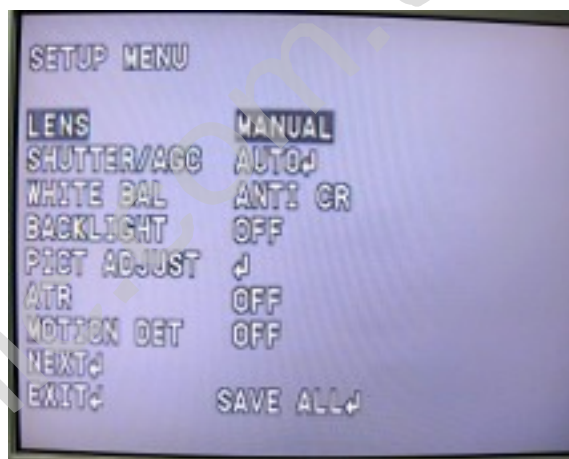




SW-200_201 OSD User's Guide



MODEL : SW-200_201
PCB Ver. : V0.2 & V1.0
HW RD : Nick (陳仲麒)
WRITER : Nick (陳仲麒) & Usher(郭宗翰)

RELEASE	APPROVED	DESIGN LEADER

History

Rev.	Released Date	Updated Information	Written by
0.1	0927	User Manual Create	Nick & Usher

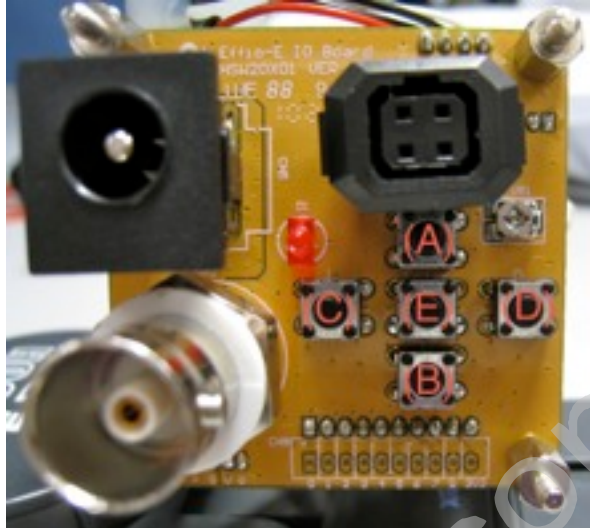
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Interface Illustration

Control interface



- (A) OSD Up button
- (B) OSD Down button
- (C) OSD Left button
- (D) OSD Right button
- (E) OSD Enter button



OSD Interface



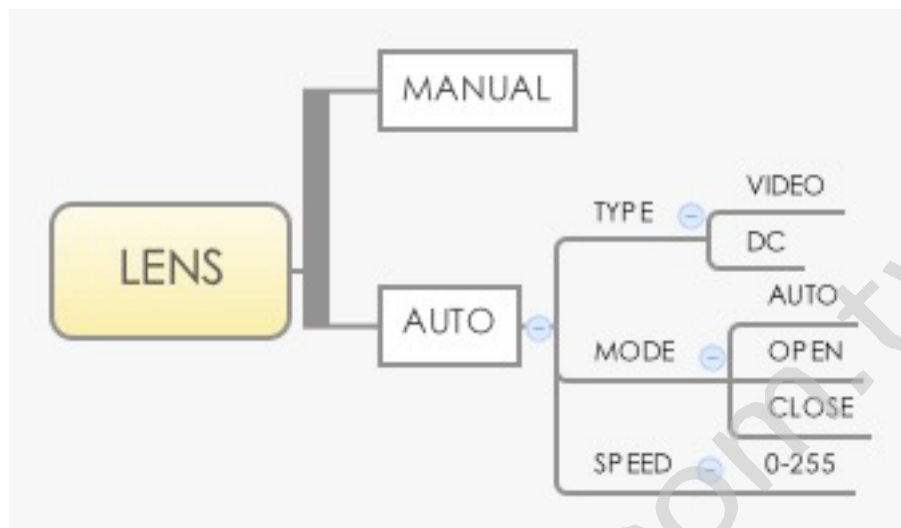
- (a) Item Name : Select Items by using UP & DOWN button
- (b) Selection Function : Select Function by using LEFT & RIGHT button
- (c) Adjustable Function : Functions with arrow symbol, press ENTER button to enter branch menu
- (e) Next page : Press Enter to enter OSD menu page 2 (This OSD menu has total of 2 pages)
- (f) Exit : Leave OSD Menu
- (g) Save : Save all the settings
- (h) Default : Reset all the OSD settings back to the factory default
- (i) Back : Return to OSD Menu Page 1
- (j) Adjustment Bar : Press LEFT or RIGHT button to adjust the values
- (k) Return : Return to TOP OSD menu from branch OSD menu

OSD MENU

OSD	LENS	Manual Lens & Auto Iris Lens Setting
	SHUTTER / AGC	Shutter speed & AGC setting, it determines the image brightness under low lux or bright condition
	WHITE BAL	White balance mode setting, it determines the way the color is produced
	BACKLIGHT	Backlight setting
	PICT ADJUST	Basic image adjustment such as hue, saturation, contrast, sharpness
	ATR	Adaptive tone reproduction, software WD setting
	MOTION DET	Motion detect function, sense area, sensitivity setting
	PRIVACY	Privacy mask, color, transparency setting
	DAY / NIGHT	Color / Mono / Auto Mode setting
	NR	Noise Reduction setting
	CAMERA ID	Camera ID Setting
	LANGUAGE	OSD Language Setting, total of 8 languages available
	CAMERA RESET	Reset OSD setting
	EXIT	Leave OSD Menu

LENS

Basic setting for lens, it covers normal lens & auto iris lens.



1. MANUAL

This function is for normal lens or vari-focal lens.

