

Digital Surveillance Recorder

Operating Instructions

**HSR-J2016/J2016P
HSR-J2009/J2009P**

Owner's Record

The model and serial numbers are located on the body of the unit. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. _____ Serial No. _____

WARNING

To reduce the risk of fire or electric shock, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

THIS APPARATUS MUST BE EARTHED.

WARNING

This unit has no power switch. When installing the unit, incorporate a readily accessible disconnect device in the fixed wiring, or connect the power cord to socket-outlet which must be provided near the unit and easily accessible. If a fault should occur during operation of the unit, operate the disconnect device to switch the power supply off, or disconnect the power cord.

Caution for LAN port

For safety reason, do not connect the LAN port to any network devices that might have excessive voltage.

For the customers in the USA (HSR-J2009/J2016 only)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

If you have any questions about this product, you may call: Sony's Business Information Center (BIC) at 1-800-686-SONY(7669) or Write to:

*Sony Customer Information Services Center
6900-29 Daniels Parkway, PMB 330
Fort Myers, Florida 33912*

Declaration of Conformity

Trade Name:	SONY
Model No.:	HSR-J2009/J2016
Responsible Party:	Sony Electronics Inc.
Address:	16450 W. Bernardo Dr, San Diego, CA92127 U.S.A.
Telephone No.:	858-942-2230

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.



Voor de klanten in Nederland

Gooi de batterij niet weg maar lever deze in als klein chemisch afval (KCA).

UL disclaimer statement

Underwriters Laboratories Inc. ("UL") has not tested the performance or reliability of this hardware, operating software or other aspects of this product. UL has only tested for fire, shock or casualties as outlined in UL's Standard(s) for Safety. UL Certification does not cover the performance or reliability of the security hardware and security operating software. UL MAKES NO REPRESENTATIONS, WARRANTIES OR CERTIFICATIONS WHATSOEVER REGARDING THE PERFORMANCE OR RELIABILITY OF ANY SECURITY RELATED FUNCTIONS OF THIS PRODUCT.

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Precautions

On safety

- Operate the unit on 120-240V AC, 50/60 Hz.
- The nameplate indicating operating voltage, current consumption, etc., is located on the rear of the unit.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Do not drop or place heavy objects on the power cord. If the power cord is damaged, unplug the unit immediately. It is dangerous to use the unit with a damaged power cord.
- Connect the power cord to an AC outlet in the wall. *For more on connecting to a power source, see "Powering on" on page 32.*
- Unplug the unit from the wall outlet if it is not to be used for several days or more.
- Disconnect the power cord from the wall AC outlet by grasping the plug, not by pulling the cord.

On installation

- Do not place a heavy object on the unit.
- Allow adequate air circulation to prevent internal heat build-up. Keep the top, sides, and rear of the unit 5 cm (2 inches) or more away from the walls or ceiling. Do not detach the feet of the unit. The space under the unit is necessary.
Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation slots.
- Do not use the unit in a closed box.
- Do not install the unit in a location near heat sources such as radiators or air ducts.
- Place the unit to avoid direct sunlight.
- Do not install the unit in a place subject to mechanical vibration or shock.
- Do not put magnetic objects close to the unit and cassette tape. Magnetic fields may affect the color reproduction of the unit and cause distortion.
- The unit is designed for operation in a horizontal position.
Do not install it in an inclined position.

On operation

When the unit is not in use, unplug the unit to conserve energy and to extend its life.

On cleaning

As a safety precaution, unplug the unit before cleaning it.

- To keep the unit looking brand-new, periodically clean it with a mild detergent solution. Never use strong solvents such as thinner or benzine, or abrasive cleaners since they will damage the cabinet.
When cleaning, keep liquid away from electrical contacts and connectors.
- When there is a buildup of dust on air vents, use a vacuum cleaner to remove it.

On repacking

- Before repacking, disconnect all cables and connecting cords.
- Do not throw away the carton and packing materials. They make an ideal container with which to transport the unit. When shipping the unit to another location, repack it.

On transportation

When transporting the unit, protect it from vibration and impact.

If you have any questions about this unit, contact your authorized Sony dealer.

Backup function

This unit is equipped with a backup battery (lithium battery) on the bottom to maintain the clock settings. When the unit is used under normal conditions, the backup battery is recharged.

The battery is fully recharged after a minimum of about 30 hours, and will maintain the clock settings for up to about 30 days.

Notes

- The settings may not be maintained properly if the backup battery has been recharged for less than 30 hours when the power goes off.
- To replace the backup battery (lithium battery), contact your Sony dealer.

Notes relating to externally connected devices

When connected to a RAID unit

- To power the RAID unit, always use an uninterruptible power supply (UPS).
- The RAID unit and the HDD built into this unit cannot be used simultaneously.
- Power off both this unit and the RAID unit before connecting them together, then wait until the RAID unit startup procedure has completed before powering on this unit. If this unit is powered on first, or if this unit is powered on during the RAID unit startup process, the RAID unit may not be recognized.
- Configure mirroring settings on the RAID unit. Do not configure these settings on the main unit, as this may restrict the recording rate, or result in duplicate mirroring settings.
- For more on which RAID units can be connected, contact your Sony dealer.

Notes on Machines Equipped With a Hard Disk Drive

This unit is equipped with a hard disk drive (HDD), which is a precision device. Shock, vibration, static electricity, or extraordinary temperature or humidity may cause trouble with HDDs or loss of data stored on a hard disk.

Be sure to pay careful attention when installing, operating and setting up this unit.

Do NOT impart any mechanical shock or vibration.

This may damage the HDD or cause loss of data.

- When transporting the unit, be sure to pack it with the specified packing materials.
If carrying the unit on a cart, use a cart with low vibration. If excessive mechanical shock or vibration is imparted, the HDD may be damaged.
- NEVER move this unit in power-on state. Mount/remove the unit onto/from a rack in power-off state.
- Do not impart shock to any other machine in the rack that is equipped with an HDD.
- Be sure to turn off the power of every other machine in the rack that is equipped with an HDD before mounting/removing the unit onto/from a rack.

- Do not place the unit near equipment that causes vibration.
- Do not remove the cabinet of the unit.
- When placing the unit on a floor or stand, be sure to gently set the unit down with the four specified feet attached to the bottom. If there are no feet on the bottom, attach them before setting the unit down.

Never operate the unit within 30 seconds after the power is turned off.

The disk in an HDD rotates by inertia for a while after the power is turned off. In this condition, the heads are in an unstable state. During this period, the HDD is more sensitive to mechanical shock and vibration than during power-on state. **Refrain from imparting even a slight shock for at least 30 seconds after the power is turned off.** Operations may be initiated after 30 seconds or more (as the disk stops).

Notes on temperature and humidity

The operating and storage temperature and humidity must be maintained within the specified ranges.

Operating temperature: 5°C to 40°C (41°F to 104°F)

Operating humidity: 20% to 80% (maximum wet-bulb temperature 29°C or 84°F) (no condensation)

Storage temperature: -20°C to +60°C (-4°F to +140°F)

Storage humidity: 20% to 80% (maximum wet-bulb temperature 29°C or 84°F) (no condensation)

In the event of trouble with the HDD

If there is something wrong with the HDD of this unit (a failure occurs in the HDD), handle this unit following the cautions given above. This protects the HDD and your data from further damage until the contents of the failure can be confirmed or analyzed.

Set the built-in clock before use.

Recording cannot be made if the date and time have not set with the built-in clock.

If no setting has been made for the built-in clock, a warning message will be displayed on the monitor screen when the power is supplied to the unit. First adjust the built-in clock.

Precautions

Replacement

The HDD, cooling fans and built-in lithium battery are expendable parts. Replace them with new ones once in every two or three years of usage under normal ambient temperature. Note that the timing of replacement depends on various conditions. For replacement, consult your authorized Sony dealer.

On recording

Note that the contents of the recording cannot be compensated for under any and all conditions, including conditions that may arise due to a malfunction of this unit.

The Sony HSR-J2009/J2016/J2009P/J2016P Digital Surveillance Recorder is a digital video recorder that records images of high picture quality from surveillance video cameras for extended periods. Images are recorded on the built-in hard disk, and you can achieve high-quality recording/playback without worrying about the recording time and durability of cassette tapes as you would with a recorder using videocassettes.

Features

Long-time recording with large-capacity hard disks

The recorder is equipped with a pair of 250-GB hard disks (500 GB in total), permitting long-time continuous recording.

Examples: Normal recording area 99% and archive area 1%

- 1 input, 1 field/sec, HYPER picture-quality mode: 2,823 hours (117 days)
- 1 input, 1 field/sec, HIGH picture-quality mode: 4,629 hours (192 days)
- 1 input, 1 field/sec, LOW picture-quality mode: 12,860 hours (535 days)
- 16 inputs, 1.25 field/sec at each input, HIGH picture-quality mode: 231 hours (9 days) at HSR-J2016
- 16 inputs, 1.042 field/sec at each input, HIGH picture-quality mode: 277 hours (11 days) at HSR-J2016P

External storage device (RAID unit) enables even longer recording times

A RAID unit can be connected, enabling even longer recording times. The unit supports only one RAID unit.

High-quality and high-resolution recording/playback with the JPEG2000 compression system

Image modes of 5 levels

The HSR-J2009/J2016/J2009P/J2016P enables you to select from among five picture-quality modes, i.e. HYPER (42 KB/field), SUPER (34 KB/field), HIGH (26 KB/field), MID (18 KB/field), LOW (10 KB/field) according to your purpose or required recording time.

High resolution

A high resolution of 720 × 240 pixels (HSR-J2009/J2016) or 720 × 288 pixels (HSR-J2009P/J2016P) can be obtained.

Faster network image transfer

By using JPEG2000 compression, faster transfer rates are achieved than those possible with Motion-JPEG compression.

Support for simultaneous recording and playback at 120 field/s

Simultaneous recording and playback is possible at a maximum of 120 field/s (a maximum of 100 fields/s for the HSR-J2009P/J2016P), allowing smooth, high image quality video to be recorded. For live monitoring, all channels can be shown at 30 frame/s (at 25 frames/s for the HSR-J2009P/J2016P).

ROI (Region of Interest) support for longer recording times

The ROI function allows different parts of the image to be recorded at different image quality settings. The ROI function allows important parts of the image to be recorded with high image quality, while using lower quality for other parts. This reduces the data size and enables longer recording times than before.

A variety of recording and playback

The built-in hard disks can be partitioned into two areas, i.e. recording and archive areas to enable the various possibilities.

- Alarm recording even during timer recording
- Pre-reverse playback, which enables playback without interrupting the recording in progress.
- Alarm recording using the 10 × 14 multipoint activity detection sensor
- Two-channel audio input

Overview

- Variable-speed playback with the Jog and Shuttle dials
- ×2 Zooming function for picture monitoring
- Program recording function
- Masking function for specified camera(s) in monitoring
- Image quality, recording rate, and motion detection settings available for each camera
- Auto delete function for automatically erasing data that has exceeded the set storage period
- Easy setup function for easily configuring settings according to your recording objective

Sixteen inputs

The HSR-J2016/J2016P has 16 camera inputs for monitoring and recording.

The HSR-J2009/J2009P has 9 camera inputs for monitoring and recording.

PTZ camera control support

- All camera inputs can be multiplexed on coaxial cable.
In addition to remote control of PTZ cameras (pan, tilt, and zoom), the camera internal menu is also available.
- For the PTZ cameras that can be connected to the unit, contact your Sony dealer.

Built-in multiplexer

The recorder has built-in multiplexing capability, which allows independent recording and monitoring. There is also a choice of three split-screen monitoring patterns (4-split, 9-split, and 16-split) by freely assigning multiple cameras to single monitor.

All product and company names mentioned herein are trademarks or registered trademarks of their respective owners.

Versatile system configuration

Remote control via a network

Using the LAN connector, you can control the recorder via TCP/IP from a Computer (WEB browser) for recording/playback and data transmission.

Up to 15 people can connect at one time. (The screen refresh rate may slow down, depending on the operation mode of the unit and the network environment.)

Data storage

A USB connection allows data to be saved on CD-R/RW or DVD+R/+RW, and also on CompactFlash card using the CF card slot on the front panel. Using a CF card adapter (CompactFlash Type II), data storage on various memory cards is also supported.

In addition, data can be downloaded to a computer via a network.

* There is a limit on the number of data that can be copied via CompactFlash card, “Memory Stick”, and the network (max. 40,000 copies per operation).

* For more on which CD/DVD drives can be connected, contact your Sony dealer.

