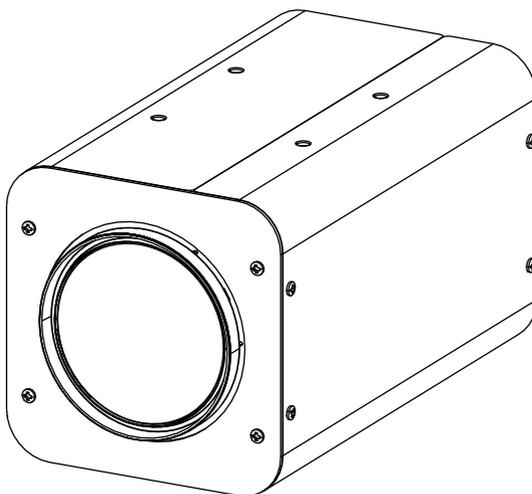




SSZ-9700

Instruction Manual



Thank you for purchasing this product.

Please read this manual carefully before using to ensure proper use of this product.

Be sure to read "Safety Precautions" in particular to use the product safely.

Please keep the manual at hand after reading and read it when necessary.

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Safety Notice

WARNING

	Mount this unit to a stable place with sufficient strength.
	Tighten all screws and locking mechanism firmly. If the screws are loose, this unit may fall resulting in injury. Falling from height may lead to serious accident.
	Use at correct power supply and voltage. The rated input voltage of this unit is DC 12 V. Supplying a power beyond the rated value may cause damage to this unit, and it may lead to smoke or fire at the worst. Input a voltage according to the rated voltage of the camera.
	This unit is able to divert lightning conduction to itself and the connecting cables to some extent, but this is not 100 % guaranteed. For installation locations subject to lightning strikes, make sure to apply lightning induction to the connecting cables.

CAUTION

	Avoid rubbing the metal edge. Rubbing too hard may lead to injury.
	If there is any abnormality such as smoke, abnormal noise or foreign object, turn off the power supplied to the camera. Remove the camera and immediately contact the retailer where you purchased the product.
	Do not disassemble or modify. Doing so may impair the functions of the product or cause an electric shock.

Precautions

Storage and Operating Environment

- This unit is intended for indoor use only. Do not use it outdoor.
- Do not shoot extremely bright subjects (such as lighting and sun) for long periods of time. And avoid placing the product in the following locations. Doing so may result in unwanted operation or malfunction.
 - Extremely hot or cold places (Operating temperature: -10 °C to +50 °C [14 °F to 122 °F])
 - Extremely humid places (Operating humidity: 35 %RH to 90 %RH, without condensation)
 - Near strong magnetic field sources such as transformer or motor
 - Near radio wave sources such as transceivers or cellular phones
 - Near TV or radio transmitters that emit strong radio waves
 - Locations affected by reflections from fluorescent lights and window
 - Locations where unstable lighting is used (where flicker occurs)
 - Locations that reflects laser light
 - Near high-voltage lines and railroad tracks
 - Extremely dusty or sandy locations
 - Locations subject to strong vibration or shock, such as inside vehicles or ships
 - Locations exposed to rain or condensation, such as window side.
 - Locations subject to steam or oil, such as kitchens.
 - Special environment such as in combustible atmosphere
 - Locations where radiation, X-rays, salt attack or corrosive gases occur
 - Locations where chemicals are used, such as pools and hot springs
- If this unit and the cable connected to this unit are used in a location where strong radio waves or magnetism are generated (e.g., near a radio, TV, transformer, railroad track, monitor, etc.), noise or beats may appear in the image and change its color.
- Insufficient heat dissipation from this unit may lead to malfunction. To prevent heat buildup, do not block air circulation around this unit. This unit dissipate heat from the surface (side) of the main unit. Do not install this unit at a location where heat is trapped, such as near a wall.
- Do not install this unit at a location exposed to cold air, such as near the air outlet of an air conditioner.
- When using in the following conditions and environments, do contact us and pay attention to safety measures.
 - Use in conditions and environment other than the specifications stated or outdoor.
 - Use for applications that are expected to have a significant impact on people and property and require specific safety.
- This unit is used under various conditions, do perform analysis and testing as necessary before making a decision although the suitability of the device or equipment have been decided by the designer of the device or equipment or the person who decides the specifications. The performance and safety of this device or equipment should be guaranteed by the customer who has determined the compatibility with the device or equipment.
- This unit is not designed and manufactured to be used for controlling devices that directly affect someone's life (*1) or devices that are involved in one's safety and have a significant impact on the maintenance of public functions (*2). Do not use for those purposes.
 - *1 Devices that directly affect someone's life are as follows.
 - Medical equipment such as life support machines and operating room equipment
 - Exhaust gas such as toxic gas, smoke exhaust device
 - Devices that are required to be installed by various laws and regulations such as the fire legislation and building regulations
 - Devices based on the above stated

*2 Devices that are involved in one's safety and have a significant impact on the maintenance of public functions are as follows.

- Traffic control equipment for aviation, railroads, roads, shipping, etc.
- Equipment such as nuclear power plants
- Devices based on the above stated

Transportation

- Always turn off the power before moving this unit.
- Handle the unit with care and avoid heavy shock or vibration.