2. AUTO

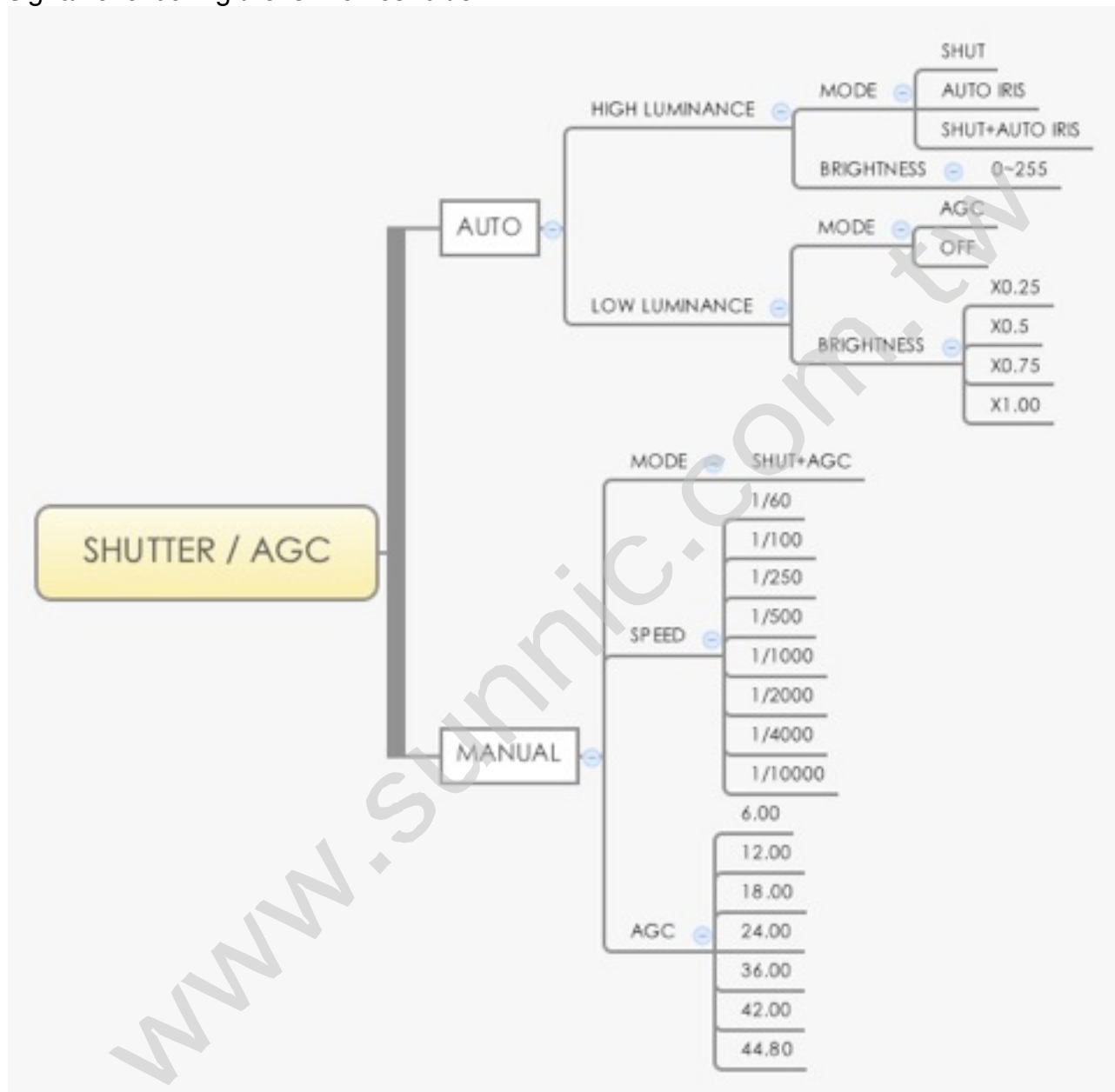
This function is for auto iris lens, system automatically adjusts the iris level to control the brightness.

Option	Content	Description
TYPE	- VIDEO - DC	VD circuit is not included in the module, it is recommended to use DC
MODE	- AUTO - OPEN - CLOSE	AUTO : Syster automatically determines the iris level-light OPEN : Test function, iris will be opened to maximum CLOSE : Test function, iris will be closed
SPEED	0-255	Speed for iris response , default is 80 0 : Slowest , 255 : Fastest



SHUTTER / AGC

This function controls the shutter speed & AGC. AGC can automatic adjust the output signal level during the low lux condition.



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1. AUTO

HIGH LUMINANCE

Option	Content	Description
MODE	• SHUT(Note 1) • SHUT+ATUO IRIS (Note 1) • ATUO IRIS (Note 2)	• Shutter Mode • Shutter + Auto Iris Mode • Auto Iris Mode
BRIGHTNESS	0-255	Brightness Adjustment , default 60 0 for dark , 255 for bright

Note 1: This function is appeared only when LENS : MANUAL is selected

Note 2: This function is appeared only when LENS : AUTO is selected , when using Auto Iris Lens, it is recommended to set it to AUTO IRIS mode to avoid the color rolling issue.

LOW LUMINANCE

Option	Content	Description
MODE	• AGC • OFF	Turn on AGC (so output signal amplified during low lux) Turn off AGC function
BRIGHTNESS	• X0.25 • X0.50 • X0.75 • X1.00	Brightness adjustment , default is x0.5 , x0.25 : Dark , x1.0 : Bright

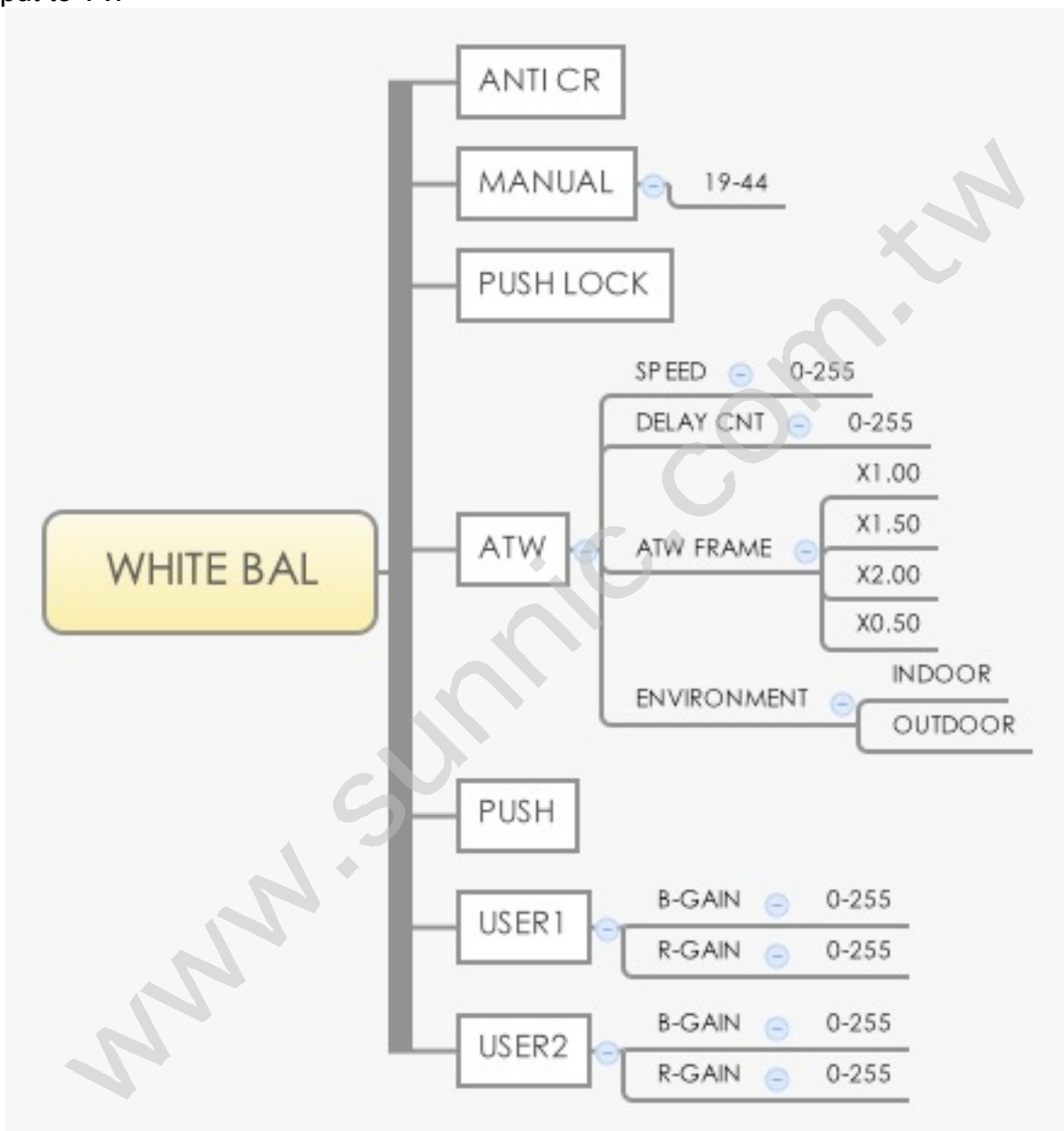
2. MANUAL

Option	Content		Description
MODE	SHUT+AGC		Shutter + AGC
SHUTTER	• 1/60 • 1/100 • 1/250 • 1/500	• 1/1000 • 1/2000 • 1/4000 • 1/10000	Shutter Speed
AGC	• 6.00 • 12.00 • 18.00 • 24.00	• 30.00 • 36.00 • 42.00 • 44.80	AGC value



WHITE BAL

White balance is the process of removing unrealistic color with according to the light sources & temperature, so that objects appear white in person are rendered white on final output to TV.



