

WAT-2200Mk-2/WAT-3200 Control Software Operation Manual

[version 2.00]

Watec Co., Ltd.

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1 Overview

"WAT-2200Mk-2/WAT-3200 Control Software" is software for setting, factory reset and OSD Operation for WAT-2200Mk-2/WAT-3200 by RS-232 communication that complies with the VISCA protocol.

Note: This software does not support all settings in the OSD menu due to communication protocols.

For a list of settings, please refer to the WAT-2200Mk-2/WAT-3200 User Manual "5. RS232 Command List."

For detailed information on each setting, please refer to "3. Functions".

2 Disclaimer

For any damages caused by using the "WAT-2200Mk-2/WAT-3200 Control Software", Watec Co., Ltd. does not guarantee.

3 Supported models

The following SDI models are Supported .

- WAT-2200 Mk-2
- WAT-3200

4 Operating environment

Operation has been confirmed in the following environment.

Table 1 System requirements

OS	Windows10(*1), Windows11(*2) (*1) Confirmed by Version:22H2, OS Build:19045.4474 (*2) Confirmed by Version:24H2, OS Build:26100.2894
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5 Specification of communication

The specification of communication is below.

Table 2 Communication protocol

Serial port	<ul style="list-style-type: none">- Data rate : 9600bps- Data bit : 8bits- Parity : none- Stop bit : 1bit- Flow control : none
limitation	<ul style="list-style-type: none">- Cannot communicate with the camera on starting after about 10 seconds.

6 Communication cable

The pin-assignment and the connections of the serial communication cable(CB-03) are below.



Fig. 1 Pin layout

Table 3 Internal connection of the CB-03

Mini-Din 8pin (male)			Internal Connection	D-sub 9pin (female)		
Pin No.	Name	Description		Pin No.	Name	Description
3	TXD (out)	Send from camera	Connect	2	RXD (in)	Receive by control equipment
5	RXD (in)	Receive by camera	Connect	3	TXD (out)	Send from control equipment
4	GND	Ground	Connect	5	GND	Ground
1, 2, 6, 7, 8	NC	Unused (For remote control button)	Non-Connect	1, 4, 6, 7, 8, 9	NC	Unused *

*Short the 7pin (RTS) and 8pin (CTS) on the control equipment side as needed.
(Disable the hardware flow control)

7 Precautions when using this software

- When rebooting, setting changes, factory reset, etc. are performed by direct operation of the camera, there may be differences between the actual camera settings and the settings displayed by this software.
If the camera is operated directly, please perform the "get settings (from camera)" described later and check if there is any difference between the actual camera settings and the settings displayed by this software.
- It is not recommended to change the settings using this software while the OSD is displayed on the camera.
- This software does not support all settings in the OSD menu due to communication protocols.
For a list of settings, please refer to the WAT-2200Mk-2/WAT-3200 User Manual "5. RS232 Command List."
For detailed information on each setting, please refer to "3. Functions".
- Please check that there are no problems with operation in your actual use environment after checking the settings using this software.

8 How to Install

Unzip the file downloaded from our website and copy the created folder to any location. After that, execute "WAT-2200Mk-2_3200_Control_Installer_Ver200.msi" in the folder and follow the instructions to install.

9 How to Start

Click "WAT-2200Mk-2_3200_Control" from the Windows start menu to open it, then click "WAT-2200Mk-2_3200_ControlSoftware" to start it.

Or search for "WAT-2200Mk-2_3200_ControlSoftware" from the Windows start menu search and click to launch.

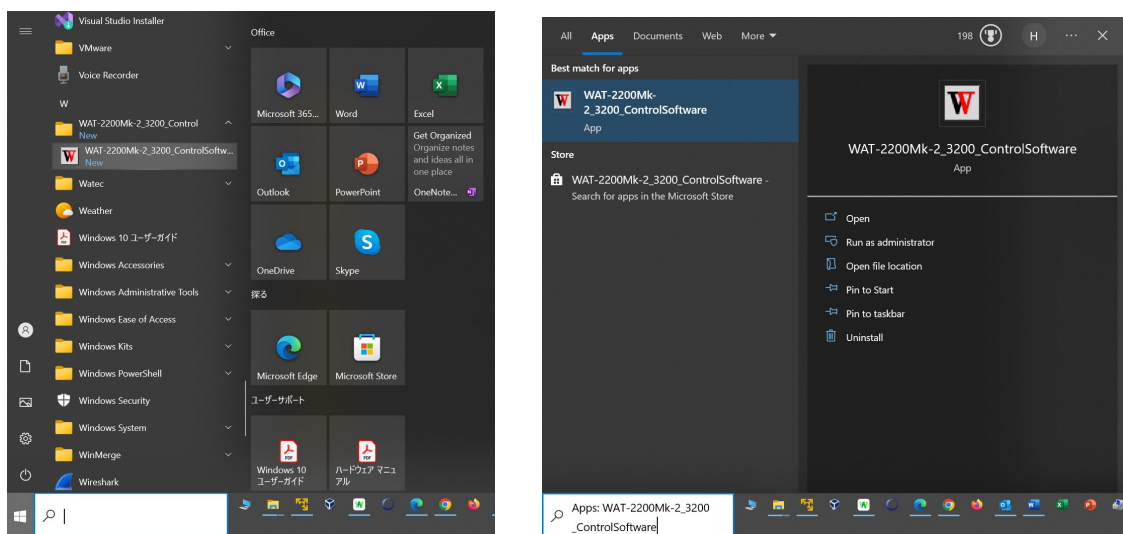


Fig. 2 How to find app

10 How to Uninstall

Right-click "WAT-2200Mk-2_3200_ControlSoftware" found by the method introduced in "9 How to Start" and click Uninstall. When the "Uninstall or change a program" screen appears, find "WAT-2200Mk-2_3200_ControlSoftware" from the list and uninstall it.

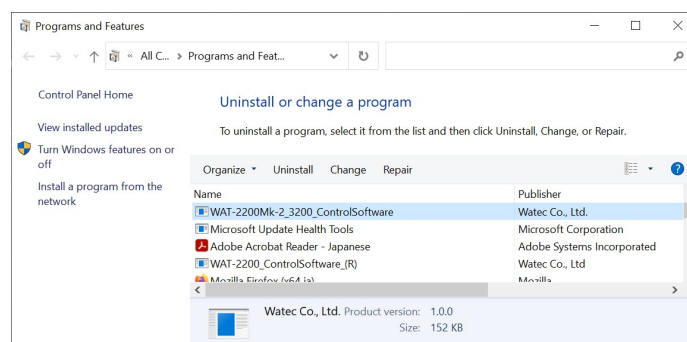


Fig. 3 programs and features

11 Operation Instruction

11-1 Settings of the port number and model

When starting the software or click "11-2-1-1 option..." (described later), the port selection window (Fig. 4) will be displayed in the option window.

You can check the port number in Device Manager.

After selecting the port number, subsequent operations will be changed depending on whether the serial number of the camera for the communication destination contains/does not contain the letter "R".

If you cancel the port selection window (click the × button), the main window will enter VIEWER-MODE(*1).

*1: VIEWER mode is a mode for only viewing the settings saved with "11-2-1-3 save file...".

In VIEWER mode, only "11-2-1-1 option..." and "11-2-1-2 load file..." can be operated and all setting items will be disabled.