Installation and Connection

- For best performance of the lens focusing function, please leave this unit turned on for about one hour before using it.
- Vibration or shock when the power is turned on may cause the lens to not operate properly, so please handle this unit with care.
- Use a power supply compliant with SELV (Safety Extra-Low Voltage)/LPS (Limited Power Source) according to IEC 60950-1 standard, or ES1/PS2 compliant power supply according to IEC 62368-1 standard for this product.

Maintenance

- Remove dust or dirt on the surface of the lens with a blower (commercially available). Do not use a spray type blower to clean the lens as water droplets may splatter into the lens. Pay careful attention when cleaning the lens.

Phenomena Specific to CMOS Image Sensors

- The following phenomena that may appear in images are specific to CMOS (complementary metal-oxide semiconductor) image sensors. They do not indicate malfunctions.
 - White Spots
Although the CMOS image sensors are produced with high-precision technologies, fine white spots may be generated on the screen in rare cases, caused by cosmic rays, etc. This is due to the principle of CMOS image sensors and is not a malfunction. The white spots tend to be seen especially in the following cases:
 - When operating at a high environmental temperature
 - When the shutter speed is slowed down
 - When you have raised the master gain (sensitivity)
 - Aliasing
When fine patterns, stripes, or lines are shot, they may appear jagged or flicker.

Phenomena Specific to Lens

- The following phenomenon that may appear in images is specific to a lens and is not a malfunction.
 - Ghosting
When bright light source like the sun is near the angle of incidence of the lens, extremely bright shadows may appear in the image due to diffuse reflection within the lens.

Others

- For safety and power saving purposes, turn off the system when it will not be used for a long time.
- This unit is a precision instrument, do not subject to strong impact.
- Attach the lens cap to the lens when the camera will not be used for a long time.
- This unit is designed to be used indoor. Be sure to take protective measures for the lens such as attaching a protective cover when using it outdoor.
- We recommend that a cable connected to the DC power terminal and RS-485 port be 3 meters or less.
- We are not liable for any damage caused by prolonged recording with AF Mode set to Auto.

Contents of This Manual

- The specifications and/or appearance of the product are subject to change without prior notice.
- “EIZO” is the registered trademark of EIZO Corporation.
- Other product names are trademarks or registered trademarks of their respective companies.

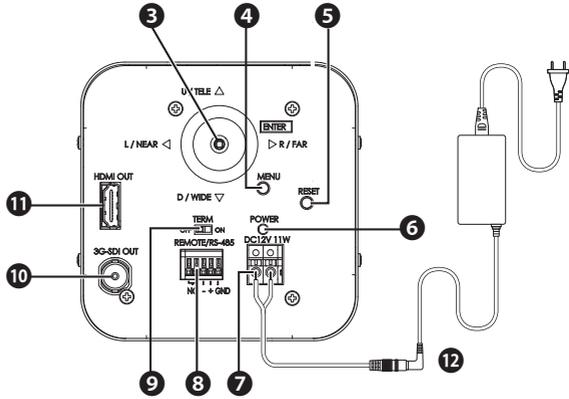
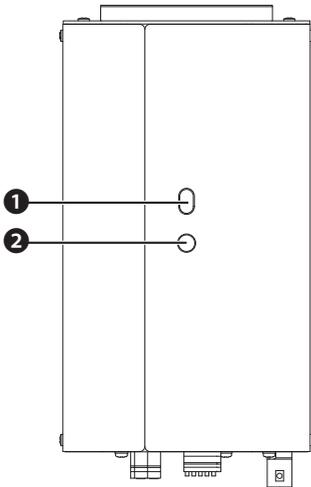
Introduction

This unit is an ultra-sensitive single-panel color camera equipped with a 35x optical zoom lens that covers a focal length from wide angle 6.5 mm to telephoto 230 mm, and it uses a 2.12 million pixel 1/1.8-inch CMOS sensor. Ideal for surveillance or security measures and environmental surveys in low light areas at night for borders, harbors and other special purposes.

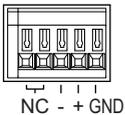
Features

- Enables color imaging with high sensitivity under low-light conditions, down to 0.004 lx.
- Maintains excellent SN ratio even at high-gain settings, with the original 2D/3D noise reduction function.
- Achieves a maximum zoom ratio of up to 350x (f = 10500mm in 35mm equivalent) by combining a 35x optical zoom lens and 10x digital zoom (when using digital zoom, resolution is reduced).
- Enables recording of clear images under hazy condition with the optical Defog function by an infrared light transmission filter.
- Enables recording under significant brightness difference condition with the HDR function.
- Capable of establishing an advanced surveillance system with the RS-485 communication function.

