

WAT-1300 / WAT-1300/CS

OSD User's Manual

Rev. 1.00

Watec Co., Ltd.

2023/7/3

Change History

Rev. No.	Date	Changes	Remarks
1.00	2023/7/3		Initial Release

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1.Introduction

This user manual describes the functions of WAT-1300 and WAT-1300/CS and how to configure them using the OSD (On Screen Display) menu.

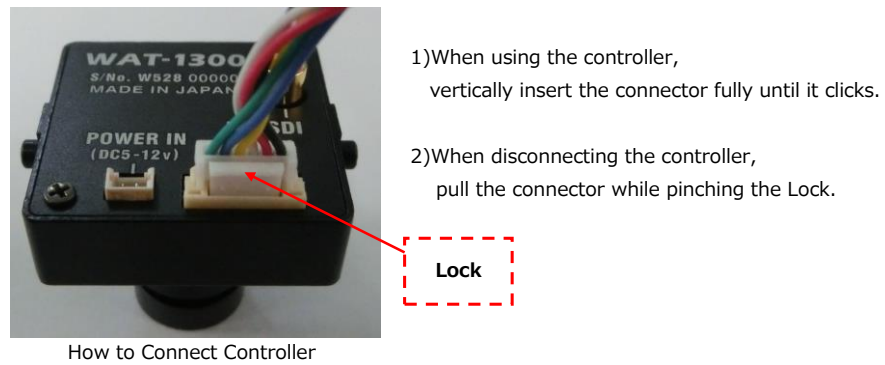
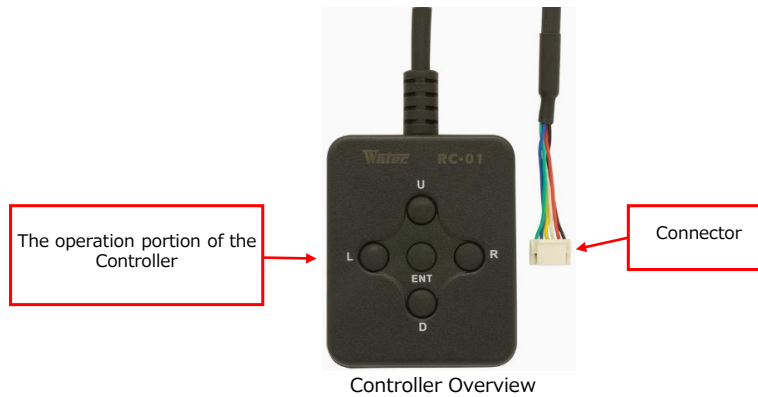
When the settings of the camera is changed according to this manual, check to see that the operation and the effects of the changes made to the camera are acceptable.

The WAT-1300&WAT1300/CS user's manual is subject to change by design and the specifications of the product without notice.

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2.OSD MENU OPERATION

The functions and parameter settings of WAT-1300 and WAT-1300/CS can be changed by OSD(On Screen Display). The OSD menu can be operated by connecting the optional remote control (RC-01) to the rear of the camera.



The controller has 5 buttons, UP/DOWN/LEFT/RIGHT/ENTER.



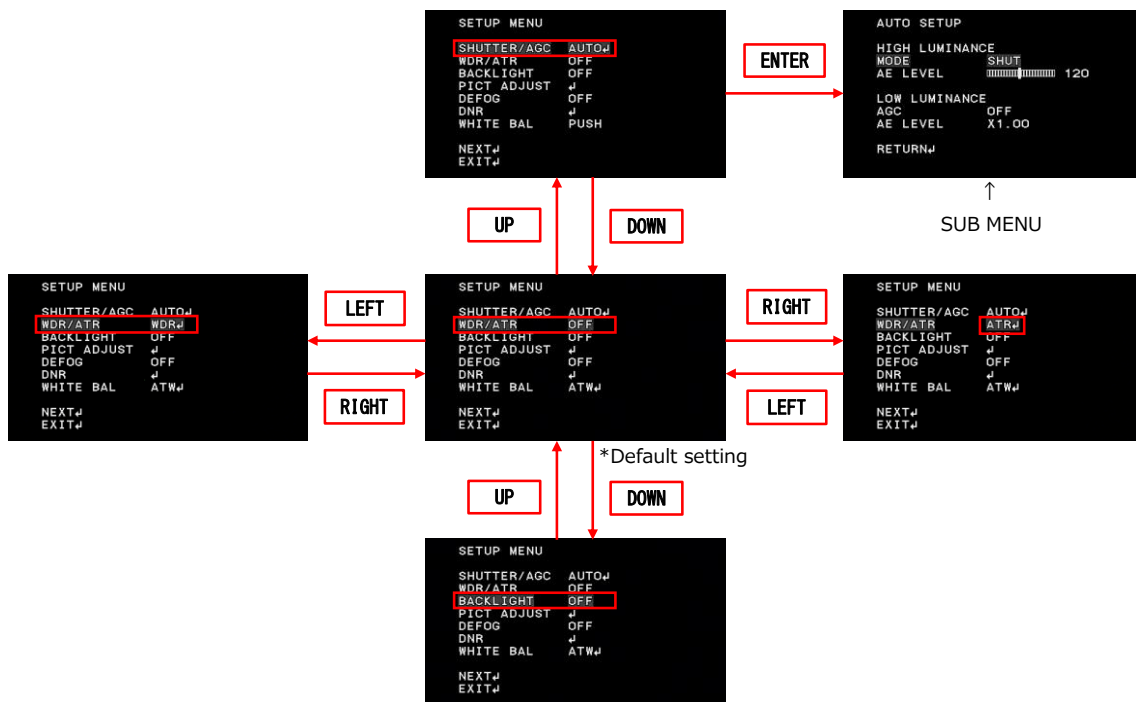
Use 5 buttons above to operate the OSD menu.

1)UP/2)DOWN : Mainly to move the cursor up and down to select an item on the lists on the OSD menu.

3)LEFT/4)RIGHT : Mainly to adjust and change the functions on each list on the OSD menu.

5)ENTER : Mainly to execute the selected list and function on the OSD menu. The symbol "⌂" will be on some lists on the OSD menu to indicate that there are sub menus or selectable options by pressing 5)Enter.

Please refer to the following model operation pictures on the basic controller usage.
 The figure below shows the OSD operation when WDR/ATR (OFF) is selected as the default position.



Switching the Menu

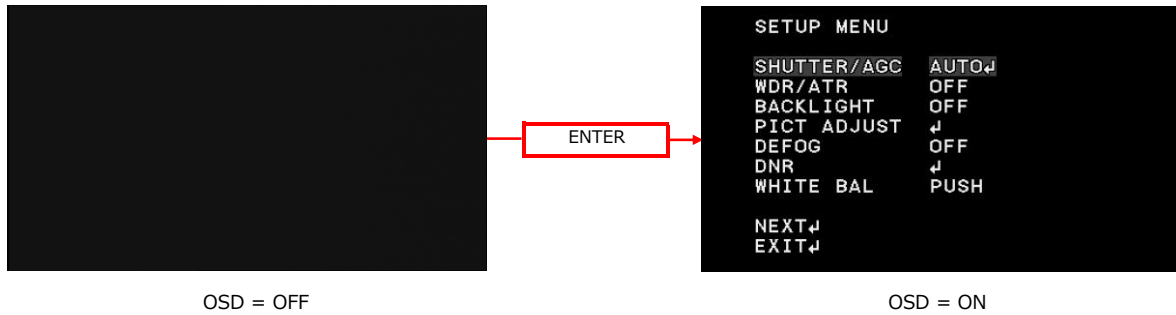


- * From the next page, each button is written as follows.
- 1)UP key is written as "UP"
 - 2)DOWN key is written as "DOWN"
 - 3)LEFT key is written as "LEFT"
 - 4)RIGHT key is written as "RIGHT"
 - 5)ENTER key is written as "ENTER"

3.Function

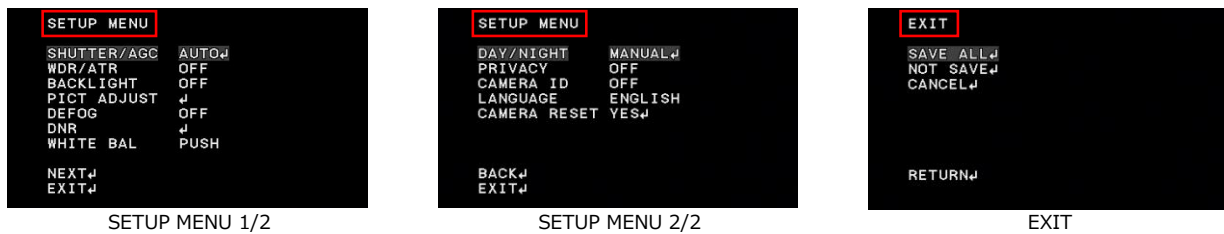
3.1 OSD Menu

SETUP menu will appear on the screen when pressing ENTER.



Move the cursor to EXIT with UP/DOWN buttons and press the ENTER to display the EXIT page.

