

# **FUJIFILM**

**Surveillance Camera**

# **FUJIFILM SX800**

**V3.1**

**Owner's Manual: Stand-Alone Mode**

**FUJIFILM Corporation**

BL00005224-202

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# Safety Precautions

## For Your Safety

This section lists important precautions that must be followed to ensure safe and correct use of the product. Read them before using the product and observe them during use.

The ⚠ **WARNING** and ⚠ **CAUTION** indications in this document indicate the following:

⚠ **WARNINGS** Failure to observe warnings could result in death or serious injury.

⚠ **CAUTIONS** Failure to observe cautions could result in injury or property damage.

### ⚠ **WARNINGS**

- Take all steps necessary to prevent water entering the product. Failure to observe this precaution could result in fire or electric shock. Should water find its way in, disconnect the power source immediately.
- Be sure the product is installed securely. Serious accidents could result should the product fall from a height.
- When working in high places, work with a partner or partners, use a safety line, and take all other precautions necessary to ensure safety. Slipping, falling, or loss of balance could result in serious accidents.
- When installing the camera in high places, ensure that people below keep their distance. Falling objects could cause serious accidents.
- Ensure that the surface on which the camera is installed is level. Failure to observe this precaution could cause the camera to fall, potentially causing serious accidents.

### ⚠ **CAUTIONS**

- Keep the product out of direct sunlight.
- Do not turn the product on without first confirming that the power supply is connected correctly.
- The product could cause injury if dropped during transport. Take all precautions necessary to ensure that the product is not dropped.
- Ensure that the voltage of the power supply matches the product's rated voltage. Incorrect voltages could damage the product or result in fire or electric shock.
- When connecting or disconnecting the power cable, hold the plug and not the cable. Damage to the cable could result in fire or electric shock.
- Should you detect any abnormalities such as smoke, unusual noises or smells, or the presence of foreign matter inside the product, disconnect the power supply immediately and contact the original retailer.
- Do not disassemble or modify. Failure to observe this precaution could result in electric shock or product malfunction. Malfunctions or damage resulting from customers disassembling or modifying the product are not covered under warranty.
- Do not aim the camera at the sun. Direct sunlight focused through the lens could damage the product's internal parts.
- Install the camera base down. Installing the camera in other orientations could lead to warping that may impair product performance.

## General Precautions

- Use the product only as described in this manual.
- The camera and its accessories are precision devices. Under no circumstances should they be subjected to excessive force.
- Install the camera in a housing or other location where it will not be exposed to rain, wind, dust, or direct sunlight.
- Bringing the camera abruptly from a cold location to a warm and humid environment could cause the lens to fog. Take measures to allow the camera to adapt to the new environment before subjecting it to changes in temperature and humidity.
- Replace the cap if the camera will not be used for an extended period.
- The camera lens has a special anti-reflective coating. As a result, the back of the lens may appear spotted, but this has no effect on performance.

# NOTICES

## Verification

Model Number: SX800

Trade Mark: Fujifilm

This device complies with Part 15 of the FCC Rules.

Operation 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.

## **Caution:**

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.

## **FCC Warning:**

To assure continued compliance, follow the attached installation instructions. This includes using the provided power cord and shielded interface cables when connecting to computer or peripheral devices. Also, any unauthorized changes or modifications to this equipment could void the user's authority to operate this device.

## **For Customers In Canada**

CAN ICES-3(A)/NMB-3(A)

**WARNING:** This equipment is compliant with Class A of CISPR32. In a residential environment this equipment may cause radio interference.

This product complies with the following EU Directives:

- RoHS Directive 2011/65/EU
- EMC Directive 2014/30/EU

Compliance with these directives implies conformity to applicable harmonized European standards (European Norms) which are listed on the EU Declaration of Conformity issued by FUJIFILM Corporation for this product or product family.

This compliance is indicated by the following conformity marking placed on the product:



This marking is valid for non-Telecom products and EU harmonized Telecom products (e.g. Bluetooth).

## **About the Icons**

The symbols on the product represent the following:

|                                                                                     |                                                                           |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
|  | AC                                                                        |
|  | DC                                                                        |
|  | Class II equipment (The construction of the product is double-insulated.) |

**Disposal of Electrical and Electronic Equipment in Private Households In the European Union, Norway, Iceland and Liechtenstein:**

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This symbol on the product, or in the manual and in the warranty, and/or on its packaging indicates that this product shall not be treated as household waste. Instead it should be taken to an applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences to the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.



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# Precautions for Use

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## Operating Environment

- The camera can be used at temperatures of from –10 to +50 °C (temperatures below freezing are only supported if the power supply is not interrupted) and at humidities of from 10 to 80% (no condensation).
- Prolonged use at high temperatures or humidities could degrade components, shortening product life.
- Do not install the product where it will be exposed to solvents or other chemicals.

## Installation

- Do not install cables in close proximity to cables for fluorescent lights or other electrical devices. Failure to observe this precaution could impair sound or image quality. Move the cables if signal quality is affected.
- Using the product in close proximity to powerful electromagnetic fields, such as those produced by television transmitter antennas, electric motors, or transformers, could result in distorted or wavy pictures. Should this occur, use steel cable shielding.
- Plastic cable insulation may sometimes be damaged by crows or other birds. Protect cables using a cable conduit.
- Fix cables in place so that they are not subject to repeated vibration, friction, or tugging. Failure to observe this precaution could cause the cable to break.
- Install the product base down.

## Use

- Do not aim the lens directly at the sun or other bright light sources or reflections. Failure to observe this precaution could result in deterioration of the image sensor color filter, affecting picture color.
- Do not subject the product to strong physical shocks or vibration. Failure to observe this precaution could result in product malfunction.
- Clean the product with a soft, dry cloth. Never use chemically-treated cloths or solvents such as benzine (petroleum ether), thinner, or alcohol. Failure to observe this precaution could cause warping or discoloration.
- Do not apply force to the connectors when handling the product. Failure to observe this precaution could result in the product being disconnected or damaged.

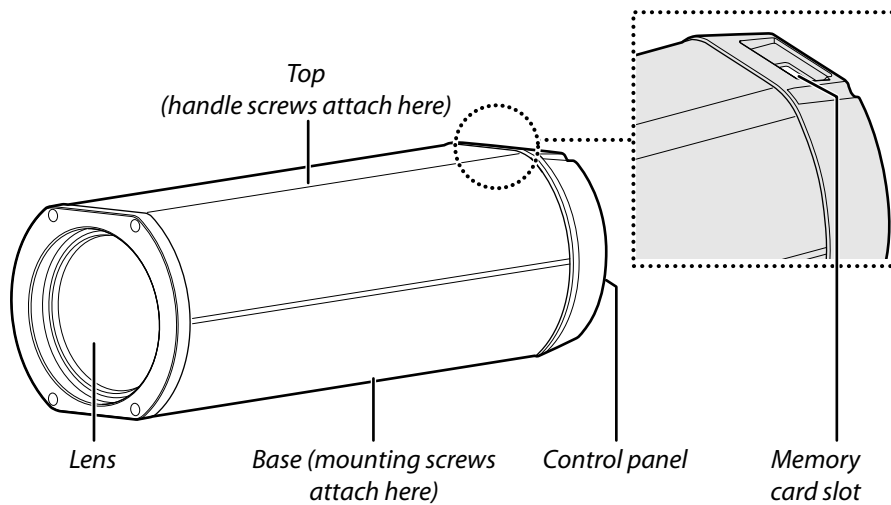
## Network Connections

- You will need to supply an IP address, subnet mask, and gateway IP address.
- The frame rate may drop if multiple streams are transmitted via unicast.
- When connected to multiple devices, the product will transmit data to all devices at the rate supported by the device with the slowest receiving rate.
- Use the product on a secure network (for example, an in-house LAN).