MD5C.C - RSA Data Security, Inc., MD5 message-digest algorithm

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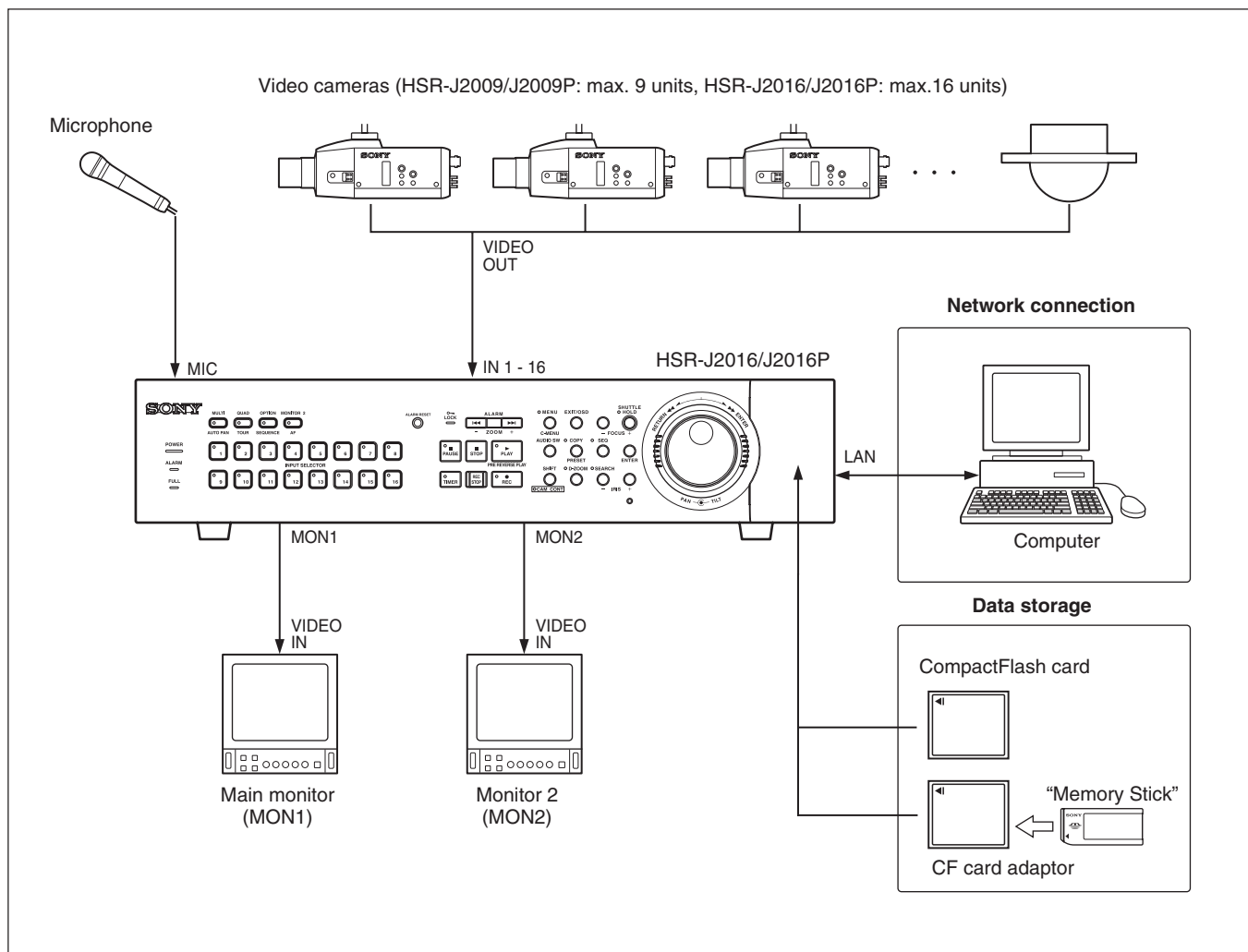
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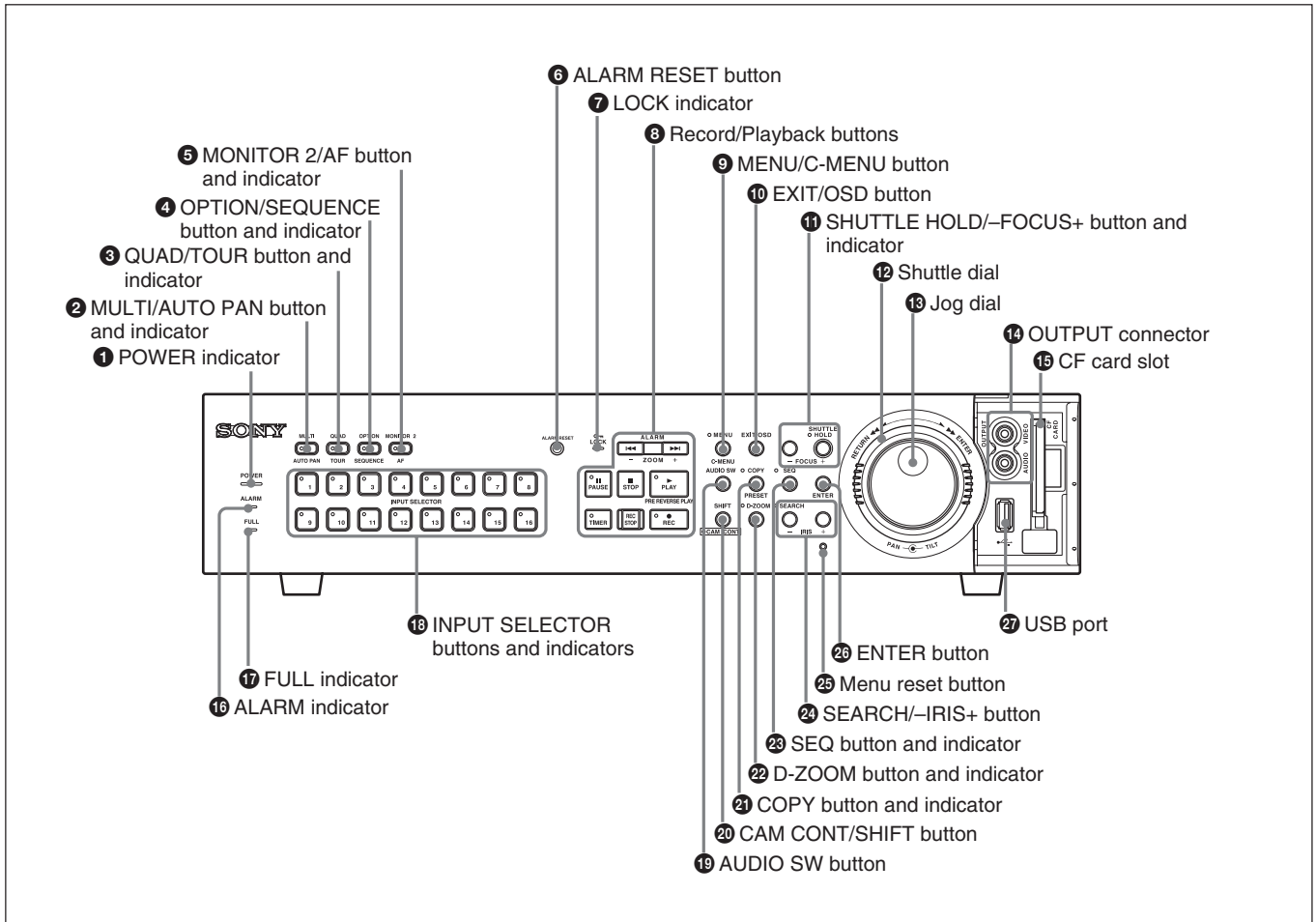
System Configuration Example

You can record images captured by the connected cameras while observing the input on the video monitor, and play back the recorded images.



Locations and Functions of Parts

Front Panel



1 POWER indicator

Lights in green when the power is applied to the unit and goes dark when the power is disconnected. It flashes in red if any problem occurs with the hard disk drive or fan.

Note

In order to keep the unit internal temperature low, a fan is provided on the side of the unit. If the fan does not operate properly, the POWER indicator will flash to indicate a problem. Unplug the unit from the power supply and check to make sure nothing is obstructing the fan. If after the power is restored to the unit, the POWER indicator still flashes, do not use the unit and consult your dealer.

2 MULTI/AUTO PAN button and indicator

When you press this button, the monitor changes to 9/16-division screen display. Each push of the button toggles between 9-division and 16-division.

During camera control

The button functions as an auto-panning button for the PTZ camera (AUTO PAN).

3 QUAD/TOUR button and indicator

When you press this button, the monitor changes to 4-division screen display. Each push of the button toggles the 4-division display.

During camera control

The button functions as a tour button for the PTZ camera (TOUR).

4 OPTION/SEQUENCE button and indicator

When you press this button during 9/16-division screen display, the option screen is called up.

During camera control

The button functions as a sequence button for the PTZ camera (SEQUENCE).

5 MONITOR 2/AF button and indicator

When you press this button, and the unit enters Setup mode for the monitor 2 connected to the MON2 connector.

When you press the button again, Monitor 2 Setup mode is released.

During camera control

The button functions as a one-push auto-focus button for the PTZ camera (AF).

6 ALARM RESET button

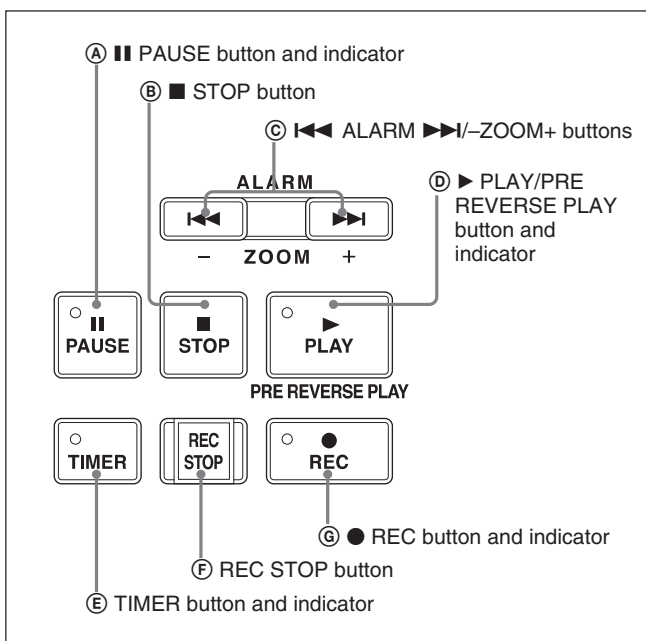
When you press this button in alarm status, the alarm indications are all reset.

7 LOCK indicator

Lights in red when the security lock function is active.

For details on the security lock, see "Security Lock Settings" on page 41.

8 Record/Playback buttons



A || PAUSE button and indicator (amber)

When you press this button during playback, the unit enters Still-Picture mode, and the indicator lights. Press the button again to restore the normal playback mode.

B ■ STOP button

Press this button to end playback (including that of Still-Picture or Variable-Speed Playback mode).

C ◀◀ ALARM ▶▶/–ZOOM+ buttons

During playback of the recorded area, pressing one of these buttons skips to the previous or next alarm recording event.

During playback of the archive area, pressing one of these buttons skips to the previous or next event.

During camera control

The button functions as a zoom button for the PTZ camera (ZOOM).

D ▶ PLAY/PRE REVERSE PLAY button and indicator (green)

When you press this button in stop status, the indicator lights, and playback begins.

For details, see "Normal Playback" on page 83.

By pressing the button during recording, you can view the recorded images from the point before the specified pre-reverse time (1 to 99 minutes) without stopping the recording in progress (Pre-Reverse Playback).

For details on the operation, see "Pre-Reverse Playback During Recording" on page 85.

E ● TIMER button and indicator (red)

When you press this button, the unit enters timer-standby status, and the indicator lights. Recording will begin at the starting time you specified using the menu, and the REC button indicator will light. Pressing the button again cancels timer-standby status or timer recording in progress.

For details on the operation, see "Timer Recording" on page 69.

F REC STOP button

Press this button to end recording.

G ● REC button and indicator (red)

When you press this button, the indicator lights, and recording begins.

Locations and Functions of Parts

9 MENU/C-MENU button

Pressing this button activates the menu mode. In menu mode, the button can be used to go from one submenu to another, or from one setup screen to another.

For details on the operation, see “Menu Operations” on page 26.

During camera control

The button calls up the setup menu for the connected camera (C-MENU).

10 EXIT/OSD button

Press to quit Menu mode.

Each time you press this button during recording, playback, or in the stop condition, the position of the operation display will change in the order bottom, top, no display. While information is displayed, the indicator lights.

11 SHUTTLE HOLD/–FOCUS+ button and indicator (green)

By pressing this button to light the indicator, you can lock the direction and speed of playback dictated by the current orientation of the Shuttle dial.

When you press the button again, the mode before you start the variable-speed playback will be restored.

For details on the operation, see “Variable-Speed Playback” on page 85.

When the recorder is connected to a network, the connection can be terminated by holding this button pressed. If the security lock feature has been enabled on the setup menu, holding the button depressed for more than 3 seconds will activate the security lock mode (except while the setup menu is displayed or during playback or in still image mode).

During camera control

The button adjusts the focus for the PTZ camera (FOCUS).

12 Shuttle dial (outer)

When you rotate the Shuttle dial in Playback mode (▶ PLAY button indicator lit) or in Still-Picture mode (■ PAUSE button indicator lit), playback is performed according to the direction and degree of the rotation.

For details on the operation, see “Variable-Speed Playback” on page 85.

In OSD operations, your selection or setting will be accepted when you turn the dial clockwise.

13 Jog dial (inner)

By rotating the Jog dial in Playback mode (▶ PLAY button indicator lit), you can gradually change the playback speed. Clockwise rotation increases the speed and counterclockwise rotation decreases it. When you rotate the Jog dial in Still-Picture mode (■ PAUSE button indicator lit), playback is performed frame by frame. Clockwise rotation forwards the frames and counterclockwise rotation reverses them.

For details on the operation, see “Variable-Speed Playback” on page 85.

In OSD operations, you can move the cursor on the screen and select setting values using this dial.

14 OUTPUT connector

AUDIO: Connect to the AUDIO IN connector of the monitor or similar.

VIDEO: Connect to the VIDEO IN connector of the monitor or similar.

15 CF card slot

If you insert a CompactFlash card, copying of the recorded data to external memory will be enabled. When you use a commercially available CF card adaptor (CompactFlash Type II), copying of the data to “Memory Sticks”, etc. will be enabled.

16 ALARM indicator

Lights in red during pre-alarm recording and flashes in red during alarm recording. It goes dark when recording ends.

For alarm recording and pre-alarm recording, see “Alarm and Pre-alarm Recording” on page 64.

17 FULL indicator

Flashes in red if the remaining capacity of the recording area of the built-in hard disk drops below the specified value (default: 1%), and steadily lights in red if the remaining capacity becomes 0.

18 INPUT SELECTOR buttons and indicators

When you press one of these buttons, the indicator on the button lights, and the picture from the camera connected to the corresponding camera input (1 to 16) appears on the monitor.

When the alarm was triggered or when VIDEO LOSS has occurred, the indicator flashes.

19 AUDIO SW button

Switches audio channel output in playback/LIVE mode. With each push of the button, the setting will change in the order 1+2, off, 1, 2.

20 CAM CONT/SHIFT button

When you press this button, the indicator lights up and the camera control mode is activated.

For details, see “Controlling the cameras” on page 94.

The button also serves for extended functions on menu screens.

21 COPY button and indicator (green)

This button serves to copy recorded images onto the archive area of the internal HDD or onto external media (CompactFlash card, CD-R/RW, DVD+R/+RW). When the button is pressed, the indicator lights up and the copy operation display appears.

For details, see “Data Storage” on page 72.

22 D-ZOOM button and indicator (green)

The button permits you to zoom in on a part of the camera input or playback image on the monitor screen. Specify the part to be zoomed in using the Jog and Shuttle dials.

While the zoom function is active, the indicator of the D-ZOOM button lights. When you press the button again, the normal size is restored.

For details on the operation, see “Zooming in on a detail of a picture” on page 46.

23 SEQ button and indicator

When you press this button, the indicator begins to flash, and the unit enters Automatic Switching mode.

In Full-Screen mode, the pictures from each of the sixteen cameras are displayed one by one in sequence.

In 4-division mode, all 4 pictures on the screen will be switched to the next 4 pictures at a time.

This button is invalid in Multi-Screen mode.

The switching interval can be set by menu operation.

24 SEARCH/–IRIS+ button

When you press this button in a recording mode or in stop status, the search operation display appears.

To cancel the search mode, press the SEARCH button once more.

During camera control

The button adjusts the iris for the PTZ camera (IRIS).

25 Menu reset button

Press this button to return the settings of the menu items being displayed on the monitor to the factory-set default settings.

26 ENTER button

During camera control, the button accepts an item on the camera setup menu.