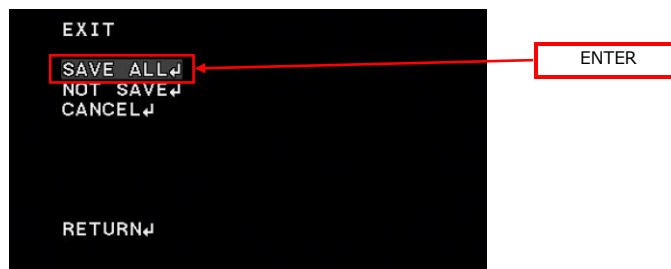
OSD Menu is consist of 3 pages (SETUP MENU 1/2-2/2 and EXIT).



3.2 Save Settings(SAVE ALL)

Saving (SAVE ALL) the changes in camera settings. After changing camera settings, you can save the changed set values by executing SAVE ALL on the EXIT page. Move the cursor to SAVE ALL with UP / DOWN / LEFT / RIGHT and press ENTER to save the set value. The saved settings are kept even after the camera is powered off.

*Please note that when you turn off the power without saving the setting values after changing the setting or execute CANCEL on the EXIT page, the changed setting will not be saved.



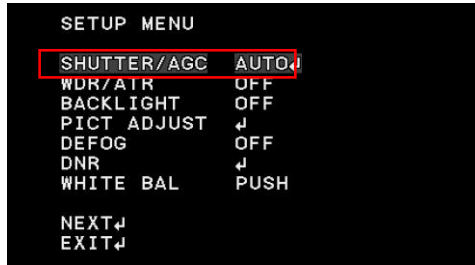
3.3 Shutter/Gain Settings(SHUTTER/AGC)

Set the exposure control. There are two modes of exposure control: the automatic exposure control (AUTO) and the manual exposure control (MANUAL).

When AUTO is selected, shutter speed and gain are automatically controlled according to the imaging environment.

When MANUAL is selected, shutter speed and gain can be set to arbitrary fixed values. Move the cursor to SHUTTER/AGC with UP/DOWN and use the LEFT/RIGHT to select AUTO or MANUAL.

After selecting the mode, press ENTER to open each advanced setting sub menu.



3.3.1 Automatic Exposure Control(AUTO)

3.3.1.1 Shutter Speed(SHUTTER)

Set the shutter speed (SHUTTER). The set value is SHUT only.

SHUTTER/AGC	MODE	OPERATION
AUTO	SHUT	Automatic exposure control by electric iris. Depending on the brightness of the shooting object, exposure will be controlled within the range of 1/60s(1/50s) to 1/100000s for getting the appropriate brightness. *(1/50s): When output format is 720/50p

3.3.1.2 Brightness Settings, High Luminance Side(AE LEVEL)

Set the brightness in the screen (AE LEVEL). Use the LEFT / RIGHT to adjust the brightness.

*Default : 120

SHUTTER/AGC	AE LEVEL (HIGH LUMINANCE)	OPERATION
AUTO	000-255	Brightness can be set within the range of 000 (dark) -255 (bright). The larger the value, the brighter the image.

3.3.1.3 Auto Gain Control(AGC)

Set the auto gain control setting (AGC). The gain controls exposure during low-light conditions that cannot be fully exposed with the electronic shutter. Use the LEFT / RIGHT to select AGC ON or OFF.

*Default : ON



AGC = OFF



AGC = ON

SHUTTER/AGC	AGC	OPERATION
AUTO	OFF	Exposure control at low luminance does not operate.
	ON	Automatic exposure control with gain at low luminance. *Gain range is 0 to 54 dB.

3.3.1.4 Brightness Settings, Low Luminance Side(AE LEVEL)

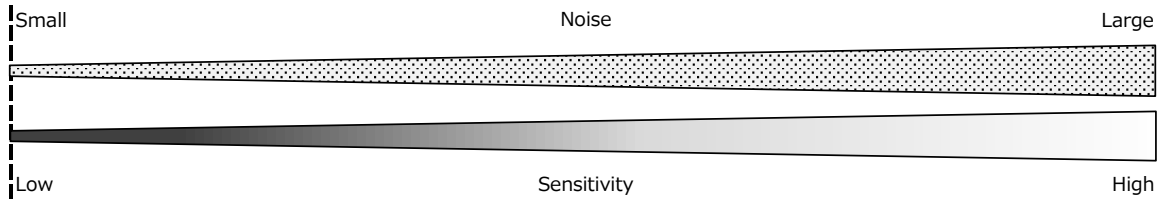
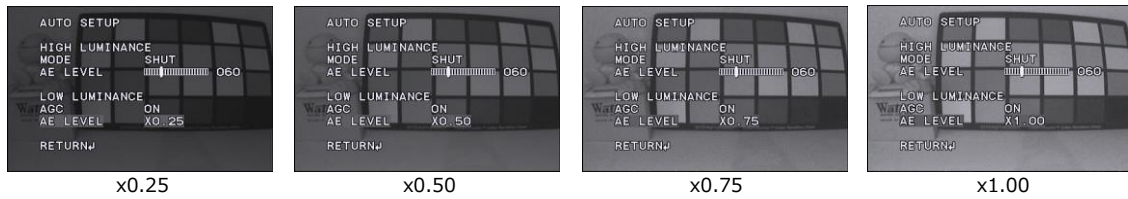
Set the brightness of exposure control at low luminance side(AE LEVEL) .

Apart from 『3.3.1.2 Brightness Adjustment (AE LEVEL)』 , the brightness at the time of gain operation can be set independently. For dark subjects, you could reduce the noise instead of darkening the image.

Use the LEFT / RIGHT to select from x0.25, x0.50, x0.75, x1.00.

*Default : x1.00

○AGC Operation



SHUTTER/AGC	AE LEVEL (LOW LUMINANCE)	OPERATION
AUTO	x0.25	The lower the value, the lower the sensitivity, the S/N ratio improves instead. The higher the value, the lower the S/N ratio, the sensitivity improves instead.
	x0.50	
	x0.75	
	x1.00	

3.3.2 Manual Exposure Control(MANUAL)

3.3.2.1 Shutter Speed(SHUTTER)

Set the shutter speed (SHUTTER) settings. Use the LEFT/RIGHT to select the shutter speed.

SHUTTER/AGC	MODE	OPERATION
MANUAL	SHUT	Selectable shutter speed : 1/60s(1/50s), 1/100s,1/120s, 1/125s, 1/250s, 1/500s, 1/1000s, 1/2000s, 1/4000s, 1/8000s, 1/10000s, 1/20000s, 1/50000s, 1/100000s *(1/50s): When output format is 720/50p *Default : 1/60s(1/50s)

3.3.2.2 Gain Value Settings(AGC)

Set the gain value (AGC) settings. Use the LEFT/RIGHT to set the gain value.

*Default : MIN (0dB)

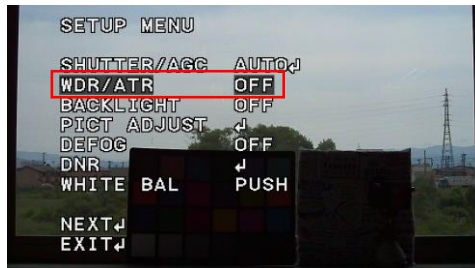


SHUTTER/AGC	AGC	OPERATION
MANUAL	MIN – MAX	Fix the gain to an arbitrary value regardless of the brightness of the subject. The setting value can be selected from 18dB, 24dB, 30dB, 36dB, 42dB, 48dB, MAX(54dB). The higher the setting value, the brighter the image. The smaller the setting value, the darker the image.

3.4 Wide Dynamic Range / Tone Correction(WDR/ATR)

Set the wide dynamic range / tone correction function. When you take a subject with a large contrast difference such as a backlight condition, some of the subjects will be overexposure or underexposure. The wide dynamic range / tone correction (WDR / ATR) suppresses overexposure or underexposure of the subject under the conditions and corrects it to a natural image. Use the LEFT / RIGHT to select from OFF, ATR or WDR.

*Default : OFF

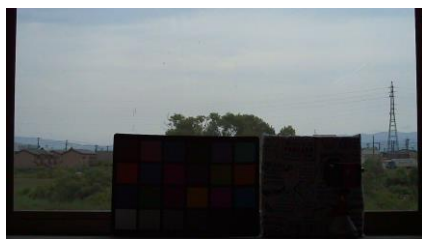


3.4.1 Adaptive Tone-Curve Reproduction(ATR)

Press the ENTER when ATR is selected to display the ATR menu.

You can select the correction amount of brightness and contrast of tone correction from LOW, MID, HIGH.

*Default : MID



ATR = OFF



ATR = ON

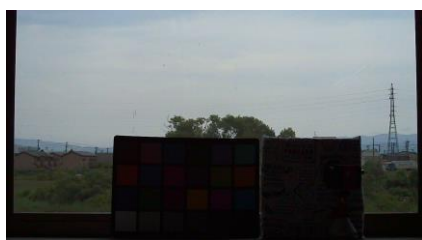
WDR/ATR	SUB MENU	OPERATION
ATR	BRIGHTNESS	Set the brightness correction amount of the tone correction function. The larger the setting value, the brighter the image, the smaller the setting value, the darker the image.
	CONTRAST	Set the contrast correction amount of the tone correction. Increasing the setting value improves the visibility and can capture the bright and dark areas at the same time. Decreasing the set value will result in a natural image with overall contrast.