Names and Functions of Parts



- 1 Securing Hole**
Can be used to prevent rotation.
- 2 Tripod Socket**
Socket for securing onto a tripod etc. Use 1/4"-20 UNC screws with length of 5.5 mm or less.
- 3 Arrow Buttons**
Refer to the menu operation. (→ P 9)
- 4 MENU Button**
Refer to the menu operation. (→ P 9)
- 5 RESET Button**
Reboots the camera when it is pressed.
- 6 Power Indicator**
Lights up in green when the camera is turned on.
- 7 DC 12 V Connection Terminal Block**
Input DC 12 V. (No polarity)
- 8 RS-485**
Use for remote controlling via RS-485.



- 9 RS-485 Terminal Switch**
During RS-485 communication, set to "ON" for one-to-one control and "OFF" for daisy-chain connection. (Last connection device is ON)
- 10 3G-SDI Output Terminal**
Image output terminal for 3G-SDI.
- 11 HDMI Output Terminal**
Image output terminal for HDMI.

12 AC adapter (optional, sold separately)

Used to supply power.

Part No.: DVAC-02-J

Specifications: Input AC100-240 V (50Hz/60Hz), Output DC+12V

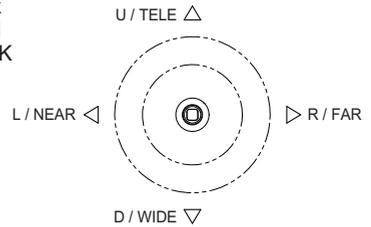
Operation

User Setup

Setup menu can be set on the OSD display.

Names and Functions of Setup Buttons

Operate using the Arrow buttons (figure on the right) on the back of the camera. Use the Arrow buttons to move up, down, left and right to the item you want to select, and press the Arrow button (OK button) to confirm.



Structure of Setup Mode

The setup menu consists of 7 items of setup menu.

Contents of Main Menu

The menu's initial screen (Main Menu) appears when the MENU button is pressed. Various settings for the camera operation are available. To close the menu screen, press the MENU button again or select EXIT.

Main Menu

Main Menu		
ALC	Setup	↵
Picture	Setup	↵
Color	Setup	↵
Lens	Setup	↵
Video Output	Setup	↵
Dev. Setting	Setup	↵
Information	Disp	↵
EXIT		

ALC Menu

ALC	
ALC Mode	Full Auto
ALC Level	..... 100
Limits	Setup ↵
Shutter	1/60
Gain	0.0dB
Iris	F**
BLC Mode	Off
Detailed	Settings ↵
RETURN	EXIT

ALC Mode

For selecting the method to control the brightness.

Full Auto

The gain, shutter speed and iris are automatically adjusted.

Shut.Prio.

The gain and iris are automatically adjusted and the shutter speed can be adjusted to any setting value.

Gain Prio.

The shutter speed and iris are automatically adjusted and the gain can be adjusted to any setting value.

Iris Prio

The gain and shutter speed are automatically adjusted and the iris can be adjusted to any setting value.

Manual

The gain, shutter speed and iris can be adjusted to any setting value.

ALC Level

Adjust the convergence value for automatic exposure using the Arrow buttons. Moving the lever to the right enhances the brightness. Adjust to the appropriate position while looking at the actual image.

Limits

Adjust the maximum and minimum values of shutter speed, gain, and iris to any setting value during automatic adjustment.

Shutter

When ALC Mode is set to Shut.Prio. or Manual, use the Arrow buttons to adjust any value setting for the shutter speed.

- 1/1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 [59.94Hz system]
- 1/1, 1/2, 1/3, 1/6, 1/12, 1/25, 1/50, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 [50Hz system]

* There is a margin of error in the displayed value of the shutter speed and the actual control.

Gain

When ALC Mode is set to Gain Prio. or Manual, use the Arrow buttons to adjust any setting value for the gain.

- 0 to 78 dB (in step of 0.3 dB)

Iris

When ALC Mode is set to Iris Prio. or Manual, use the Arrow buttons to adjust any setting value for the iris.

- F1.5, F2, F2.8, F4, F5.6, F8, F11, F16, F22

BLC Mode

The backlight correction can be set using the Arrow buttons.

Off

Adjusts the best brightness for the entire screen.

On

Automatically corrects the brightness by measuring the light while avoiding extremely bright areas on the entire screen.

Spot

Automatically selects an area surrounded by a frame on the screen and corrects the brightness so that the other areas are in the best condition.

When entering SPOT SET, a 9×5 grid appears on the screen.

Move the cursor using the Arrow buttons and press the Arrow button at the required position to fill in the grid. The filled area is excluded from photometry.

Detailed Settings

Flickerless

Allows you to turn on or off the flicker improvement function.

- Fixed at 1/100s for the 59.94Hz system and 1/60s for the 50Hz system

Day/Night

Allows you to select a IR cut filter switching specification from the following modes.

Color

Outputs color images (with IR cut) at all times.

B/W

Outputs monochrome images (without IR cut) at all times.

Auto

Automatically switches to color images of high quality during daytime and black-and-white images of high sensitivity at night.

After selecting this mode, Switch Level (switching brightness level) can be set by pressing the OK button.

Switch Level Setting

For setting the switching brightness level.

Dark

The switching brightness level is dark.

Mid

The switching brightness level is between Dark and Bright.

Bright

The switching brightness level is bright.

Manual

The switching brightness level is set manually.

