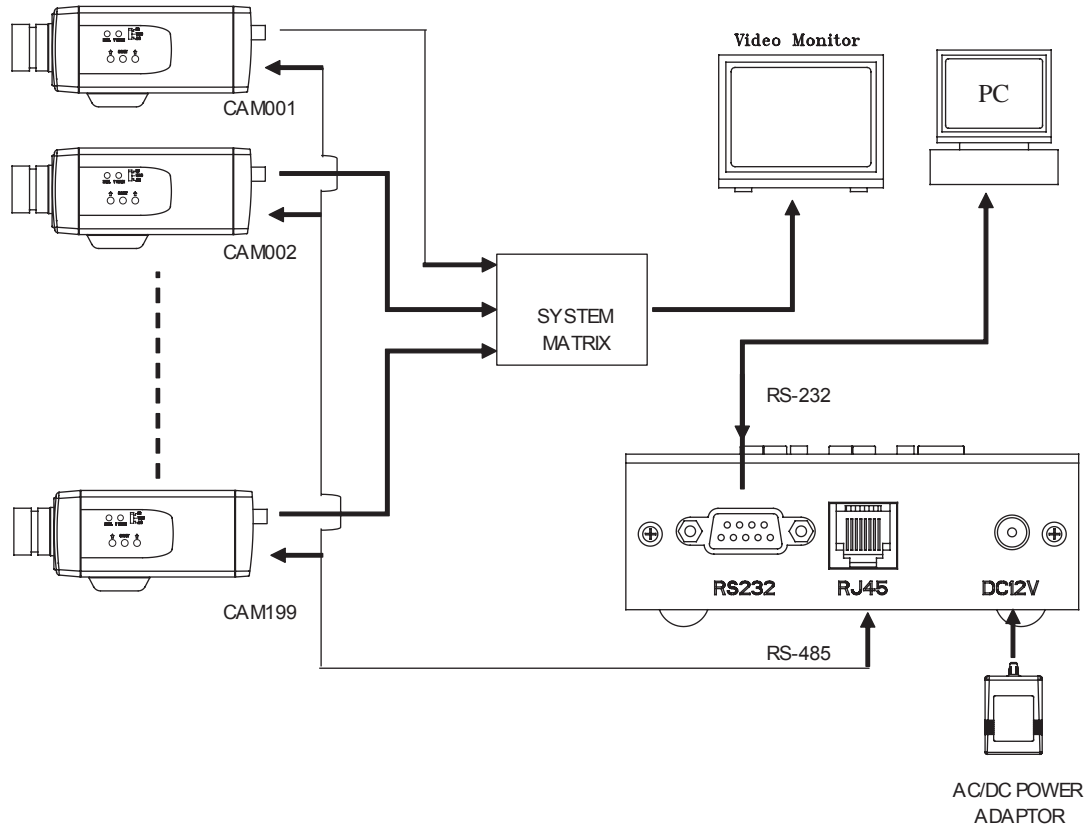


10.1-2 Single Camera Installation :



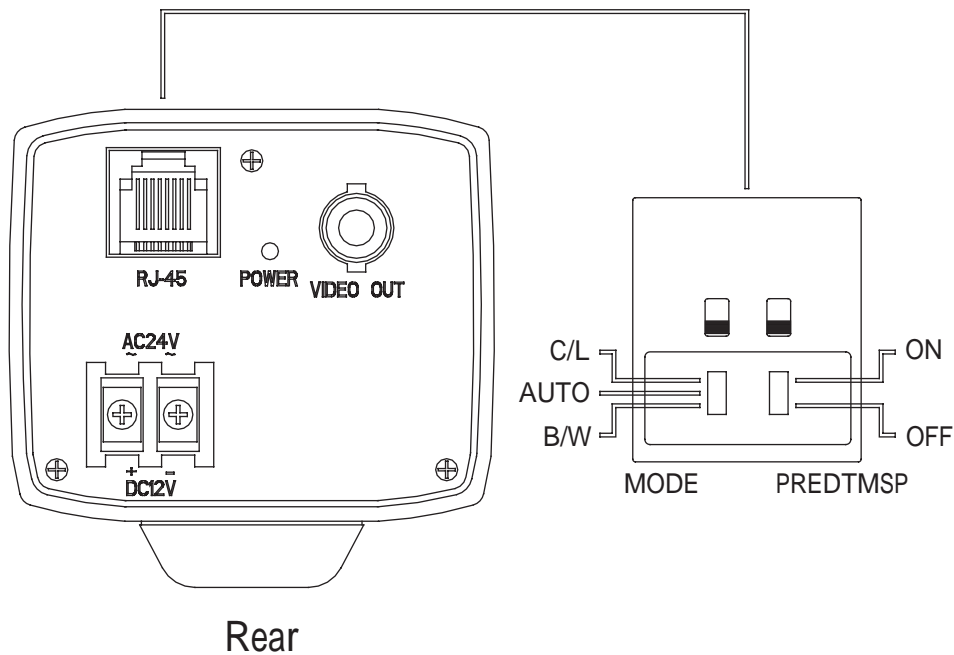
SETUP PROCEDURES

10.1-3 Multi-Camera Installation :