3.4.2 Wide Dynamic Range(WDR)

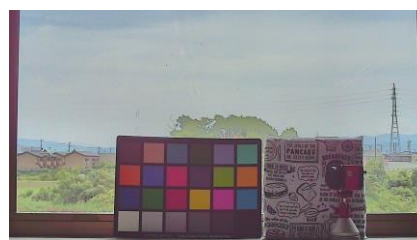
Press the ENTER when WDR is selected to display the WDR menu.

You can select the correction amount of wide dynamic range brightness and contrast from LOW, MID, HIGH.

*Default : MID



WDR = OFF



WDR = ON

WDR/ATR	SUB MENU	OPERATION
WDR	BRIGHTNESS	Set the brightness correction amount of the wide dynamic range function. The larger the setting value, the brighter the image, the smaller the setting value, the darker the image.
	CONTRAST	Set the contrast correction amount of the wide dynamic range. Increasing the setting value improves the visibility and can capture the bright and dark areas at the same time. Decreasing the set value will result in a natural image with overall contrast.

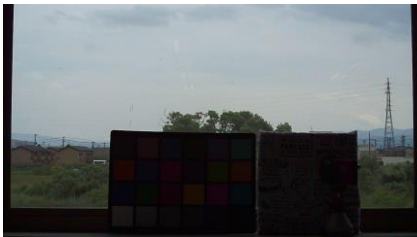
3.5 Back Light Compensation(BACKLIGHT)

Set the backlight compensation mode (BACKLIGHT). Backlight compensation mode can be selected from Backlight Compensation (BLC) and Highlight Compensation (HLC). Move the cursor on BACKLIGHT and use LEFT / RIGHT to select OFF, BLC or HLC.

*Default : OFF



○Backlight compensation(BLC)



BLC = OFF



BLC = ON

○Highlight compensation(HLC)



HLC = OFF

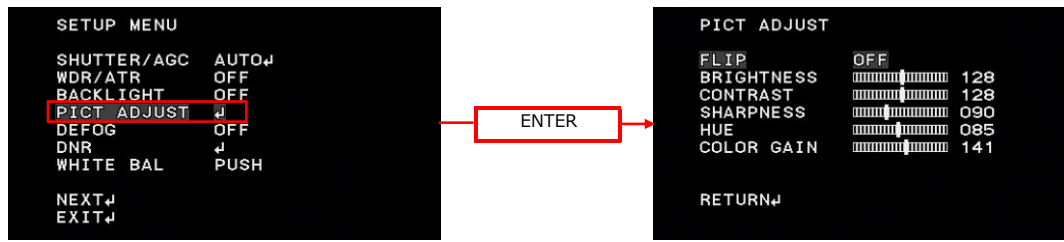


HLC = ON

BACKLIGHT	OPERATION
OFF	No operation
BLC	Backlight compensation(BLC) operates. BLC is performed by increasing the brightness of the entire screen such that the subject that is blackened by backlight will have the proper brightness. When there is a dark subject, the BLC operates such that the correct brightness will be obtained. *When the 『3.4.2 Wide Dynamic Range』 function is ON, BLC can not be selectable.
HLC	Highlight compensation(HLC) operates. HLC reduces the burden on the observer's eyes by masking a strong light source in the dark and improves the deteriorated visibility with a strong light source.

3.6 Picture Adjust(PICT ADJUST)

Adjust image quality. Move the cursor to PICT ADJUST and press the ENTER to display the PICT ADJUST menu. Move the cursor up or down with UP / DOWN and select the item you want to adjust.



3.6.1 Image Flip(FLIP)

Set the image Flip(FLIP) processing. Use the LEFT/RIGHT to select from normal (OFF), horizontal flip (H - FLIP), vertical flip (V - FLIP) and horizontal - vertical image flip. (HV - FLIP).

*Default : OFF

MIRROR	OPERATION
OFF	Normal image
H-FLIP	Horizontal image flip
V-FLIP	Vertical image flip
HV-FLIP	Horizontal and vertical image flip. Rotating the image by 180 degrees.

3.6.2 Brightness(BRIGHTNESS)

Set the brightness(BRIGHTNESS)settings. Use the LEFT/RIGHT to adjust the brightness.

*Default : 128

CONTRAST	OPERATION
000-255	The smaller the setting value, the darker the image, and the larger the setting value the brighter the image.

3.6.3 Contrast(CONTRAST)

Set the contrast (CONTRAST) settings. Use the LEFT/RIGHT to adjust the contrast.

*Default : 128

CONTRAST	OPERATION
000-255	The smaller the setting value, the lower the contrast. The larger the setting value, the higher the contrast.

3.6.4 Edge Enhancement(SHARPNESS)

Sets the intensity of edge enhancement (SHARPNESS). It enhances the visual effects of resolution by emphasizing the outline portion of the image. Use the LEFT / RIGHT to set SHARPNESS.

*Default : 090

SHARPNESS	OPERATION
000-255	The larger the setting value, the higher the edge enhancement level of the entire screen, the sharper the image, but the noise become marked.

3.6.5 Chroma Settings(HUE/COLOR GAIN)

Set the chroma level (HUE, COLOR GAIN). You can set your arbitrary color by adjusting color gain (COLOR - GAIN) and color hue (HUE). Use the LEFT / RIGHT to adjust the chroma.

○HUE



HUE = 000

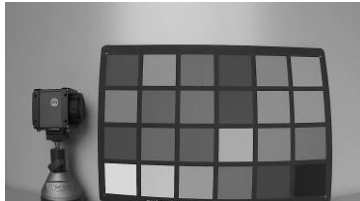


Default



HUE = 180

○COLOR GAIN



COLOR GAIN = 000



Default



COLOR GAIN = 255

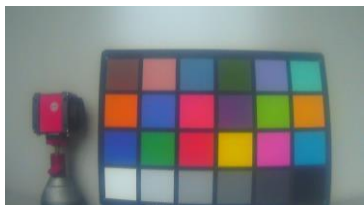
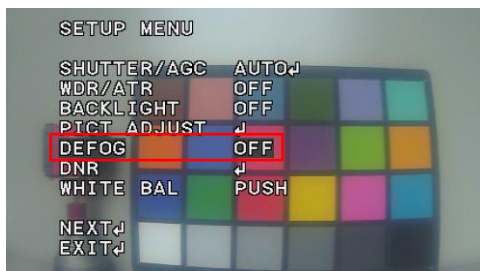
(ADJUST MENU)	OPERATION
HUE	HUE can be set in the range of 000-180. Adjust the hue.
COLOR GAIN	COLOR GAIN can be set in the range of 000 - 255. Adjust the color gain.

* The above explanation is a guide only, make adequate evaluation in the use environment.

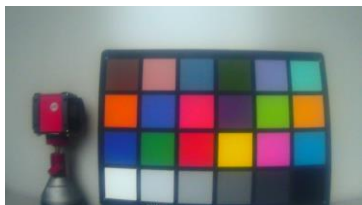
3.7 Defog(DEFOG)

Set the defog (DEFOG) settings. When fog or smoke occurs, the contrast of the screen decreases and the visibility deteriorates. The defog function can improve the contrast of visually impaired images with fog and or smoke and improve visibility. Selectable from OFF or AUTO. Pressing the ENTER when AUTO is selected displays the DEFOG Menu. Use the LEFT / RIGHT to select the DEFOG setting.

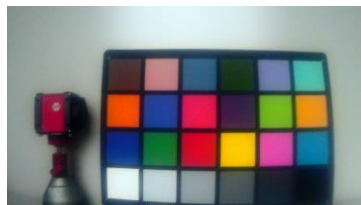
*Default : OFF



LOW



MID



HIGH

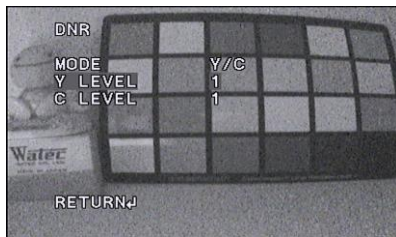
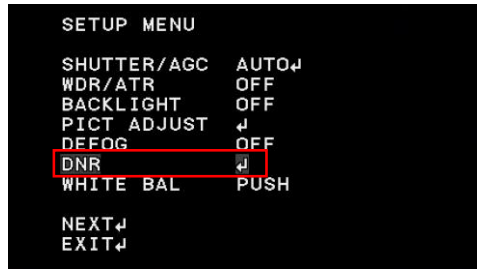
DEFOG	SUB MENU	OPERATION
OFF	-	No operation
AUTO	LOW	DEFOG automatically operates when foggy condition is detected. LOW : Fog detection sensitivity low, contrast correction low
	MID	MID : Fog detection sensitivity mid, contrast correction mid
	HIGH	HIGH : Fog detection sensitivity high, contrast correction high The larger that set value, the higher the contrast. It improves the visibility. *Default : MID

3.8 Noise Reduction(DNR)

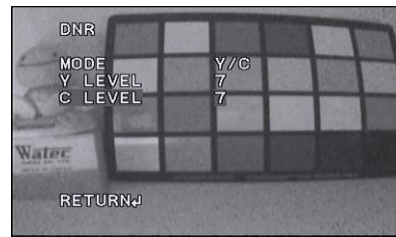
Set the noise reduction (DNR) function. Noise reduction is a function to reduce image noise to improve the image quality of the camera. Especially, it reduces the noise that occurs when the gain becomes high.