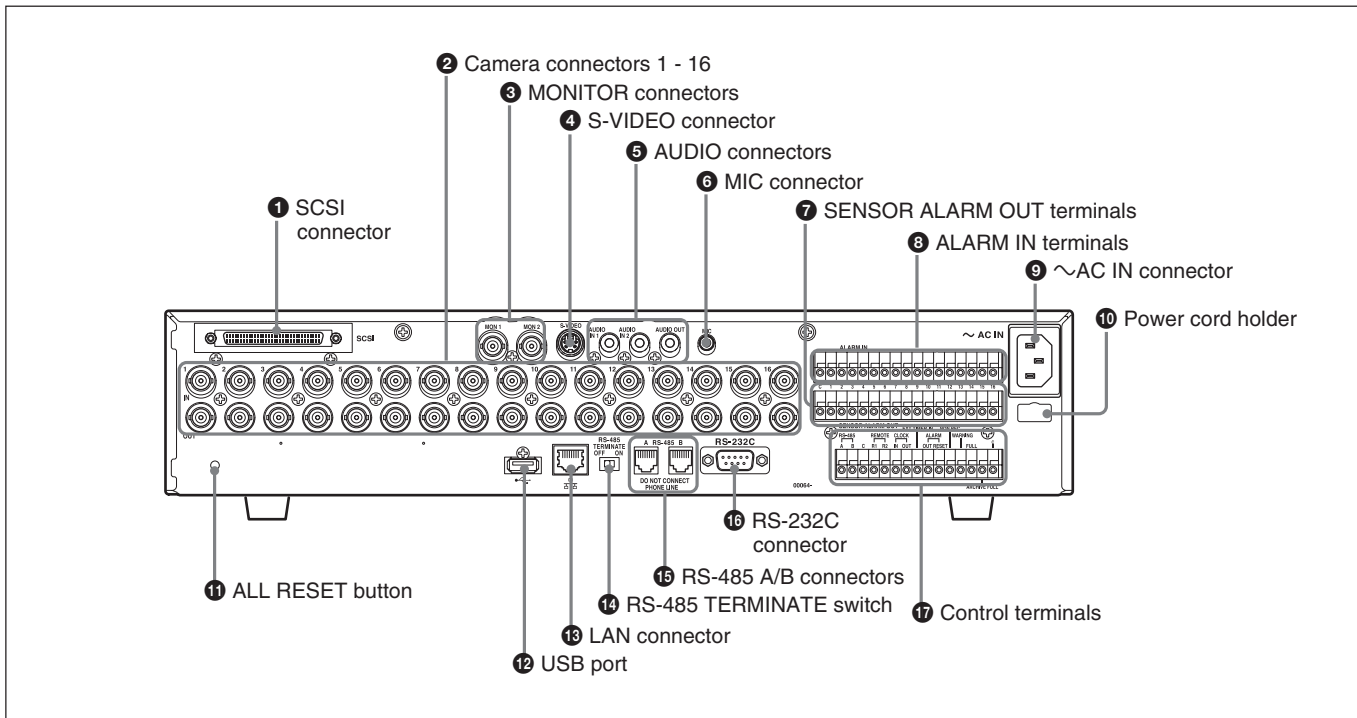
27 USB port

A CD-R/RW or DVD+R/+RW drive can be connected here.

When another device is connected to the USB port on the front panel, the front-panel USB port is given priority.

Locations and Functions of Parts

Rear Panel



1 SCSI connector

Serves for connecting a RAID unit via a SCSI bus.

2 Camera connectors 1 - 16 (BNC type) (HSR-J2009/J2009P: 1 - 9)

IN: Connect video cameras.

OUT: The camera signals supplied to the corresponding IN connectors are output as-is.

3 MONITOR connectors (BNC type)

MON1 (main monitor): To output a video signal to the main monitor. Connect to the video input of the monitor.

MON2 (monitor 2): To output a video signal to the monitor 2. Connect to the video input of the monitor. Only the live picture is output. No playback picture is output.

4 S-VIDEO connector

Supplies the same signal as the main monitor (MON1) output.

5 AUDIO connectors (phono jacks)

IN1, IN2: Connect an audio signal. When a microphone is connected to the MIC connector, the microphone input is combined with the AUDIO IN2 input signal.

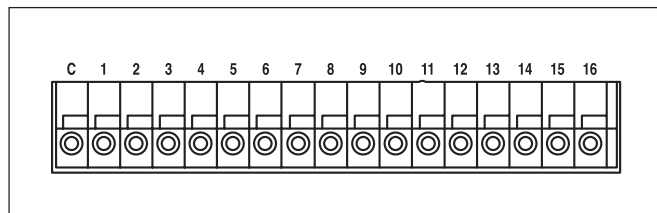
OUT: Connect to the AUDIO IN connector of a monitor or similar.

6 MIC (microphone) connector (monaural minijack)

Connect a microphone for audio recording.

7 SENSOR ALARM OUT terminals

The C terminals are for ground.



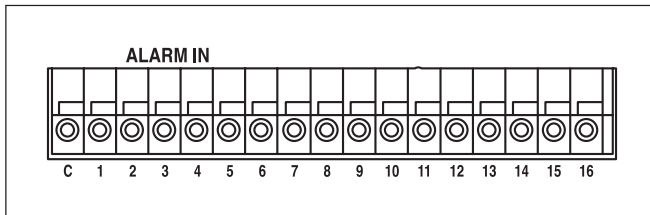
Terminals 1 - 16 (HSR-J2009/J2009P: 1 - 9)

When the sensor alarm of a channel activates, an alarm signal is output from the corresponding terminal.

For details, see "Outputting alarm signals" on page 20.

8 ALARM IN terminals

The C terminals are for ground.



Terminals 1 - 16 (HSR-J2009/J2009P: 1 - 9)

Connect alarm sensors to receive external alarm signals.

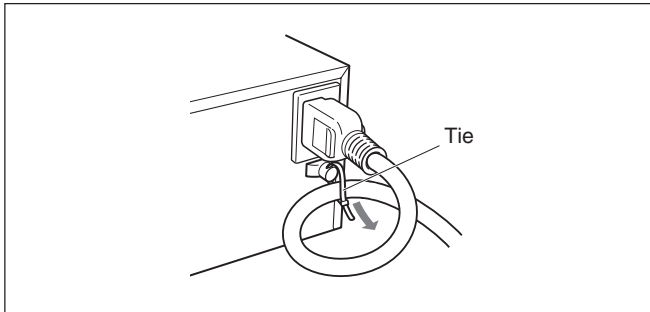
For details, see "Connecting external alarm sensors" on page 20.

9 ~AC IN connector

Connect AC power using the supplied power cord.

10 Power cord holder

Secure the power cord using the supplied tie, as shown below.



11 ALL RESET button

Resets (reboots) the unit. When a reset is performed, the time setting also returns to the initial value.

12 USB port

A CD-R/RW or DVD+R/+RW drive can be connected here.

When another device is connected to the USB port on the front panel, the front-panel USB port is given priority.

13 LAN connector (10Base-T/100Base-TX)

Serves to control this unit via a network.

14 RS-485 TERMINATE switch

Used when multiple devices are connected via the RS-485 control connectors.

15 RS-485 A/B connectors

Connect a remote control here.

With a straight cable, connect to the A connector, and with a cross cable, connect to the B connector.

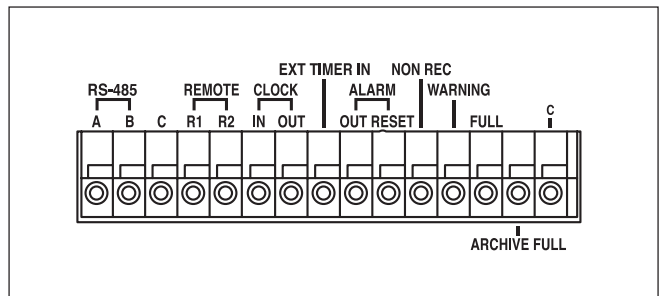
16 RS-232C connector

Serves to connect a modem.

17 Control terminals

For input and output of various control signals.

The C terminals are for ground.



RS-485 A, RS-485 B connectors

Connect a PTZ camera here. For information on PTZ cameras compatible with the unit, consult your Sony dealer.

REMOTE R1, REMOTE R2 terminals

Allow remote control of the unit.

CLOCK terminals

Allow adjusting the built-in clock of the unit using an external switch or synchronizing the clocks of other connected devices to the clock of this unit.

IN: Clock input (normally-open contact). Connect an external switch or similar.

OUT: Clock output (Open collector/1 kΩ). The output level drops to 0 V at a time specified by a menu setting.

For connection information, see "Clock Adjustment" on page 32.

EXT TIMER IN terminal

When External Timer Recording mode has been specified, recording starts upon reception of a signal at this terminal (normally-open contact).

ALARM terminals

OUT: Outputs an alarm signal.

RESET: Input the alarm reset signal here.

Locations and Functions of Parts

NON REC terminal

The output level drops to 0 V if recording is interrupted.

WARNING terminal

The output level drops to 0 V if a problem occurs with the HDD or fan.

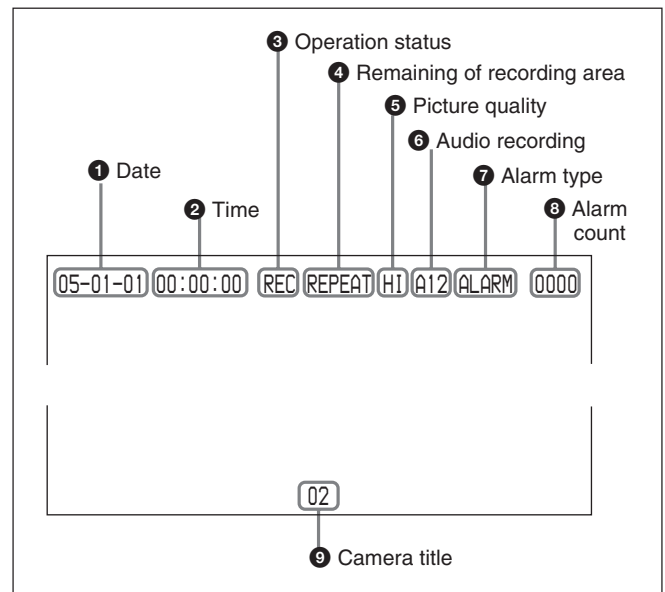
FULL terminal

The output level drops to 0 V if the remaining recording area capacity of the built-in hard disk drops below a value specified by a menu setting.

ARCHIVE FULL terminal

The output level drops to 0 V if the remaining archive area capacity of the built-in hard disk drops below a value specified by a menu setting.

On-Screen Data



By pressing the EXIT/OSD button on the front panel, you can change the display position or even make them disappear.

Items except the operation status can be independently turned on/off with a menu operation

① Date/② Time

In a recording mode or stop status (monitoring the camera input), the current date (month-day-year on the HSR-J2009/J2016 or day-month-year on the HSR-J2009P/J2016P) and time (hour:min:sec) are displayed.

In playback, the date and time when the recording has made are displayed.

③ Operation status

The current operation mode is displayed.

REC: Recording

EXT: External timer recording

▶: Playback in the forward direction

◀: Playback in the reverse direction

||: Still

▶▶: High-speed playback in the forward direction

◀◀: High-speed playback in the reverse direction

||▶: Slow-motion playback in the forward direction

◀||: Slow-motion playback in the reverse direction

Note

When recording and playback are both in progress, only ▶ is displayed.

④ Remaining of recording area

When the recording area OVERWRITE function is set to OFF with the RECORDING CONDITIONS SET menu, the remaining capacity of the recording area is displayed (in %).

⑤ Picture quality

In a recording mode or stop status, the picture quality and recording cycle specified for normal recording are displayed.

In playback, the picture quality and recording cycle when the recording has made are displayed.

⑥ Audio recording

During audio recording, “A” and the output volume selected using the AUDIO SW button appear.

“12” channel 1+2

“1” channel 1

“2” channel 2

⑦ Alarm type

The active alarm type is displayed.

ALARM: Alarm recording

PRE: Pre-alarm recording

The indication flashes while the corresponding recording is in progress.

⑧ Alarm count

Each time alarm recording is made, the value is increased by one.

The value will return to 0000000 if it exceeds 9999999.

⑨ Camera title

The number (or title if defined) of the camera being selected is displayed.

When an alarm is generated, “EA (external alarm)” or “SA (sensor alarm)” flashes at the left of the number (title).

Disk error indication

If a hard disk error occurs at startup or during operation, a “DISK ERROR” error message appears on the monitor and the front panel POWER indicator flashes.

If a disk error is generated, consult your Sony dealer.

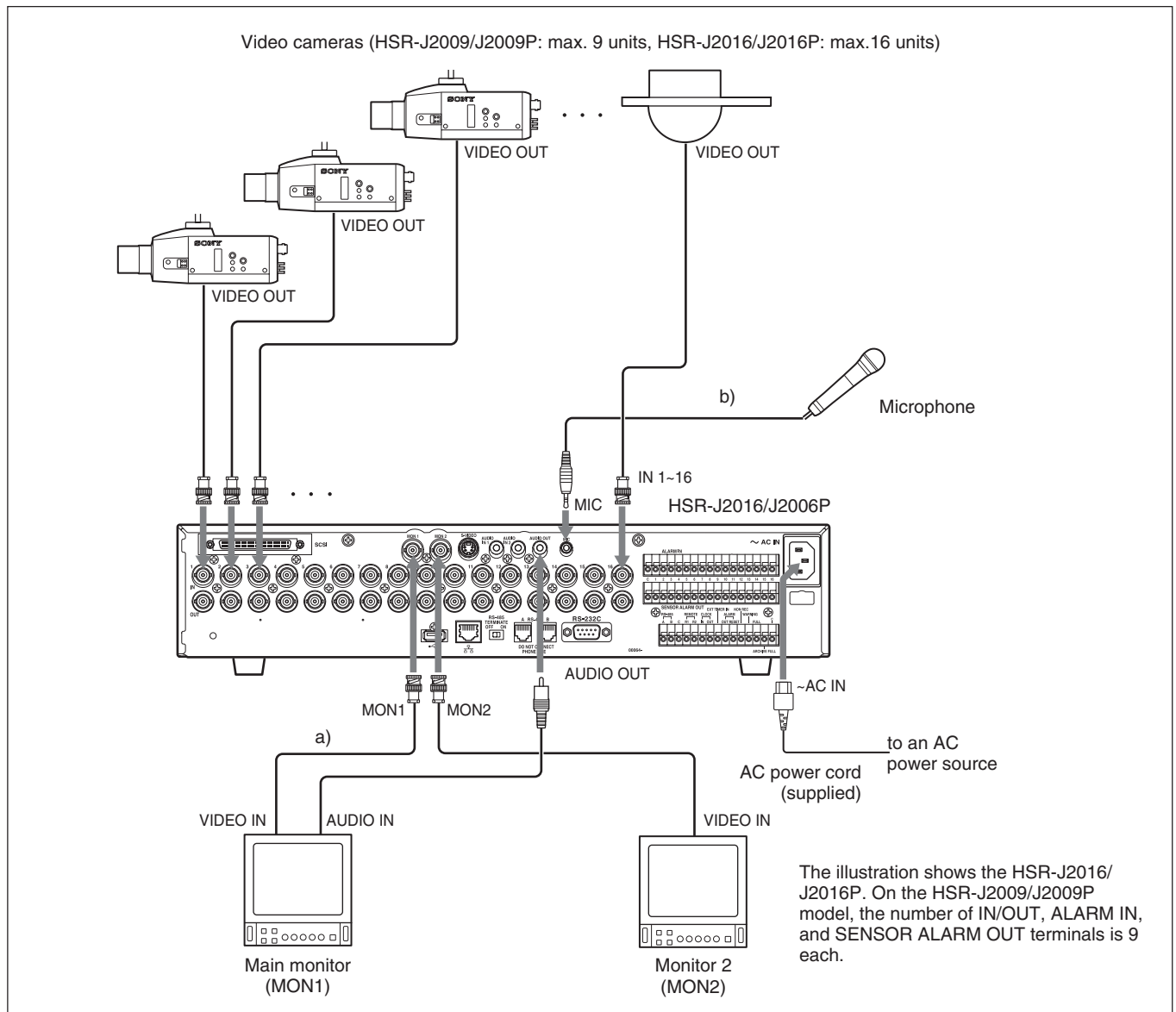
Connections

Turn off the power to all the units to be connected.
Connect the power cords only after completing all other connections.