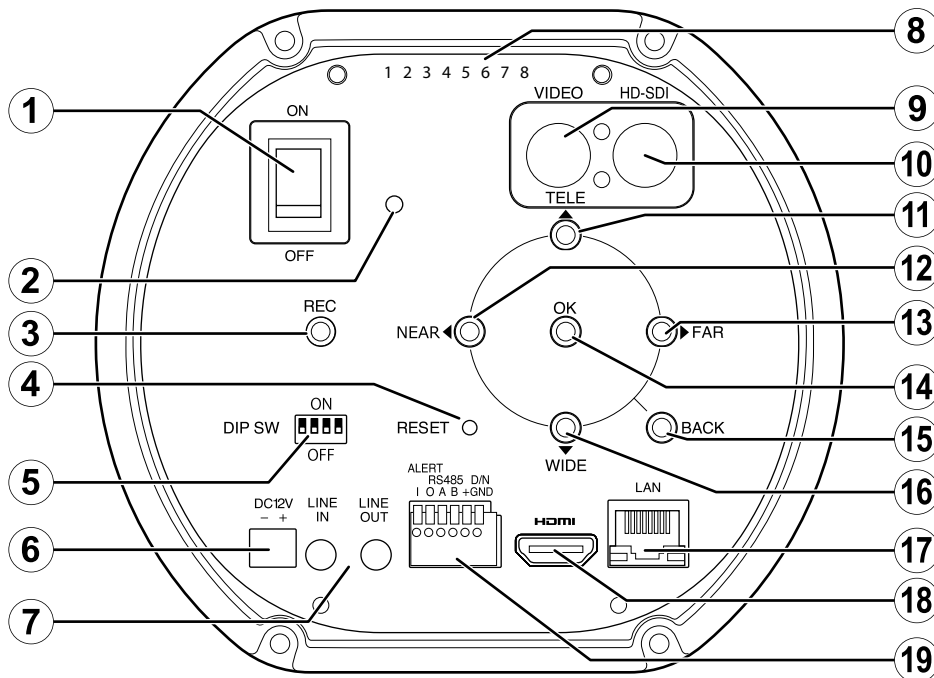


# Introduction

## Parts of the Camera



## The Control Panel



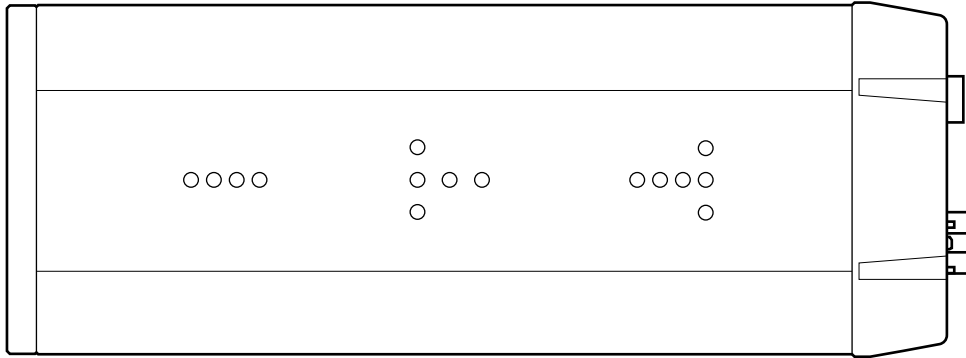
| Item | Name                          |
|------|-------------------------------|
| ①    | Power switch                  |
| ②    | Power lamp                    |
| ③    | REC (record) button           |
| ④    | RESET button                  |
| ⑤    | DIP switches (4 bits)         |
| ⑥    | Power connector               |
| ⑦    | Audio input/output connectors |
| ⑧    | Serial number                 |
| ⑨    | Video output connector        |
| ⑩    | HD-SDI output connector       |

| Item | Name              |
|------|-------------------|
| ⑪    | TELE button       |
| ⑫    | NEAR button       |
| ⑬    | FAR button        |
| ⑭    | OK/MENU button    |
| ⑮    | BACK button       |
| ⑯    | WIDE button       |
| ⑰    | LAN connector     |
| ⑱    | HDMI connector    |
| ⑲    | Six-pin connector |

# Installation and Connection

## Installation

Use the screw holes on the base to secure the camera to a mount or other surface.



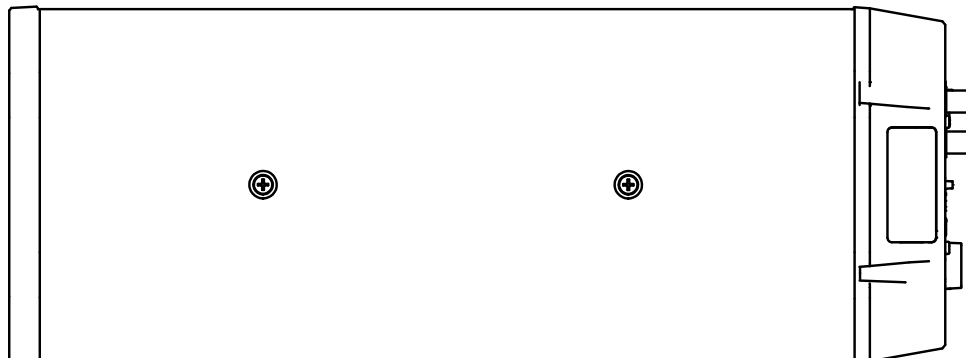
### ⚠ WARNING

Attach the product securely to a surface that can safely bear the combined weight of the camera and associated hardware. Do not mount the camera in unstable locations or locations subject to frequent vibration or attach it to weak materials such as drywall, ALC (autoclaved lightweight concrete), concrete blocks, or plywood. Injury could result should the product fall from its mounting.

### ⚠ CAUTIONS

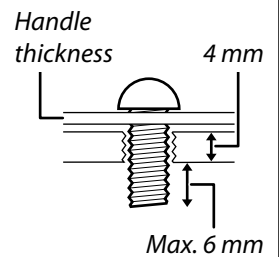
- Use ¼", UNC 20 thread screws with a thread engagement length of 6.5 to 10 mm.
- Install the camera base down.

A handle can be attached using the screws on top of the camera.



### ⚠ CAUTIONS

- Use M4 screws with a thread engagement length of at least 4 mm and a protrusion of no more than 6 mm.
- Do not use the screw holes on top of the camera for any other purpose.