Move the cursor to DNR and press the ENTER to display the DNR menu.

Move the cursor up or down with UP / DOWN to adjust items.



Y LEVEL = 1, C LEVEL = 1



Y LEVEL = 7, C LEVEL = 7

DNR MENU	(SUB MENU)	OPERATION
MODE	OFF	No operation. *Default : OFF
	Y	Noise reduction operates on Y component independently.
	C	Noise reduction operates on C component independently.
	Y/C	Noise reduction operates on Y component and C component while using the 2 filters.
Y LEVEL	1 - 7	Set Y component correction level of noise reduction. The greater the set value, the stronger the effect of noise reduction. *Default : 4
C LEVEL	1 - 7	Set C component correction level of noise reduction. The greater the set value, the stronger the effect of noise reduction. *Default : 4

3.9 White Balance(WHITE BAL)

Set the white balance (WHITE BAL) settings. This function is to correct white colored subjects to be shown as white under the illumination environment of various color temperatures . Use the LEFT / RIGHT to select the WHITE BAL from PUSH, USER1, USER2, MANUAL, PUSH LOCK, ATW.

*Default : PUSH



WHITE BAL	OPERATION
PUSH	PUSH controls the white balance irrespective of subject conditions. Since the pull-in control always operates regardless of the preset pull-in range, the pull-in operates in a wider color temperature range than ATW, but the pull-in control operates even in the imaging scene where monochrome occupies a large proportion on the screen and color reproduction may be impaired.
USER1 USER2	USER1 and 2 allow you to change the white balance compensation value as desired for each. This is effective when the color temperature of the lighting to be used is known in advance. Adjust the setting value according to the operating environment.
MANUAL	MANUAL corrects the white balance with arbitrary setting values. Adjust the setting according to the operating environment.
PUSH LOCK	While pressing the ENTER, PUSH LOCK corrects the white balance according to the color temperature under the operating environment and fixes the operation with the white balance correction amount at that moment of the Enter is released. Since it matches the actual lighting, it can correct accurately even if the color temperature is unknown.
ATW	ATW automatically controls the white balance and maintains color reproducibility by following the change in surrounding color temperature. Pull-in range is set in advance, it controls only when the surrounding color temperatures judged to be within the pull-in frame. By setting the pull-in frame, deterioration of color reproduction can be reduced without taking in pull-in operation in imaging scenes where monochrome occupies a large proportion in the screen.

3.9.1 Push White Balance(PUSH)

PUSH controls the white balance over a wider color temperature range than ATW and maintains color reproducibility regardless of subject conditions.

*Speed control setting is not available.

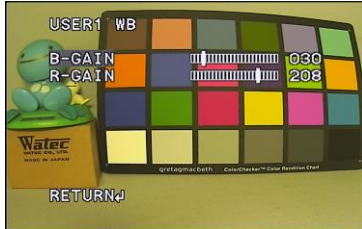
3.9.2 User White Balance (USER1/USER2)

USER1/USER2 can change the white balance compensation value as desired for each.

When either USER1 or USER2 is selected, pressing ENTER displays the SETUP menu for each WB.

Move the cursor up or down with the UP / DOWN and use the LEFT / RIGHT to adjust items.

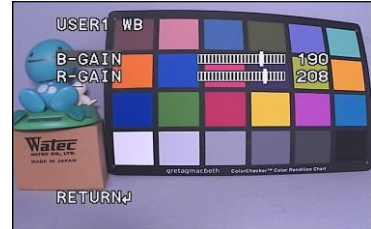
○B-GAIN



B-GAIN = 030



B-GAIN = 149



B-GAIN = 190

○R-GAIN



R-GAIN = 150



R-GAIN = 208



R-GAIN = 220

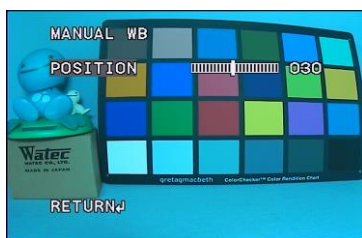
WHITE BAL	(SUB MENU)	OPERATION
USER1 /USER2	B-GAIN	Sets the B-GAIN of the white balance correction value. B-GAIN can be set in the range of 000-225. A smaller value corrects the image to yellow, while a larger value corrects the image to blue.
	R-GAIN	Sets the R-GAIN of the white balance correction value. R-GAIN can be set in the range of 000-225. A smaller value corrects the image to cyan, and a larger value corrects the image to red.

3.9.3 Manual White Balance(MANUAL)

MANUAL WB enables to set the white balance correction value arbitrarily.

When MANUAL is selected, press the ENTER to display the manual white balance setting menu.

Please use the LEFT / RIGHT to adjust items.



POSITION = 030



POSITION = 046



POSITION = 060

WHITE BAL	(SUB MENU)	OPERATION
MANUAL	POSITION	Set the manual white balance correction value POSITION. POSITION can be set in the range of 000-063. When the set value is decreased, the screen will be corrected to the blue side, and when it is increased the screen will be corrected to the red side. *Default : 041

3.9.4 Push Lock White Balance(PUSH LOCK)

PUSH LOCK adjusts the white balance under actual illumination and it can be corrected accurately even if the color temperature is unknown.



Before



After

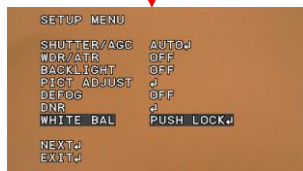
○PUSH LOCK adjustment method

Capture a white paper or other achromatic subject under actual lighting to fill the screen, then press ENTER.

It will be completed when the paper is corrected to white.



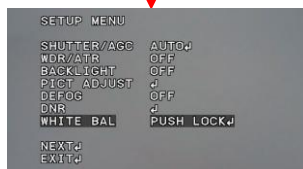
Step (1) Before



Step (2) Place the white paper in the entire screen

ENTER

Step (3) Press ENTER to start correction
(PUSH LOCK text blinks)



Step (4) When the PUSH LOCK text stops blinking,
the correction operation is completed.
(*If corrected without problems, the paper will be white.)



Step (5) After

3.9.5 Auto Trace White Balance(ATW)

ATW maintains color reproducibility even when the color temperature of the light source changes.

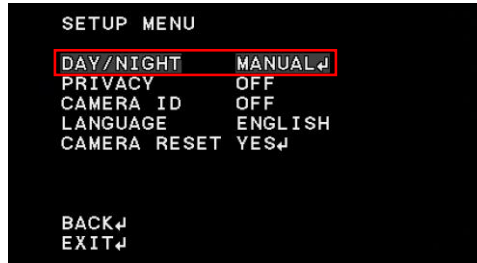
When ATW is selected, press the ENTER to display the WHITE BAL menu. Move the cursor up or down with the UP / DOWN and use the LEFT / RIGHT to adjust items.

WHITE BAL	(ATW SETUP Menu)	OPERATION
ATW	SPEED	Set the pull-in speed. The lead-in speed can be set in the range 001-255. The lower the set value, the faster the pull-in speed, and the larger the set value, the slower the pull-in speed. *Note : Color oscillation is likely to occur if the pull-in speed is set too fast. <u>*Default : 128</u>
	DELAY CNT	Set the time from the changes in color temperature to the start of white balance control. Selectable in the range 001-255. The lower the set value, the faster to start WB control, the higher the set value, the slower to start WB control. <u>*Default : 008</u>

3.10 ICR Mechaless Day/Night (DAY/NIGHT)

Set the ICR Mechaless Day/Night (DAY/NIGHT) function, which combines an RGBW image sensor with an optical dual-pass filter to create a Day/Night camera that does not use an ICR (Infrared Cut filter Removal) mechanism. This is achieved by combining an RGBW image sensor with an optical dual-pass filter. When ambient illumination is low, such as at night, the sensitivity of the camera can be improved by capturing images including near-infrared wavelengths, thereby enhancing visibility at night. The Day/Night transition mode includes continuous transition mode (MANUAL) and conventional transition mode (AUTO).

Use the LEFT / RIGHT to select between AUTO and MANUAL. *Default : MANUAL



3.10.1 Continuous Transition Mode (MANUAL)

This section sets the continuous transition mode (MANUAL). Continuous transition mode can be achieved by setting the DAY/NIGHT setting to MANUAL+COLOR, allowing smooth transition between day and night modes. When MANUAL is selected, press the ENTER to display the DAY / NIGHT menu. Move the cursor up or down and use LEFT / RIGHT to adjust items.

3.10.1.1 Day / Night Setting(DAY/NIGHT)

Select the Day / Night setting from the Day mode or the Night mode.

*Default : COLOR

DAY/NIGHT	OPERATION
COLOR	The camera is set to continuous transition mode. In bright environments, the camera operates as a normal color camera. As the light intensity lower, it will smoothly switch to the monochrome image.
B/W	Night mode is to be set. Imaging will always be monochrome even in a bright environment.