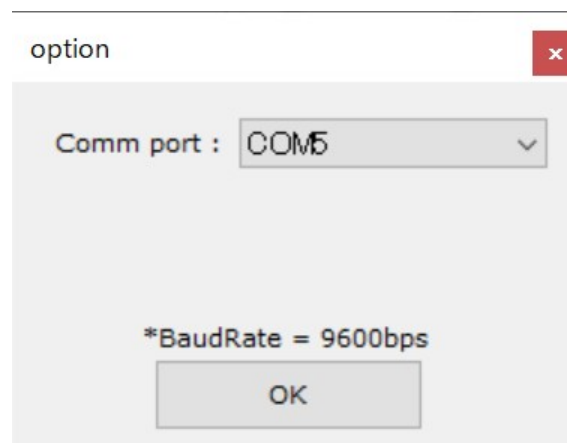


Fig. 4 Port selection window

11-1-1 If the serial number does not contain the letter “R”

If the serial number does not contain the letter R (e.g. W513 XXXXX), the Model selection window (Fig. 5) will be displayed after selecting the port number, and you can select either WAT-2200Mk-2/WAT-3200/VIEWER-MODE(*1).

If you cancel the model selection window (click the × button), the main window will enter VIEWER-MODE.

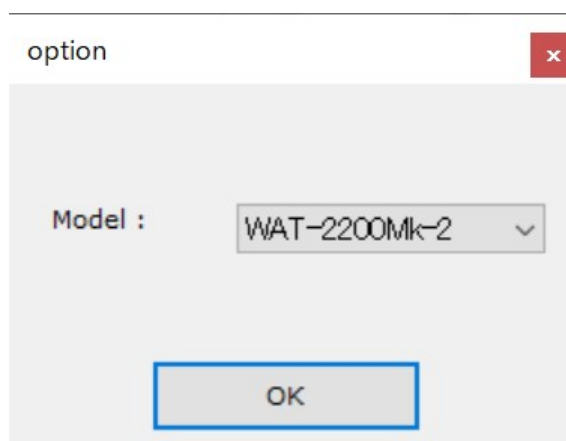


Fig. 5 Model selection window

11-1-2 If the serial number contains the letter “R”

If the serial number contains the letter R (e.g. W513R XXXXX), the Model will be automatically selected from WAT-2200Mk-2/WAT-3200 after selecting the port number.

Or, you can select VIEWER-MODE (*1) by canceling the port selection window.

Compared to when the serial number does not contain the letter R, the following additional features are available.

Table 4 List of additional features 1

Tab	Operation
Exposure	Set/Get PWM OFFSET ADJ
	Set/Get IRIS SPEED
WhiteBalance	Set/Get SPEED
	Set/Get OFFSET-B
	Set/Get OFFSET-R
DNR	Get Level

Table 5 List of additional features 2

Tab	Operation
PictureAdjust	Get Gamma - Correction Value
	Set/Get Gamma - Y LUT EXTEND
	Set/Get CONTRAST
	Set/Get BRIGHTNESS
	Set/Get AUTO EDGE
Functions	Set/Get Defog - STRENGTH
	Set/Get Defog - THRESHOLD
	Set/Get Defog - AUTO LEVEL
	Set/Get DWDR - STRENGTH
	Set/Get DWDR - SATURATION
	Set/Get DWDR - LOCAL RATIO
	Set/Get DWDR - SAT.SYNC
	Set/Get DWDR - AUTO LEVEL
	Set/Get BLC - SIZE
	Set/Get BLC - POSITION
	Set/Get BLC - AREA DISPLAY
	Set/Get HSBLC - SIZE
	Set/Get HSBLC - POSITION
	Set/Get HSBLC - LEVEL
	Set/Get HSBLC - AREA DISPLAY
	Set/Get HSBLC - BLACK MASK
	Set/Get WDR - FRAME VIEW SEL
	Set/Get WDR - WDR AE MODE
	Set/Get WDR - EXPOSURE RATIO
	Set/Get WDR - WDR STRENGTH
	Set/Get WDR - LOCAL CONTRAST
	Set/Get WDR - AE BRIGHT
	Set/Get WDR - GAIN
	Set/Get WDR - SHUTTER

11-1-3 Displaying the main window

Once the port number and model have been set, the main window will be displayed. The selected Model will be displayed in the upper left of the main window (Fig. 6). If the serial number contains the letter R, (R) will be added to the end of the Model name. The option window can be redisplayed from the menu (File->Option...).



Fig. 6 Display of the Model(Main window)

11-2 Change the camera settings

11-2-1 File menu

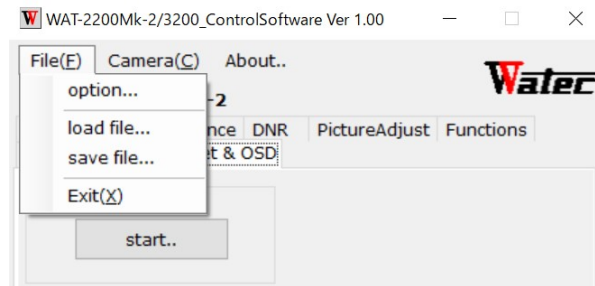


Fig. 7 file menu

11-2-1-1 option...

Display the port number and model setting window.

For details, see "11-1 Settings of the port number and model ".

11-2-1-2 load file...

Load previously saved configuration files.

After execution, the Open dialog will be displayed. Select the configuration file and press the "Open" button.

The loaded settings are reflected in the setting values displayed on the software, but not on the camera itself. Please perform "send all settings (to camera)" by yourself and reflect it in the camera settings.

Note: If the version of the software differs from when the setting file was saved, the settings may not be reflected correctly.

Note: After saving the setting file, if the user changes the contents, it may not be possible to read or the intended setting value may not be obtained.

11-2-1-3 save file...

Save the current settings to a file.

However, the Freeze on PictureAdjust tab setting is not saved.

After execution, the Save dialog will be displayed. Enter the setting file name and press the "Save" button.

Note: Since the setting values to be saved are the setting values displayed by the software, they may differ from the actual camera setting values. Please perform "get settings (from camera)" yourself and save after confirming that the setting values of the camera are reflected.

11-2-1-4 Exit

Exit this software.

The same operation is performed when the X button on the upper right of the window is pressed.

11-2-2 Camera menu

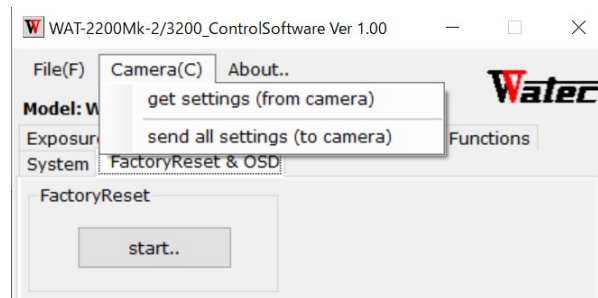


Fig. 8 Camera menu

11-2-2-1 get settings(from camera)

Get the current settings of the camera.

However, if the mode is old F/W mode, the following settings cannot be acquired.

- Level on DNR tab
- CorrectionValue on PictureAdjust tab

11-2-2-2 send all settings(to camera)

Sends the setting values displayed on the software to the camera.