Manual Setting

When Switch Level is set to Manual, the following settings can be performed.

Color⇒B/W

Sets the brightness to switch from day to night.

B/W⇒Color

Sets the brightness to switch from night to day.

Average/Peak

Allows you to adjust the average value and peak value of the metering data.

Sensor Rate

Sets the sensor drive frame rate in low light.

- * For 50Hz system, the setting item is also displayed as 30 fps/60 fps, but the system is actually driven at 25 fps/50 fps.
- * The sensor drive frame rate is set to 30 fps (25 fps) in the HDR mode.

30fps

The sensor drive frame rate is set to 30 fps (25 fps) in low light.

The shutter speed is set to 1/30 (1/25) when Gain is Up/Down in Auto to improve S/N.

60fps

The sensor drive frame rate is set to 60 fps (50 fps) in low light.

The shutter speed is set to 1/60 (1/50) when Gain is Up/Down in Auto.

Set this option when shooting with motion.

Picture Menu

Picture	
HDR	Off
Auto Knee	Off
Auto B.str	Off
Black Level	..... 0
Gamma	0.45
Fog	Off
DNR	High
Detail	..... 50
RETURN	EXIT

HDR

Allows you to turn on or off HDR (function that expresses a wide range of brightness by double exposure of low-speed shutter and high-speed shutter).

On

HDR Mode

Selecting On allows you to adjust the following items. The following items are not displayed when Off is selected.

* The frame rate of the image sensor is 1/2 in the HDR mode.

- **Shut Ratio**

Allows you to adjust the shutter ratio between low speed and high speed.

- **Mix Pos.**

Allows you to select Auto, Low or High as the switching point between the low speed shutter image and high speed shutter image.

Auto

Automatically sets the switching point between low speed and high speed.

Low

The switching point is based on the high speed shutter.

High

The switching point is based on the low speed shutter.

Off

Normal Mode

Auto Knee

Allows you to automatically compress and display the bright area.

On

It lowers the knee point to about 80 IRE and automatically adjusts the knee slope according to the brightness.

Off

The knee point is fixed at about 100 IRE.

Auto B str.

Allows you to turn on or off the function to stretch and display the dark area.

On

Sets Auto Black Stretch to ON.

Off

Normal Mode

Black Level

The black level of the camera image can be adjusted using the Arrow buttons.

Gamma

Allows you to select the gamma characteristics for the camera according to the display (monitor) used.

- 0.35 to 0.55 (0.01 step)/ 1.0

Fog

Even when the background and/or the contour of the subject are among fog, haze, or smoke, as long as they are slightly visible, the function corrects the image by providing contrast so that they become more visible. The image can also be made more visible by using an infrared light transmission filter concurrently.

Opt.DefogH

Defog function via infrared light transmission filter and electronically; high correction level.

Opt.DefogM

Defog function via infrared light transmission filter and electronically; medium correction level.

Opt.DefogL

Defog function via infrared light transmission filter and electronically; low correction level.

Opt.Defog

Defog function via infrared light transmission filter.

Off

Normal mode.

Low

Digital Defog function; low correction level.

Mid

Digital Defog function; medium correction level.

High

Digital Defog function; high correction level.

* When using an infrared light transmission filter, the screen becomes monochrome.

DNR

Select the noise reduction effect using the Arrow buttons.

Off

Noise reduction does not operate.

Low

Noise reduction operates on LOW.

High

Noise reduction operates on HIGH.

* The amount of noise reduction operation operates in proportion to the amount of gain. When Gain is low, the amount of noise reduction operation is small and when Gain is high, the amount of noise reduction operation is large.

* When the Gain is increased by selecting High, an afterimage may occur under the influence of 3D noise reduction.

Detail

The contour enhancement level of the camera image can be adjusted using the Arrow buttons.

Color Menu

	Color	
White Bal.	Manual	
Red Gain	.....	50
Blue Gain	.....	50
Chroma	.....	50
Color Matrix	Setup	
RETURN	EXIT	

White Bal

Allows you to switch the white balance mode using the Arrow buttons.

ATW1

Automatically tracks and adjusts white balance. (Color temperature range: 2500K to 9000K)

ATW2

Automatically tracks and adjusts white balance. Although it supports a wider range of color temperatures than ATW1, the color may shift compared to ATW1.

AWC

One push auto white balance control.

Align white balance by projecting the target achromatic (white, gray) subject and pressing the Arrow button.

Manual

Preferred white balance is acquired by adjusting Red Gain and Blue Gain.

Red Gain

When White Bal is set to Manual, you can adjust the red color using the Arrow buttons.

Blue Gain

When White Bal is set to Manual, you can adjust the blue color using the Arrow buttons.

Low Temp.

This is the balance that matches the light source of the warm color system 3200K.

High Temp.

This is the balance that matches the light source of the cool color system 5000K.

Chroma

The chroma level of the camera image can be adjusted using the Arrow buttons.

Color Matrix

Allows you to adjust the hue and saturation of six axes: R, G, B, Ye, Cy, and Mg.
After selecting each color, use the Arrow buttons to adjust the Hue and Saturation.