3.10.1.2 Burst Signal(BURST)

Select ON / OFF of the burst signal in the Night mode.

*Default : ON

BURST	OPERATION
ON	Add a burst signal. Please turn it ON if some monitors and image capture boards may not accept video signals without color burst. * We recommend that you turn off BURST when using a displayable device even without a color burst.
OFF	No burst signal is added. * When COLOR is selected with the DAY / NIGHT, the burst signal is always added, regardless of BURST setting.

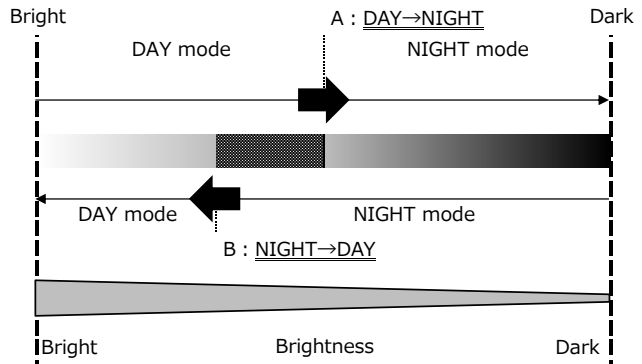
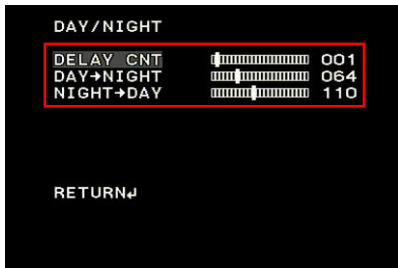
3.10.2 Conventional Transition Mode (AUTO)

This parameter is used to set the conventional transition mode (AUTO). The conventional transition mode instantly switches between day mode and night mode based on the threshold set for the ambient brightness. When AUTO is selected, pressing ENTER displays the DAY/NIGHT menu. Move the cursor up or down and use LEFT/RIGHT on the item to be adjusted.

3.10.2.1 Day / Night Switching Control (DELAY CNT / DAY→NIGHT / NIGHT→DAY)

Sets the threshold and transition judgment time for day/night switching control.

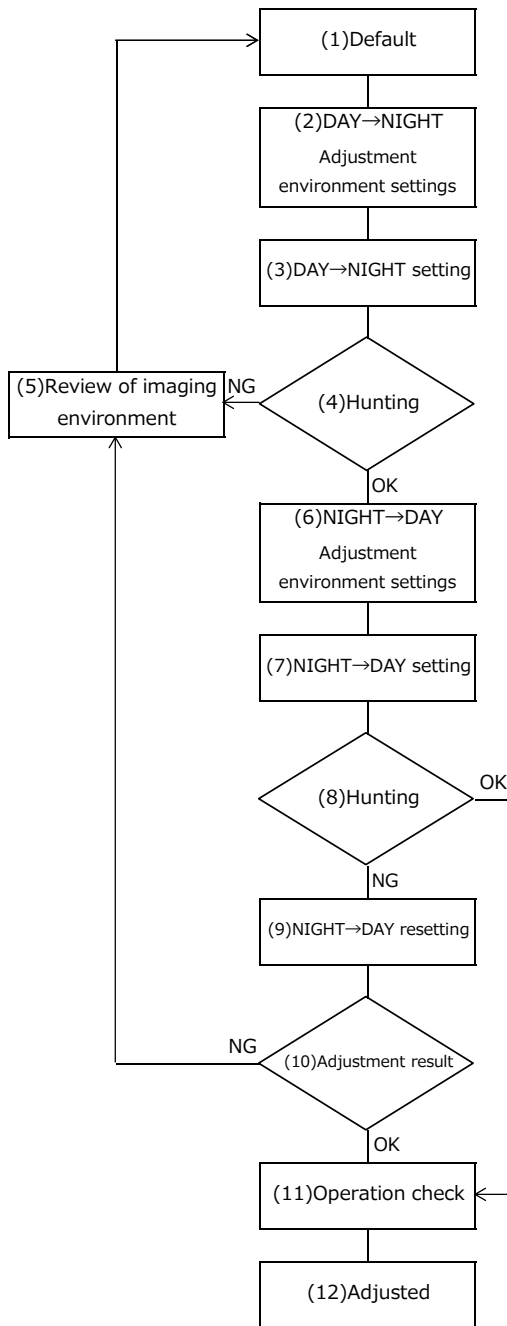
Use the LEFT / RIGHT to move the cursor to adjust the threshold and transition judgment time of Day⇌Night.



DAY/NIGHT	(DAY/NIGHT MENU)	OPERATION
AUTO	DELAY CNT	Sets the transition judgment time between day mode and night mode if the brightness remains above the threshold for the period set by DELAY CNT, a transition is made between Day⇌Night. DELAY CNT can be set in the range of 000 - 255. The unit is "seconds". *Default : 001
	DAY→NIGHT	Set the brightness to transition from Day mode to Night mode. When ambient illuminance decreases and falls below the set value, it switches to Night mode. DAY → NIGHT can be set in the range 000-255. Please set as DAY → NIGHT < NIGHT → DAY. *Default : 064
	NIGHT→DAY	Set the brightness to transition from Night mode to Day mode. When the ambient illuminance rises and exceeds the set value, it switches to Day mode. NIGHT → DAY can be set in the range 000-255. Please set as DAY → NIGHT < NIGHT → DAY. *Default : 110

○Day ⇔ Night switching threshold adjustment procedure

The procedures for adjusting DAY → NIGHT and NIGHT → DAY is as follows.

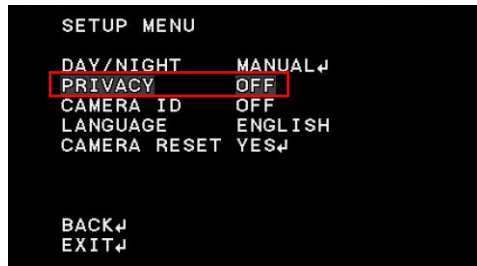


- (1) Set DAY → NIGHT = 255 (Max. value)
NIGHT → DAY = 000 (Min. value), DELAY CNT = 001.
 - (2) Adjust the lighting and reproduce the brightness you want to switch to the Night mode while checking the monitor.
 - (3) Lower the set value of DAY → NIGHT one by one until it switches from the Day mode to the Night mode.
 - (4) Jump to (6) if the hunting that the Day mode and the Night mode switch continuously does not occur.
If the hunting occurs, go to (5).
 - (5) It may be impossible to respond by switching using the threshold of Day/Night mode. Please change the object and lighting.
 - (6) Adjust the lighting and reproduce the brightness you want to switch to Day mode while checking the monitor.
 - (7) Higher the set value of NIGHT → DAY one by one until it switches from the Night mode to the Day mode.
 - (8) If the hunting does not occur, go to (11).
If the hunting occurs, go to (9).
 - (9) Lower the set value of NIGHT → DAY until the hunting stops.
 - (10) If you are not satisfied with the adjustment result of NIGHT → DAY, back to (5).
 - (11) Make change of lighting and confirm the switching of Day / Night is done without problems.
 - (12) If there is no problem with the above setting, the adjustment is completed. Please save the setting.
- *Illuminance is used for judgment of brightness.
Therefore, we recommend to readjust the Day / Night switching threshold when changing the aperture of the lens.

3.11 Privacy Mask(PRIVACY)

Set the privacy mask (PRIVACY). The privacy mask can hide areas that you do not want to display on the screen. Up to 16 masks can be displayed on the screen. You can set the display area, color, darkness and mosaic processing for each mask independently. Move the cursor to PRIVACY and select ON or OFF with LEFT / RIGHT. Press the ENTER when ON is selected displays the PRIVACY menu. Move the cursor up and down with UP/DOWN and adjustment the item you want to adjust while using the LEFT / RIGHT.

*Default : OFF



(PRIVACY MENU)	OPERATION
AREA SEL	Select the mask number to be set. The masking number is selected from 1/16 to 16/16. *Default : 1/16
TOP	Set the top side of the masked area. It can be set within the range of 000 - 720.
BOTTOM	Set the bottom side of the masked area. It can be set within the range of 000 - 720. It can not be set to a smaller value than TOP.
LEFT	Set the left side of the masked area. It can be set within the range of 000 - 1280.
RIGHT	Set the right side of the masked area. It can be set within the range of 000 - 1280. It can not be set to a smaller value than LEFT.
COLOR	Set the masking color. You can select the color from the following 8 colors. 1 (RED), 2 (GREEN), 3 (BLUE), 4 (YELLOW), 5 (CYAN), 6 (MAGENTA), 7 (WHITE), 8 (BLACK) *Default : 1 (RED)
TRANSP	Set the transparency of the masking. The masking transparency can be selected from 0.00, 0.50, 0.75 and 1.00. The higher the set value, the lower the transparency of the masking, 1.00 will completely mask the masking area. *Default : 1.00
MOSAIC	Set ON/OFF of mosaic processing. Mosaic processing on the masking area can be available when ON is selected. *When TRANSP is set to 1.00, mosaic processing is not available. *Default : OFF

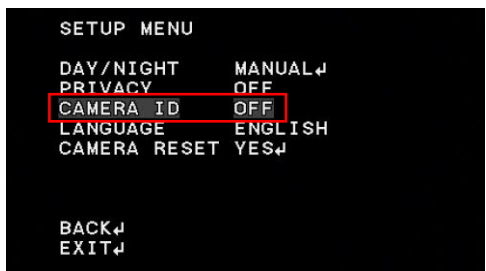
*The default setting for the mask area is that only mask number 1 is displayed. For mask numbers 2 to 16, the default setting is TOP, BOTTOM, LEFT, and RIGHT are set to 000, and the mask area is not specified.