At the same time, the Freeze on PictureAdjust tab is always set to OFF.

Please note that if the selection settings are not selected, the camera will not be set.

11-2-3 About menu

Display the about window.



Fig. 9 The about window

The about window displays the software name, version, and developer.

11-2-4 Exposure

When the WDR on the Functions tab is ON, this tab is disabled.

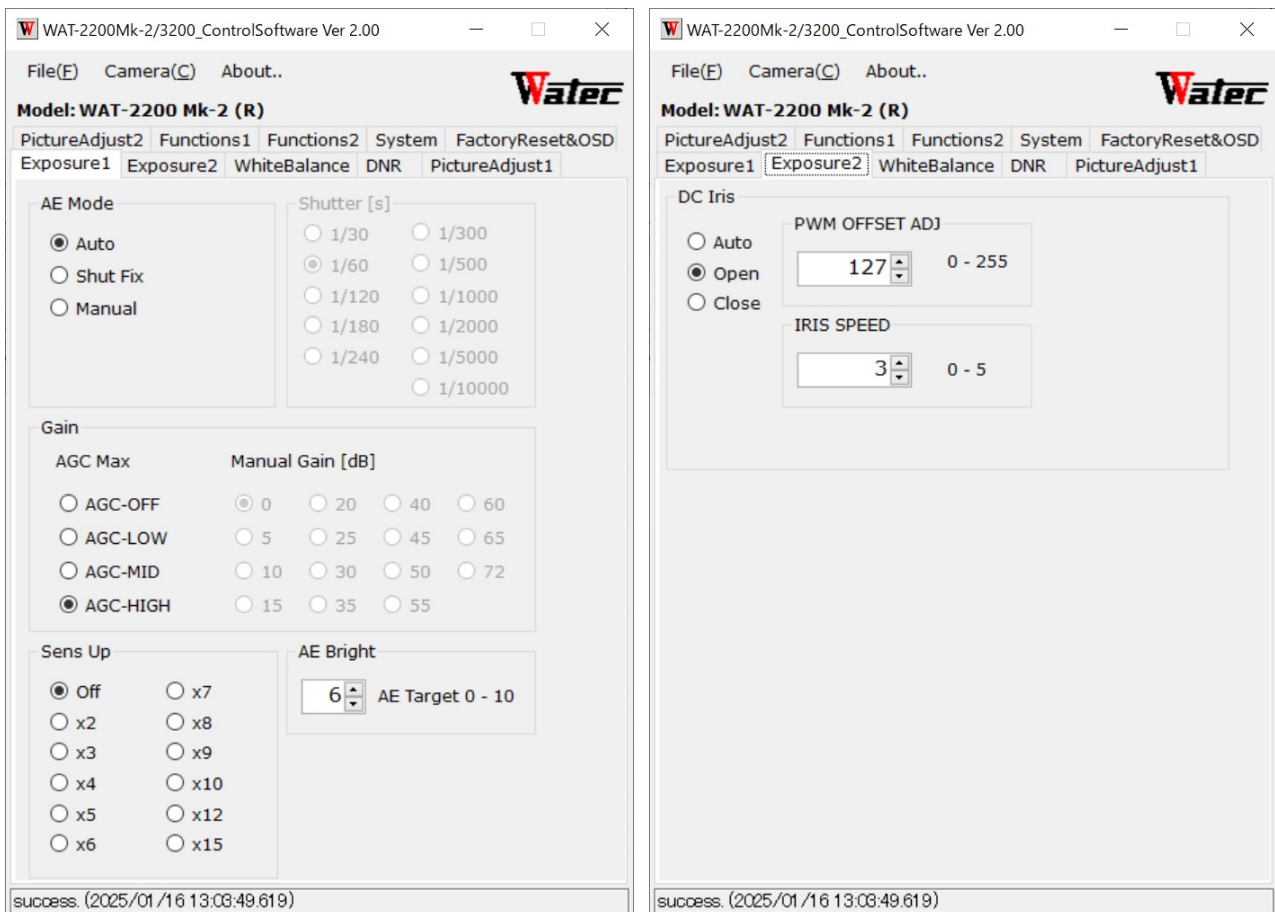


Fig. 10 Exposure tab

11-2-4-1 AE Mode

Sets the mode of auto exposure control. Each mode operates in the following combinations.

Table 6 Selection of exposure modes

Mode	Shutter	Gain
Auto	Auto	Auto
Shut Fix	Manual	Auto
Manual	Manual	Manual

[Auto]

Adjust exposure by automatically controlling electronic shutter and gain.

[Shut Fix]

With the electronic shutter fixed, the gain is automatically controlled to adjust the exposure. When the electronic shutter speed is slowed down, overexposure occurs. In that case, use a DC iris lens together.

[Manual]

Electronic shutter speed and gain can be selected independently.

Always open when using an IRIS lens.

11-2-4-2 Shutter

When the AE mode is ShutFix or Manual, an electronic shutter speed can be selected from the following values. The selectable electronic shutter speed changes depending on the OutputMode on the System tab.

Table 7 List of Shutter settings

Selected 1080p60, 1080p59, 1080i60, 1080i59, 720p60, or 720p59	Selected 1080p30 or 1080p29	Selected 1080p50, 1080i50, or 720p50	Selected 1080p25
-	1/30s	-	1/25s
1/60s		1/50s	
1/120s		1/100s	
1/180s		1/150s	
1/240s		1/200s	
1/300s		1/250s	
1/500s			
1/1000s			
1/2000s			
1/5000s			
1/10000s			

11-2-4-3 Gain

When the AE Mode is Manual, any fixed gain can be selected from the following values. In other modes, select the working range of AGC Max.

Table 8 List of ManualGain settings

0 dB	5 dB	10 dB	15 dB	20 dB	25 dB	30 dB	35 dB
40 dB	45 dB	50 dB	55 dB	60 dB	65 dB	72 dB	

Table 9 List of AGC Max settings

Setting	Gain range
AGC-OFF	0dB
AGC-LOW	0 - 36 dB
AGC-MID	0 - 50 dB
AGC-HIGH	0 - 72 dB

11-2-4-4 Sens Up

Sets the long exposure time (slow shutter).

When the AE Mode is Auto or Manual, this is enabled.

Table 10 List of SensUp settings

Off	x2	x3	x4	x5	x6	x7	x8	X9	x10	x12	x15
-----	----	----	----	----	----	----	----	----	-----	-----	-----

11-2-4-5 AE Bright

Sets the brightness target value.

When the AE Mode is Auto or Shut Fix, this is enabled.

When the value is large, the brighter the image will be when AE converges.

It can be set in the range of 0 - 10.

11-2-4-6 DC Iris

Sets the iris lens mode.

When the AE Mode is Auto or Shut Fix, this is enabled.

Table 11 List of DC Iris settings

Setting	Operating
Auto	The DC iris lens is automatically controlled so that the brightness reaches the exposure control target value.
Open	Fully open the DC iris lens.
Close	Fully close the DC iris lens.

11-2-4-6-1 PWM OFFSET ADJ

When the AE Mode is Auto or Shut Fix, this is enabled.

Sets how easily the DC iris starts moving.

When the value is large, the sooner it will start moving.

It can be set in the range of 0 - 255.