Note

This unit has no power switch. When you connect AC power using the supplied AC power cord, the unit is turned on, and all the indicators on the front panel flash during the starting process.

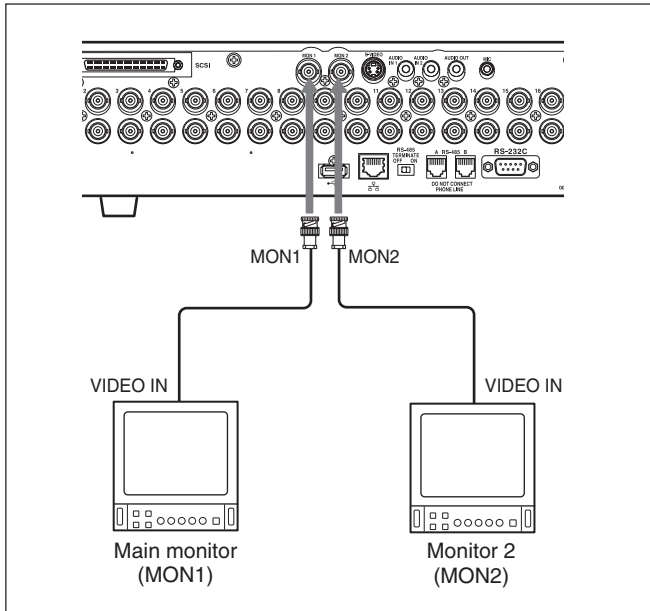
Basic Connection Example



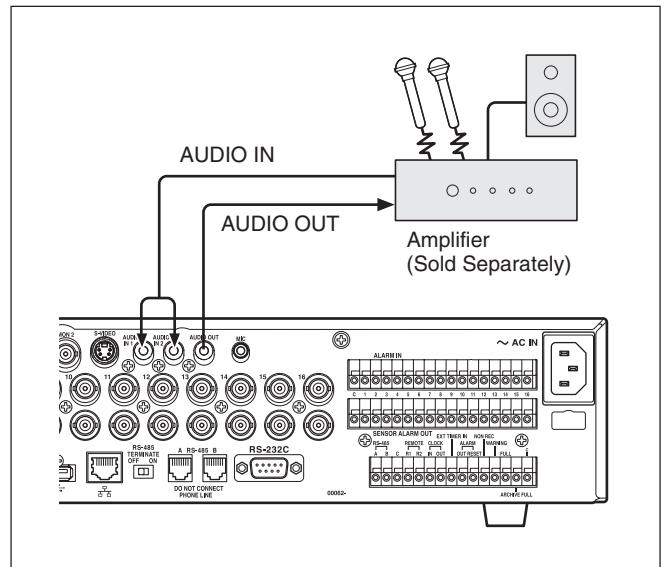
a) For the HSR-J2009P/J2016P only: Pass the cable to be connected to AUDIO OUT through the supplied ferrite core (large). If you also make connection to AUDIO IN, bundle the cables to make them pass through the core together.

b) Attach the supplied ferrite core (For the HSR-J2009P/J2016P, use the small one). Wind the cable two times then snap.

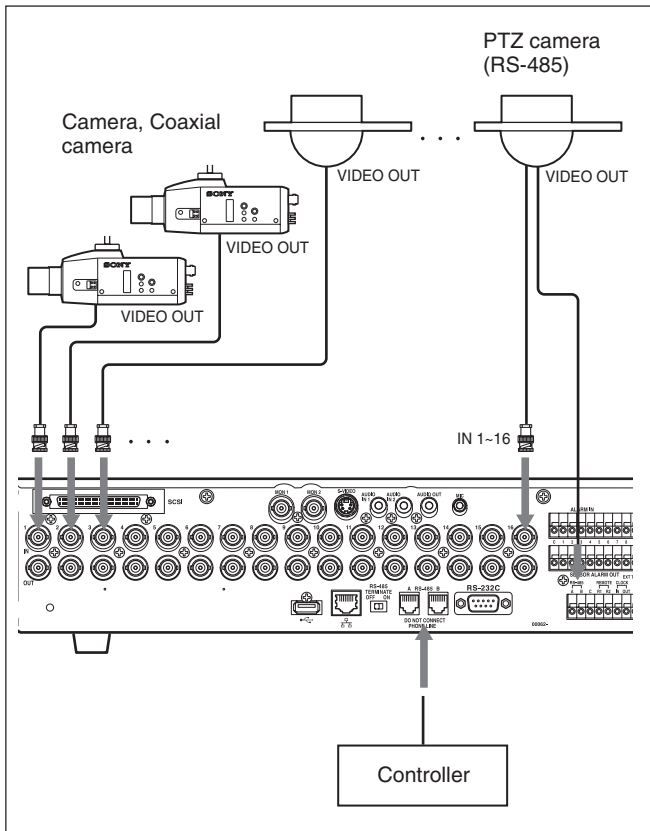
Monitor connections (monitors 1 and 2)



Audio/microphone connections



Camera connections (cameras, PTZ cameras)

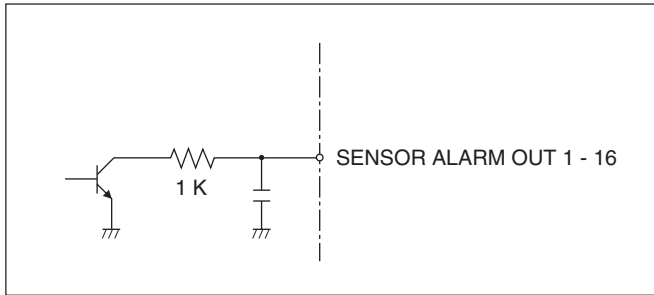


Connections

Alarm Signal Connection

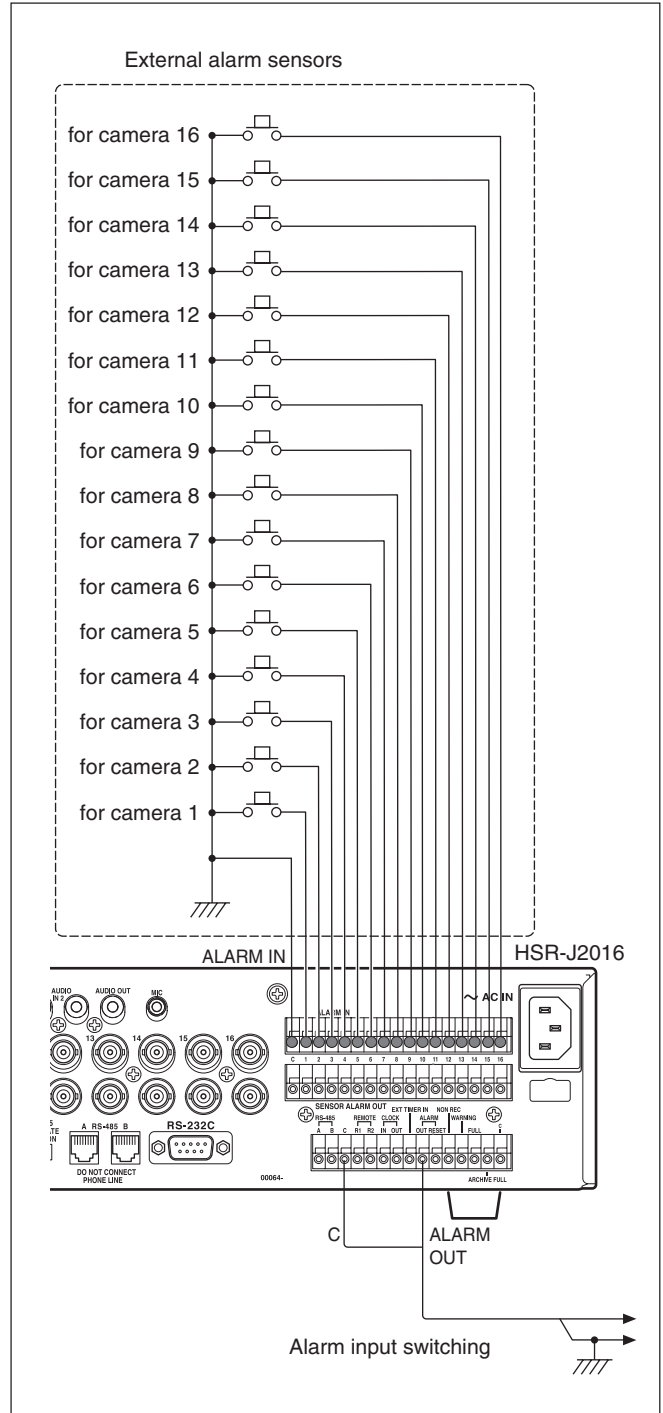
Outputting alarm signals

Connect switching circuits such as indicator lamps to the SENSOR ALARM OUT terminals. When the internal alarm sensor (activity detection sensor) of this unit sends a trigger, an indication such as an indicator lightening is possible.



Connecting external alarm sensors

Connect external alarm sensors such as a door bell or an interphone to the terminals when you use an external alarm input as a trigger for alarm recording.

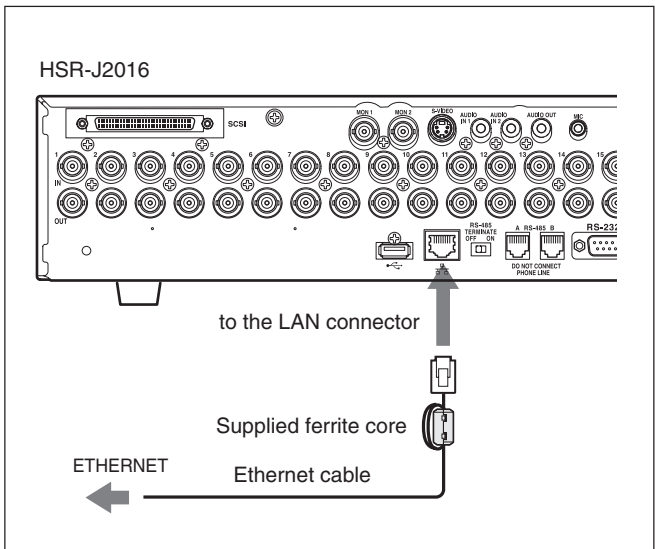


Note

For the HSR-J2009P/J2016P only: Bundle the cables to be connected to ALARM IN (1 to 16, and C) and pass them through the supplied ferrite core (large). If you also make connections to SENSOR ALARM OUT (1 to 16, and C), bundle the cables with those to ALARM IN to make them pass through the core together.

Network connection

Attach a ferrite core to an Ethernet cable, and connect it to the LAN connector.



Note

For the HSR-J2009P/J2016P only: Attach the supplied ferrite core (large). Wind the cable two times then snap.

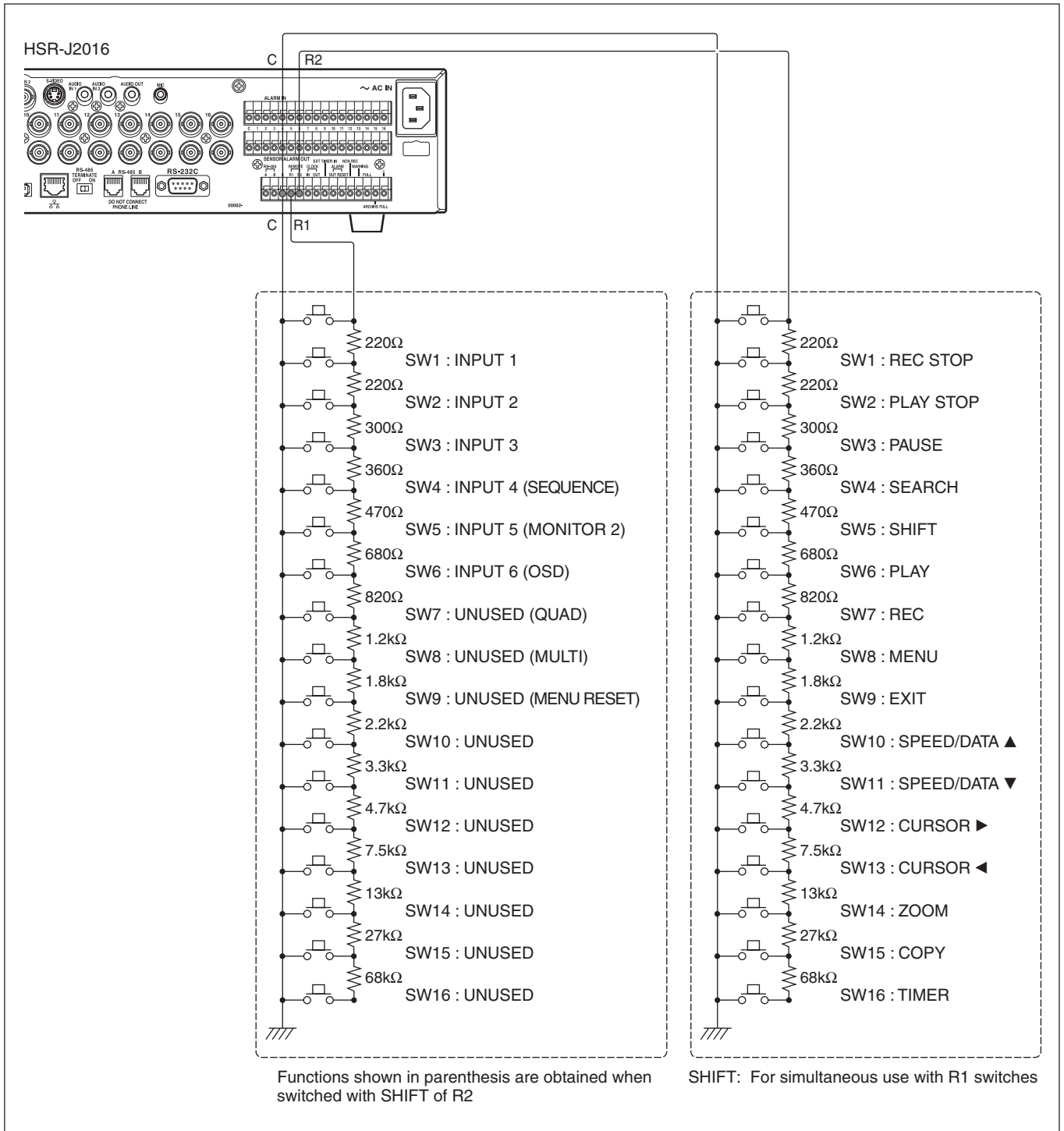
Connections

Connection of control terminals (R1, R2)

Remote control with a special circuit connected to the R1/R2 terminals is possible.