*If the same value is set for TOP and BOTTOM or LEFT and RIGHT, the mask area will not be displayed.

Please be careful when making settings.

3.12 CAMERA ID Setting(CAMERA ID)

Set the camera ID (CAMERA ID). This function displays arbitrary characters on the screen.
 It is effective for identifying the camera on the screen when using multiple cameras.
 Move the cursor to CAMERA ID with UP/DOWN and use the LEFT/RIGHT to select ON / OFF.
 *Default : OFF

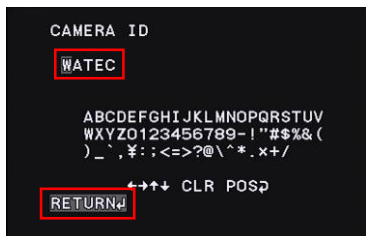


When ON is selected, press ENTER to display CAMERA ID menu. Use the UP/DOWN/LEFT/RIGHT to select the character to be displayed and use the ENTER to enter the characters.

CAMERA ID	(CAMERA ID SETUP MENU)	OPERATION
OFF	-	CAMERA ID is hidden.
ON	(input)	The characters that can be entered are displayed in the CAMERA ID SETUP menu. Up to 52 characters such as alphabet (capital), numbers, and symbols can be entered. *Default : blank
	←→↑↓	Set the position of the cursor when entering characters. After entering a character, you can change the character by moving the cursor to the character you want to change and entering another character.
	CLR	Delete the entered characters.
	POS	Set the display position of the input character. Move the cursor to POS and press the ENTER to display a window for setting the display position of the character. *Default position : Upper left of the screen.

○Character entering setting

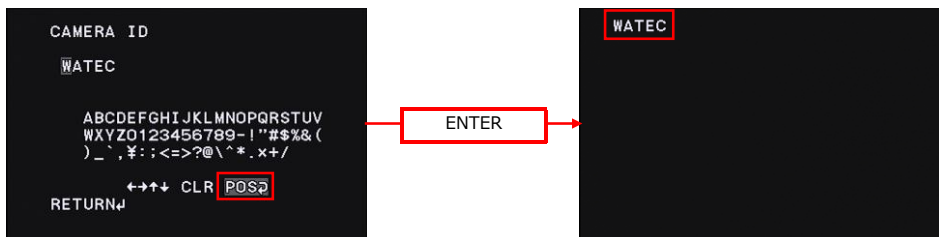
Use the UP/DOWN/LEFT/RIGHT/ENTER to set the CAMERA ID.



- (1) Move the cursor to CAMERA ID and press the ENTER.
- (2) After entering characters, move the cursor to "RETURN" and press the ENTER to return to SETUP MENU.

○Display position setting

Move the cursor to POS and press the ENTER to display the display position setting menu.
 Use the UP/DOWN/LEFT/RIGHT to set the display position. After setting, press the ENTER to return to the CAMERA ID menu.



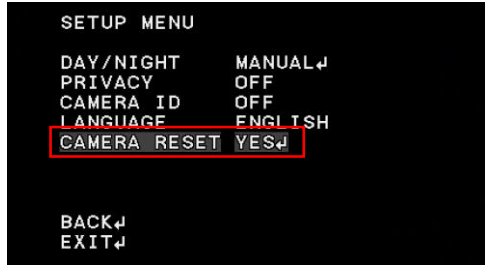
*CAMERA ID will be displayed when the OSD menu screen is turned off. While the OSD menu is displayed, CAMERA ID does not show up.
 To turn off the OSD menu, move the cursor to EXIT with UP/ DOWN and press the ENTER to display the EXIT menu.
 Move the cursor to SAVE ALL or NOT SAVE with the UP / DOWN, hide the OSD menu by pressing the ENTER.

3.13 LANGUAGE Setting(LANGUAGE)

Set the language of the OSD menu. You can choose from English, German, French, Russian, Portuguese, and Spanish. Move the cursor to LANGUAGE with UP/DOWN and use the LEFT / RIGHT to select from ENGLISH, DEUTSCH, FRANCAIS, русский, PORTUGUÊS and ESPAÑOL.
 *Default : ENGLISH

3.14 Factory Reset(CAMERA RESET)

This function returns the camera setting to factory default (CAMERA RESET) function. Even after changing camera settings, you can return the camera to the factory default by executing camera reset. Move the cursor to CAMERA RESET with UP/DOWN and press the ENTER to execute the camera reset.

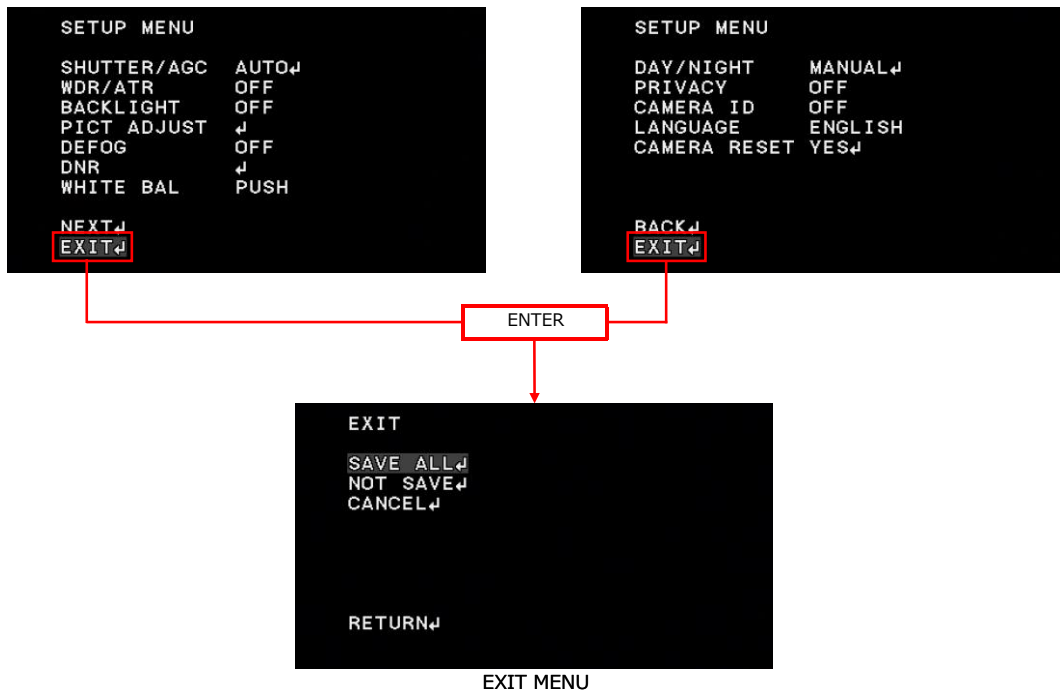


*When you want to save the default setting value after executing the camera reset, save the setting value according to 『3.2 Save setting (SAVE ALL)』 .

NOTE : When you do not save the setting value prior to turning off the power, the settings will return to the setting value before executing the camera reset.

3.15 EXIT MENU(EXIT)

Exit the OSD menu. Move the cursor to EXIT with UP / DOWN and press the ENTER so that the EXIT menu will be displayed. In EXIT MENU, you can select SAVE ALL, NOT SAVE, CANCEL, RETURN. Move the cursor with the UP / DOWN and press the ENTER to execute.



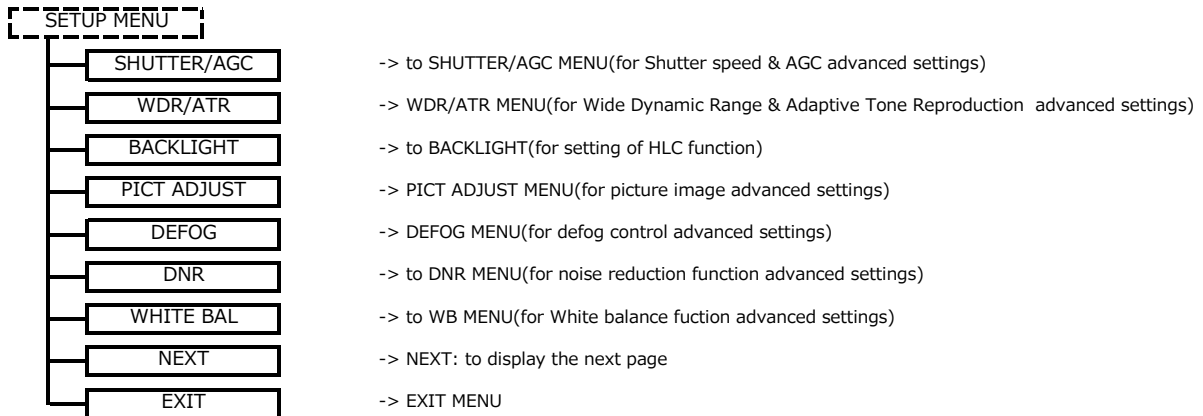
EXIT	OPERATION
SAVE ALL	Save the OSD setting in ROM and close the OSD menu. After turning on the power again, the camera starts with the saved settings.
NOT SAVE	Close the OSD menu without saving the OSD setting in ROM. After turning on the power again, the camera starts with the setting before the new modification was made.
CANCEL	Set the camera setting back to the state before displaying the OSD menu and close the OSD menu.
RETURN	Return to SETUP MENU.