1. ANTI CR

Color Rolling suppress

2. MANUAL

Manually adjust the white balance

Option	Content	Description
LEVEL	19-44	Manually adjust the white balance , default is 44 , 19 for low temperature 44 for high temperature



LEVEL: 32



(Left)LEVEL: 19 (Right)LEVEL: 44

3. PUSH LOCK

Press OSD ENTER button to lock the current white balance, once it is locked, the white balance will not operate even when light temperature is changed.

4. ATW

Auto Trace White

Option	Content	Description
SPEED	0-255	Setting for ATW response time, default is 239, 0 for slowest delay & 255 for fastest
DELAY CNT	0-255	Setting for ATW delay time ,default is 16, 0 for shortest delay & 255 for longest
ATW FRAME	• x1.00 • x1.50 • x2.00 • x0.50	No effect, system already set it to full frame
ENVIRONMENT	• INDOOR • OUTDOOR	No effect, system already set it to accomplish for both indoor & outdoor

5. PUSH

Similar to ATW, but system will force to track white balance continuously

6. USER1

User define white balance

Option	Content	Description
B-GAIN	0-255	Adjust B-Gain value
R-GAIN	0-255	Adjust R-Gain value

7. USER2

User define white balance

Option	Content	Description
B-GAIN	0-255	Adjust B-Gain value
R-GAIN	0-255	Adjust R-Gain value



BACKLIGHT

This function is used when object is heavily influenced by the excessive front light or back light source.



- (1) OFF (DEFAULT)
- (2) BLC : Back light compensation
- (3) HLC : High light compensation



Turns the excessive white light into black, it is mainly used for recognition of the car plate during the night. When excessive light source is behind the object.

LEFT : Normal Image RIGHT : Image with BLC ON

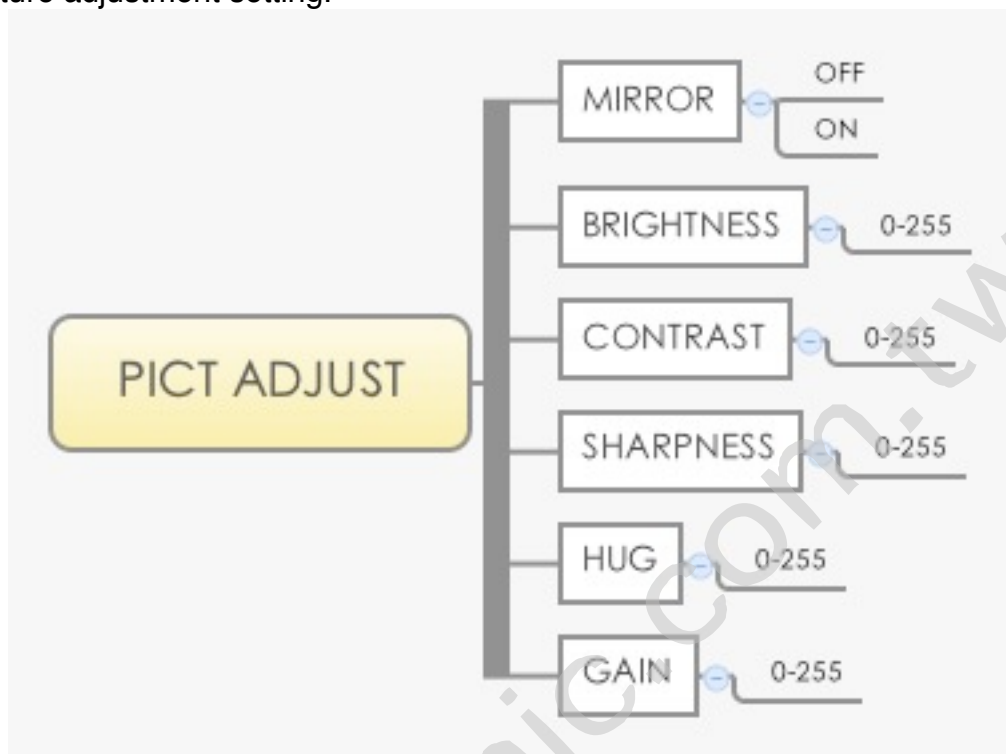


When excessive light source is presented

LEFT : Normal Image RIGHT : Image with HLC ON

PICT ADJUST

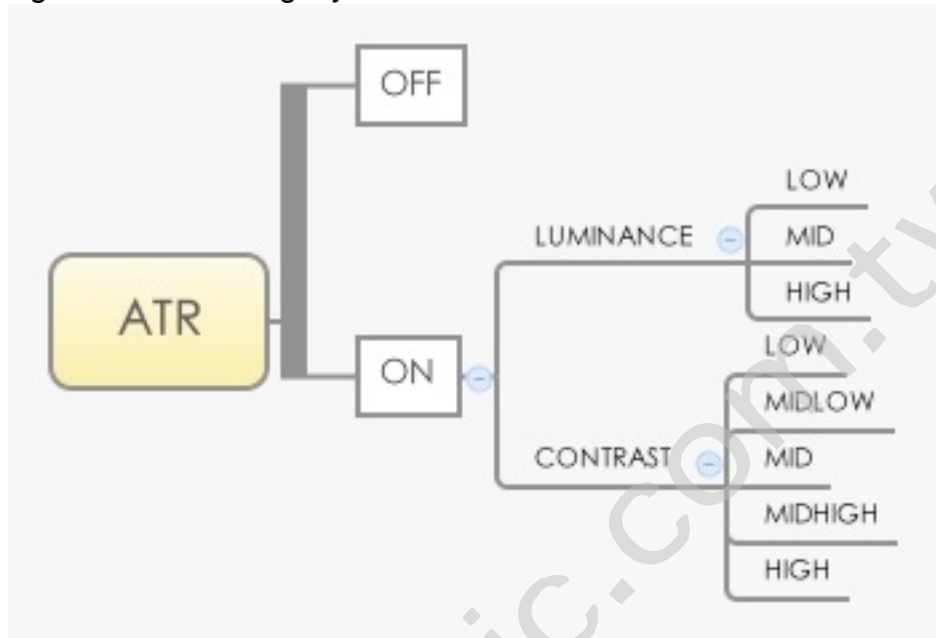
Basic picture adjustment setting.



Option	Content	Description
MIRROR	• OFF • ON	Flip image horizontally
BRIGHTNESS	0-255	brightness (default : 0)
CONTRAST	0-255	contrast (default : 128)
SHARPNESS	0-255	Sharpness (default : 128)
HUE	0-255	Color Hue (default : 102 for NTSC , 108 for PAL)
GAIN	0-255	Color Saturation (Default : 128)