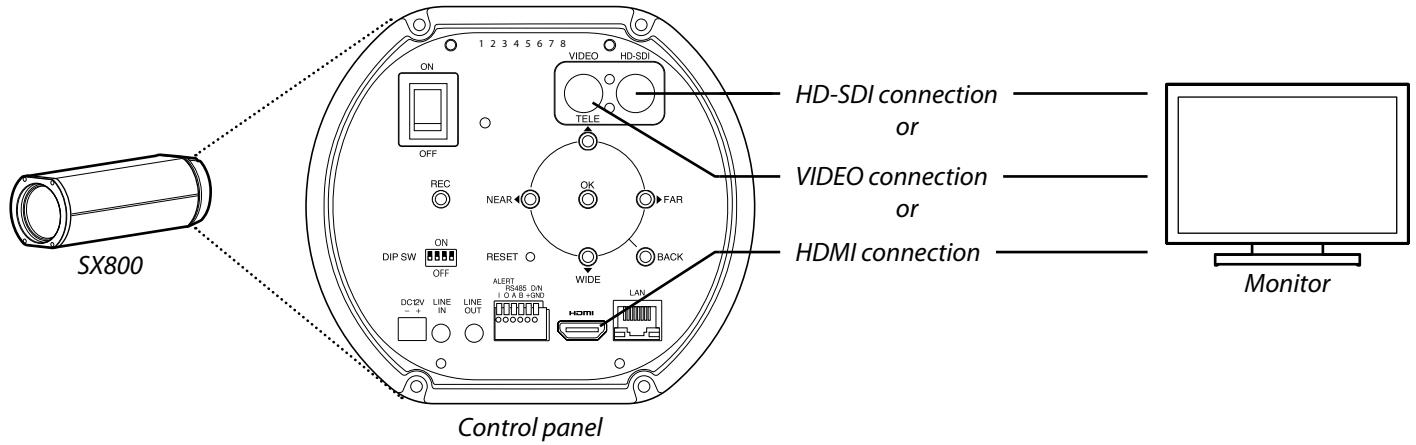
## Screw Hole Specifications

The specifications for the screw holes on the top and base of the camera are as follows:

|      | Type              | Quantity | Depth                              | Tightening torque |
|------|-------------------|----------|------------------------------------|-------------------|
| Top  | M4                | 2        | Pass through (threaded depth 4 mm) | 80–100 N•cm       |
| Base | ¼", UNC 20 thread | 15       | 10 mm                              | 240–300 N•cm      |

## Connection Schematic

The schematic below illustrates how the camera can be installed for stand-alone mode use.

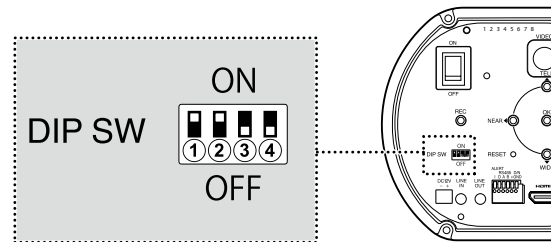


When the camera is connected to a monitor via an HD-SDI, VIDEO, or HDMI cable, you can view the live feed, control the camera, and adjust camera settings via the control panel on the back of the camera.

## Operating Mode Selection: DIP Switches

Use the DIP switches to select the operating mode.

| Operating mode | DIP switch |     |     |     |
|----------------|------------|-----|-----|-----|
|                | ①          | ②   | ③   | ④   |
| IP             | OFF        | ON  | OFF | OFF |
| RS485          | ON         | OFF | OFF | OFF |
| Stand-alone    | ON         | ON  | OFF | OFF |

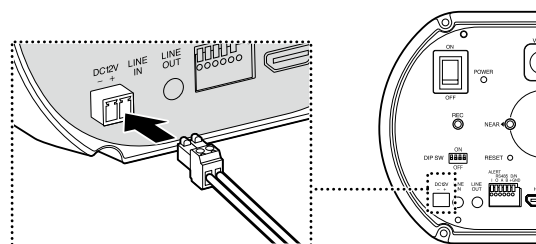


## Connecting to a Monitor

- 1 Connect the supplied plug to the power cable and plug the cable into the camera power connector.

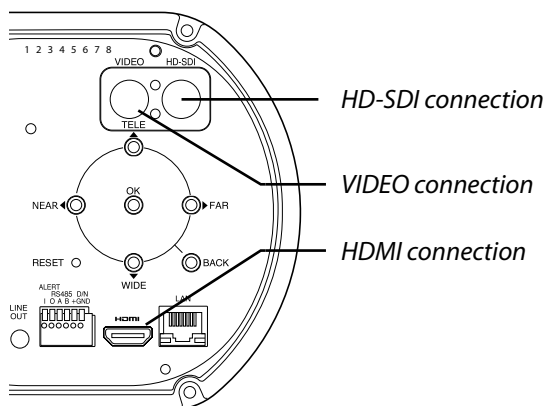
**CAUTION** Use only DC 12 V power.

**TIP** Customers must supply their own power cable.

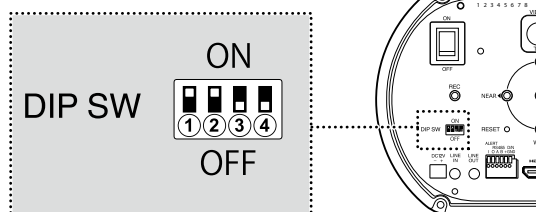


- 2 Connect the camera to the monitor using the appropriate cable.

**CAUTION** The camera cannot be connected via HD-SDI while connected via HDMI.

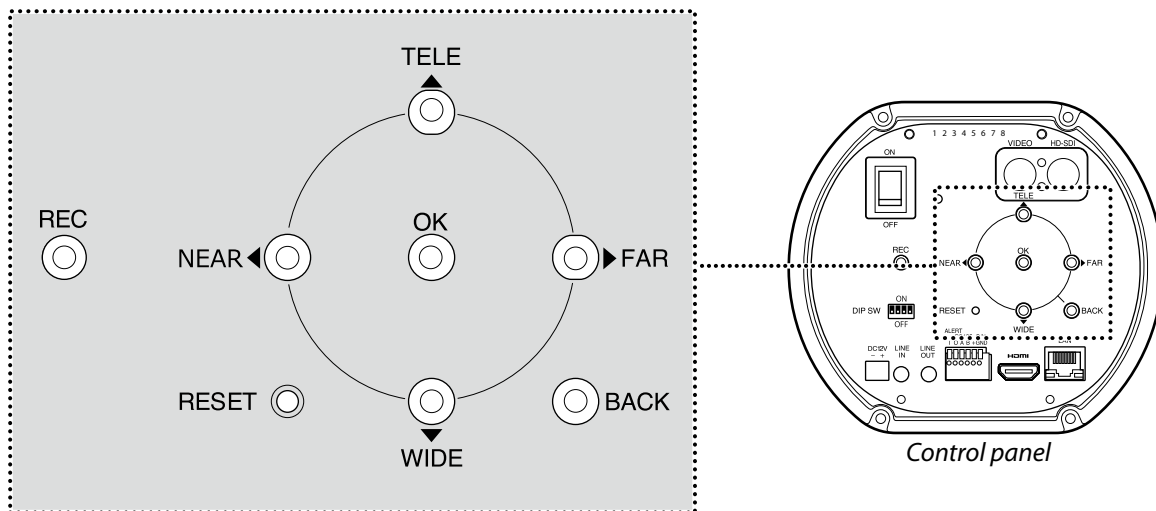


- 3 Select stand-alone mode by setting DIP switches ① and ② to "ON" and DIP switches ③ and ④ to "OFF".



# Camera Controls

Use the control panel on the back of the camera for live feed or camera control or adjusting camera settings. To display the menus, press and hold the **OK/MENU** button for 3 seconds.