11-2-4-6-2 IRIS SPEED

When the AE Mode is Auto or Shut Fix, this is enabled.

Sets the speed at which the DC iris converges after it starts moving.

When the value is large, the faster it will converge.

It can be set in the range of 0 - 5.

11-2-5 WhiteBalance

When the WAT-3200 is selected in the option window, this tab is disabled.
Also, when the WDR on the Functions tab is ON, this tab is disabled.

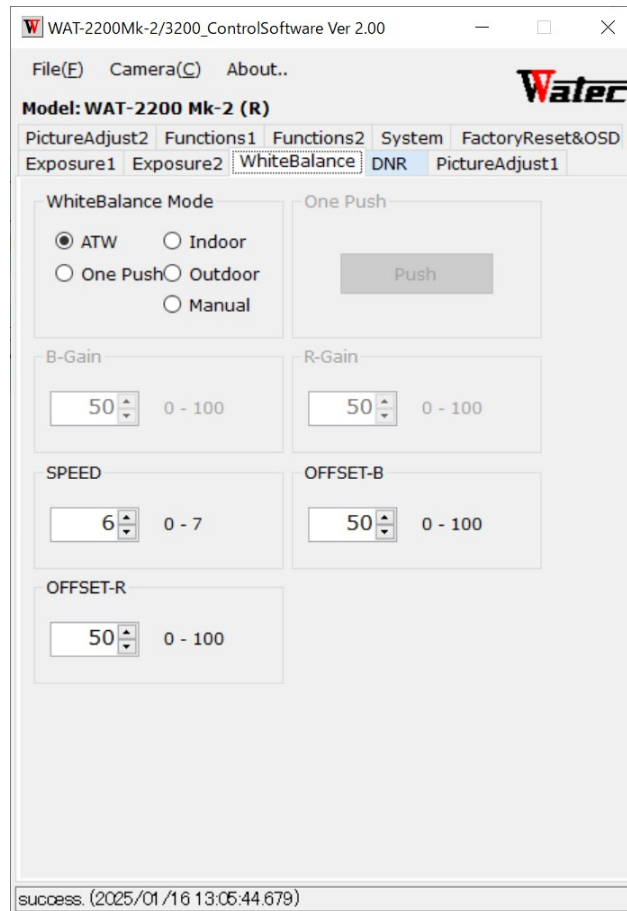


Fig. 11 WhiteBalance tab

11-2-5-1 White Balance Mode

Sets the white balance operation mode.

Table 12 List of WhiteBalanceMode settings

Setting	Operating
ATW	Automatically follows changes in ambient color temperature to control white balance and maintain color reproducibility.
One Push	This mode fixes the white balance at a specific color temperature. It is used in combination with the white balance convergence (Push Button).
Indoor	White balance automatically follows (about 4600K - 7200K). Set to easily follow indoor light sources (fluorescent lights, etc.).
Outdoor	White balance automatically follows (about 4600K - 10000K). Set to easily follow outdoor light sources (sunlight, etc.).
Manual	Adjust R-Gain/B-Gain of white balance correction value as desired.

11-2-5-2 One Push

11-2-5-2-1 Push Button

Executes the white balance convergence and then locks the white balance.

When the WhiteBalanceMode is OnePush, this is enabled.

11-2-5-3 B-Gain

Sets the B-Gain of the white balance correction value.

When the WhiteBalanceMode is Manual, this is enabled.

When the value is large, the image becomes more blue.

It can be set in the range of 0 - 100.

11-2-5-4 R-Gain

Sets the R-Gain of the white balance correction value.

When the WhiteBalanceMode is Manual, this is enabled.

When the value is large, the image becomes more red.

It can be set in the range of 0 - 100.

11-2-5-5 **SPEED**

Set the follow-speed of WHITE BALANCE.

When the WhiteBalanceMode is ATW, INDOOR, or OUTDOOR, this is enabled.

When the value is large, the faster the white balance will follow up when the subject's color changes.

It can be set in the range of 0 - 7.

11-2-5-6 **OFFSET-B**

Set the offset by the B gain when WHITE BALANCE is converged.

When the WhiteBalanceMode is ATW, INDOOR, or OUTDOOR, this is enabled.

When the value is large, the image becomes more blue as the white balance converges.

It can be set in the range of 0 - 100.

11-2-5-7 **OFFSET-R**

Set the offset by the R gain when WHITE BALANCE is converged.

When the WhiteBalanceMode is ATW, INDOOR, or OUTDOOR, this is enabled.

When the value is large, the image becomes more red as the white balance converges.

It can be set in the range of 0 - 100.

11-2-6DNR

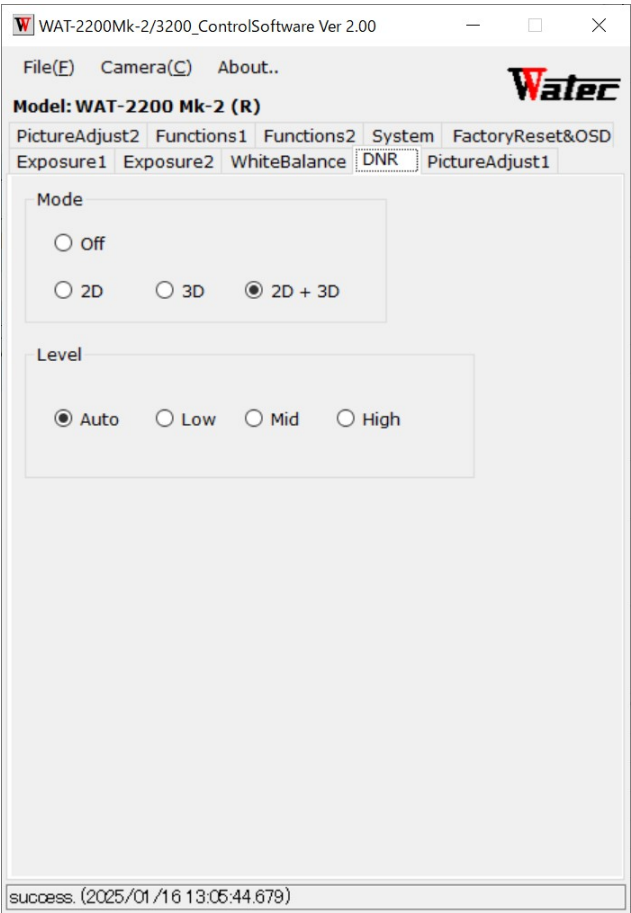


Fig. 12 DNR tab

11-2-6-1 Mode

Sets the noise reduction control mode.

Table 13 List of DNR Mode settings

Setting	Operating
Off	No noise reduction control.
2D	2D noise reduction works. Edge-preserving smoothing reduces noise. The contours of the subject may become blurred.
3D	3D noise reduction works. Noise is detected by comparing two consecutive frames and reduced. Depending on the subject, afterimages may be noticeable.
2D+3D	Control noise reduction by combining 2D noise reduction and 3D noise reduction.

11-2-6-2 Level

Sets the strength of noise reduction.

When the Mode is 2D, 3D, or 2D+3D, this is enabled.

Table 14 List of DNR Level settings

Setting	Operating
Auto	Automatically controls the strength of noise reduction.
Low	Sets the strength of the noise reduction to LOW.
Mid	Sets the strength of the noise reduction to MID.
High	Sets the strength of the noise reduction to HIGH.