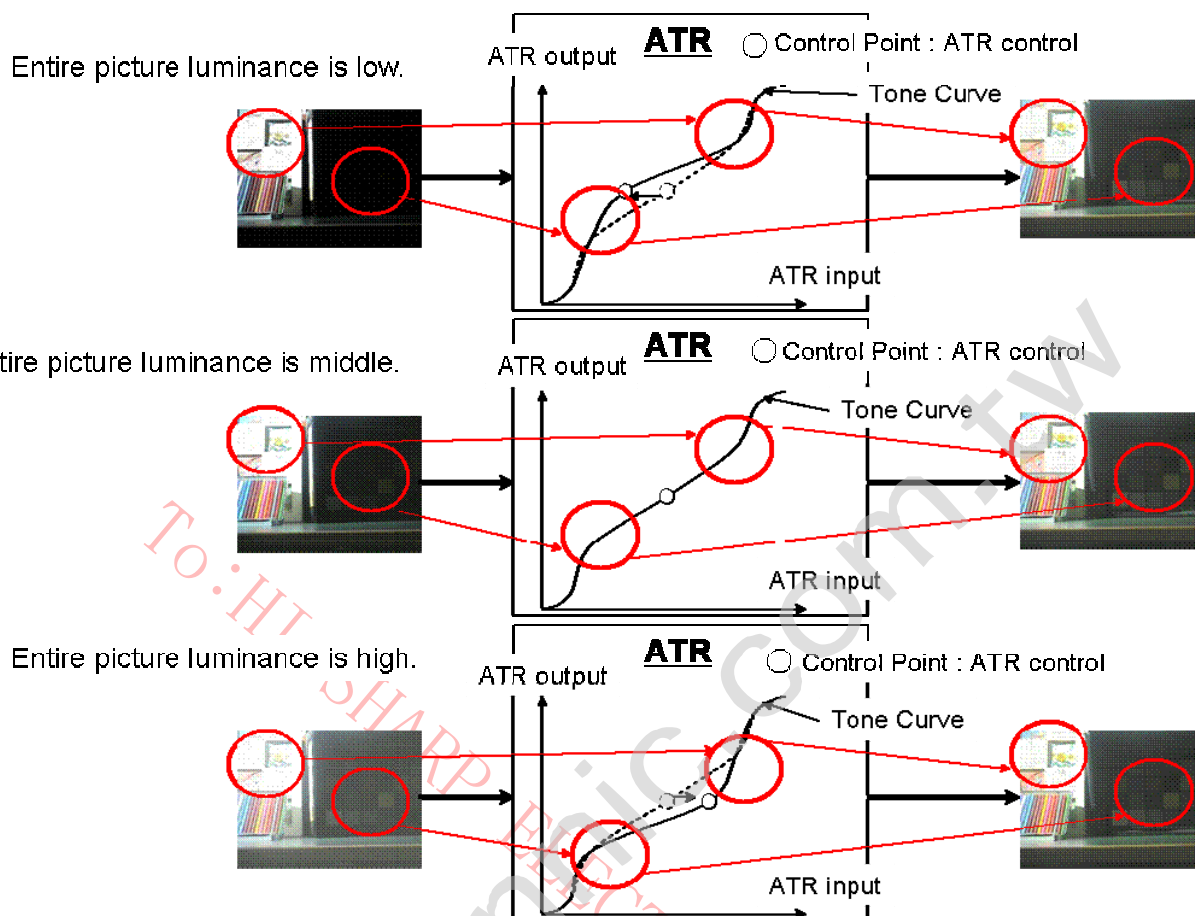
ATR(Adaptive tone Reproduction)

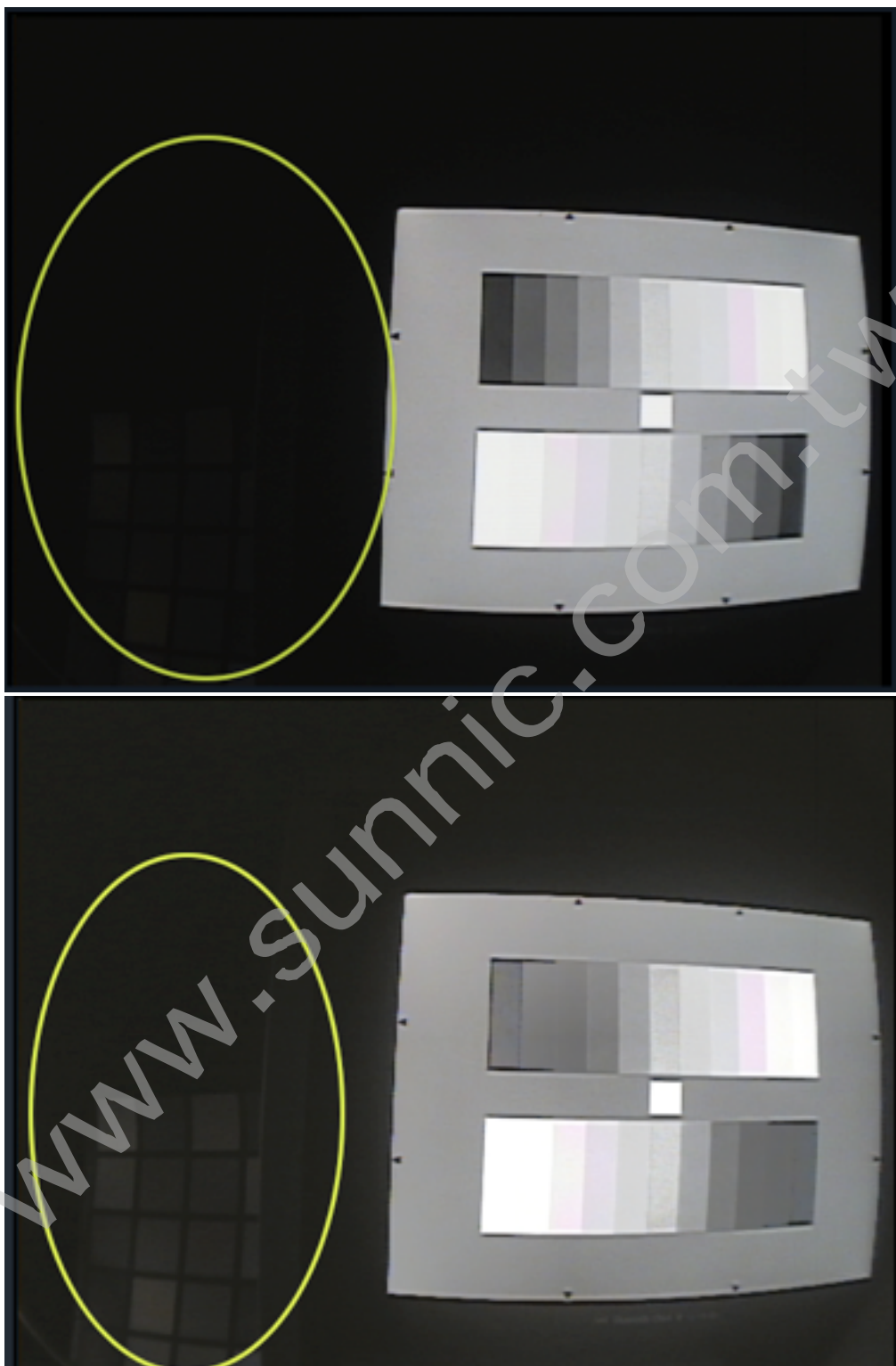
This function is to softwarely achieve Wide dynamic range, when this function is ON, the brightness of the darker region will be slightly brighter, and same for the brighter region, the brightness will be slightly darker



1. OFF
2. ON

Option	Content	Description
LUMINANCE	• LOW • MID • HIGH	BRIGHTNESS DEFAULT : LOW
CONTRAST	• LOW • MID LOW • MID • MID HIGH • HIGH	CONTRAST DEFAULT : LOW