The following buttons are used to navigate the menus and control the camera:

| Button                    | Function                                                                                                                                                          |                                                                   |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
|                           | Menu navigation                                                                                                                                                   | Camera control                                                    |
| <b>NEAR</b> button        | Move the cursor left                                                                                                                                              | Focus closer to the camera                                        |
| <b>FAR</b> button         | Move the cursor right                                                                                                                                             | Focus further away from the camera                                |
| <b>WIDE</b> button        | Move the cursor down                                                                                                                                              | Zoom out                                                          |
| <b>TELE</b> button        | Move the cursor up                                                                                                                                                | Zoom in                                                           |
| <b>OK/MENU</b> button     | Select the highlighted item                                                                                                                                       | Press and hold for 3 seconds to display the menus                 |
| <b>BACK</b> button        | Return to the previous display                                                                                                                                    | View or hide the focus area and zoom frames                       |
| <b>REC</b> button         | Record footage to the SD memory card                                                                                                                              |                                                                   |
| <b>RESET</b> button       | Restore factory default settings                                                                                                                                  |                                                                   |
|                           | <b>Note:</b> Pressing and holding the button for 3 seconds displays a confirmation dialog. Follow the on-screen instructions to restore factory default settings. |                                                                   |
| <b>FAR + NEAR</b> buttons | —                                                                                                                                                                 | Press the two buttons at the same time to focus using one-push AF |

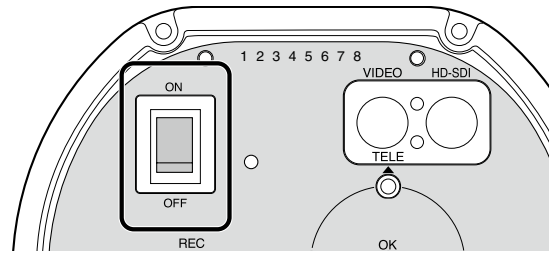
**TIP** Press and hold the **RESET** button for 3 seconds and then select **OK** to restore default settings when prompted. This restores all settings except the IP address to their default values.

# Basic Setup

The first time you turn the camera on, you will be prompted to choose a language and set the camera clock.

## Choosing a Language and Setting the Clock

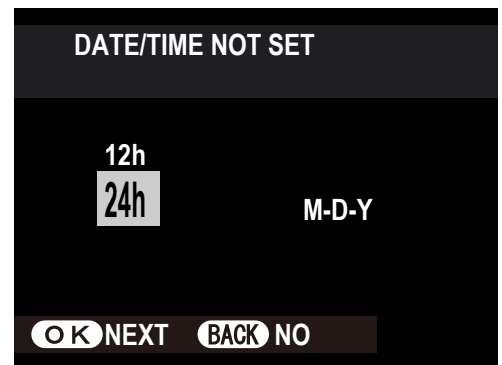
- 1 Turn the camera on. A splash screen will be displayed, followed by a language-selection dialog.



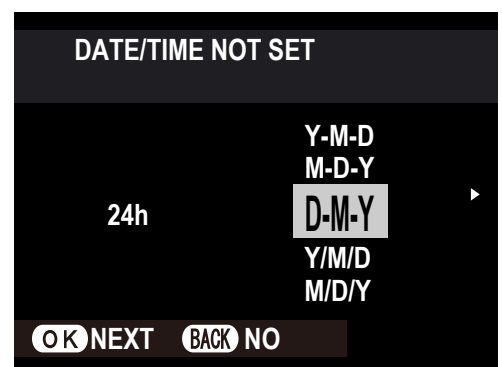
- 2 Using the control panel **TELE** (▲) and **WIDE** (▼) buttons to move the cursor up and down, highlight the desired language and then press **OK**.



- 3 You will next be prompted to choose from 24- and 12-hour clocks. Press **TELE** (▲) and **WIDE** (▼) to choose an option and press **FAR** (▶) to proceed.



- 4 Press **TELE** (▲) and **WIDE** (▼) to choose a date format and press **FAR** (▶) to proceed.



5 Set the clock, using **NEAR** (◀) and **FAR** (▶) to highlight options and **TELE** (▲) and **WIDE** (▼) to edit the highlighted option. Press **OK** when the process is complete.



-  **TIPS**
- You can skip the current step by pressing the **BACK** button in the control panel. You will be prompted to complete any steps you skipped the next time you turn the camera on.
  - You can also choose a language and set the clock from the setup menu.

## Memory Card Warning

If no memory card is inserted or if a memory card is inserted with the write-protect switch in the “lock” position, a warning will be displayed. Check that a memory card is correctly inserted in the memory card slot.



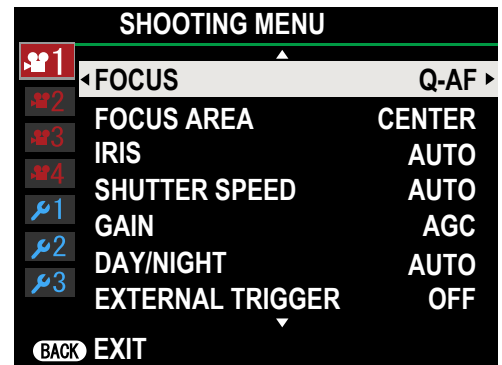
*Warning displayed when no memory card is inserted.*

# Camera Menus

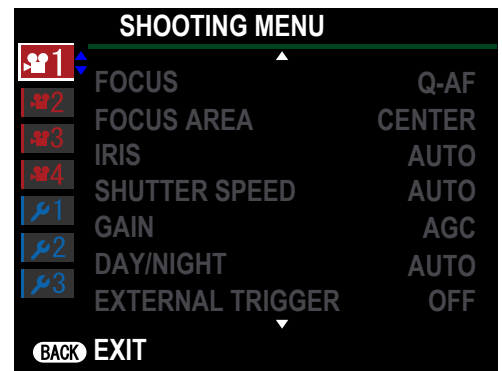
## Using the Menus

Use the menus to adjust camera settings. Press and hold the control panel **OK** button to display the menus and use the **TELE** (▲), **WIDE** (▼), **NEAR** (◀), and **FAR** (▶) buttons to move the cursor up, down, left, and right, the **OK** button to select highlighted items, and the **BACK** button to exit to the previous menu.

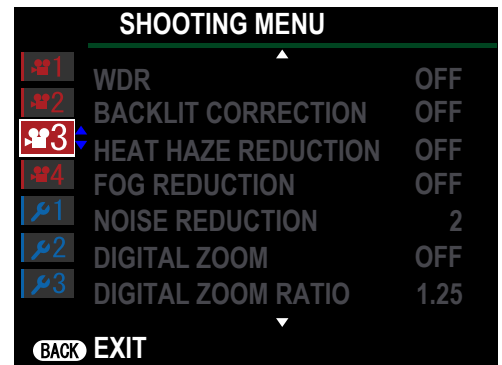
1 Hold the **OK** button for 3 seconds to display the menus.



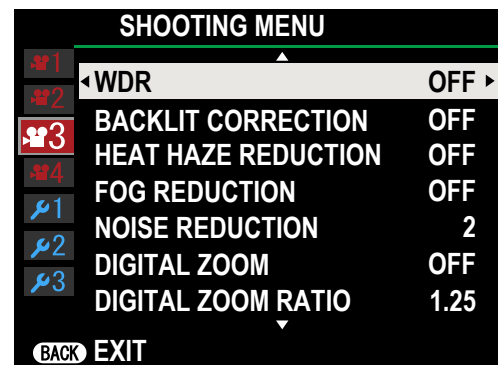
2 Press **NEAR** (◀) to highlight the tab for the current menu.