10.2 Connection with Switcher Box (Optional)

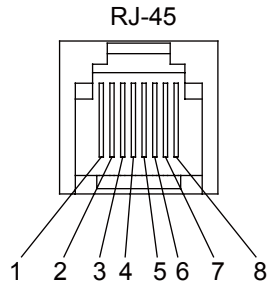
To connect this camera with Switcher Box to obtain simple control function.
(B.C.G Control and PREDTMSP)



SETUP PROCEDURES

10.3 B.C.G & PREDTMSP Control

Pin	Function
1	DATA + (RS-485)
2	DATA - (RS-485)
3	PREDTMSP
4	C/L
5	GND
6	B/W
7	GND
8	POWER(+5V)



B.C.G function :

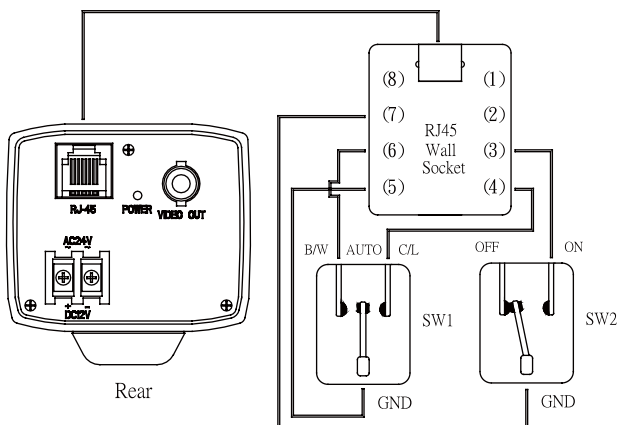
When D/N MODE set to B.C.G mode, the camera will change to COLOUR MODE and B/W MODE manually according to a RJ-45 B.C.G commands.

Control Terminal			Image
B = Pin 6	C = Pin 4	G = Pin 5	
H (OFF)	H (OFF)	GND	Auto
L (ON)	L (ON)	GND	
H (OFF)	L (ON)	GND	Colour
L (ON)	H (OFF)	GND	Black and White

PDSP(PREDTMSP, Pre-determined Shutter Speed) function :

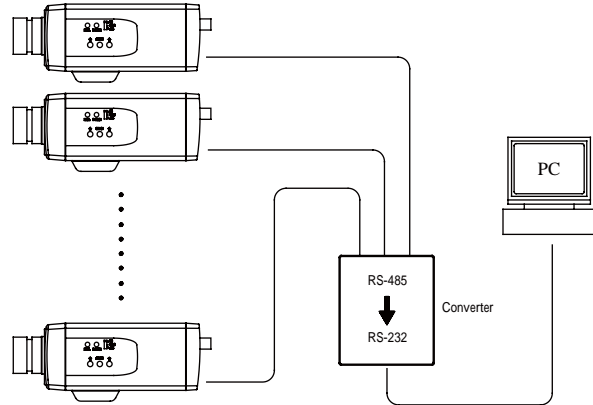
According to a RJ-45 PDSP commands, the shutter speed will manually change to Pre-determined shutter speed which is set in OSD menu.

Control Terminal		PREDTMSP
Pin 3	Pin 7	
H (OFF)	GND	OFF
L (ON)	GND	ON



Note :SW1&SW2 symbolise electronic switching (PIR) or manual switching (Voltage free contact).

10.4 Connection with PC (Optional)



To connect this camera with PC and control it by PC software RS-232. This converter is not a standard or optional accessory, but it's easy to obtain in the market conditions.

SPECIFICATIONS

Signal system	NTSC		PAL	
Image system				
Imaging area	4.9mm x 3.7mm			
Image pickup device	1/2"-type exview CCD			
Effective pixels(HxV)	768 x 494		752 x 582	
Electric				
Scanning system	2:1 Interlace V: 59.94Hz,		2:1 Interlace V: 50Hz,	
	H: 15.734KHz		H: 15.625KHz	
Sync system	Internal / linelock			
Horizontal resolution	540 TV lines			
Lens mount	CS with backfocus			
Gamma correction	0.45			
Minimum illumination	Day mode: 0.004 lux(F1.4, AGC on, 10 IRE)			
	Night mode: 0.0012 lux(F1.4, AGC on, 10 IRE)			
S/N ratio	More than 50dB (AGC off)			
Iris control	Video / DC driver			
Gain control	Auto(standard / wide)			
White balance	ATW1 / ATW2 / ATW3 / AWC / manual			
Electric shutter	Auto 1/60(1/50) to 1/100,000sec. / manual			
BLC	BLC1 / BLC2 / BLC3/ BLC4 / off			
Day/Night mode	Auto / manual			
OSD	Yes			
Remote control	RS485, (RJ45)			
Video output	1Vpp composite output, 75 ohm			
Power supply				
Power requirement	DC12V / AC24V		DC12V / AC24V	AC90~260V
Power consumption	10W (max.)			
Environment				
Operating temperature	-10°C ~ 50°C			
Operating humidity	30% ~ 90% RH			
Storage temperature	-20°C ~ 60°C			
Mechanism				
Dimensions(WxHxD)	66mm x 55mm x 130mm			
	(2.6" x 2.16" x 5.11")			
Weight	500g approx.			