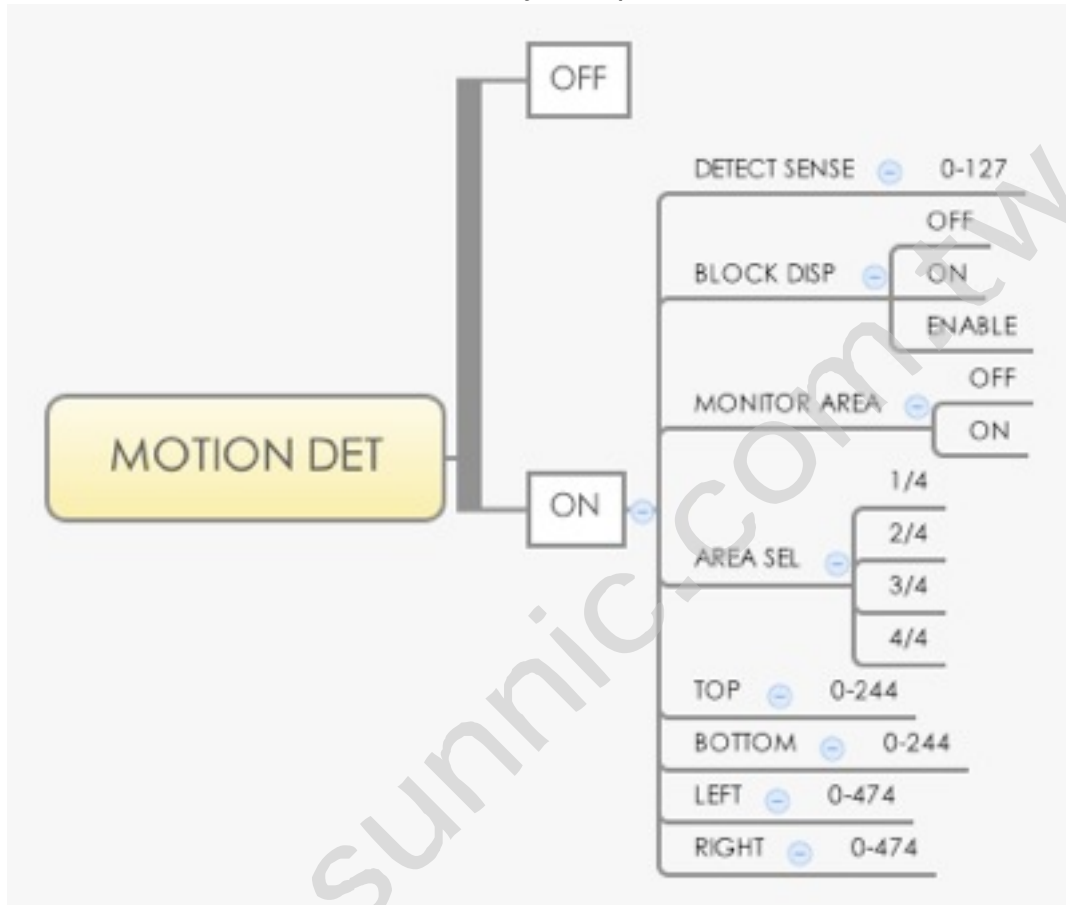




Picture above : Normal Image
Picture below : Image with ATR ON

MOTION DET

This function detects the object movement (CCTV must be static). The detection frame blinks when object movement is detected. GPIO 1 of the module will output alarm signal (3.3V) when movement is detected. Normally it outputs 0V.



Motion Detect Frame : The frame blinks when any movement is detected within the frame.

1. OFF
2. ON

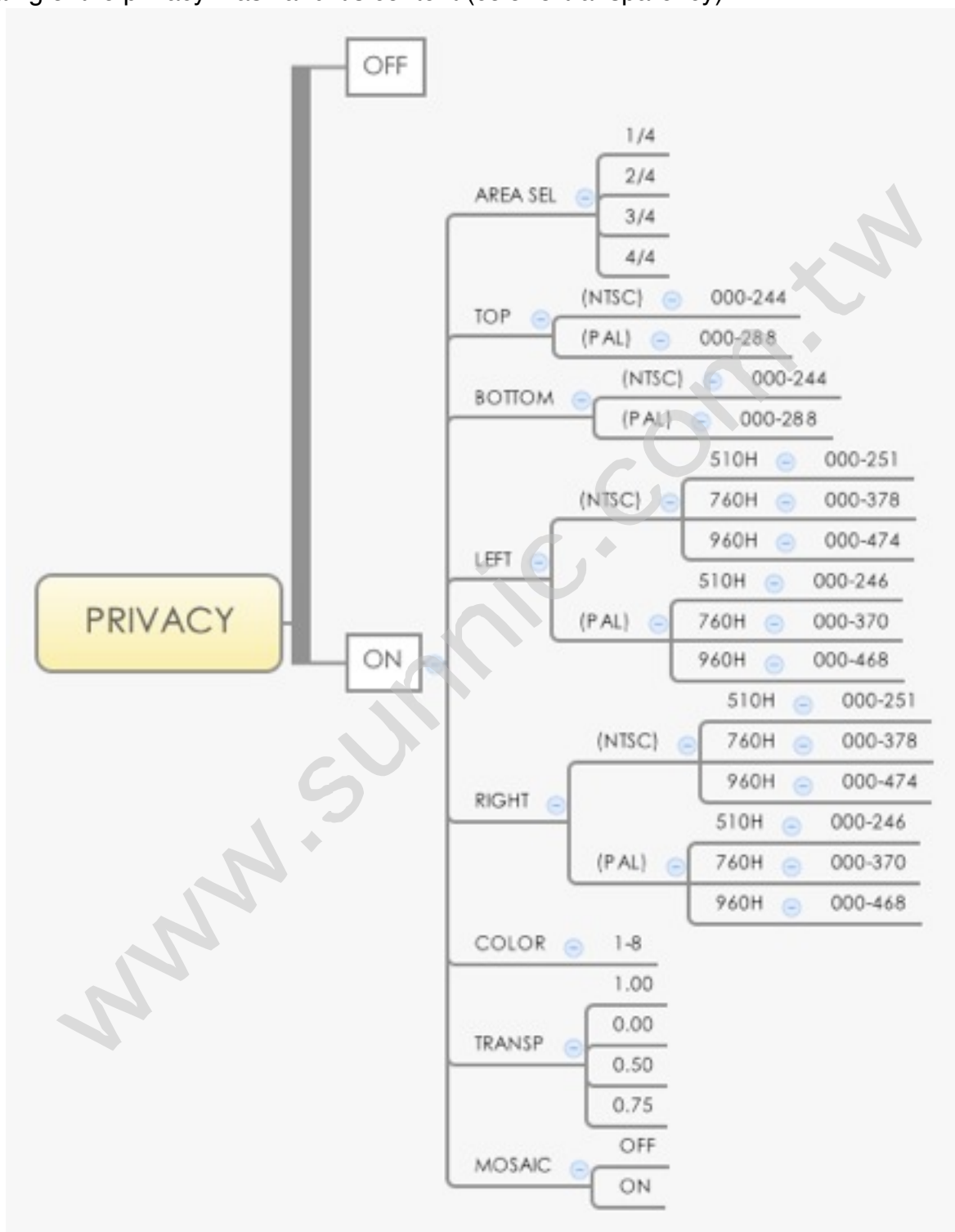
Option	Content	Description
DETECT SENSE	0-255	Motion detection sensitivity , default : 115 , 0 for lowest sensitivity, 255 for highest sensitivity.
BLOCK DISP	• OFF • ON • ENABLE*	Display the motion detect grid, default OFF
MONITOR AREA	• ON • OFF	Display the motion detect frame when movement detected , default ON

Option	Content	Description
AREA SEL	• 1/4 • 2/4 • 3/4 • 4/4	Frame location setting, total of 4 frames available
TOP	0-244	Frame boundary (TOP)
BOTTOM	0-244	Frame boundary (BOTTOM)
LEFT	0-474	Frame boundary (LEFT)
RIGHT	0-474	Frame boundary (RIGHT)



PRIVACY

Setting of the privacy mask and it's content (color & transparency)