Connection example

If you make a remote controller, use the layout shown below. Set the input to LOW. Use twisted pair cables to connect to the R1/R2 terminals.



Connecting external storage devices

Connecting a RAID unit

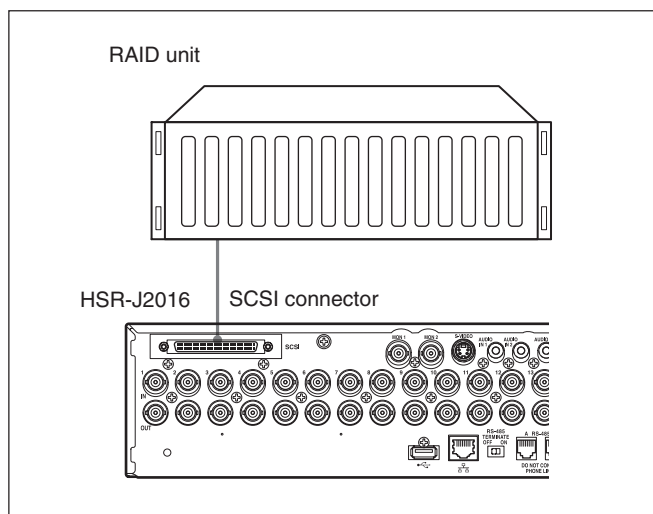
You can record image on the hard disks of a RAID unit through a SCSI connection.

* For more on which RAID units can be connected, contact your Sony dealer.

Note

Connect the RAID unit with both this unit and the RAID unit powered off.

- 1 Connect the RAID unit to the SCSI connector on the rear panel.



- 2 Power on the RAID unit.

- 3 Power on this unit.

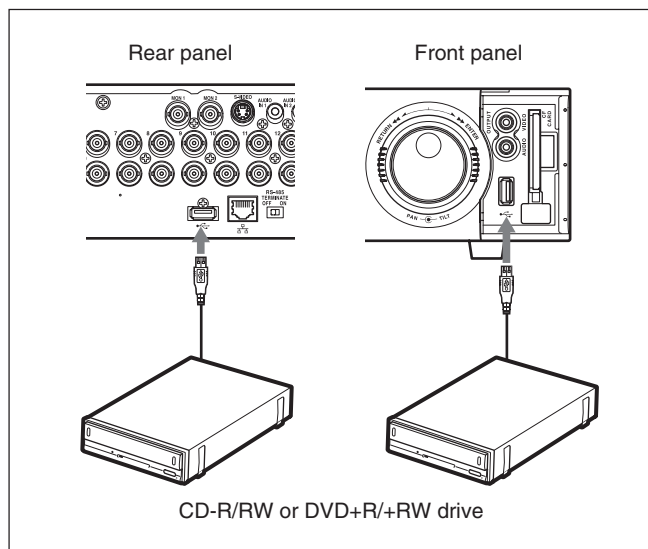
Notes

- A single RAID unit can be connected to this unit.
- When the RAID unit is connected, it is not possible to record images on the HDD of this unit.
- If this unit is powered on first, the RAID unit may not be recognized.

Connecting a CD-R/RW or DVD+R/+RW drive

By connecting a CD-R/RW or DVD+R/+RW drive, data saved on the internal HDD of this unit can be copied to media.

Connect the CD-R/RW or DVD+R/+RW drive to the USB port on the front or rear panel.

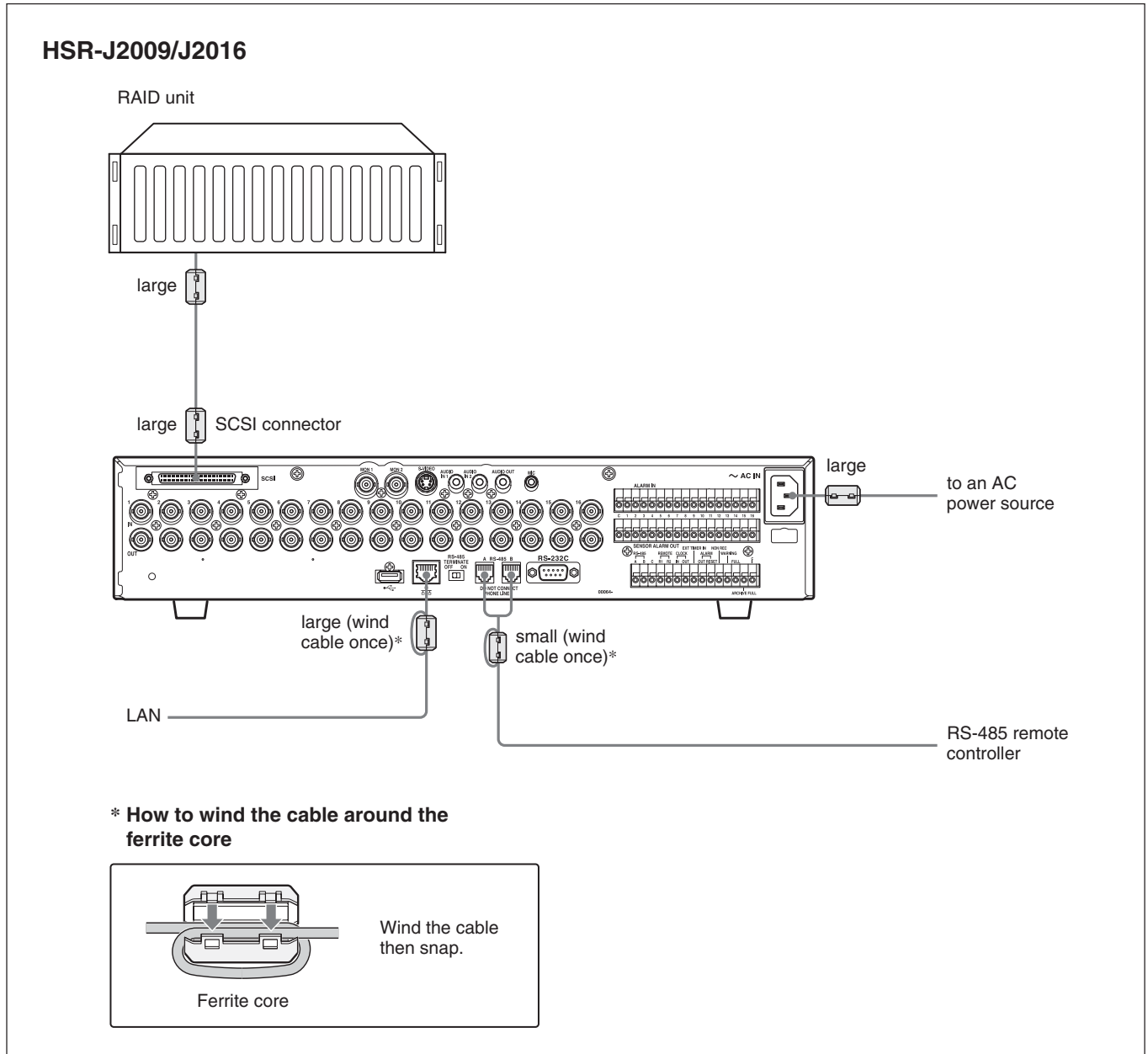


For the method of copying data, see “Copying data to the archive area, CompactFlash card, CD-R/RW, or DVD+R/+RW” (page 72).

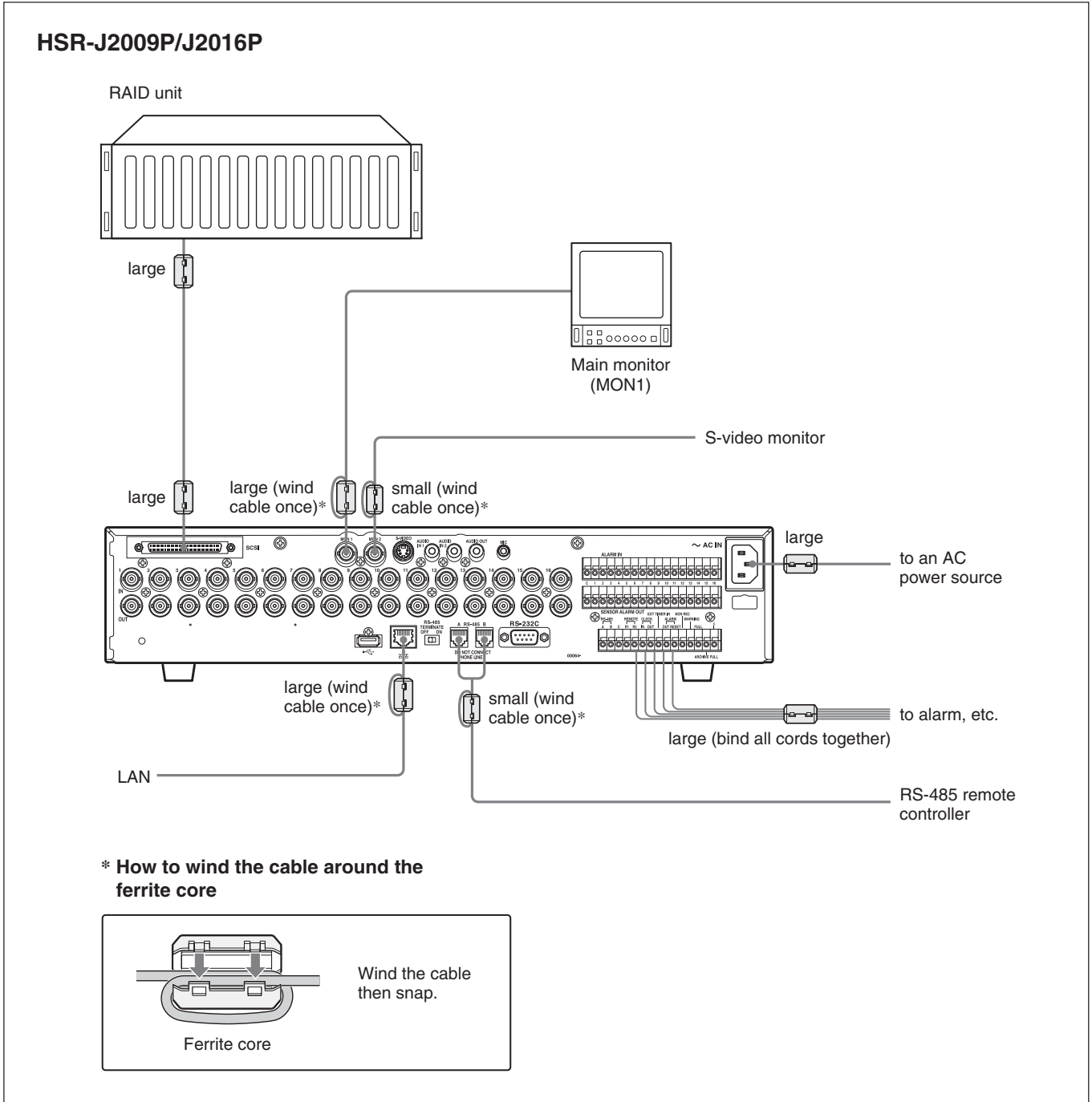
Connections

Attaching the ferrite core

After connection, attach the ferrite cores (four large ones and one small one) as shown below.



After connection, attach the ferrite cores (six large ones and two small ones) as shown below.



Preparations

Basic OSD Operations

You can perform various settings on the monitor screen.

For the on-screen displays, you can select from among English, French, Spanish and German (HSR-J2009P/J2016P only) with a menu operation. See page 32.

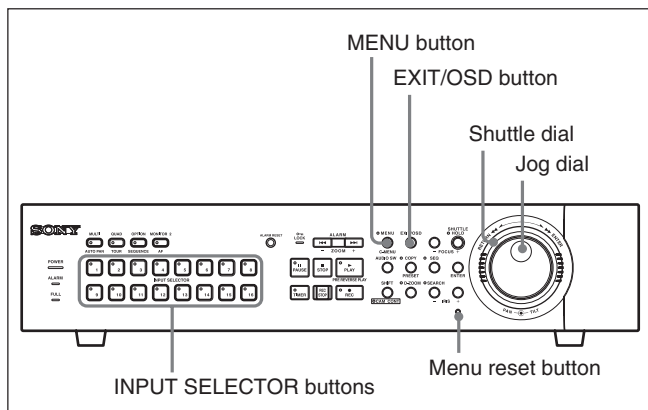
For the menu layers, see page 29.

The display examples in this manual are those for the HSR-J2016P.

Menu Operations

This section describes how to set a menu item as an example of OSD (On-Screen Display) operations.

Buttons and dials used in menu operations



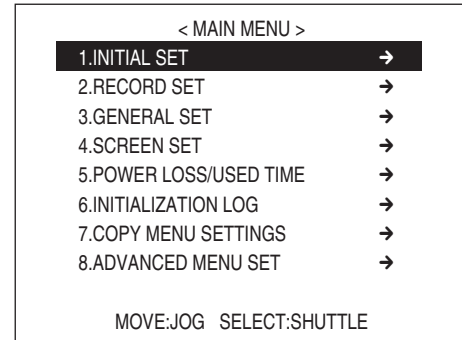
The COPY and SEARCH buttons also associate their own menus.

For these menus, see page 72 or see page 87.