4.OSD Menu Tree

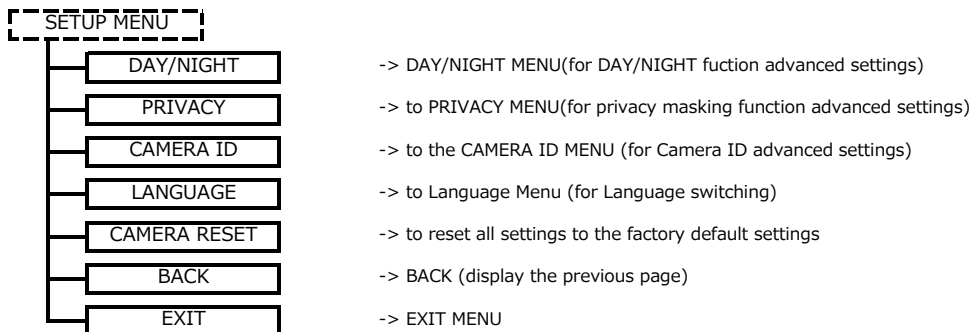
- Legend
- Represents OSD menu item
 - Represents the operation by UP, DOWN and ENTER key of the remote control
 - Represents the operation by RIGHT, LEFT and ENTER key of the remote control
 - Represents a selectable mode and setting value of each menu item
 - Represents the title on the OSD and not a setting item

※LANGUAGE:ENGLISH

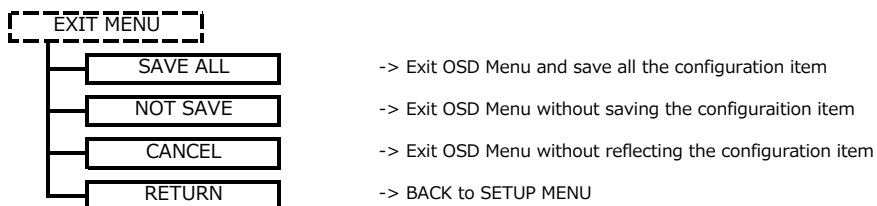
○SETUP MENU



○SETUP MENU

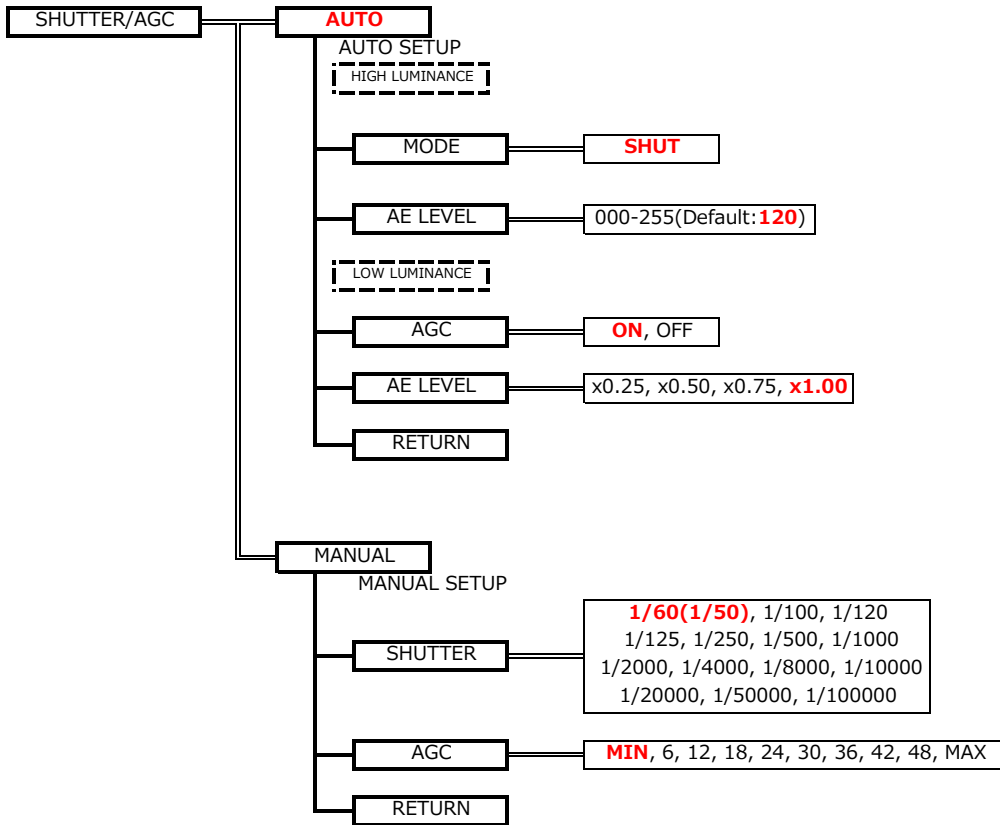


○EXIT MENU

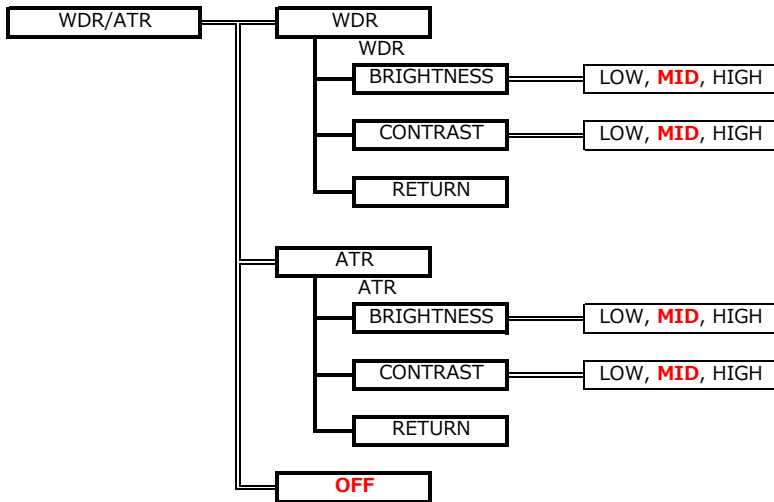


○SHUTTER/AGC(SETUP MENU)

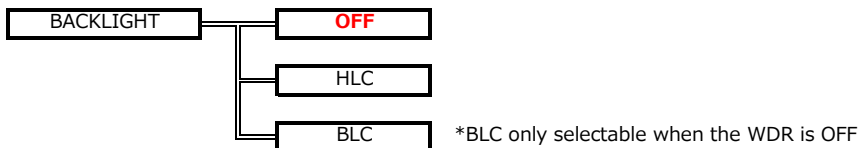
Default : in Red



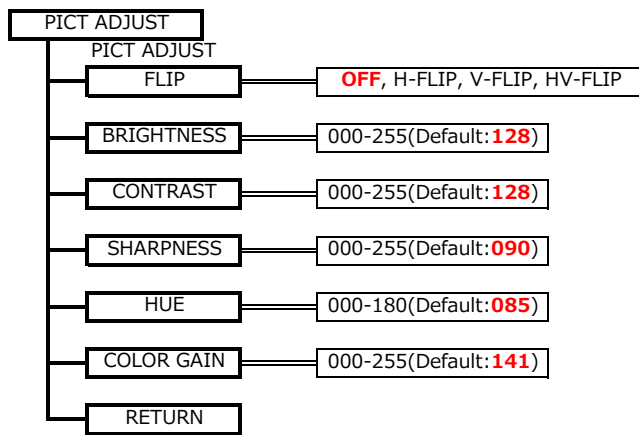
○WDR/BLC(SETUP MENU)



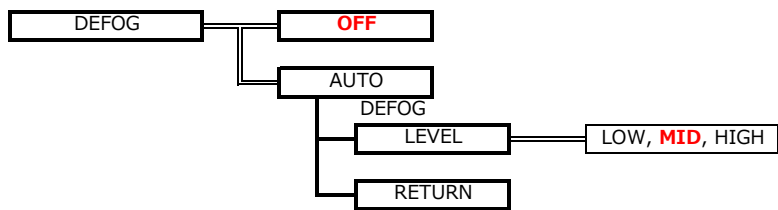
○BACKLIGHT(SETUP MENU)



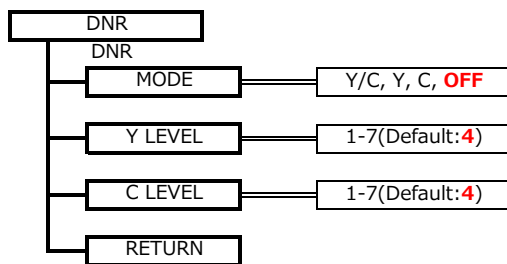
○ PICT ADJUST (SETUP MENU)