3 Press **TELE** (▲) and **WIDE** (▲) to highlight the tab for the desired menu.

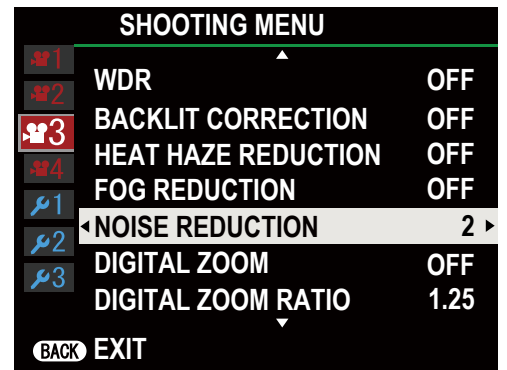


4 Press **FAR** (▶) to place the cursor in the selected menu.

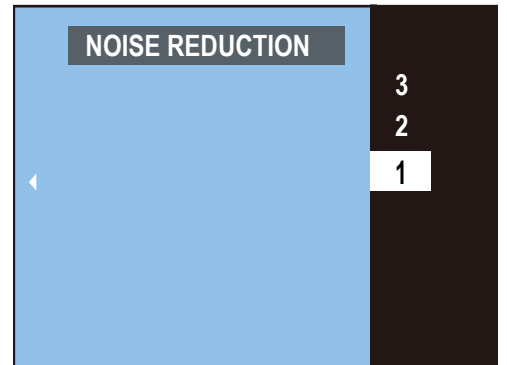




5 Press **TELE** (▲) and **WIDE** (▼) to highlight the desired item.

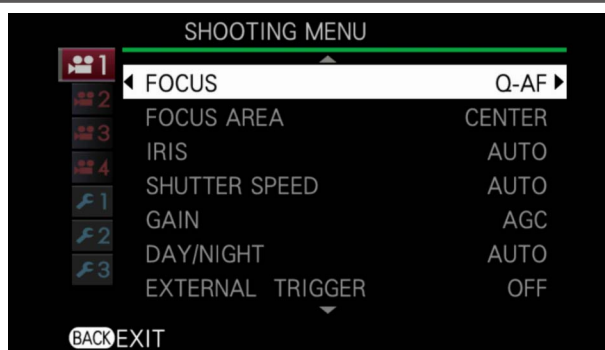


6 Press **FAR** (▶) to view options for the highlighted item.



7 Choose the desired option and press **OK**.

## SHOOTING MENU 1



### FOCUS

Choose how the camera focuses.

| Option        | Description                                                                                                                                                                                                                                                                                                                                                                             |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CONTINUOUS AF | The camera adjusts focus continuously in response to changes in the distance to the subject.<br><b>AF SENSITIVITY:</b> This property determines whether the focus system will continue to track the current subject after a new subject enters the focus area at a different distance from the camera. The higher the value, the longer the camera will wait before switching subjects. |
| QUICK AF      | The camera focuses on the subject at the center of the frame for one shot only after zoom is adjusted. Focus can be adjusted manually when zoom is not in use.                                                                                                                                                                                                                          |
| MF            | Auto focus is OFF. Focus manually on the intended location.                                                                                                                                                                                                                                                                                                                             |

### FOCUS AREA

Choose how the camera selects the focus area.

| Option | Description                                                               |
|--------|---------------------------------------------------------------------------|
| CENTER | The camera focuses on the subject at the center of the frame.             |
| AREA   | The frame is divided into a three-by-three grid for focus-area selection. |

### IRIS

Choose the aperture value (iris). See “Specifications” (page 25) for supported values.

### SHUTTER SPEED

Choose the shutter speed.

| Option | Description                                                                               |
|--------|-------------------------------------------------------------------------------------------|
| AUTO   | The camera adjusts shutter speed automatically. You can choose the minimum shutter speed. |
| MANUAL | Choose the shutter speed manually.                                                        |

**GAIN**

Adjust image brightness.

| Option           | Description                                                                                                                 |
|------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>MANUAL</b>    | Choose a value for gain.                                                                                                    |
| <b>AGC</b>       | The camera adjusts gain automatically to brighten the image when lighting is poor.                                          |
| <b>HYPER-AGC</b> | Sensitivity is increased over automatic gain control. Noise increases, but it is suitable for shooting in darker locations. |

**DAY/NIGHT**

In day/night mode, the camera records in color when the subject is brightly lit and in black-and-white when the subject is poorly lit. This option is available when **OFF** is selected for **EXTERNAL TRIGGER**.

| Option                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>AUTO</b>                 | <p>The camera selects day or night mode automatically according to lighting conditions. You can choose the lighting conditions that trigger the switch when <b>AUTO</b> is selected:</p> <ul style="list-style-type: none"> <li>• <b>DAY to NIGHT THRESHOLD:</b> Choose the brightness threshold that triggers the switch from day to night (0–255).</li> <li>• <b>NIGHT to DAY THRESHOLD:</b> Choose the brightness threshold that triggers the switch from night to day (0–255).</li> <li>• <b>SWITCHING SENSITIVITY:</b> Choose how long (0–60 S) the camera waits to switch modes once the brightness threshold is crossed.</li> </ul>                                      |
| <b>SCHEDULED</b>            | <p>The camera switches to day or night mode at a selected time.</p> <ul style="list-style-type: none"> <li>• <b>DAY START TIME:</b> Choose a time from 00:00 to 23:59.</li> <li>• <b>NIGHT START TIME:</b> Choose a time from 00:00 to 23:59.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>AUTO &amp; SCHEDULED</b> | <p>Choose a light trigger and time for switching between day and night modes.</p> <ul style="list-style-type: none"> <li>• <b>DAY to NIGHT THRESHOLD:</b> Choose the brightness threshold that triggers the switch from day to night (0–255).</li> <li>• <b>NIGHT to DAY THRESHOLD:</b> Choose the brightness threshold that triggers the switch from night to day (0–255).</li> <li>• <b>SWITCHING SENSITIVITY:</b> Choose how long (0–60 S) the camera waits to switch modes once the brightness threshold is crossed.</li> <li>• <b>DAY START TIME:</b> Choose a time from 00:00 to 23:59.</li> <li>• <b>NIGHT START TIME:</b> Choose a time from 00:00 to 23:59.</li> </ul> |
| <b>DAY</b>                  | The camera operates in day mode at all times.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>NIGHT</b>                | The camera operates in night mode at all times.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

 **TIP** The **SHOOTING MENU > DAY/NIGHT, EXTERNAL TRIGGER, IR WAVELENGTH, OPTICAL FILTER(DAY)** and **OPTICAL FILTER(NIGHT)** preferences are linked. For more information, see “Lighting Triggers” (page 16).

## EXTERNAL TRIGGER

Choose whether day/night selection is performed in response to an external trigger.

| Option    | Description                                                                                                                |
|-----------|----------------------------------------------------------------------------------------------------------------------------|
| ON(VLC)   | Applies a VLC (Visible Light Cut) filter to the external trigger. The optical filters selected for day/night are disabled. |
| ON(CLEAR) | Replaces the filter with clear glass. The optical filters selected for day/night are disabled.                             |
| OFF       | The camera does not respond to the external trigger.                                                                       |

 **TIP** The **SHOOTING MENU > DAY/NIGHT, EXTERNAL TRIGGER, IR WAVELENGTH, OPTICAL FILTER(DAY)** and **OPTICAL FILTER(NIGHT)** preferences are linked. For more information, see “Lighting Triggers” (page 16).