Starting a menu operation

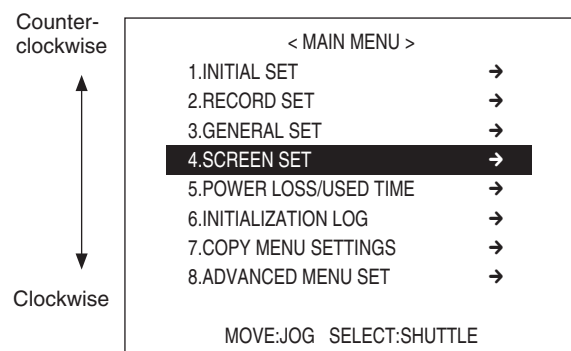
Press the MENU button. The main menu appears on the monitor screen.

The menu bar highlights the top item.



To move the highlighting

Turn the Jog dial. Clockwise rotation moves the menu bar downward and counterclockwise rotation moves it upward.



To select a menu item

Move the menu bar to highlight the desired item using the Jog dial, then turn the Shuttle dial clockwise to register your selection.

When you select 1. INITIAL SET, 2. RECORD SET, 3. GENERAL SET, 4. SCREEN SET, or 8. ADVANCED MENU SET the corresponding submenu appears.

When you select 5. POWER LOSS/USED TIME, 6. INITIALIZATION LOG, or 7. COPY MENU SETTINGS, the information/setting display appears.

To return to the main menu from a submenu or a setting display

Turn the Shuttle dial counterclockwise.

Note

You cannot operate the menu during recording.

To switch to a submenu or a setting display of another menu item

Press the MENU button when a submenu or a setting display of a menu item is displayed.

A submenu or a setting display of the next menu item appears.

For example, when you press the MENU button while the submenu of 1. INITIAL SET is displayed, the submenu of 2. RECORD SET appears.

Notes

- Any menu display does not appear during playback, even if you press the MENU button.
- When you press the MENU button during recording, a menu display appears, and you can check the menu settings. In this case, the ● (record) mark is displayed in the upper left part of the menu screen, and you cannot change the settings. To set a menu item, first stop recording.

Setting an item

- 1 When setting the highlighted item, simply turn the Shuttle dial clockwise.

The current setting begins to flash.

```
<LANGUAGE/LANGUE/SPRACHE/IDIOMA>
  ENGLISH
  <CLOCK SET>
  01-01-2005 SAT 00:00:00
  <SUMMER TIME SET>
  MODE : USE
  WEEK MONTH TIME
  ON LST-SUN 03 02:00
  OFF LST-SUN 10 02:00
  <EXT.CLOCK SET>
  ADJUST. TIME 01:00
```

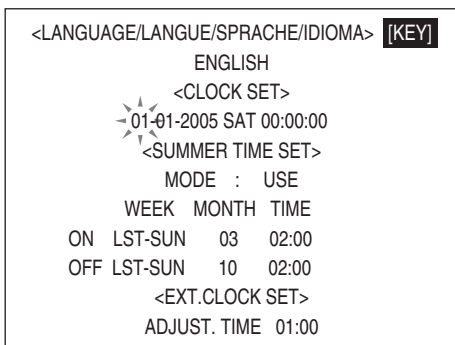
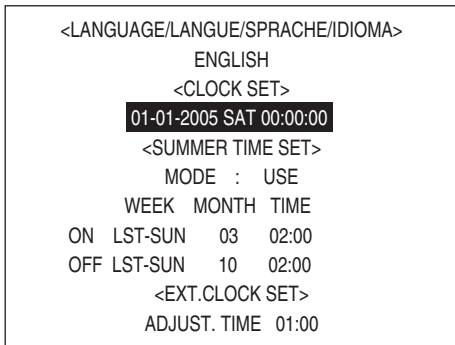


```
<LANGUAGE/LANGUE/SPRACHE/IDIOMA>
  ←ENGLISH→
  <CLOCK SET>
  01-01-2005 SAT 00:00:00
  <SUMMER TIME SET>
  MODE : USE
  WEEK MONTH TIME
  ON LST-SUN 03 02:00
  OFF LST-SUN 10 02:00
  <EXT.CLOCK SET>
  ADJUST. TIME 01:00
```

Or, select the item to be set by moving the highlighting with the Jog dial, and turn the Shuttle dial clockwise to finalize your selection.

On the line where multiple inputs are required, the first column begins to flash.

Preparations



- 2** To change the setting at the flashing line or column, turn the Jog dial.

The values (settings) you can select for the flashing line or column are displayed in sequence.

When [KEY] appears at the top-right corner of the screen

The [KEY] indication appears when you select an item to which you can directly input numeric values. In this case, the INPUT SELECTOR buttons 1 to 9 function as the numeric keys 1 to 9. Also, the MULTI, QUAD, OPTION, and MONITOR 2 buttons function as the 0 (zero) input key. Moreover, for the HSR-J2016/J2016P, the INPUT SELECTOR button 10 can be used as the 0 (zero) input key.

You can use these buttons to select the desired numeric values instead of turning the Jog dial.

- 3** When the desired value (setting) is displayed, turn the Shuttle dial clockwise to register the new value (setting).

The next column, if any on the same line, starts flashing. Set it in the same manner.

By turning the Shuttle dial counterclockwise, you can reverse the setting procedure.

When the setting(s) on one line ends, the next line you can set will be highlighted when you turn the Shuttle dial clockwise.

To return the settings to the defaults

Press the Menu Reset button on the front panel using a thin pointed implement.

All the settings of the menu item being displayed on the monitor screen will return to their factory-set values.

To exit Menu mode

Press the EXIT/OSD button.

Storing the menu settings

The values set with the menus can be stored on a CompactFlash card as data and loaded to resume the settings when required.

For the operation, see “Saving/Loading of Menu Settings” on page 43.

Menu Layers

MAIN MENU	Submenu	Setting items	Setting values or functions	
1. INITIAL SET	1. LANGUAGE/CLOCK SET	LANGUAGE	ENGLISH/FRANÇAIS/DEUTSCH ¹⁾ /ESPAÑOL	
		CLOCK SET	<i>dd-mm</i> ²⁾ - <i>yyyy/hh:mm:ss</i>	
		SUMMER TIME SET ³⁾	USE/NO USE	
			ON WEEK/MONTH/TIME OFF WEEK/MONTH/TIME	
	EXT. CLOCK SET	<i>hh-mm</i>		
	2. CAMERA DETECT	–	Detects the connected cameras.	
	3. TITLE SET	CAMERA 1 - 16	10-digit camera titles	
	4. HOLIDAY SET	1 - 20	<i>dd-mm</i> ²⁾	
	5. TIME PERIOD SET	TIME PERIOD A	T-1/T-2/T-3/T-4, <i>hh-mm</i>	
		TIME PERIOD B	T-1/T-2/T-3/T-4, <i>hh-mm</i>	
		SELECT TIME PERIOD	SEQUENCE A/B, MASK A/B, ACTIVITY/ROI SENSOR A/B	
	6. PRE REVERSE	PRE REVERSE PLAY TIME	<i>n</i> MIN (<i>n</i> = 1 - 99)	
	2. RECORD SET	1. NORMAL REC EASY SET	1	RECORDING DURATION BASE (RECORDING DURATION, TIMER RECORDING, PICTURE QUALITY, AUDIO RECORDING, NUMBER OF CAMERAS, REC RATE)
			2	REC RATE BASE (REC RATE, TIMER RECORDING, PICTURE QUALITY, AUDIO RECORDING, NUMBER OF CAMERAS, RECORDING DURATION)
2. RECORDING AREA SET		RECORDING AREA	<i>n</i> %, AREA FULL RESET	
		ARCHIVE AREA	<i>n</i> % (<i>n</i> = 1 - 10), AREA FULL RESET	
3. RECORDING CONDITIONS SET		RECORDING AREA	OVERWRITE ON/OFF	
		ARCHIVE AREA/MODE	MANUAL COPY/AUTO ALARM COPY	
		REMAINING DISK WARNING	<i>n</i> % (<i>n</i> = 1 - 10)	
		AUTO DELETE	1 - 99 DAYS	
4. NORMAL REC MODE SET		PICTURE QUALITY	HYPER/SUPER/HIGH/MID/LOW/INDIV.	
		PICTURE QUALITY SET	Displays the PICTURE QUALITY SET screen.	
		AUDIO RECORDING	ON/OFF	
		REC RATE	<i>n</i> FPS	
		REC PROGRAM GROUP	OFF/P-1/P-2/P-3/P-4	
5. PROGRAM REC SET		P-1/P-2/P-3/P-4	<i>n</i> FPS	
6. TIMER SET		WEEK	SUN/MON/TUE/WED/THU/FRI/SAT/DLY/EXT	
		START	<i>hh:mm</i>	
		STOP	<i>hh:mm</i>	
		PROGRAM	OFF/P-1/P-2/P-3/P-4	
		FPS	<i>n</i> FPS	
7. ALARM REC MODE SET		ALARM RECORDING	ENABLED/AL-REC ON TIMER/AL-REC OFF TIMER/ OLY AL-RC ON TMR/OFF	
		PICTURE QUALITY	HYPER/SUPER/HIGH/MID/LOW/INDIV.	
		PICTURE QUALITY SET	Displays the PICTURE QUALITY SET screen.	
		AUDIO RECORDING	ON/OFF	
		ALARM INTERLEAVE	ONLY/SW/ALL	
		REC RATE	<i>n</i> FPS	
		DURATION	5S/10S/20S/40S/1M/2M/3M/4M/5M/10M/15M/CC	
		PRE-ALARM RECORDING	ON/OFF	
	REC RATE	<i>n</i> FPS		
	DURATION	5S/10S/20S/40S/1M/2M/3M/4M/5M/10M/15M		
	ALARM TRIGGER	ALARM/SENSOR/ALARM AND SENSOR/ ALARM OR SENSOR		
8. ALARM OPERATION SET	ACTIVITY SENSOR	Displays the Activity Detection Sensor Set screen.		
	ALARM RETRIGGER	ON/OFF		
	MAIN MON. DISPLAY	FULL/9/16/NC		
	ALARM PRIORITY	LAST/FIRST/SWITCH		
	MON.2 DISPLAY	FULL/9/16/NC		

1) HSR-J2009P/J2016P only
2) *mm-dd* with HSR-J2009/J2016

3) DAYLIGHT SAVINGS with HSR-J2009/J2016

Preparations

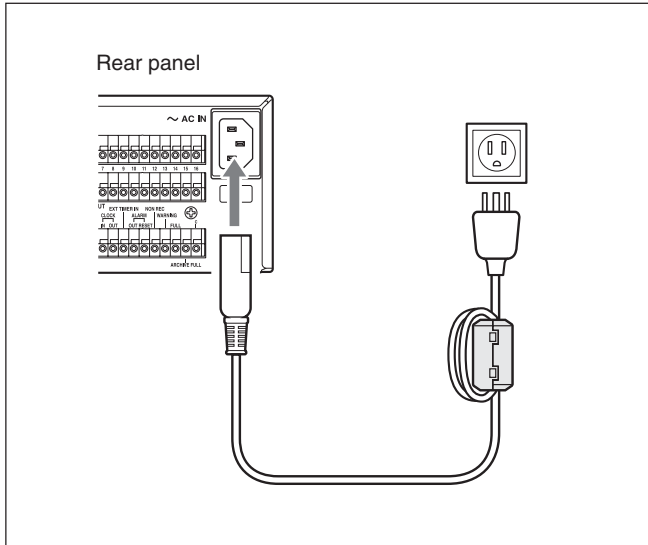
MAIN MENU	Submenu	Setting items	Setting values or functions
3. GENERAL SET	1. DISPLAY SET	DATE	ON/OFF
		TIME	ON/OFF
		QUALITY	ON/OFF
		AUDIO	ON/OFF
		ALARM COUNT	ON/OFF
		ALARM TYPE	ON/OFF
		TITLE	ON/OFF
		VIDEO LOSS	ON/OFF
	2. BUZZER SET	ALARM	ON/OFF
		DISK FULL	ON/OFF
		DISK ERROR	ON/OFF
		LOCK WARNING	ON/OFF
		KEY IN	ON/OFF
		NON REC	ON/OFF
	3. SECURITY LOCK SET	LOCK MODE	KEY/PASSWORD/NETWORK
		FREE ACCESS LEVEL	LV1/LV1.2/LV1.2.3/NO
		OPERARION AUTHORITY	NORMAL/CHANGE
		COPY	LV2.3.4/LV3.4/LV4
		CAMERA CONTROL	LV2.3.4/LV3.4/LV4
		USER ID SET	Displays the USER ID SET screen.
	4. RS-232C/RS-485 SET	CONTROL	RS-232C/RS-485
		DATA SPEED	2400/4800/9600/19200
		STATUS INFO	ON/OFF
		ALARM INFO	ON/OFF
		ADDRESS	000-127
	5. HDD SET	DISK INITIALIZE	Initializes a hard disk.
		MIRRORING	ON/OFF
		PLAYBACK DRIVE	MASTER/SLAVE
	6. NETWORK SET	DHCP	ON/OFF
		IP ADDRESS	To be specified according to your system.
		SUBNET MASK	
		GATEWAY	
		PORT	1-65535
		NETWORK SPEED	NO LIMIT/1024kbps/512kbps/256kbps/128kbps/64kbps
		DNS SET	Displays the DNS SET screen.
		MAC ADDRESS	
	7. NETWORK CONTROL SET	NETWORK CONTROL	ON/OFF
		NETWORK STATUS	ON/OFF
		OPERATION AUTHORITY	NORMAL/CHANGE
		COPY/DOWNLOAD	LV3.4/LV4
		CAMERA CONTROL	LV2.3.4/LV3.4/LV4
USER ID SET		Displays the USER ID SET screen.	
4. SCREEN SET	1. MULTI SCREEN	QUAD POSITION SET	Displays the QUAD POSITION SET MENU screen.
		MULTI 9 POSITION SET	Displays the MULTI 9 POSITION SET MENU screen.
		MULTI 16 POSITION SET	Displays the MULTI 16 POSITION SET MENU screen.
	2. SEQUENCE SET	MAIN/MON.2 MONITOR SET	Displays the MAIN/MON.2 MONITOR SET screen.
			FULL: <i>n</i> SEC/ QUAD: <i>n</i> SEC
	3. MASK	MASK SET	Displays the MASK SET screen.
			ON/OFF
	4. COLOR LEVEL SET		Displays the COLOR LEVEL SET screen.
	5. POWER LOSS/USED TIME	POWER LOSS	Display only
USED TIME		Displays the USED TIME screen.	