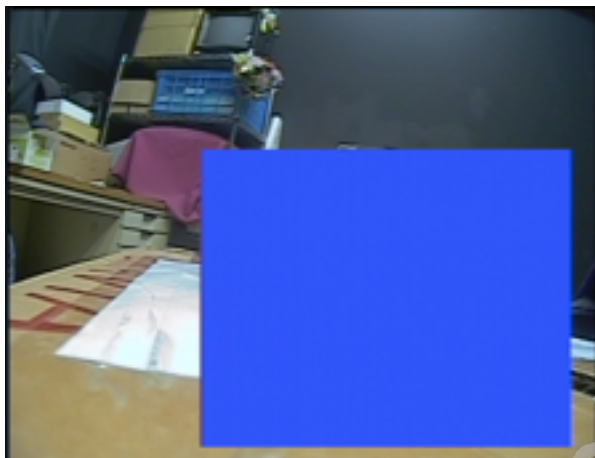




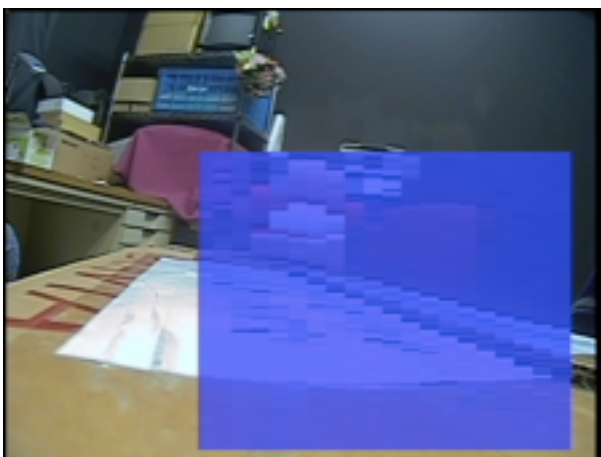
1. OFF
2. ON

Option	Content	Description
AREA SEL	• 1/4 • 2/4 • 3/4 • 4/4	Mask location setting, total of 4 frames available
TOP	000-244 (NTSC) 000-288 (PAL)	Mask boundary (TOP)
BOTTOM	000-244 (NTSC) 000-288 (PAL)	Mask boundary (BOTTOM)
LEFT	000- 474(NTSC) 000- 468(PAL)	Mask boundary (LEFT)
RIGHT	000- 474(NTSC) 000- 468(PAL)	Mask boundary (RIGHT)
COLOR	1 ~ 8	Mask Color Setting 1. Red 2. Green 3. Purple 4. Yellow 5. Cyan 6. Pink 7. White 8. Black

Option	Content	Description
TRANSP	• 1.00 • 0.00 • 0.50 • 0.75	Mask transparency setting , 1.0 = 0% Transparency , 0.0 = 100% Transparence
MOSAIC	• OFF • ON	Mosaic ON/OFF Setting



Transparency : 1.00(Left) 0.00(Right)



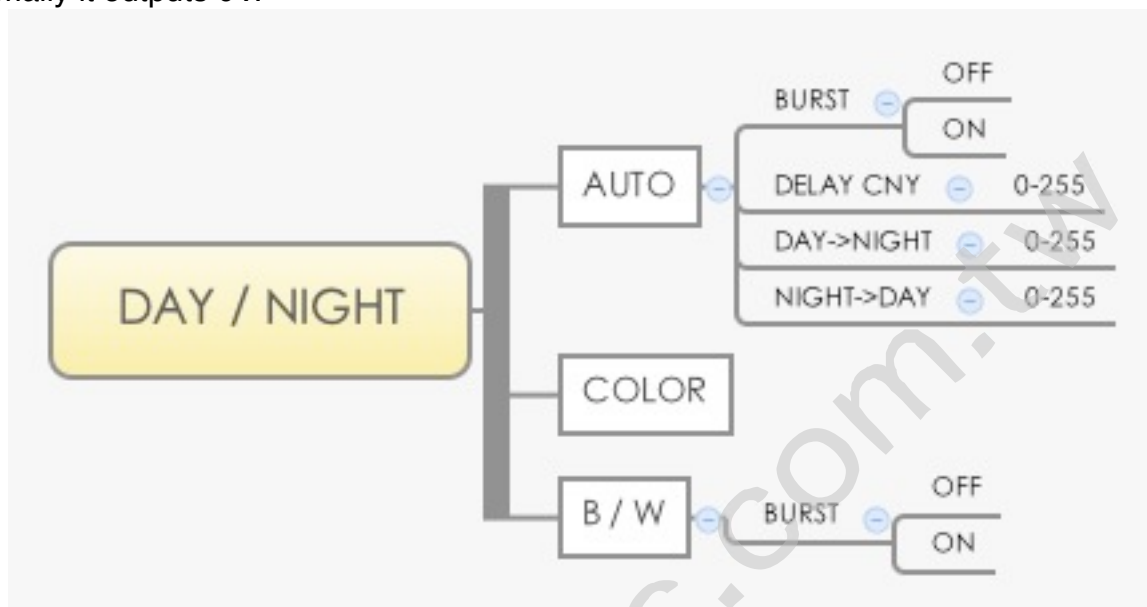
Transparency : 0.50(Left) 0.75(Right)

DAY / NIGHT

Setting for the DAY/NIGHT or COLOR/BW mode.

When system switch to BW mode, GPIO 0 of the module will output a 3.3V signal.

Normally it outputs 0V.



1. AUTO

Option	Content	Description
BURST	• OFF • ON	Burst ON/OFF during low lux mode, default : OFF
DELAY CNT	0-255	Mode switch delay time , default : 1, 0 for slowest delay , 1 for fastest delay
DAY→NIGHT	0-255	Color to B/W mode switch threshold , default : 3 , 0 for lowest threshold , 255 for highest threshold
NIGHT→DAY	0-255	B/W to color mode switch threshold , default : 5 , 0 for lowest threshold , 255 for highest threshold

Switch threshold & Lux Table (Using 3.6mm, F2.0 lens)

DAY→NIGHT		NIGHT→DAY	
Value	Lux	Value	Lux
5	0.97	5	2.43
10	2.20	10	6.31
15	3.32	15	10.89
20	4.86	20	14.18
25	9.16	25	17.47
30	12.94	30	22.67
35	18.50	35	28.62
40	20.76	40	32.36
45	25.61	45	36.07
50	27.03	50	45.62