Note: When the Mode is 2D, the camera works with the DNR Level as the Auto, regardless of the Level set by this control software.
Furthermore, the display on the OSD will also be Auto.

11-2-7 PictureAdjust

When WDR on the Functions tab is ON, this tab is disabled.

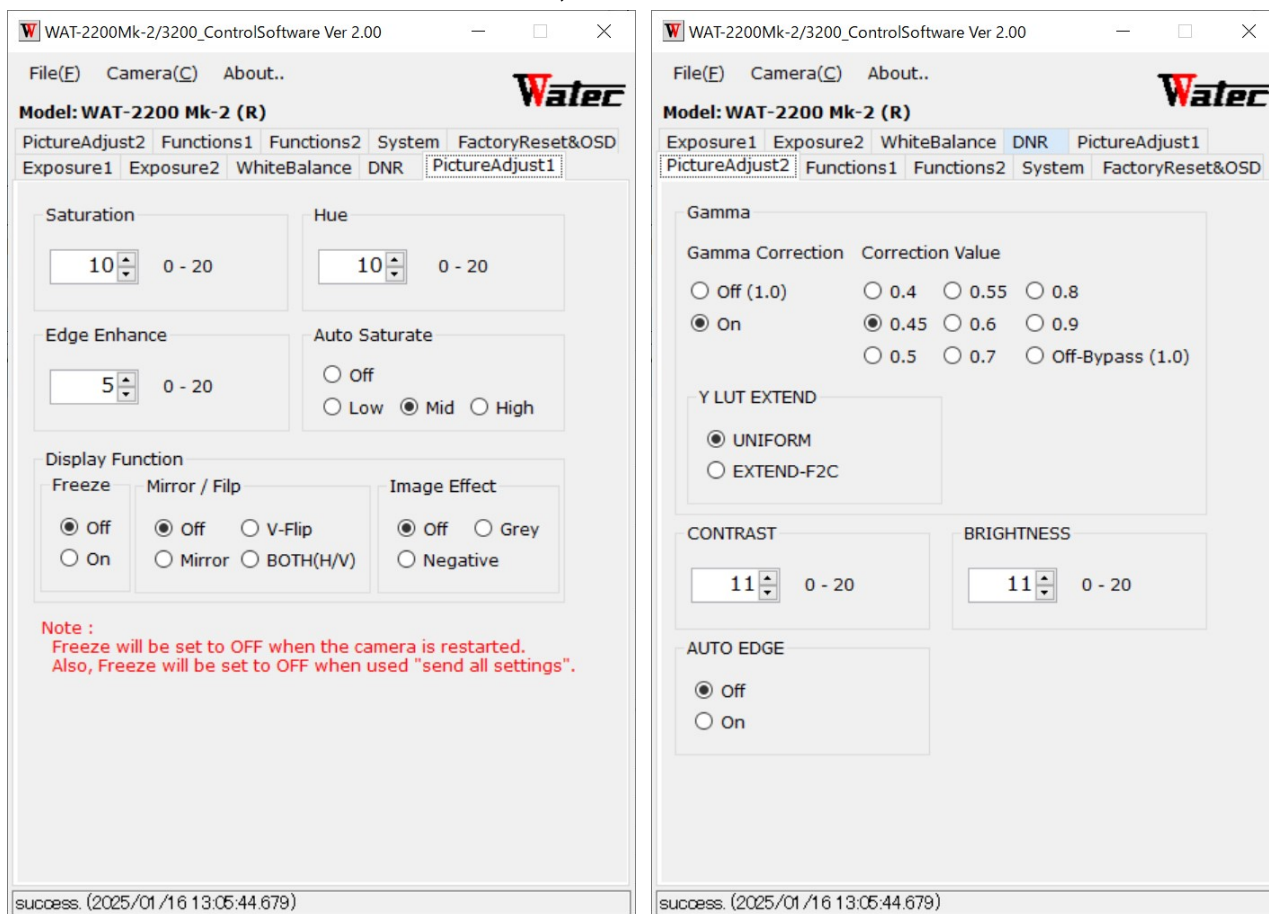


Fig. 13 PictureAdjust tab

11-2-7-1 Gamma

11-2-7-1-1 Gamma Correction

Switches the gamma correction function ON/OFF.

11-2-7-1-2 Correction Value

Sets the gamma correction value.

When the Gamma Correction is ON, this is enabled.

Table 15 List of Correction Value settings

0.4	0.45	0.5	0.55	0.6	0.7	0.8	0.9	Off-Bypass(1.0)
-----	------	-----	------	-----	-----	-----	-----	-----------------

11-2-7-1-3 Y LUT EXTEND

Select the Gamma Correction method.

When the Gamma Correction is ON, this is enabled.

Table 16 List of Y LUT EXTEND

Setting	Operating
UNIFORM	Uniformly correct the dark and bright part of the subject.
EXTEND-F2C	Brightness correction except on the bright part on the subject.

11-2-7-2 Saturation

Adjusts the saturation of the image.

It can be set in the range of 0 - 20.

11-2-7-3 Hue

Adjusts the hue of the image.

It can be set in the range of 0 - 20.

11-2-7-4 Edge Enhance

Adjust the level of edge enhancement.

It can be set in the range of 0 - 20.

11-2-7-5 Auto Saturate

This function suppresses the saturation when the illumination of the subject is low.

Table 17 List of Auto Saturate settings

Setting	Operating
Off	Maintains color saturation even when subject illumination is low.
Low	Sets the strength of the auto saturation to LOW.
Mid	Sets the strength of the auto saturation to MID.
High	Sets the strength of the auto saturation to HIGH.

11-2-7-6 Display Function

11-2-7-6-1 Freeze

Sets the Freeze state of the image.

Note: When the camera starts up, this setting is always Off.

Note: This setting value is not saved by "save file". Furthermore, when doing "send all settings (to camera)", it will be forcibly set to Off, and the Freeze state of the camera will also be set to OFF.

Table 18 List of Freeze settings

Setting	Operating
Off	Sets the Freeze state to OFF.
On	Sets the Freeze state to ON. When the Freeze is ON, the following settings are disabled. <ul style="list-style-type: none">- WDR on Functions tab- MotionDetect on Functions tab- OutputFormat on System tab- CVBSFormat on System tab

11-2-7-6-2 Mirror/Flip

Sets the Mirror/Flip state of the image.

When the DIS on the Functions tab is ON, this is disabled.

Also, when this setting is Mirror, V-Flip, or BOTH (H/V), the DIS on the Functions tab is disabled.

Table 19 List of Mirror/Flip settings

Setting	Operating
Off	Turn off MIRROR.
Mirror	Invert to right and left of the image.
V-Flip	Invert to up and down of the image.
BOTH(H/V)	Rotate the image 180 degrees.

11-2-7-6-3 Image Effect

Sets the Image Effect state of the image.

Table 20 List of Image Effect settings

Setting	Operating
Off	Turn off IMAGE EFFECT.
Negative	The negative-positive reversal on the contrast and color of the image.
Gray	Make the image to achromatic color.

11-2-7-7 CONTRAST

Adjust the contrast difference and color density difference of the image.

It can be set in the range of 0 - 20.