MAIN MENU	Submenu	Setting Items	Setting values or functions
6. INITIALIZATION LOG		DATE, TIME, AREA, ACTION, USER	Display only
7. COPY MENU SETTINGS		SAVE MENUS TO CF	Saves the menu settings.
		LOAD MENUS FROM CF	Loads the menu settings.
		COPY USER ID SETTINGS	YES/NO
		COPY RECORDING AREA SETTINGS	YES/NO
8. ADVANCED MENU SET	1. ROI SET	STATIC AREA1-3	MAX/HIGH/LOW/MIN/OFF
		ACTIVE ROI	ON/OFF
		EFFECTIVE REC MODE	NORMAL REC/ALARM REC/NORMAL/ALARM
		AREA/SENSITIVITY SET	Displays the AREA/SENSITIVITY SET screen.
	2. ALARM NOTICE SET	ALARM NOTICE	ON/OFF
		SMTIP SERVER ADDRESS	
		USER MAIL ADDRESS	
		SEND MAIL ADDRESS SET	Displays the SEND MAIL ADDRESS SET screen.
		SUBJECT	
		AUTHENTICATION	
		POP3 SERVER ADDRESS	
		USER ID	
		PASSWORD	
	3. CAMERA CONTROL SET	PROTOCOL	OFF/BBV COAX/PELCO COAX/RS-485/422
		ADD	000-127
		RS-485/422 PROTOCOL	OFF/BBV/KALATEL/PELCO/SENSORMATIC
	4. PPP SET	DIAL UP	ON/OFF
		DIAL UP SET	Displays the DIAL UP SET screen.
		DIAL IN	ON/OFF
		DIAL IN SET	Displays the DIAL IN SET screen.
		CIRCUIT TYPE	
		MODEM INI. COMMAND	
		BAUD RATE	
		DATA SIZE	
		PARITY	
		STOP BIT	
	5. TIME ZONE/NTP SET	TIME ZONE	
SYNC. WITH NTP SERVER		ON/OFF	
NTP SERVER ADDRESS			
TIME TO SYNCHRONIZE		hh:mm	

Preparations

Powering on

Connect the supplied power cord.



The POWER LED on the front panel of this unit lights green.

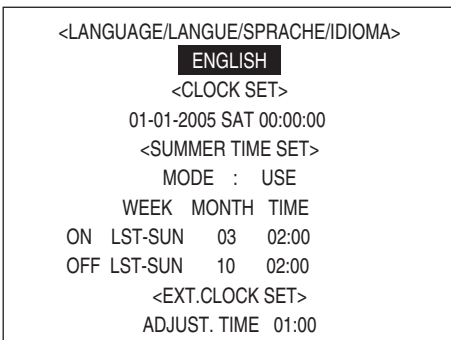
OSD Language Selection

You may select the language for on-screen displays, such as menus and messages, from among English, French, German (HSR-J2009P/J2016P only) and Spanish.

Use the submenu 1. LANGUAGE/CLOCK SET of the main menu 1. INITIAL SET.

- 1 Select 1. LANGUAGE/CLOCK SET by turning the Shuttle dial clockwise.

The LANGUAGE/CLOCK SET display appears and the current language setting is highlighted.



- 2 Turn the Shuttle dial clockwise.

The current language setting flashes.

- 3 Turn the Jog dial to select the desired language and turn the Shuttle dial clockwise.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Clock Adjustment

Adjust the built-in clock to your local time.

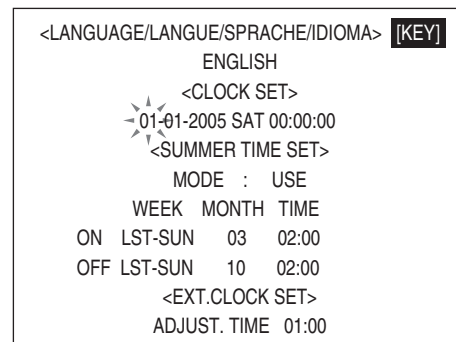
Use the same submenu 1. LANGUAGE/CLOCK SET of main menu 1. INITIAL SET as with the language selection.

You may also perform the settings for summer time (daylight savings time) and external clock adjustment.

Adjusting the clock

- 1 Turn the Jog dial to highlight the current setting of CLOCK SET and turn the Shuttle dial clockwise.

The leftmost column flashes.



- 2 Turn the Jog dial to set the month (HSR-J2009/J2016)/day (HSR-J2009P/J2016P) and turn Shuttle dial clockwise.

The next day (HSR-J2009/J2016)/month (HSR-J2009P/J2016P) column flashes.

- 3 Similarly, set the day (HSR-J2009/J2016)/month (HSR-J2009P/J2016P), year, hours and minutes in the sequence.

The day of the week is automatically set.

The seconds are reset to 0 when you set the minutes.

Activating summer (daylight savings) time

The clock will be automatically switched to summer (daylight savings) time if you set MODE for DAYLIGHT SAVINGS (HSR-J2009/J2016)/ SUMMER TIME SET (HSR-J2009P/J2016P) to USE.

- 1 Turn the Jog dial to highlight the MODE line and turn the Shuttle dial clockwise.
NO USE (the current setting) flashes.
- 2 Turn the Jog dial to set to USE and turn the Shuttle dial clockwise.
- 3 Set when to switch to summer (daylight savings) time on the ON line.
WEEK: What day of which (first, second, third, fourth, or last) week in the specified month on which to switch
MONTH: Month in which to switch
TIME: Time (hours:minutes) when to switch
- 4 Similarly set when to return to the standard time on the OFF line.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Adjusting the time using the CLOCK IN/OUT terminals

To adjust the built-in clock of this unit and/or the clocks of another connected HSR-J2009/J2016/ J2009P/J2016P units using the CLOCK IN/OUT terminals on the rear panel, set the hours and minutes for ADJUST. TIME of EXT. CLOCK SET.

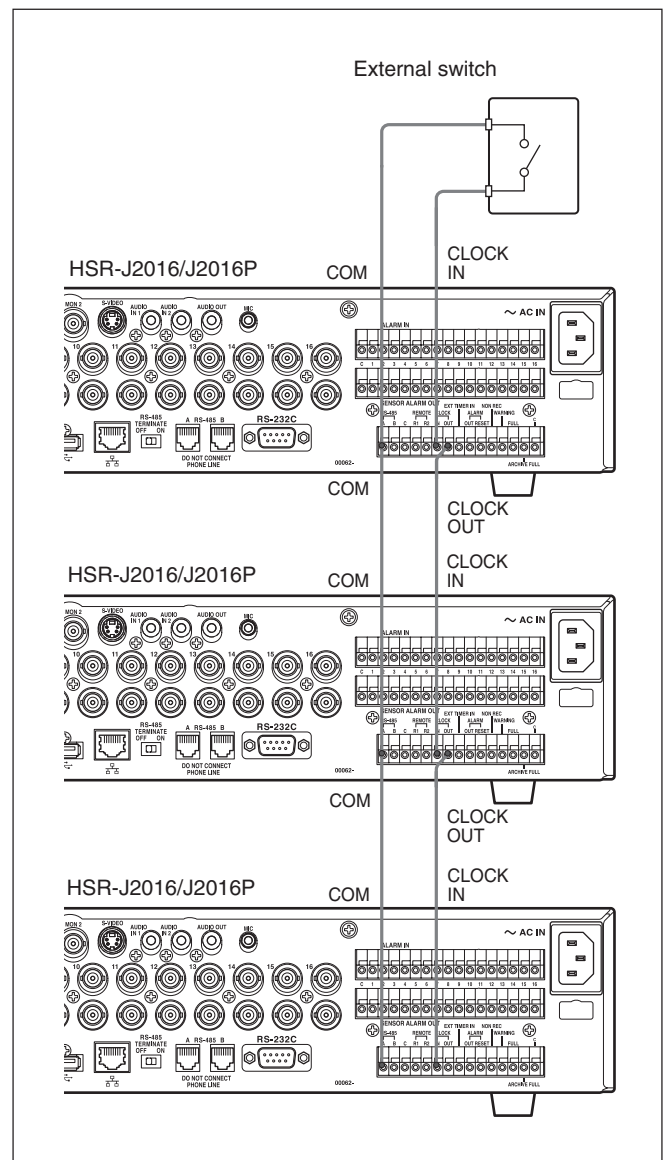
The output at the CLOCK OUT terminal will drop to 0 V at the time you specify here.

When the CLOCK IN terminal is short-circuited to the C terminal, the built-in clock will be set to the time you specify here, and the output at the CLOCK OUT terminal will drop to 0 V at the same time.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Connection example: When adjusting the time by using an external switch



Preparations

Setting the Time Period

You can perform settings for various operations, such as the automatic switching operation, the mask function, and the activity sensor operation, individually for each quarter of a day (ex. morning, daytime, evening, and night).

Two settings A and B are possible.

Perform settings on the submenu 5. TIME PERIOD SET of the main menu 1. INITIAL SET.

1 Select 1. INITIAL SET from the main menu.

2 Select 5. TIME PERIOD SET from the submenu.

The TIME PERIOD SET menu appears.

<TIME PERIOD SET>				
TIME PERIOD	T-1	T-2	T-3	T-4
TIME PERIOD A	00:00	00:00	00:00	00:00
TIME PERIOD B	00:00	00:00	00:00	00:00
SELECT TIME PERIOD				
SEQUENCE	TIME PERIOD A			
MASK	TIME PERIOD A			
ACTIVITY/ROI SENSOR	TIME PERIOD A			

3 Specify the time period.

1) Select TIME PERIOD A, then turn the Shuttle dial clockwise.

The two left figures of T1 flash.

2) Enter each hour figure of the beginning time (24-hour display) for the period T1 with the Jog dial, then turn the Shuttle dial clockwise.

The minute figures for T1 flash.

3) Enter each minute figure of the beginning time for the period T1 with the Jog dial, then turn the Shuttle dial clockwise.

The two left figures of T2 flash.

4) Specify the beginning time of T2, T3, and T4 in the same manner.

Perform settings of T1 to T4 for the time period setting B.

4 Set the TIME PERIOD (A or B) for each of SEQUENCE operations (page 50), MASK operations (page 50), and ACTIVITY/ROI SENSOR operations (page 65).

Notes

- Set as T1<T2<T3<T4.
- If you set T2 to “00:00”, you can also set T3 and T4 only to “00:00”.
Similarly, if you set T3 to “00:00”, you can also set T4 only to “00:00”.
- If T1 to T4 are all set to “00:00” as the default status, T2 to T4 are considered not to be defined, and only the T1 setting is valid for all-day recording (00:00 to 00:00).

Example:

<TIME PERIOD SET>				
TIME PERIOD	T-1	T-2	T-3	T-4
TIME PERIOD A	06:00	12:00	18:00	22:00
TIME PERIOD B	08:00	20:00	00:00	00:00
SELECT TIME PERIOD				
SEQUENCE	TIME PERIOD A			
MASK	TIME PERIOD A			
ACTIVITY/ROI SENSOR	TIME PERIOD B			

The time slots that correspond to the above settings are shown below. For the SEQUENCE and MASK settings, the time period A applies. For the ACTIVITY/ROI SENSOR setting, the time period B applies.

TIME PERIOD A	T1 06:00 to 12:00
	T2 12:00 to 18:00
	T3 18:00 to 22:00
	T4 22:00 to 06:00

TIME PERIOD B	T1 08:00 to 20:00
	T2 20:00 to 08:00
	T3 undefined
	T4 undefined

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Hard Disk Expansion and Mirroring Setting

Initializing the hard disk

You can initialize the hard disk using the submenu 5. HDD SET of the main menu 3. GENERAL SET as required.

For details on menu operations, see “Menu Operations” on page 26.

```
<HDD SET>
DISK 1 : 250GB NEW  DISK 2 : 250GB NEW

NEW DISK INITIALIZE →
  PLEASE INITIALIZE THE NEW DISK
MIRRORING           : OFF
PLAYBACK DRIVE      : ***
CAUTION : RECORDING SPEED WILL BE
  LIMITED BY MIRRORING!
ALL DISK INITIALIZE →
```

Highlight NEW DISK INITIALIZE and turn the Shuttle dial clockwise. Initializing begins.

When initializing is completed, the size of the disk is displayed.

Activating the mirroring function

As the unit is equipped with two hard disks, the mirroring function to record the same data on both of the disks can be activated.

MIRRORING: Set to ON to activate the mirroring function.

PLAYBACK DRIVE: Select the drive from which to read the data for playback if data are recorded on both drives with the mirroring function.

Notes

- In mirroring, when you set MIRRORING to ON, the maximum recording cycle will be limited to 60 FPS (HSR-J2009/J2016) or 50 FPS (HSR-J2009P/J2016P). Along with this, it includes a case for recording time change. So, please always check recording time available and the number of times for alarm via NORMAL REC MODE SET and ALARM REC MODE SET in the menu.
- Set MIRRORING to OFF when a RAID unit is connected.

Recording Area Settings

For the recording area and archive area, by default respectively 80% and 20% areas are assigned. You can change this assignment, or completely reset the areas. You can also select for the recording area whether, when the hard disk becomes full, whether to stop recording, or to overwrite.

Changing the size of an area

You can change the percentages of areas using the submenu 2. RECORDING AREA SET of the main menu 2. RECORD SET.

Note

When you change the area assignment, the previous data will be lost.

- 1 Select 2. RECORD SET from the main menu.
- 2 Select 2. RECORDING AREA SET from the submenu.

The RECORDING AREA SET display appears, showing the current settings.

```
<RECORDING AREA SET>
TOTAL CAPACITY       : 250GB
INTERNAL HDD         : 250GB

RECORDING AREA       : 97%
  AREA FULL RESET    →
ARCHIVE AREA         : 3%
  AREA FULL RESET    →

CAUTION : WHEN THE AREA SETTING IS CHANGED,
  THE WHOLE AREA WILL BE INITIALIZED !
```

Preparations

- Turn the Jog dial to highlight the area to be changed, and turn the Shuttle dial clockwise to finalize your selection.

The current value of the selected area flashes.

- Turn the Jog dial to select the desired value and turn the Shuttle dial clockwise to register the setting.

You can set the recording area up to a maximum of 99%. The capacity of the archive area is automatically calculated from the recording area setting (1 to 99%).

A confirmation message is displayed.

- To execute the change, select YES and turn the Shuttle dial clockwise.

To cancel, select NO.

Resetting an area

You may clear all the data in an area by a reset operation.

Notes

- The recording area can be reset only when overwrite recording is switched OFF (see next item for details of overwrite recording).
- You cannot delete specific events only.

- Highlight the AREA FULL RESET line of the area you wish to reset on the RECORDING AREA SET display and turn the Shuttle dial clockwise.

A confirmation message appears.

- To execute the reset, select YES and turn the Shuttle dial clockwise.

To cancel, select NO.

Overwriting a recording area

You can select whether to stop recording, or to overwrite the recording area when the hard disk becomes full.

Use the submenu 3. RECORDING CONDITIONS SET of the main menu 2. RECORD SET.

You may also set the warning status when the remaining capacity of a recording area becomes close to the end.