### Lighting Triggers

Day/night selection can be configured in any of the following three ways:

| Configuration      | Description                                                                                        | Configured using                 |                                      |
|--------------------|----------------------------------------------------------------------------------------------------|----------------------------------|--------------------------------------|
|                    |                                                                                                    | Menu item                        | Option                               |
| ① Auto             | Day/night selection is performed automatically according to a schedule and/or lighting conditions. | SHOOTING MENU > DAY/NIGHT        | AUTO, SCHEDULED, or AUTO & SCHEDULED |
| ② Manual           | Day/night selection is performed manually.                                                         |                                  | DAY or NIGHT                         |
| ③ External trigger | Day/night selection is performed in response to input from an external trigger.                    | SHOOTING MENU > EXTERNAL TRIGGER | ON(VLC)*, ON(CLEAR)*, or OFF         |

\* The optical filters chosen for day/night do not apply if a signal is received from the external trigger when **ON(VLC)** or **ON(CLEAR)** is selected for **EXTERNAL TRIGGER**. If no signal is received or if **OFF** is selected, the optical filter will function as shown in the following table.

The following table shows relation between the filter selected for day/night, image color, and wavelength:

| Option | Filter | Image color     | SHOOTING MENU > IR WAVELENGTH |                                               |
|--------|--------|-----------------|-------------------------------|-----------------------------------------------|
|        |        |                 | Status                        | Supported wavelengths                         |
| DAY    | IRC    | Color           | Disabled                      | Visible light only                            |
|        | VLC    |                 |                               | 808 nm only                                   |
| NIGHT  | CLEAR  | Black and white | Enabled                       | 950 nm, 940 nm, 850 nm, 808 nm, visible light |
|        | VLC    |                 |                               |                                               |

## SHOOTING MENU 2



### IR WAVELENGTH

Match the IR wavelength to the infrared light source used. See “Specifications” (page 25) for supported values.

**TIP** The **SHOOTING MENU > DAY/NIGHT, EXTERNAL TRIGGER, IR WAVELENGTH, OPTICAL FILTER(DAY)** and **OPTICAL FILTER(NIGHT)** preferences are linked. For more information, see “Lighting Triggers” (page 16).

### IMAGE STABILIZATION

Choose an image stabilization option adapted to the scene.

| Option | Description                                                                  |
|--------|------------------------------------------------------------------------------|
| AUTO   | The camera chooses the type of image stabilization best suited to the scene. |
| OIS    | Reduce the effects of camera shake using optical image stabilization.        |
| EIS    | Reduce the effects of camera shake using electronic image stabilization.     |
| OFF    | Image stabilization disabled.                                                |

### OPTICAL FILTER(DAY)

Choose an optical filter for day mode.

| Option | Description                                                                              |
|--------|------------------------------------------------------------------------------------------|
| IRC    | Enable the IRC filter, blocking infrared light and recording only visible-light footage. |
| VLC    | Enable the VLC filter, blocking visible light and recording only infrared footage.       |

**TIP** The **SHOOTING MENU > DAY/NIGHT, EXTERNAL TRIGGER, IR WAVELENGTH, OPTICAL FILTER(DAY)** and **OPTICAL FILTER(NIGHT)** preferences are linked. For more information, see “Lighting Triggers” (page 16).

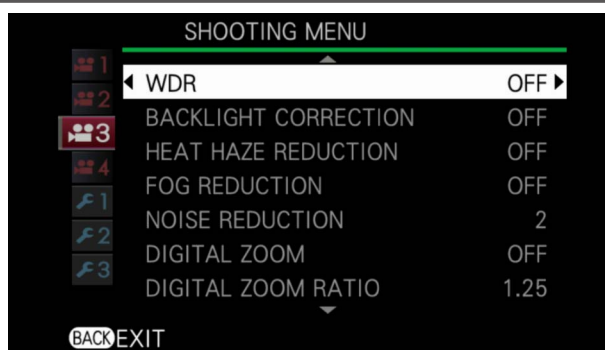
### OPTICAL FILTER(NIGHT)

Choose an optical filter for night mode.

| Option | Description                                                                        |
|--------|------------------------------------------------------------------------------------|
| CLEAR  | Record footage in both infrared and visible light.                                 |
| VLC    | Enable the VLC filter, blocking visible light and recording only infrared footage. |

**TIP** The **SHOOTING MENU > DAY/NIGHT, EXTERNAL TRIGGER, IR WAVELENGTH, OPTICAL FILTER(DAY)** and **OPTICAL FILTER(NIGHT)** preferences are linked. For more information, see “Lighting Triggers” (page 16).

## SHOOTING MENU 3



### **WDR**

Use with high-contrast subjects to reveal details “washed out” in the highlights and lost in the shadows. Choose higher values for high-contrast subjects.

### **BACKLIGHT CORRECTION**

Reduce loss of detail in the shadowed areas of backlit subjects. The higher the value, the greater the effect.

### **HEAT HAZE REDUCTION**

Reduce the wavering effect of heat haze, making the image clearer overall. The higher the value, the greater the effect.

### **FOG REDUCTION**

Make images where the subject is obscured by fog more vivid and easier to see. The higher the value, the greater the effect.

### **NOISE REDUCTION**

Reduce the effects of noise for a smoother picture. The higher the value, the greater the effect.

### **DIGITAL ZOOM**

Choose the digital zoom type.

| Option     | Description                                                                                                                                     |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| CONTINUOUS | The camera zooms smoothly from maximum optical zoom to the zoom ratio selected for <b>DIGITAL ZOOM RATIO</b> .                                  |
| EXTENDED   | The camera zooms instantaneously from the current zoom position (whatever it may be) to the zoom ratio selected for <b>DIGITAL ZOOM RATIO</b> . |
| OFF        | Digital zoom disabled.                                                                                                                          |

### **DIGITAL ZOOM RATIO**

Choose the zoom factor for digital zoom.

| Options |      |      |      |
|---------|------|------|------|
| 2.00    | 1.75 | 1.50 | 1.25 |

## SHOOTING MENU 4



### USE SETTING

Choose a shooting preset.

| Option                  | Description                                                                                                         |
|-------------------------|---------------------------------------------------------------------------------------------------------------------|
| <b>SURVEILLANCE</b>     | Emphasize outlines.                                                                                                 |
| <b>MOVIE PRODUCTION</b> | Choose for accurate color reproduction when shooting non-surveillance footage at social gatherings or other events. |

### BRIGHTNESS

Adjust brightness. The higher the value, the greater the effect.

### CONTRAST

Adjust contrast. The higher the value, the greater the effect.

### SATURATION

Adjust color saturation. The higher the value, the greater the effect.

### SHARPNESS

Make outlines more or less sharply defined. The higher the value, the greater the effect.

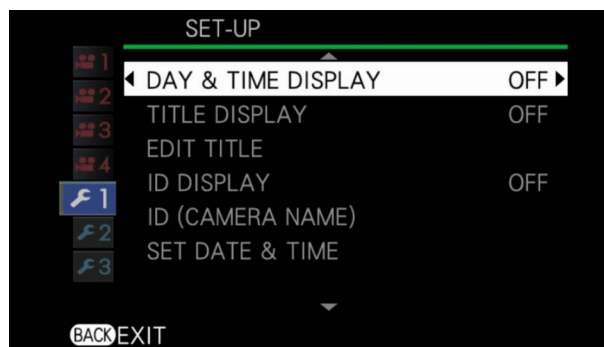
### WHITE BALANCE

Match white balance to the light source (for example, sunlight or artificial lighting).

| Option                     | Description                                                                               |
|----------------------------|-------------------------------------------------------------------------------------------|
| <b>AUTO</b>                | The camera adjusts white balance automatically.                                           |
| <b>AUTO WHITE PRIORITY</b> | The camera sets white balance to a high level.                                            |
| <b>CUSTOM 1/CUSTOM 2</b>   | Measure a value for white balance using a piece of paper or other white reference object. |
| <b>FINE</b>                | For subjects lit by direct sunlight.                                                      |
| <b>SHADE</b>               | For subjects in the shade or under overcast skies.                                        |
| <b>COLOR TEMPERATURE</b>   | Choose a color temperature (3000K, 5000K, or 9000K).                                      |

 **TIP** After choosing an option for white balance, you can adjust white balance shift.

## SET-UP 1



### **DAY & TIME DISPLAY**

Choose the date and time display position. Date and time are not displayed if **OFF** is selected.