11-2-7-8 BRIGHTNESS

Adjust the brightness of the image.

It can be set in the range of 0 - 20.

11-2-7-9 AUTO EDGE

Weaken the contour emphasizing during low illuminance.

11-2-8 Functions

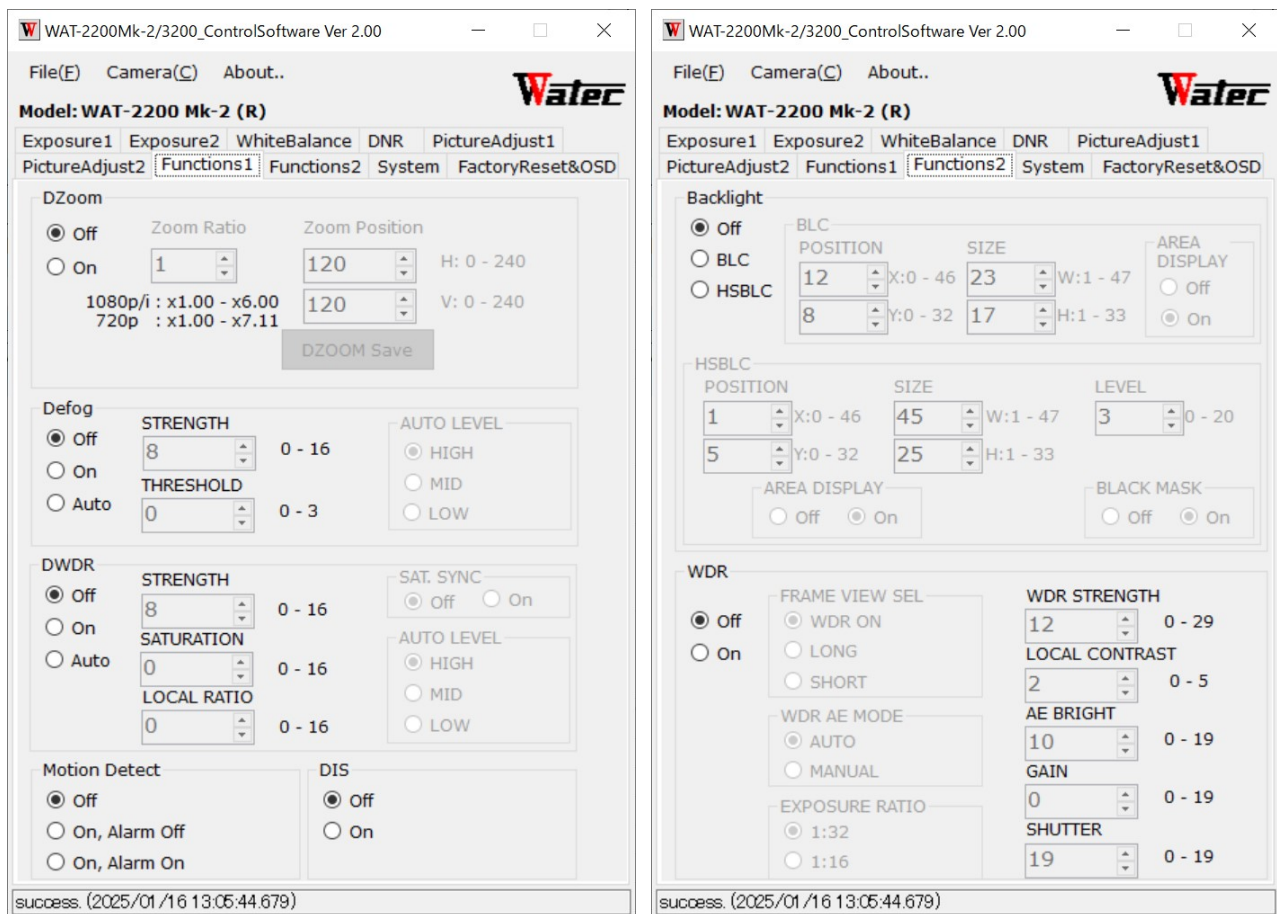


Fig. 14 Functions tab

11-2-8-1 DZoom

Switches the digital zoom function ON/OFF.

When the DIS is ON, this is disabled.

Also, when this setting is ON, the DIS is disabled.

11-2-8-1-1 Zoom Ratio

Sets the magnification of digital zoom.

When the DZoom is ON, this is enabled.

It can be set in the range of 1 - 6.

11-2-8-1-2 Zoom Position

Sets the pan and tilt position of the digital zoom.

When the DZoom is ON, this is enabled.

H is the setting for the pan side (horizontal direction) and V is the setting for the tilt side (vertical direction).

Both can be set within the range of 0 - 240.

11-2-8-1-3 DZOOM Save Button

Saves the digital zoom magnification, pan, and tilt position settings to the camera.

When the DZoom is ON, this is enabled.

If you have not saved with this button, the digital zoom setting will return to the last saved setting when the camera is restarted.

11-2-8-2 Defog

Sets the state of fog correction.

When the Back Light is BLC or HSBLIC, this is disabled.

Also, when this setting is On or Auto, the BackLight is disabled.

Table 21 List of Defog settings

Setting	Operating
Off	Sets the Defog to OFF.
On	Sets the Defog to ON (Fixed).
Auto	Sets the Defog to ON (Auto).

11-2-8-2-1 **STRENGTH**

Sets the strength of Defog (Fixed).
When the Defog is ON, this is enabled.
It can be set in the range of 0 - 16.

11-2-8-2-2 **THRESHOLD**

Sets the threshold of Defog (Auto).
When the Defog is Auto, this is enabled.
0 is the most easily corrected setting, and 3 is the least easily corrected setting.
It can be set in the range of 0 - 3.

11-2-8-2-3 **AUTO LEVEL**

Set the strength of Defog (Auto).
When the Defog is Auto, this is enabled.
It can be select from HIGH/MID/LOW.

11-2-8-3 **DWDR**

Correct the contrast of the subject by the histogram equalization.

Table 22 List of DWDR

Setting	Operating
Off	Sets the DWDR to OFF.
On	Sets the DWDR to ON (Fixed).
Auto	Sets the DWDR to ON (Auto).

11-2-8-3-1 **STRENGTH**

Set the strength of brightness correction on the dark part.
When the DWDR is ON, this is enabled.
It can be set in the range of 0 - 16.

11-2-8-3-2 **SATURATION**

Darken the bright part to make less difference with the dark part.
When the DWDR is ON, this is enabled.
It can be set in the range of 0 - 16.

11-2-8-3-3 LOCAL RATIO

Reduce the difference of the medium part of the contrast.

When the DWDR is ON, this is enabled.

It can be set in the range of 0 - 16.

11-2-8-3-4 SAT.SYNC

Sets ON/OFF of the function that controls the brightness of bright areas.

When the DWDR is Auto, this is enabled.

11-2-8-3-5 AUTO LEVEL

Set the strength of DWDR (Auto).

When the DWDR is Auto, this is enabled.

It can be select from HIGH/MID/LOW.

11-2-8-4 Motion Detect

Sets the MotionDetect ON/OFF.

When the Freeze on PictureAdjust tab is ON, this is disabled.

Furthermore, when this setting is "On, Alarm Off" or "On, Alarm On", the Blacklight sets to OFF.