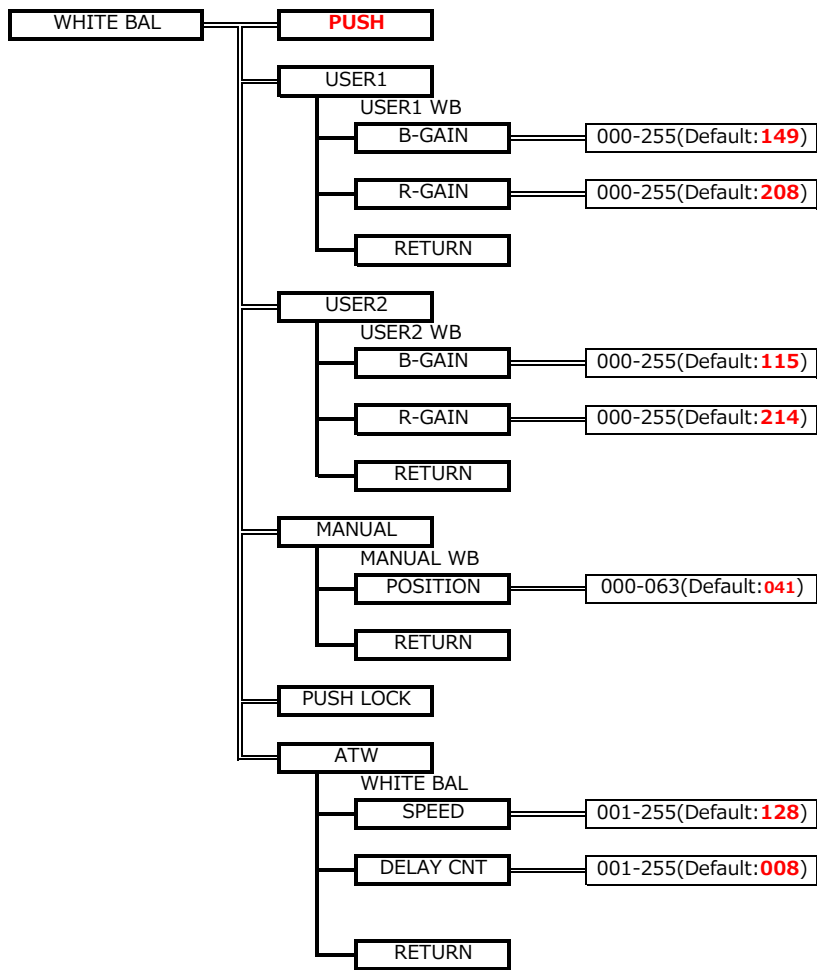
○ DEFOG (SETUP MENU)



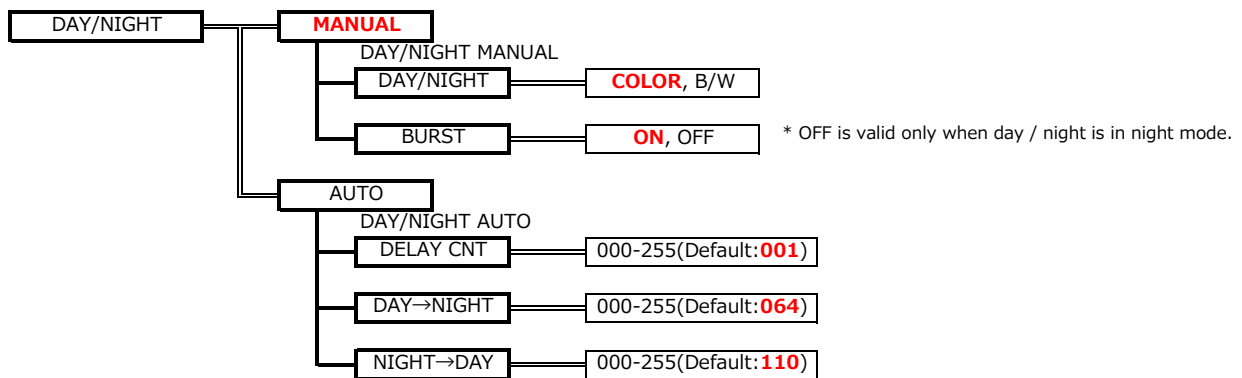
○ DNR (SETUP MENU)



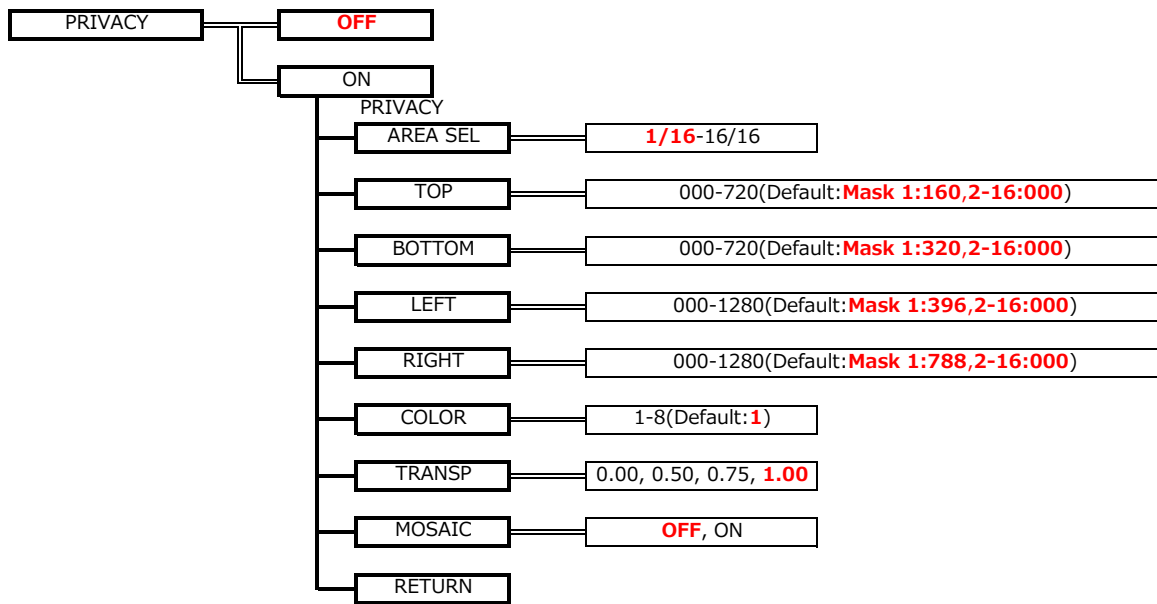
○WHITE BAL(SETUP MENU)



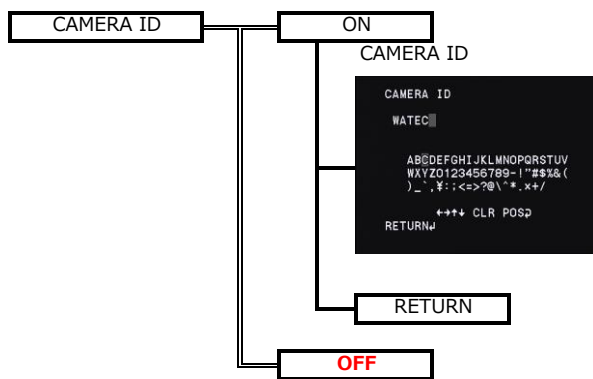
○DAY/NIGHT(SETUP MENU)



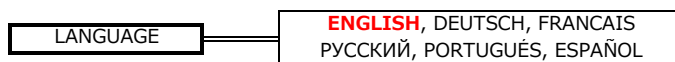
○PRIVACY(SETUP MENU)



○CAMERA ID(SETUP MENU)



○LANGUAGE(SETUP MENU)



○CANERA RESET(SETUP MENU)



○OSD factory settings

■ SHUTTER/AGC

Name	Default setting
SHUTTER/AGC	AUTO
MODE	SHUT
AE LEVEL (HIGH LUMINANCE)	120
AGC	ON
AE LEVEL (LOW LUMINANCE)	x1.00

■ WDR/ATR

Name	Default setting
WDR/ATR	OFF

■ BACKLIGHT

Name	Default setting
BACKLIGHT	OFF

■ PICT ADJUST

Name	Default setting
FLIP	OFF
BRIGHTNESS	128
CONTRAST	128
SHARPNESS	090
HUE	085
COLOR GAIN	141

■ DEFOG

Name	Default setting
DEFOG	OFF

■ DNR

Name	Default setting
MODE	OFF

■ WHITE BAL

Name	Default setting
WHITE BAL	PUSH

■ DAY/NIGHT

Name	Default setting
DAY/NIGHT	MANUAL
DAY/NIGHT	COLOR

■ PRIVACY

Name	Default setting
PRIVACY	OFF

■ CAMERA ID

Name	Default setting
CAMERA ID	OFF

■ LANGUAGE

Name	Default setting
LANGUAGE	ENGLISH