Lens Menu

Lens			
Zoom Speed	.....		1
Zoom Move			
E-Zoom Mode	Max x4		
Focus Speed	.....		1
Focus Move	N<	>F	
AF Mode	Auto		
RETURN	EXIT		

Zoom Speed

The movement speed of the zoom lens can be adjusted using the Arrow buttons.

Zoom Move

The zoom lens can be adjusted using the Arrow buttons.

E-Zoom Mode

Allows you to set the digital zoom from the following modes.

Off

An optical zoom (35x) only.

Max x4

An optical zoom and the digital zoom (4x) can be combined to zoom up to 140x.

Max x10

An optical zoom and the digital zoom (10x) can be combined to zoom up to 350x.

Focus Speed

The movement speed of the focus lens can be adjusted using the Arrow buttons.

Focus Move

The focus lens can be adjusted using the Arrow buttons.

AF Mode

Allows you to select the auto focus from the following modes.

Auto

This is the mode in which normal auto focus is always functioning.

One Push AF

The auto focus functions only when you press and hold the Arrow button.

Manual

Adjust the focus lens manually by moving left and right using the Arrow buttons to focus.

Caution : _____

- It may be difficult to focus using auto focus depending on the condition of the subject. In that case, use Manual to focus.
You may not be able to focus using auto focus especially when the subject is dark, there is a lot of noise, the contrast is low, or the lens is dirty.
- Prolonged recording with AF Mode set to Auto can affect the lifespan of the lens control motor. We recommend setting AF Mode to One Push AF or Manual.

Video Output Menu

Video Output	
Video Format	1080p/59.94 ↵
HDMI Color	RGB(Limit) ↵
Flip/Mirror	Normal
Video Test	Camera
RETURN	EXIT

Video Format

Allows you to change the signal format of the HD output.

If you change the setting, an "Enter symbol" is displayed. Press the Arrow button to display the confirmation screen.

Selecting OK restarts the camera and switches the format. There is no video output during the restart.

HDMI Color Space

Allows you to select the color space of the HDMI output.

You can select from RGB(Limit), RGB(Full) and YUV422.

If you change the setting, an "Enter symbol" is displayed. Press the Arrow button to display the confirmation screen.

Selecting OK changes the color space setting.

Flip / Mirror

Allows you to reverse the image.

Normal

Normal mode.

Flip

Flips the image vertically.

Mirror

Flips the image horizontally.

Frip&Mirror

Flips the image vertically and horizontally.

Video Test

Camera

Normal state

Gray Scale

Gray scale signal

Color Bar

Color bar signal

Cross Line

Cross line signal

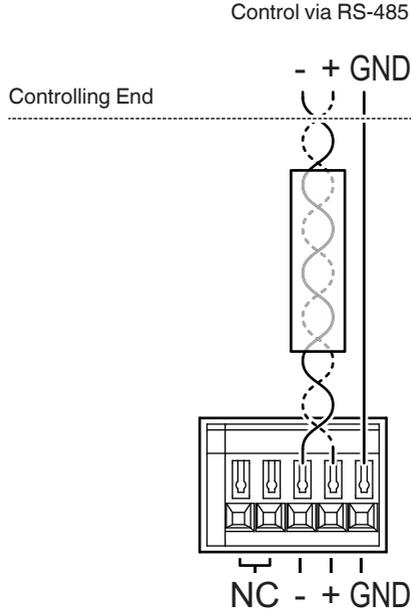
Setting to Default

For returning all settings except video out and communication system to factory default. The following items will not return to default setting.

- Video output mode
- HDMI Color Space
- Camera ID
- RS-485 ID
- RS-485 Baud.

RS-485 Connection

Connect according to the diagram below to control via RS-485.



Terminal Block on the Back of SSZ-9700

Device Setting (2/2) Menu

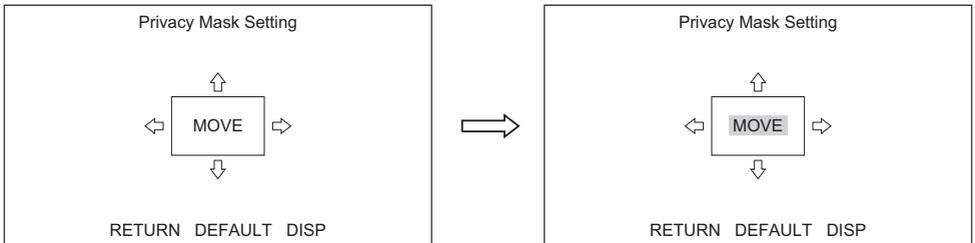
Dev. Setting (Page 2/2)		
Privacy Mask	On	↵
MenuDispTime	60 Sec	
Message Disp	Off	
CameraStatus	Off	
RETURN	EXIT	NEXT

Privacy Mask

Up to 8 different Privacy Masks can be individually set up.
Selecting Privacy Mask switches the screen to a Privacy Mask display.