Table 23 List of Motion Detect settings

Setting	Operating
Off	Sets the MotionDetect to OFF.
On, Alarm Off	Sets the MotionDetect to ON. Sets the function to output the detection result by Visca command to OFF.
On, Alarm On	Sets the MotionDetect to ON. Sets the function to output the detection result by Visca command to ON.

11-2-8-5 DIS

Sets function of reducing the blur and/or vibration of the subject.

the DIS is disabled in the following cases:

- When Mirror/Flip on PictureAdjust tab is Mirror, V-Flip, or BOTH (H/V)
- When DZoom is ON
- When WDR is ON

Also, when the DIS is ON, the following settings are disabled.

- Mirror/Flip on PictureAdjust tab
- DZoom
- WDR

11-2-8-6 Back Light

Sets the backlight compensation status.

When the Defog is On or Auto, this is disabled.

Also, when this setting is BLC or HSBLC, the Defog is disabled.

Furthermore, when this setting is BLC or HSBLC, the Motion Detect sets to OFF.

Table 24 List of Back Light settings

Setting	Operating
Off	Sets the BackLight state to OFF.
BLC	Sets the BackLight state to BLC.
HSBLC	Sets the BackLight state to HSBLC.

11-2-8-6-1 BLC

11-2-8-6-1-1 POSITION

Sets the start position of the BLC area.

When the Back Light is BLC, this is enabled.

11-2-8-6-1-2 SIZE

Sets the BLC area size.

When the Back Light is BLC, this is enabled.

Note: You cannot set a value that makes the sum of POSITION X and SIZE W greater than 48. And you cannot set a value that makes the sum of POSITION Y and SIZE H greater than 34.

If you try to set it, it will automatically be changed to the maximum value that can be set.

11-2-8-6-1-3 AREA DISPLAY

Set whether to display or hide the BLC area.

When the Back Light is BLC, this is enabled.

11-2-8-6-2 HSBLC

11-2-8-6-2-1 POSITON

Sets the start position of the HSBLC area.

When the Back Light is HSBLC, this is enabled.

11-2-8-6-2-2 SIZE

Sets the HSBLC area size.

When the Back Light is HSBLC, this is enabled.

Note: You cannot set a value that makes the sum of POSITION X and SIZE W greater than 48. And you cannot set a value that makes the sum of POSITION Y and SIZE H greater than 34.

If you try to set it, it will automatically be changed to the maximum value that can be set.

11-2-8-6-2-3 LEVEL

Set the threshold to recognize the high brightness part.

When the Back Light is HSBLC, this is enabled.

It can be set in the range of 0 - 20.

11-2-8-6-2-4 AREA DISPLAY

Set whether to display or hide the HSBLC area.

When the Back Light is HSBLC, this is enabled.

11-2-8-6-2-5 BLACK MASK

Switches the BLACK MASK function ON/OFF.

When the Back Light is HSBLC, this is enabled.

11-2-8-7 WDR

Sets function of the multiple exposure function.

the WDR is disabled in the following cases.

- When Freeze on PictureAdjust tab is ON
- When DIS is ON

Also, when the WDR is ON, the following items are disabled.

- Exposure tab
- WhiteBalance tab
- PictureAdjust tab
- DIS

11-2-8-7-1 FRAME VIEW SEL

When the WDR is ON, this is enabled.

Table 25 List of FRAME VIEW SEL

Setting	Operating
WDR ON	Display the WDR synthesis image.
LONG	Display only the long exposure image.
SHORT	Display only the short exposure image.

11-2-8-7-2 WDR AE MODE

When the WDR is ON, this is enabled.

Table 26 List of WDR AE MODE

Setting	Operating
AUTO	Automatically adjust the shutter and gain during the WDR is working. This is effective when the brightness of the subject changes drastically. The time until WDR operation converges will be longer.
MANUAL	The shutter and gain value is fixed during the WDR is working. The time until WDR operation converges will be shorter.

11-2-8-7-3 EXPOSURE RATIO

When the WDR is ON, this is enabled.

Table 27 List of EXPOSURE RATIO

Setting	Operating
1:32	Set the ratio of the exposure time between short and long exposures to 1:32.
1:16	Set the ratio of the exposure time between short and long exposures to 1:16.

11-2-8-7-4 WDR STRENGTH

When the WDR is ON, this is enabled.

Set the strength of the WDR process.

It can be set in the range of 0 - 29.

11-2-8-7-5 LOCAL CONTRAST

When the WDR is ON, this is enabled.

Set the correction level of the contrast when the WDR synthesis.

It can be set in the range of 0 - 5.

11-2-8-7-6 AE BRIGHT

When the WDR is ON and the WDR AE MODE is AUTO, this is enabled.

Set the target value of the brightness when WDR AE MODE=AUTO.

It can be set in the range of 0 - 19.

11-2-8-7-7 **GAIN**

When the WDR is ON and the WDR AE MODE is MANUAL, this is enabled.

Set gain when WDR AE MODE=MANUAL.

It can be set in the range of 0 - 19.

11-2-8-7-8 **SHUTTER**

When the WDR is ON and the WDR AE MODE is MANUAL, this is enabled.

Set shutter when WDR AE MODE=MANUAL.

It can be set in the range of 0 - 19.

11-2-9 System

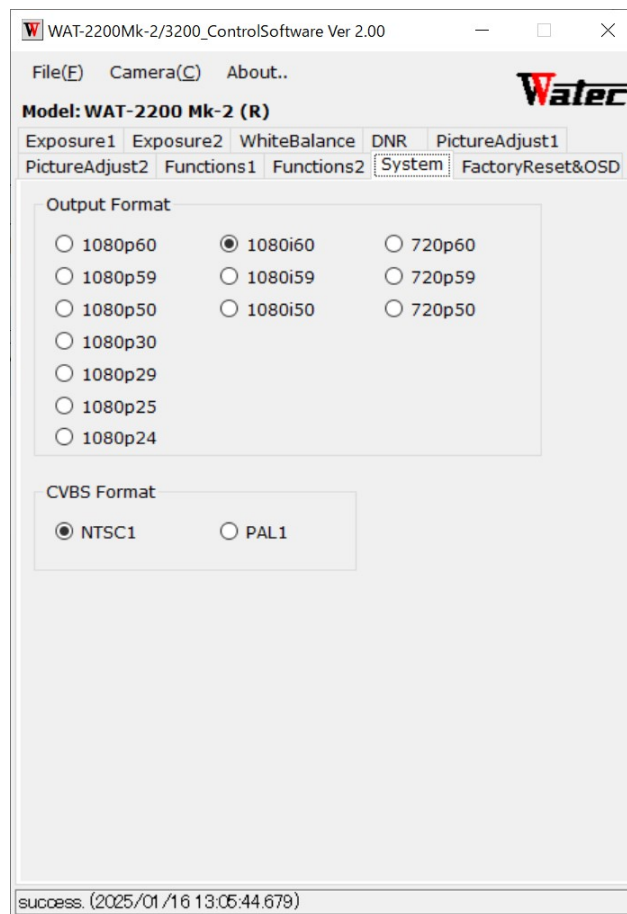


Fig. 15 System tab

11-2-9-1 Output Format

Sets the SDI output format.