2. COLOR

COLOR MODE

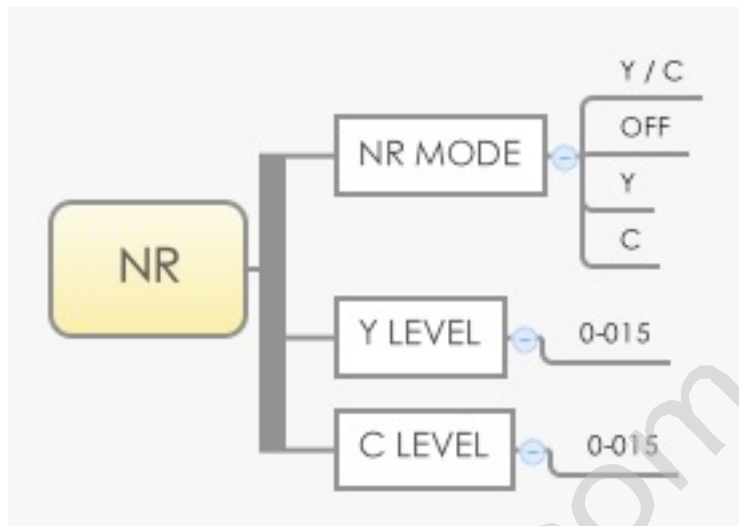
3. B/W

B/W MODE

Option	Content	Description
BURST	OFF ON	Burst ON/OFF Setting

NR

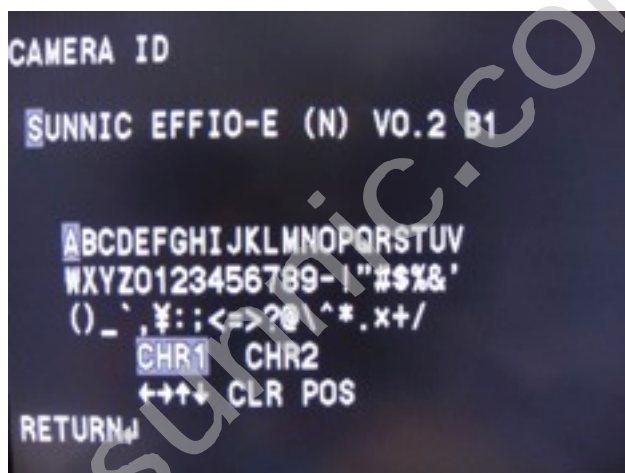
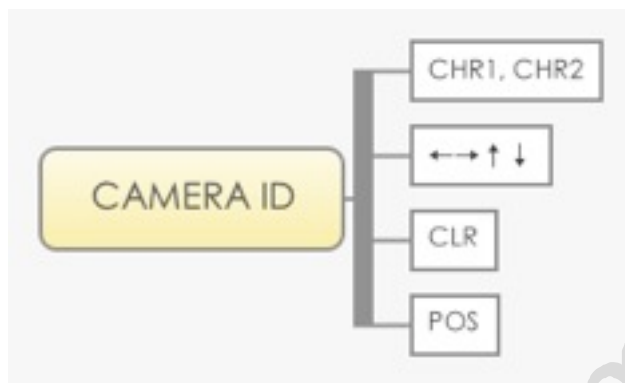
Noise reduction function minimises the level of noise. Noise refers to the random white or color pixels.



Option	Content	Description
NR MODE	• Y/C • OFF • Y • C	noise reduction mode adjustment
Y LEVEL	0-015	Luminance noise reduction , default : 4, 0 for minimum reduction, 15 for maximum reduction
C LEVEL	0-015	Color noise reduction , default : 4, 0 for minimum reduction, 15 for maximum reduction

CAMERA ID

This function allows user to input their desired text and which will be shown on the screen 2 rows & 26 characters are availables, characters including 26 alphabets & numbers & symbols

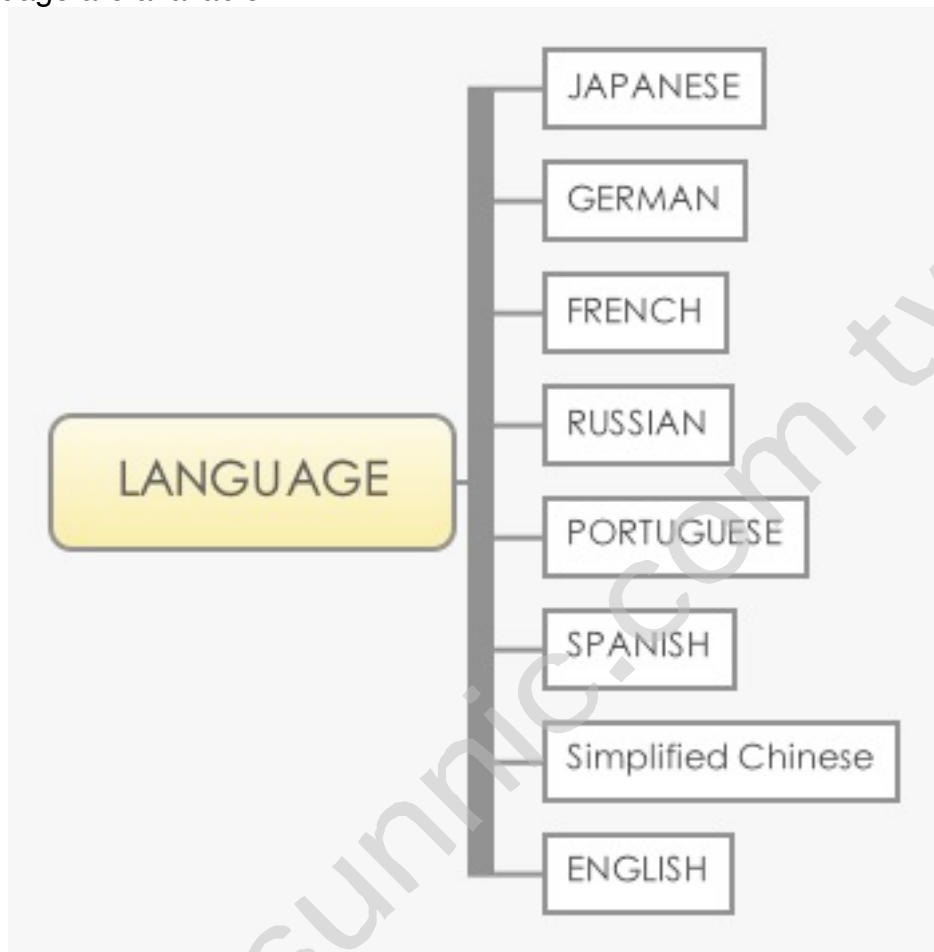


1. OFF
2. ON

Content	Description
CHR1	Default characters
CHR2	User define characters (maximum of 40), please contact to sales if it is required
←→↑↓	Move the location of the cursors
CLR	Clear the highlight character & move to next character
POS	Use OSD UP/DOWN/LEFT/RIGHT button to adjust the ID locations Press ENTER when it is finished