Privacy Mask		
Mask1	On	↵
Mask2	Off	
Mask3	Off	
Mask4	Off	
Mask5	Off	
Mask6	Off	
Mask7	Off	
Mask8	Off	
Paint	Gray	
RETURN	EXIT	

You can set Mask 1 to 8 to On or Off individually.
The mask color can be selected from Gray, White and Black.
The screen for setting the position and size of the mask appears when a Mask is selected and set to On using the Arrow button.



Move the cursor to the position where you want to change and press the Arrow button. The cursor changes from flashing to dark highlight flashing. In the above figure, you can shift the position (MOVE) using the Arrow buttons.

And the size (arrows ⇔) can be changed using the Arrow buttons.

To change the position you want to change, press the Arrow button. The cursor resumes to normal flashing from dark highlight flashing and the position can be shift using the Arrow buttons.

Menu Display Time

Allows you to set the duration to display the OSD menu.

- 10 s / 60 s / Always

Message Disp

For selecting whether to display or hide the following messages on the screen.

On

The status display of Zoom, Focus and One-Push AF.

Off

The status message is not displayed.

CameraStatus

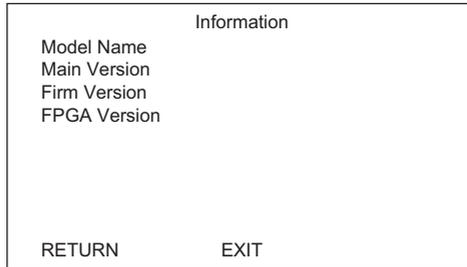
On

The status of the gain, shutter speed, iris, zoom lens, and focus lens settings are displayed at the bottom of the screen.

Off

The setting status is not displayed.

Information: Version



Information like Model Name, Serial No, etc.

Model Name

Model name

Main Version

Main program version

Firm Version

Firm program version

FPGA Version

FPGA program version

Restrictions on Menu Setting

Some items cannot be set (item not displayed) under certain settings.
Refer to here for items that are not displayed.

○: Can be set, x: Cannot be set (item not displayed), *: Exception (item is displayed but the setting value is changed because the setting items cannot be used simultaneously)

Setting Condition			HDR = On	Auto Knee = On	Auto B.str = On	Fog = Low, Mid, High Opt.DefogL, M, H	
Menu	Item	Setting value etc.					
Picture	HDR	-	-	○ (* Priority to HDR. When HDR = On, Auto Knee works with Off.)	○	○ (* Priority to HDR. When HDR = On, setting value for Fog changes)	
	Auto Knee	-	x	-	○	* (Changes to Off)	
	Auto B.str	-	○	○	-	* (Changes to Off)	
	Black Level	-	x	○	x	○	
	Gamma	-	x	x	x	x	
	Fog	Off		○	○	○	-
		Opt.Defog					
Low, Mid, High			x	*	*	-	
	Opt.DefogL, M, H			*	*	-	

Setting Condition			HDR = On
Menu	Item	Setting value etc.	
ALC	ALC Mode	-	○
	ALC Limits	Shutter Limit	x
		Others	○
	Shutter	-	1/30 to 1/4000 (59.94Hz system) 1/25 to 1/4000 (50Hz system)
	BLC Mode	-	x
	Detailed	Flickerless	x

Setting Condition			ALC Mode = Gain Prio. Gain=0.0 to 5.7 dB
Menu	Item	Setting value etc.	
ALC	ALC Limits	Shutter Limit (L)	1/60 to 1/4000 (59.94Hz system) 1/50 to 1/4000 (50Hz system)

Menu Structure

TOP Menu

Main Menu		
ALC	Setup	↵
Picture	Setup	↵
Color	Setup	↵
Lens	Setup	↵
Video Output	Setup	↵
Dev. Setting	Setup	↵
Information	Disp	↵
EXIT		

ALC

ALC		
ALC Mode	Full Auto	
ALC Level	.....	100
Limits	Setup	↵
Shutter	1/60	
Gain	0.0dB	
Iris	F**	
BLC Mode	Off	
Detailed	Settings	↵
RETURN EXIT		

ALC Limits

ALC Limits	
Shutter Limit(H)	1/10000
Shutter Limit(L)	1/1
Gain Limit(H)	75.0dB
Gain Limit(L)	0.0dB
Iris Limit(O)	F1.5
Iris Limit(C)	F22.0
RETURN EXIT	

Picture

Picture		
HDR	Off	
Auto Knee	Off	
Auto B.str	Off	
Black Level	.....	50
Gamma	0.45	
Fog	Off	
DNR	High	
Detail	.....	50
RETURN EXIT		

Picture (HDR On時)

Picture		
HDR	On	↵
Auto Knee	Off	
Auto B.str	Off	
Fog	Off	
DNR	High	
Detail	.....	50
RETURN EXIT		

BLC Mode = Spot > Spot Metering Settings

Spot Metering Settings																																																																																																					
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RETURN EXIT																																																																																																					

HDR Settings

HDR Settings	
Shut Ratio	1:16
Mix Pos.	Auto
RETURN EXIT NEXT	

Detailed Settings

ALC Detailed HDRs	
Flickerless	Off
Day/Night	Auto
Average/Peak	A,P=100: 0
Sensor Rate	30fps
RETURN EXIT	