Table 28 List of Output Format settings

Setting	Operating
1080i60	Outputs Full HD (1920x1080), 60field/s in interlaced format (HD-SDI)
1080i59	Outputs Full HD, 59field/s in interlaced format (HD-SDI)
1080i50	Outputs Full HD, 50field/s in interlaced format (HD-SDI)
1080p60	Outputs Full HD, 60frame/s in progressive format (3G-SDI)
1080p59	Outputs Full HD, 59frame/s in progressive format (3G-SDI)
1080p50	Outputs Full HD, 50frame/s in progressive format (3G-SDI)
1080p30	Outputs Full HD, 30frame/s in progressive format (HD-SDI)
1080p29	Outputs Full HD, 29frame/s in progressive format (HD-SDI)
1080p25	Outputs Full HD, 25frame/s in progressive format (HD-SDI)
1080p24	Outputs Full HD, 24frame/s in progressive format (HD-SDI)
720p60	Outputs HD (1280x720), 60frame/s in progressive format (HD-SDI)
720p59	Outputs HD, 59frame/s in progressive format (HD-SDI)
720p50	Outputs HD, 50frame/s in progressive format (HD-SDI)

Note: Depending on the monitor, there are settings that do not display the image.
Check the specifications of the monitor you are using before setting.

Note: If you change the Output Format, the camera will reset the DZoom setting.
If you change the Output Format, this control software will automatically re-acquire the DZoom setting.

11-2-9-2 CVBS Format

Sets the CVBS output format.

Table 29 List of CVBS Format settings

Setting	Operating
NTSC1	Compress Full HD size video to 4:3 aspect ratio and output in NTSC format.
PAL1	Compress Full HD size video to 4:3 aspect ratio and output in PAL format.

11-2-10 FactoryReset&OSD

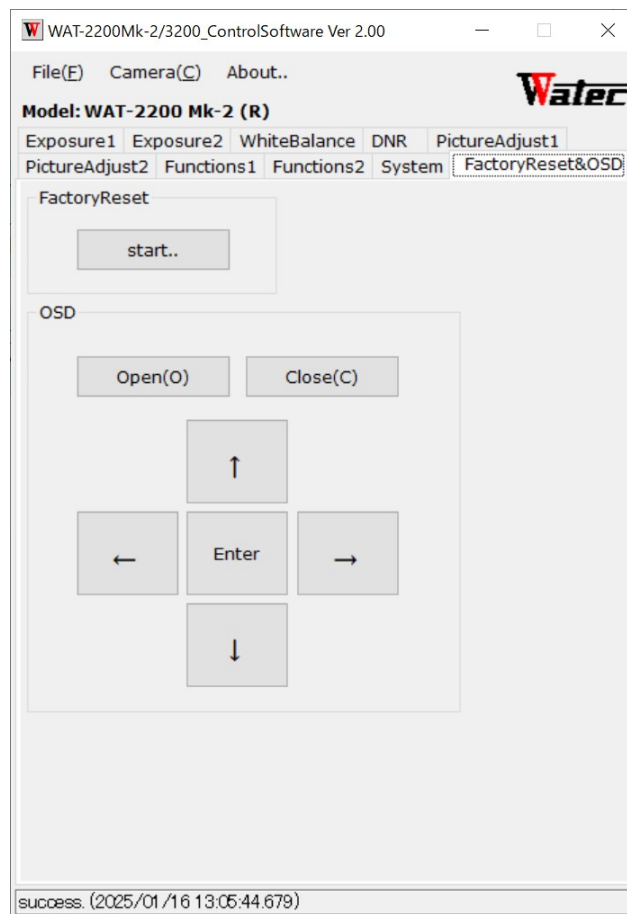


Fig. 16 FactoryReset&OSD tab

11-2-10-1 **FactoryReset**

11-2-10-1-1 **start Button**

Sends a command to reset the camera to the factory default settings.

After restarting the camera, the setting values are not automatically acquired, so please perform "get settings (from camera)" by yourself and reflect them in each setting.

11-2-10-2 **OSD**

Sends commands to perform OSD operations.

One command is sent each time the button is pressed.

Even if you press and hold it, the command is sent only once.

Also, keyboard input is available only when the Factory Reset & OSD tab is selected.

Table 30 List of OSD settings

Button	Key	Operating
Open(O)	[O] key	Sends the OSD Open command to the camera.
Close(C)	[C] key	Sends the OSD Close command to the camera.
↑	[Up] key	Sends the OSD Up command to the camera.
→	[Right] key	Sends the OSD Right command to the camera.
↓	[Down] key	Sends the OSD Down command to the camera.
←	[Left] key	Sends the OSD Left command to the camera.
Enter	[Enter] key	Sends the OSD Enter command to the camera.

12 Revision history

-2023/05/31	[version 1.00]	1 st release.
-2023/12/25	[version 1.01]	Edited by "1 Overview" and "7 Precautions when using this software".
-2025/05/29	[version 2.00]	Changed "1. Overview" Changed "4. Operating Environment" Changed "5. Specification of communication" Changed "7. Precautions when using this software" Changed "8. How to Install" Changed "11-1. Settings of the port number and model " - Changed Fig.4/5 - Added Fig.6, - Added Table 4/5 Changed "11-2-2-1. get settings(from camera)" Changed Fig.9 of "11-2-3. About Menu" Changed Fig.10 of "11-2-4. Exposure" Added "1/240" (1/200) in Table 7 of "11-2-4-2. Shutter" Added "x3/x5/x7/x9" in Table 10 of "11-2-4-4. Sens Up" Added "11-2-4-6-1. PWM OFFSET ADJ" Added "11-2-4-6-2. IRIS SPEED" Changed Fig.11 of "11-2-5. WhiteBalance" Added "11-2-5-5. SPEED" Added "11-2-5-6. OFFSET-B" Added "11-2-5-7. OFFSET-R" Changed Fig.12 of "11-2-6 DNR" Added Note "11-2-6-2 Level" Changed Fig.13 of "11-2-7 PictureAdjust" Added "11-2-7-1-3 Y LUT EXTEND" Changed Fig.14 of "11-2-8 Functions" Added "11-2-8-2-1 STRENGTH" Added "11-2-8-2-2 THRESHOLD" Added "11-2-8-2-3 AUTO LEVEL" Added "11-2-8-3 DWDR" Added "11-2-8-3-1 STRENGTH" Added "11-2-8-3-2 SATURATION" Added "11-2-8-3-3 LOCAL RATIO" Added "11-2-8-3-4 SAT.SYNC" Added "11-2-8-3-5 AUTO LEVEL" Added "11-2-8-6-1 BLC"

Added "11-2-8-6-2 HSBLC"
Added "11-2-8-7-1 FRAME VIEW SEL"
Added "11-2-8-7-2 WDR AE MODE"
Added "11-2-8-7-3 EXPOSURE RATIO"
Added "11-2-8-7-4 WDR STRENGTH"
Added "11-2-8-7-5 LOCAL CONTRAST"
Added "11-2-8-7-6 AE BRIGHT"
Added "11-2-8-7-7 GAIN"
Added "11-2-8-7-8 SHUTTER"
Changed Fig.15 of "11-2-9 System"
Added "1080p24" in Table 28 of "11-2-9-1 Output Format"
Changed Fig.16 of "11-2-10 FactoryReset&OSD"