### **TITLE DISPLAY**

Choose the title display position. The title is not displayed if **OFF** is selected.

### **EDIT TITLE**

Set the title.

\* Uppercase characters and numbers can be entered (Lowercase characters cannot be entered).

### **ID DISPLAY**

Choose the ID display position. The ID is not displayed if **OFF** is selected.

### **ID (CAMERA NAME)**

Set the ID (camera name).

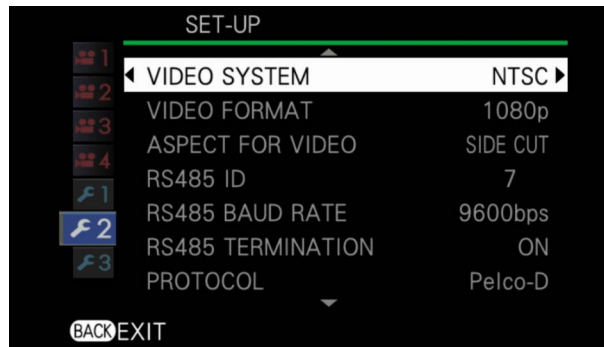
\* Uppercase characters and numbers can be entered (Lowercase characters cannot be entered).

### **SET DATE & TIME**

Choose the date and time display format.



## SET-UP 2



### **VIDEO SYSTEM**

Choose the standard used for video output from the camera.

### **VIDEO FORMAT**

Choose the frame size at which video is output from the camera.

### **ASPECT FOR VIDEO**

Choose how video is displayed on monitors with an aspect ratio that does not match the selected format.

| Option    | Description                                                                                |
|-----------|--------------------------------------------------------------------------------------------|
| SIDE CUT  | The image is cropped to fit the display.                                                   |
| LETTERBOX | The image is displayed at its original aspect ratio with black bars above and below.       |
| SQUEEZE   | Video with an aspect ratio of 16:9 is reformatted to fit displays with a 4:3 aspect ratio. |

### **RS485 ID**

Set the RS485 ID.

### **RS485 BAUD RATE**

Choose the baud rate for data transmitted via RS485.

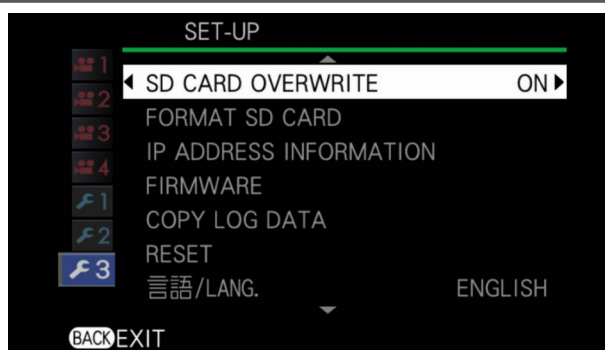
### **RS485 TERMINATION**

Select **ON** to enable the RS485 termination resistor.

### **PROTOCOL**

Choose a communications protocol for RS485 connections.

## SET-UP 3



### **SD CARD OVERWRITE**

Choose whether the camera overwrites existing data when the memory card is full.

| Option | Description                                                                                                                             |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------|
| ON     | When the memory card is full, the camera overwrites existing files to make room for new data.                                           |
| OFF    | The camera stops recording data when the memory card is full. You have the option of displaying the amount space available on the card. |

### **FORMAT SD CARD**

Select **OK** to format the memory card. Any existing data on the card will be deleted.

### **IP ADDRESS INFORMATION**

View camera IP address settings.

### **FIRMWARE**

Update camera firmware. If the memory card inserted in the camera contains a new version of the camera firmware, selecting this option will display a confirmation dialog. Select **FIRMWARE UPDATE** to perform the update.

The latest firmware is available at the following website.  
<https://global.fujifilm.com/en/business-optical-devices/cctv/sx>



### **COPY LOG DATA**

Copy log data to the memory card. Selecting this option displays a confirmation dialog. Select **OK** to perform the update.

### **RESET**

| Option                    | Description                                                                                                                                               |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| RESET SETTINGS            | Reset camera settings to their default values.<br>Settings can also be reset by pressing and holding the control panel <b>RESET</b> button for 3 seconds. |
| IP ADDRESS SETTINGS RESET | Reset camera IP address settings.                                                                                                                         |

### **言語/LANG.**

Choose a language.

# Defaults

The **RESET** option in the setup menu restores settings to the following default values:

## SHOOTING MENU

| Option                | Default                                                                                               |
|-----------------------|-------------------------------------------------------------------------------------------------------|
| FOCUS                 | QUICK AF                                                                                              |
| FOCUS AREA            | CENTER                                                                                                |
| IRIS                  | AUTO                                                                                                  |
| SHUTTER SPEED         | AUTO (1/30)                                                                                           |
| GAIN                  | AGC                                                                                                   |
| DAY/NIGHT             | AUTO<br>• DAY to NIGHT THRESHOLD: 70<br>• NIGHT to DAY THRESHOLD: 130<br>• SWITCHING SENSITIVITY: 7 S |
| EXTERNAL TRIGGER      | OFF                                                                                                   |
| IR WAVELENGTH         | VISIBLE LIGHT                                                                                         |
| IMAGE STABILIZATION   | AUTO                                                                                                  |
| OPTICAL FILTER(DAY)   | IRC                                                                                                   |
| OPTICAL FILTER(NIGHT) | CLEAR                                                                                                 |
| WDR                   | OFF                                                                                                   |
| BACKLIGHT CORRECTION  | OFF                                                                                                   |
| HEAT HAZE REDUCTION   | OFF                                                                                                   |
| FOG REDUCTION         | OFF                                                                                                   |
| NOISE REDUCTION       | 2                                                                                                     |
| DIGITAL ZOOM          | OFF                                                                                                   |
| DIGITAL ZOOM RATIO    | 1.25                                                                                                  |
| USE SETTING           | SURVEILLANCE                                                                                          |
| BRIGHTNESS            | 50                                                                                                    |
| CONTRAST              | 50                                                                                                    |
| SATURATION            | 50                                                                                                    |
| SHARPNESS             | 80                                                                                                    |
| WHITE BALANCE         | AUTO                                                                                                  |