Color

Color		
White Bal.	Manual	
Red Gain	.....	50
Blue Gain	.....	50
Chroma	.....	50
Color Matrix	Setup	↵
RETURN EXIT		

Color Matrix(Page 1/2)

Color Matrix(Page 1/2)		
Red	.....	0
Hue	.....	0
Saturation	.....	0
Green	.....	0
Hue	.....	0
Saturation	.....	0
Blue	.....	0
Hue	.....	0
Saturation	.....	0
RETURN EXIT NEXT		

Day/Night = Auto > Day/Night Settings

Day/Night Settings		
Switch Level	Manual	
Color > B/W	.....	30
B/W > Color	.....	100
	1/60	
RETURN EXIT		

Lens

Lens		
Zoom Speed	.....	1
Zoom Move	.....
E-Zoom Mode	Max x4	
Focus Speed	.....	1
Focus Move	N< >F	
AF Mode	Auto	
RETURN EXIT		

Color Matrix(Page 2/2)

Color Matrix(Page 2/2)		
Yellow	.....	0
Hue	.....	0
Saturation	.....	0
Cyan	.....	0
Hue	.....	0
Saturation	.....	0
Magenta	.....	0
Hue	.....	0
Saturation	.....	0
RETURN EXIT NEXT		

Specifications

Lens Unit

Zoom Ratio	35x (when digital zoom is On: up to 350x)
Focal Length	6.5 mm to 230 mm
Angle of View (HxV) [16:9]	Wide: 60.4° x 35.9° Tele: 2.0° x 1.2°
Aperture Range	F1.5 to F22
Optical Filter	IR cut filter/Dummy filter/Defog filter
Zoom/Focus/Aperture Control	Stepping motor
Focus Range	5 m to ∞
Focus System	Auto Focus, One Push Auto Focus, Manual

Camera Unit

Image Sensor	Single Panel CMOS/ RGB Bayer Array	
Total Pixels	Approximately 2,270,000 pixels 2016 (H) × 1128 (V)	
Effective Pixels	Approximately 2,120,000 pixels 1936 (H) × 1096 (V)	
Pixel Size	4.1 Mm (H) × 4.1 μm (V)	
Optical Size	1/1.8 inch	
Sensor Frame Rate	59.94 fps/50 fps (1/2 fps when in HDR mode)	
Scanning System	Progressive	
Minimum Illumination	0.004 lx (F1.5 1/30 s, 50 IRE, +78 dB)	
Horizontal Resolution	900 TV lines or more	
SN Ratio	50 dB or above ($\gamma = 1$, Contour Correction OFF, DNR OFF)	
Image Quality Adjustment	Exposure Mode	Full Auto / Shut. Prio. / Gain Prio. / Iris Prio. / Manual
	Gain	Manual: 0 dB to 78 dB (0.3 dB step)
	Electronic Shutter	1/1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 s [59.94Hz system] 1/1, 1/2, 1/3, 1/6, 1/12, 1/25, 1/50, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 s [50Hz system]
	Iris	F1.5 to F22
	ALC Adjustment	Level adjustment/ Limits adjustment
	Backlight Correction	On/ Off/ Spot
	Gamma Correction	0.35 to 0.55 (0.01 step) / 1.0
	DNR	Off / Low / High

Image Quality Adjustment	White Balance	ATW1 / ATW2 / AWC / Manual / Low Temp. / Hi Temp.
	HDR MODE	Off / HDR / Auto Knee / Auto Black Stretch
	Defog	Optical Defog / Digital Defog (3 levels each)
	Color Matrix	R/G/B/Ye/Cy/Mg 6 axis adjustment
	Others	Detail / Chroma / Black Level
Digital Zoom	1 to 10x (in tandem with optical zoom, Off / Max x4 / Max x10)	
Image Reversal	Mirror/Flip/Mirror Flip	
Privacy Mask	8 masks Gray/White/Black	
Test Pattern	Color Bar, Gray Scale, built-in Cross Line	
Operation	Via OSD screen	

Interface

Image Output Terminal	3G-SDI (BNC) ×1 HDMI (Type A) ×1	
Serial Port	RS-485 (original command, Pelco-D command)	
Video Output	3G-SDI, HDMI	1080P/59.94 (LEVEL A), 1080i/59.94, 1080p/29.97, 1080p/50.00 (LEVEL A), 1080i/50.00, 1080p/25.00

General

Power Supply	DC 12 V ±10 % (Ripple 50 mVp-p or less)
Power Consumption	11 W
Operational Temperature/ Humidity Range	-10 to 50°C / 10 to 90 %
Storage Temperature/ Humidity Range	-10 to 60°C / 10 to 90 %
Dimension	95.0 (W) × 95.0 (H) × 165.0 (D) mm excluding protrusions
Weight	1.5 kg

- The specifications and/or appearance of the product are subject to change without prior notice.