LANGUAGE

8 OSD language are available



1. Japanese
2. German
3. French
4. Russian
5. Portuguese
6. Spanish
7. Simplified Chinese
8. English

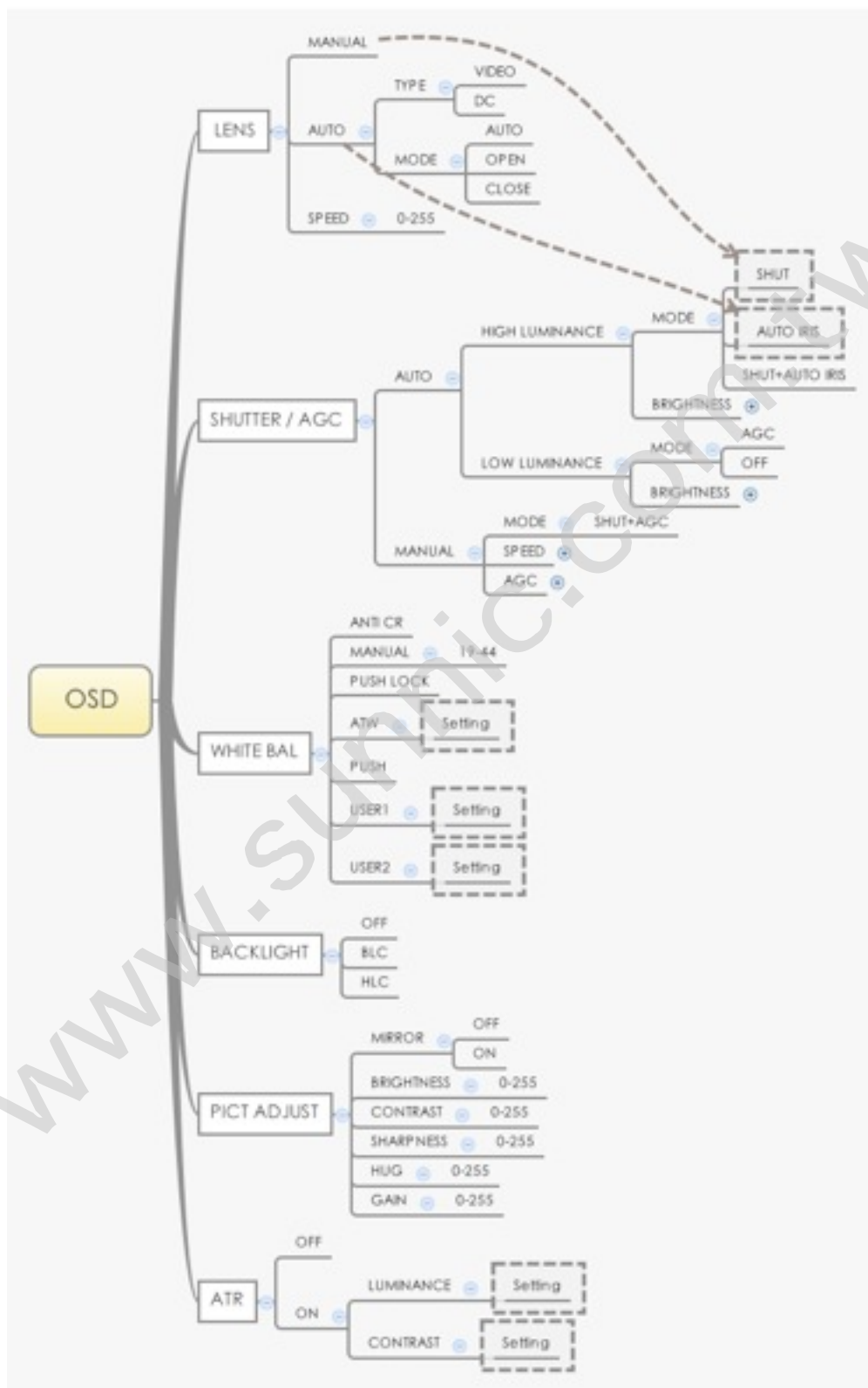
CAMERA RESET

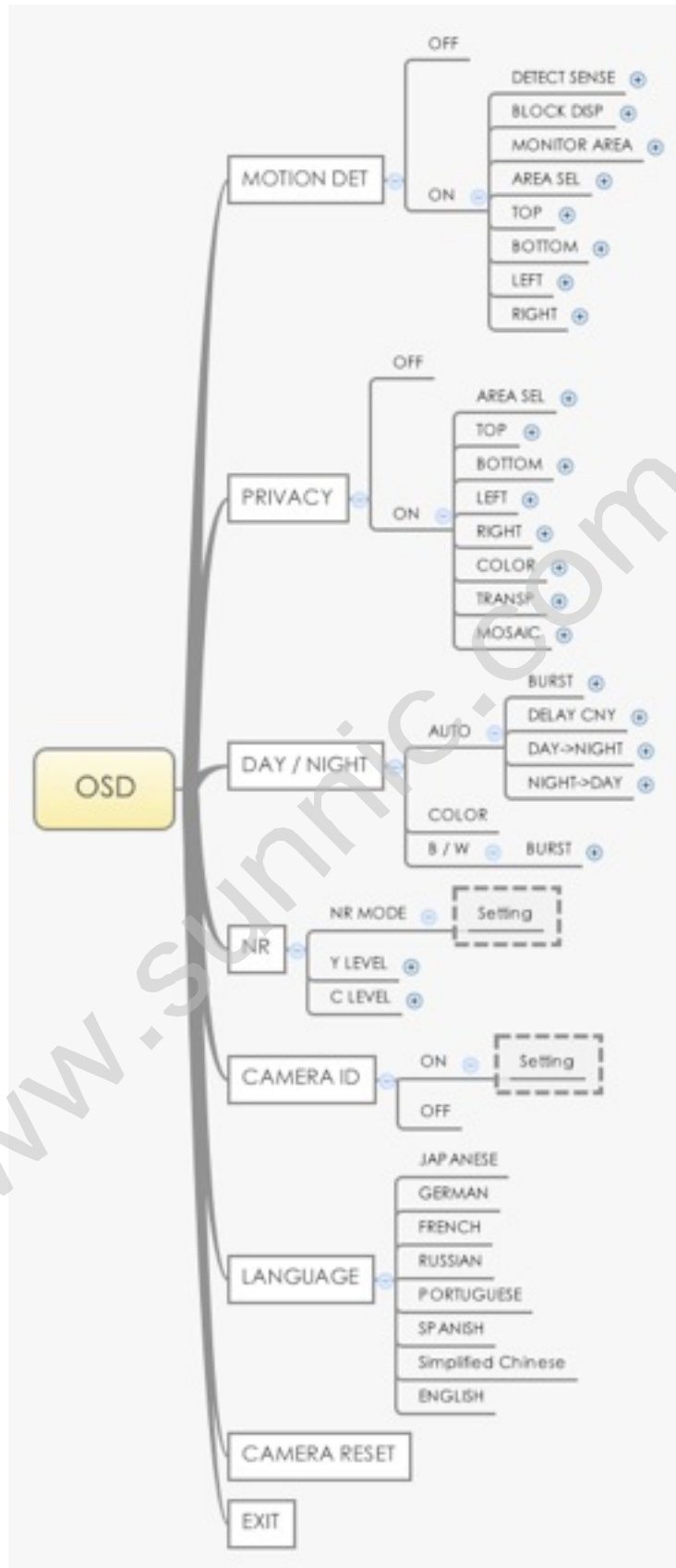
Return all the OSD settings to factory default

(SAVE ALL must be applied in order to keep the settings after power ON/OFF)



OSD TREE (FULL)





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Default Register Table

OSD Functions				Default NTSC	Default PAL
LENS	MANUAL*				
	AUTO	TYPE		DC	DC
		MODE		AUTO	AUTO
SHUTTER / AGC	AUTO*	SPEED		80	80
		HIGH LUMINANCE	MODE BRIGHTNESS	SHUT 60	SHUT 60
		LOW LUMINANCE	MODE BRIGHTNESS	AGC X0.50	AGC X0.50
		MODE		SHUT+AGC	SHUT+AGC
	MANUAL	SHUTTER		1/60	1/60
		AGC		6	6
WHITE BAL	ANTI CR*				
	MANUAL			44	44
	PUSH LOCK				
	ATW	SPEED		239	239
		DELAY CNT		16	16
		ATW FRAME		X1.00	X1.00
		ENVIRONMENT		INDOOR	INDOOR
	PUSH				
	USER1	B-GAIN		29	29
		R-GAIN		34	34
BACKLIGHT	USER2	B-GAIN		45	45
		R-GAIN		26	26
PICT ADJUST	OFF*				
	BLC				
	HLC				
MOTION DET	MIRROR			OFF	OFF
	BRIGHTNESS			0	0
	CONTRAST			128	128
	SHARPNESS			128	128
	HUE			102	108
	GAIN			128	128
ATR	OFF*				
	ON	LUMINANCE		LOW	LOW
		CONTRAST		LOW	LOW
MOTION DET	OFF*				
	ON	DETECT SENSE		115	115
		BLOCK DISP		OFF	OFF
		MONITOR AREA		ON	ON
		AREA SEL		1/4	1/4
		TOP 1		80	100
		BOTTOM 1		150	170
		LEFT 1		190	190
		RIGHT 1		310	290

PRIVACY	OFF*				
	ON	AREA SEL		1/4	1/4
		TOP 1		160	190
		BOTTOM 1		235	270
		LEFT 1		310	320
		RIGHT 1		450	445
		COLOR		8	8
		TRANSP		0.75	0.75
DAY / NIGHT	AUTO*	MOSAIC		ON	ON
		BURST		OFF	OFF
		DELAY CNT		1	1
		DAY→NIGHT		3	3
	COLOR B/W	NIGHT→DAY		5	5
		BURST		OFF	OFF
NR	NR MODE			Y/C	Y/C
	Y LEVEL			4	4
	C LEVEL			4	4

* marks represent the factory default function