## SET-UP

| Option                 | Default                                                     |
|------------------------|-------------------------------------------------------------|
| DAY & TIME DISPLAY     | OFF                                                         |
| TITLE DISPLAY          | OFF                                                         |
| EDIT TITLE             | —                                                           |
| ID DISPLAY             | OFF                                                         |
| ID (CAMERA NAME)       | —                                                           |
| SET DATE & TIME        | • TIME DISPLAY: 24h<br>• DATE DISPLAY FORMAT:<br>MM-DD-YYYY |
| VIDEO SYSTEM           | NTSC                                                        |
| VIDEO FORMAT           | 1080p                                                       |
| ASPECT FOR VIDEO       | SIDE CUT                                                    |
| RS485 ID               | 7                                                           |
| RS485 BAUD RATE        | 9600bps                                                     |
| RS485 TERMINATION      | ON                                                          |
| PROTOCOL               | Pelco-D                                                     |
| SD CARD OVERWRITE      | ON                                                          |
| FORMAT SD CARD         | —                                                           |
| IP ADDRESS INFORMATION | —                                                           |
| FIRMWARE               | —                                                           |
| COPY LOG DATA          | —                                                           |
| RESET                  | —                                                           |
| 言語/LANG.               | ENGLISH                                                     |

# Troubleshooting

Should the product fail to function as expected, consult the table below. If you are unable to find a solution here, contact your local Fujifilm distributor.

| Problem                                      | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No video, or the image in the video is dark. | <ul style="list-style-type: none"> <li>• <b>The camera is off:</b> Check that the cables are correctly connected, the power lamp is lit, and the correct voltage is being supplied to the lens.</li> <li>• <b>The cables are not correctly connected:</b> Check that the cables are correctly connected.</li> <li>• <b>The lens cap is on:</b> Remove the lens cap.</li> <li>• <b>The iris is stopped down to the minimum aperture:</b> Select maximum aperture.</li> <li>• <b>Shutter speed requires adjustment:</b> Select an appropriate value for shutter speed.</li> </ul> |
| The image in the video is “washed out”.      | <ul style="list-style-type: none"> <li>• <b>Camera white balance, gain, shutter speed, or other settings require adjustment:</b> Confirm that settings are adjusted appropriately.</li> <li>• <b>Aperture requires adjustment:</b> Adjust aperture appropriately.</li> </ul>                                                                                                                                                                                                                                                                                                    |
| The image in the video is out of focus.      | <b>The lens is dirty:</b> Clean the lens.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Spots appear in the video.                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Menus are not displayed.                     | Press and hold the <b>OK</b> button for 3 seconds to display the menus (page 9).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Camera settings cannot be reset.             | Press and hold the <b>RESET</b> button for 3 seconds to restore default settings (page 9).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| The camera does not function as expected.    | <b>The DIP switches are not in the correct positions:</b> Use the DIP switches to select stand-alone mode (page 7).                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| The monitor is blank.                        | <b>The camera is connected to a PAL display:</b> The <b>VIDEO SYSTEM</b> option in the camera setup menu defaults NTSC. No video will be displayed on PAL devices at default settings. Use an NTSC display or adjust output settings for each of the three connection types (HDMI, SD-SDI, or VIDEO).                                                                                                                                                                                                                                                                           |

# Specifications

|                                   |                                                                                                                                                                  |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                             | FUJIFILM SX800                                                                                                                                                   |
| Focal length                      | 20–800 mm                                                                                                                                                        |
| Optical zoom                      | 40×                                                                                                                                                              |
| Digital zoom                      | 1.25×, 1.5×, 1.75×, 2×                                                                                                                                           |
| Iris range                        | f/4–f/16                                                                                                                                                         |
| Minimum object distance (M.O.D.)* | 10 m “at focal lengths of 20–400 mm”<br>20 m “at focal lengths of 401–800 mm”                                                                                    |
| Image sensor                      | CMOS sensor                                                                                                                                                      |
| Video                             | <ul style="list-style-type: none"> <li>• <b>File format:</b> MOV</li> <li>• <b>Video compression:</b> H.264 compliant</li> </ul>                                 |
| Frame size                        | 1920 × 1080, 1280 × 720, 640 × 480 (NTSC), 768 × 576 (PAL)                                                                                                       |
| Metering                          | Average                                                                                                                                                          |
| Focus modes                       | Continuous AF, quick AF, MF                                                                                                                                      |
| Aperture selection                | Auto, f/4–f/16                                                                                                                                                   |
| Shutter speed                     | Auto (with minimum speed selection of $\frac{1}{8}$ – $\frac{1}{125}$ s), manual (1 – $\frac{1}{32000}$ s)                                                       |
| Gain adjustment                   | Manual (ISO 400 – ISO 819200), AGC, HYPER AGC                                                                                                                    |
| Day/night selection               | AUTO, SCHEDULED, AUTO & SCHEDULED, DAY, NIGHT                                                                                                                    |
| Wavelengths                       | VISIBLE LIGHT, 950 nm, 940 nm, 850 nm, 808 nm                                                                                                                    |
| Image stabilization               | Available (AUTO, OIS, EIS, OFF)                                                                                                                                  |
| Wide dynamic range                | Selectable (2 levels)                                                                                                                                            |
| Back light compensation           | Selectable (2 levels)                                                                                                                                            |
| Heat haze reduction               | Selectable (3 levels)                                                                                                                                            |
| Fog reduction                     | Selectable (3 levels)                                                                                                                                            |
| Noise reduction                   | Selectable (3 levels)                                                                                                                                            |
| Shooting Mode Preset              | SURVEILLANCE, MOVIE PRODUCTION                                                                                                                                   |
| Brightness                        | Selectable (100 levels)                                                                                                                                          |
| Contrast                          | Selectable (100 levels)                                                                                                                                          |
| Saturation                        | Selectable (100 levels)                                                                                                                                          |
| Sharpness                         | Selectable (100 levels)                                                                                                                                          |
| White balance                     | AUTO, AUTO WHITE PRIORITY, CUSTOM 1, CUSTOM 2, FINE, SHADE, COLOR TEMPERATURE (choose a color temperature in degrees Kelvin from 3000K, 5000K, and 9000K)        |
| Image output connectors           | HDMI, HD-SDI, composite (BNC)                                                                                                                                    |
| Audio input/output                | <ul style="list-style-type: none"> <li>• <b>Input impedance:</b> 40K <math>\Omega</math></li> <li>• <b>Output impedance:</b> 200 <math>\Omega</math></li> </ul>  |
| Video output                      | <ul style="list-style-type: none"> <li>• <b>NTSC:</b> 1080p, 720p, 480p</li> <li>• <b>PAL:</b> 1080p, 720p, 576p</li> </ul>                                      |
| External interface                | 100BASE-T, RS-485, external trigger (DAY/NIGHT)                                                                                                                  |
| Baud rate                         | 152000 bps, 38400 bps, 19200 bps, 9600 bps, 4800 bps, 2400 bps                                                                                                   |
| Internet protocol                 | ONVIF (port number 8080) HTTP, RTSP                                                                                                                              |
| RS-485 protocol                   | Pelco D, P (includes custom commands)                                                                                                                            |
| Power source                      | DC 12 V                                                                                                                                                          |
| Power consumption                 | 9.5 W                                                                                                                                                            |
| Dimensions (W × H × D)            | 156 mm × 139 mm × 410 mm/6.14 in. × 5.47 in. × 16.14 in.                                                                                                         |
| Weight                            | Approx. 6.4 kg/14.11 lb                                                                                                                                          |
| Operating environment             | <ul style="list-style-type: none"> <li>• <b>Temperature:</b> –10 °C – +50 °C/+14 °F – +122 °F</li> <li>• <b>Humidity:</b> 10% – 80% (no condensation)</li> </ul> |
| Tilt limit                        | ±45° from level (base down)                                                                                                                                      |

\* From the foremost part of the forward lens.

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