Memo

Memo

Limited Warranty

EIZO Corporation (hereinafter referred to as "EIZO") and distributors authorized by EIZO (hereinafter referred to as the "Distributors") warrant, subject to and in accordance with the terms of this limited warranty (hereinafter referred to as the "Warranty"), to the original purchaser (hereinafter referred to as the "Original Purchaser") who purchased the product specified in this document (hereinafter referred to as the "Product") from EIZO or Distributors, that EIZO and Distributors shall, at their sole discretion, either repair or replace the Product at no charge if the Original Purchaser becomes aware within the Warranty Period (defined below) that the Product malfunctions or is damaged in the course of normal use of the Product in accordance with the description in the instruction manual of the Product (hereinafter referred to as the "User's Manual").

The period of this Warranty is 2 years from the date of purchase of the Product (hereinafter referred to as the "Warranty Period"). EIZO and Distributors shall bear no liability or obligation with regard to the Product in relation to the Original Purchaser or any third parties other than as provided under this Warranty.

EIZO and Distributors will cease to hold or store any parts (excluding design parts) of the Product upon expiration of 5 years after the production of the Product is discontinued. In repairing the Product, EIZO and Distributors will use renewal parts which comply with our QC standards. If the unit cannot be repaired due to its condition or the stockout of a relevant part, EIZO and Distributors may offer the replacement by a product with equivalent performance instead of repairing it.

The Warranty is valid only in the countries or territories where the Distributors are located. The Warranty does not restrict any legal rights of the Original Purchaser.

Notwithstanding any other provision of this Warranty, EIZO and Distributors shall have no obligation under this Warranty whatsoever in any of the cases as set forth below:

- A) Any defect of the Product caused by freight damage, modification, alteration, abuse, misuse, accident, incorrect installation, disaster, adherent dust, faulty maintenance and/or improper repair by third party other than EIZO and Distributors;
- B) Any incompatibility of the Product due to possible technical innovations and/or regulations;
- C) Any deterioration of sensor, including measurement value of the sensor;
- D) Any defect of the Product caused by external equipments;
- E) Any defect of the Product caused by the use under environmental conditions not anticipated by EIZO;
- F) Any deterioration of the attachments of the Product (e.g. cables, User's Manual, remote controller, etc.);
- G) Any deterioration of the consumables, and/or accessories of the Product (e.g. batteries, etc.);
- H) Any deformation, discoloration, and/or warp of the exterior of the Product;
- I) Any defect of the Product caused by placement in a location where it may be affected by strong vibrations or shocks;
- J) Any defect of the Product caused by leaking battery liquid;

To obtain service under the Warranty, the Original Purchaser must deliver the Product, freight prepaid, in its original package or other adequate package affording an equal degree of protection, assuming the risk of damage and/or loss in transit, to the local Distributor. The Original Purchaser must present proof of purchase of the Product and the date of such purchase when requesting services under the Warranty.

The Warranty Period for any replaced and/or repaired product under this Warranty shall expire at the end of the original Warranty Period.

EIZO OR DISTRIBUTORS ARE NOT RESPONSIBLE FOR ANY DAMAGE TO, OR LOSS OF, DATA OR OTHER INFORMATION STORED IN ANY MEDIA OR ANY PART OF ANY PRODUCT RETURNED TO EIZO OR DISTRIBUTORS FOR REPAIR.

EIZO AND DISTRIBUTORS MAKE NO FURTHER WARRANTIES, EXPRESSED OR IMPLIED, WITH RESPECT TO, INCLUDING, WITHOUT LIMITATION, THE PRODUCT AND ITS QUALITY, PERFORMANCE, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE.

IN NO EVENT SHALL EIZO OR DISTRIBUTORS BE LIABLE FOR ANY INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGE WHATSOEVER (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFIT, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, OR ANY OTHER PECUNIARY LOSS) ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT OR IN ANY CONNECTION WITH THE PRODUCT, WHETHER BASED ON CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, EVEN IF EIZO OR DISTRIBUTORS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

THIS EXCLUSION ALSO INCLUDES ANY LIABILITY WHICH MAY ARISE OUT OF THIRD PARTY CLAIMS AGAINST THE ORIGINAL PURCHASER. THE ESSENCE OF THIS PROVISION IS TO LIMIT THE POTENTIAL LIABILITY OF EIZO AND DISTRIBUTORS ARISING OUT OF THIS LIMITED WARRANTY AND/OR SALES.

Warning for Radio interference

For U.S.A., Canada Only

FCC Supplier's Declaration of Conformity

We, the Responsible Party

EIZO Inc.
5710 Warland Drive, Cypress, CA 90630
Phone: (562) 431-5011

declare that the product

Trade name: EIZO
Model: SSZ-9700

is in conformity with Part 15 of the FCC Rules. Operation of this product is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

WARNING!

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canadian Notice

This Class A information technology equipment complies with Canadian ICES-003.
Cet équipement informatique de classe A est conforme à la norme NMB-003 du Canada.

For Europe Only

Warning

Operation of this equipment in a residential environment could cause radio interference.

Warnung

Der Betrieb dieses Geräts in einer Wohnumgebung konnte Funkstörungen verursachen.

Avertissement

L'utilisation de cet équipement dans une zone résidentielle pourrait provoquer des interférences radio.

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EIZO Europe GmbH

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