- Select 2. RECORD SET from the main menu.
- Select 3. RECORDING CONDITIONS SET from the submenu.

The RECORDING CONDITIONS SET display appears, displaying the current settings.

<RECORDING CONDITIONS SET>	
RECORDING AREA	
OVERWRITE	: ON
ARCHIVE AREA	
MODE	: MANUAL COPY
REMAINING DISK WARNING	: 1%
AUTO DELETE	: OFF

- Turn the Jog dial to highlight the OVERWRITE line and turn the Shuttle dial clockwise.

The current setting (default: OFF) flashes.

- To activate the overwrite function, set OVERWRITE to ON and turn the Shuttle dial clockwise.

Changing the percentage to warn the remaining

When OVERWRITE is OFF, the FULL or ALARM indicator on the front panel will flash and an alarm signal will be output from the FULL or ARCHIVE FULL terminal if the remaining capacity of the recording area drops to a certain percentage. This value is set to 1% in the default setting. You can change it on the RECORDING CONDITIONS SET display.

- 1 Turn the Jog dial to highlight the REMAINING DISK WARNING line and turn the Shuttle dial clockwise.

The current setting (default: 1) flashes.

- 2 Turn the Jog dial to set the desired value and turn the Shuttle dial clockwise.

The value can be selected in the range of 1 to 10%.

Auto Saving to the Archive Area

When AUTO ALARM COPY is selected for MODE in the ARCHIVE AREA, an alarm recording is made simultaneously in the normal recording area and the archive recording area.

- 1 Turn the Jog dial to highlight the MODE line and turn the Shuttle dial clockwise.

The current setting (MANUAL COPY) flashes.

- 2 Turn the Jog dial to select AUTO ALARM COPY and turn the Shuttle dial clockwise.

Notes

- Selecting AUTO ALARM COPY halves the maximum recording rate.
- Changing MANUAL COPY to AUTO ALARM COPY starts hard disk initialization.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Limiting the data-retention period

It is possible to limit the data-retention period for recorded pictures. For example, if the period is set to 90 days, pictures recorded more than 90 days before will not be played back. The retention period can be set to a value between 1 and 99 days.

Use the RECORDING CONDITIONS SET display for the setting.

- 1 Turn the Jog dial to highlight the AUTO DELETE line and turn the Shuttle dial clockwise.

The current setting (default: OFF) flashes.

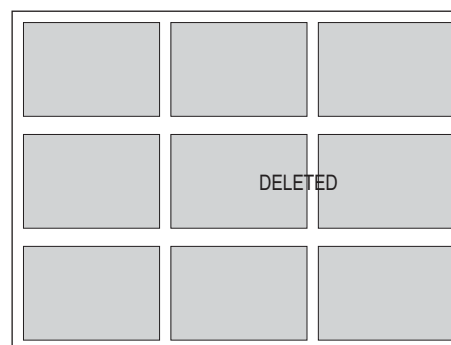
- 2 Turn the Jog dial to set the desired value (1 to 99) and turn the Shuttle dial clockwise.

When the specified retention period has expired

In PLAY mode

It is not possible to view a picture and/or listen to audio.

As its time data will remain until the picture is overwritten, the unit enters PLAY mode when you press the PLAY button. However, the picture will not be played back, and DELETED is indicated at the center of screen.



In SEARCH mode (except for Archive area search)

For ALARM SEARCH, the alarm list data will remain until the picture is overwritten. However DELETED will be indicated instead of the PREVIEW picture when you select the event.

Preparations

<ALARM SEARCH>				
NO	DATE	TIME	CH	TOTAL ALARMS :0000028
0000028	24-10	19:15	01	SEARCH :0000028
0000027	24-10	18:57	02	CHANNEL : --
0000026	24-10	18:55	03	DELETED
0000025	24-10	18:52	03	
0000024	23-10	22:05	01	
0000023	23-10	21:59	05	
0000022	21-10	21:33	04	
0000021	21-10	21:25	05	
			MOVE:JOG	SELECT:SHUTTLE

When you turn the Shuttle dial clockwise, the unit enters PLAY mode for the selected event; however the picture cannot be played back, and audio is muted. This condition is common to Alarm thumbnail search, Time date search, and Activity detection search.

Example: Alarm thumbnail search screen

DELETED 0000029 01	DELETED 0000028 01	DELETED 0000027 02
DELETED 0000026 03	DELETED 0000025 03	DELETED 0000024 01
DELETED 0000023 05	DELETED 0000022 04	DELETED 0000021 05

For the Archive area search, the AUTO DELETE setup is not applied. So it is possible to view the pictures even after the specified retention period has expired.

Notes

• Network operation

Operation is the same between network operation and the unit operation.

• Masking

Once the Auto Delete function is applied, any masked pictures and audio cannot be played even if you change AUTO DELETE setup. Also, they cannot be copied to Memory Sticks.

• Influence of power OFF

If a no-power condition occurs, such as just turning the power OFF or the power outage, the data-retention period may be shortened. Each time power is shut off the period may be shortened by up to 10 minutes.

Camera Settings

Detecting cameras

By activating the camera detection function in the submenu 2. CAMERA DETECT of the main menu 1.INITIAL SET, the settings for unconnected cameras are automatically set to OFF.

- 1 Select 1.INITIAL SET from the main menu.
- 2 Select 2.CAMERA DETECT and turn the Shuttle dial clockwise.

A message for confirmation appears.
- 3 Select YES and turn the Shuttle dial clockwise.

The camera detection function is activated.

When detection is completed, the initial settings such as the initial setting in the automatic switching operation (*page 49*) are set to OFF.

Setting the titles

You can register titles for each camera to indicate the camera location (ex. ROOM 1, ROOM 2) etc.

Characters that can be used in titles

Alphabetic: A to Z

Numerics: 0 to 9

Symbols: - (hyphen), : (colon), . (period), / (slash), * (asterisk), space

Note

With MONITOR 2, the 9-screen display can show only 8 characters, and the 16-screen display can show only 2 characters.

- 1 Select 1. INITIAL SET from the main menu.
- 2 Select 3. TITLE SET from the submenu.

A camera picture is displayed full-screen, and a figure line for title setting is superimposed. (To set a title for the camera picture displayed, proceed to step 4.)

- 3 Select the camera picture to be set using the INPUT SELECTOR buttons.

- 4** Turn the Shuttle dial clockwise.
The cursor flashes and the unit accepts character input.
- 5** Select a character at the cursor using the Jog dial, then turn the Shuttle dial clockwise.
The cursor moves to the next position.
- 6** Select the desired characters and figures for the title (max. 10 characters) in the same manner.
- 7** Repeat steps **3** to **6** for each camera.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Network Settings

Using the LAN connector on the rear panel, connect the unit to your network.

Settings

Carry out the settings in submenus 6. NETWORK SET and 7. NETWORK CONTROL SET of the main menu 3. GENERAL SET.

For details on menu operations, see “Menu Operations” on page 26.

<NETWORK SET>	
DHCP	: ON
IP ADDRESS	: 0. 0. 0. 0
SUBNET MASK	: 0. 0. 0. 0
GATEWAY	: 0. 0. 0. 0
PORT	: 00080
NETWORK SPEED	: NO LIMIT
DNS SET	→
MAC ADDRESS	:

DHCP: Select whether the IP address of this unit is obtained automatically from the DHCP server, or is fixed. When the IP address is obtained automatically from the Internet provider or a DHCP server on the LAN, select ON, and when this unit has a fixed IP address set, select OFF.

IP ADDRESS: This can be set when “DHCP” is set to OFF. Generally, when setting a fixed IP address within a LAN, set a private IP address (e.g. 192.168.0.0 to 192.168.255.255). Note that the IP address must not conflict with the address of another device.

SUBNET MASK: This can be set when “DHCP” is set to OFF. Within a single LAN, set the same value.

GATEWAY: This can be set when “DHCP” is set to OFF. When using a gateway, for example from the LAN to a different network such as a WAN, set the IP address (on the LAN) of that device.

PORT: Set the port to be opened. The default setting is 80. If running an HTTP server on the same LAN, ensure that the port number does not conflict.

NETWORK SPEED: Select the speed corresponding to the network circuit speed. When accessing a computer on the LAN or through a broadband circuit, when the speed exceeds 1024 kbps, select the default of NO LIMIT.

DNS SET: Carry out the domain name server setting on the separate screen.

DNS SERVER: Select whether the DNS server IP address is obtained automatically or is fixed. Generally, when “DHCP” is set to ON, select AUTO here. If the DNS server address is specified by the network administrator or Internet provider, select MANUAL and set the PRIMARY and SECONDARY items below.

PRIMARY, SECONDARY: You can set these when “DNS SERVER” is set to MANUAL. Set DNS server addresses specified by the network administrator or Internet provider.

HOST NAME: The host name is displayed.

DOMAIN SUFFIX: The domain suffix is displayed.

MAC ADDRESS: The MAC address is displayed.

<NETWORK CONTROL SET>	
NETWORK CONTROL	: ON
NETWORK STATUS	: ON
OPERATION AUTHORITY	: NORMAL
COPY/DOWNLOAD	: LV2,3,4
CAMERA CONTROL	: LV2,3,4
USER ID SET	→
LV1:LIVE, LV2:PLAY, LV3:REC, LV4:MENU SET	

Preparations

NETWORK CONTROL: Determines whether the unit is to be operated via the network or not.

NETWORK STATUS: Select whether to continuously show a message “Connected to network” on the main monitor when the network connection is active.

OPERATION AUTHORITY: To use the default settings without changing the user privileges, select **NORMAL**. To change the copy/download and camera control right settings, select **CHANGE**.

COPY/DOWNLOAD: Select the user level for which to allow copy/download operations.

CAMERA CONTROL: Select the user level for which to allow camera control operations.

USER ID SET: Make user ID settings on a separate screen.

On-Screen Data Selection

You may independently turn on/off the on-screen data superimposed on the images on the monitor screen or specify titles.

Use the submenu 1. **DISPLAY SET** of the main menu 3. **GENERAL SET**.

<DISPLAY SET>	
DATE	: ON
TIME	: ON
QUALITY	: ON
AUDIO	: ON
ALARM COUNT	: ON
ALARM TYPE	: ON
TITLE	: ON
VIDEO LOSS	: ON

DATE, TIME, QUALITY, AUDIO, ALARM COUNT, ALARM TYPE, TITLE

Specify whether to superimpose each item on the images on the monitor screen.

For details on these items, see “On-Screen Data” on page 16.

VIDEO LOSS

Specify whether to indicate a message on the monitor if the signal from a camera is lost during live monitoring.

Changing the settings

- 1 Select 3. **GENERAL SET** from the main menu.
- 2 Select 1. **DISPLAY SET** from the submenu.
The **DISPLAY SET** display appears.
- 3 Highlight the item to be set, then turn Shuttle dial clockwise.
The current setting flashes.
- 4 Turn the Jog dial to change the ON/OFF setting, then turn the Shuttle dial clockwise to register your setting.

Repeat steps **3** and **4** for each item to be set.

When the settings are completed

Press the **EXIT/OSD** button to exit the menu.

Buzzer Settings

You may independently turn on/off the buzzers for warning.

Use the submenu 2. **BUZZER SET** of the main menu 3. **GENERAL SET**.

- 1 Select 3. **GENERAL SET** from the main menu.
- 2 Select 2. **BUZZER SET** from the submenu.

The **BUZZER SET** display appears.

<BUZZER SET>	
ALARM	: OFF
DISK FULL	: ON
DISK ERROR	: ON
LOCK WARNING	: ON
KEY IN	: OFF
NON REC	: OFF

ALARM: Buzzer that sounds when an alarm is generated

DISK FULL: The remaining capacity of the recording area has dropped below the specified value.

DISK ERROR: Buzzer that sounds when an error is generated for the hard disk

LOCK WARNING: Buzzer that sounds when an operation key is pressed with the security lock active.

KEY IN: Buzzer that sounds when an operation key is pressed

NON REC: Buzzer that sounds when recording is interrupted

- 3 Highlight the buzzer to be set and turn Shuttle dial clockwise.

The current setting flashes.

- 4 Turn the Jog dial to change the ON/OFF setting and turn the Shuttle dial clockwise to register your setting.

Repeat steps 3 and 4 for each buzzer to be set.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Security Lock Settings

The following three security lock functions allow you to prevent inadvertent operations or settings.

Key: Locks key operations.

Password: Access to locked operations requires a password.

Network: Recorder operations cannot be controlled via the network.

Use the submenu 3. SECURITY LOCK SET of the main menu 3. GENERAL SET.

- 1 Select 3. GENERAL SET from the main menu.
- 2 Select 3. SECURITY LOCK SET from the submenu.

The SECURITY LOCK SET display appears.

<SECURITY LOCK SET>	
LOCK MODE	: KEY
FREE ACCESS LEVEL	: NO
OPERATION AUTHORITY	: NORMAL
COPY	: LV2,3,4
CAMERA CONTROL	: LV2,3,4
USER ID SET	→
LV1:LIVE, LV2:PLAY, LV3:REC LV4:MENU SET	

- 3 Set LOCK MODE.

If you select KEY or NETWORK, skip to step 5.

KEY: Lock all key operations. While locked, pressing a key sounds a beeper.

PASSWORD: Pressing a key displays a screen asking for a user ID and password input, and operations are limited according to the level of the ID entered.

NETWORK: Lock button operations on this unit while controlling it from a computer over the network.

- 4 Set FREE ACCESS LEVEL.

ON: All operations are locked.

L1 to L3: Permissions having the set user levels are excluded from password locking.

Preparations

5 Set OPERATION AUTHORITY.
NORMAL: Use the default settings without changing the user permissions.
CHANGE: Change the permissions for copying to external media and camera control.

6 Set COPY.
LV2, 3, 4: Allow users on level 2 and above to copy images to external media.
LV3, 4: Allow users on level 3 and above to copy images to external media.
LV4: Allow users on level 4 and above to copy images to external media.

7 Set CAMERA CONTROL.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Setting user IDs

You can restrict those able to carry out operations by requiring a user ID and password to operate the unit directly or through a network.

User levels and permissions

The following table lists the four user levels that can be set.

Operation permission \ Level	LV1	LV2	LV3	LV4
Monitoring	Yes*1	Yes	Yes	Yes
Playback/search	No	Yes	Yes	Yes
Recording	No	No	Yes	Yes
Menu operations	No	No	No	Yes
Simultaneous -connection limits*2	16 users (1 user on main unit)	4 users	One LV3 or LV4 user	
		Total 4 users for LV2 to LV4		
	Total 16 users			

*1 Masked video cannot be viewed.

*2 The number of simultaneous connections is the total number of users on the main unit and connected through the network.

Registering users

- In the main menu, select 3. GENERAL SET.
- Select submenu 3. SECURITY LOCK SET.
- Select USER ID SET.
The USER ID SET screen appears.

<USER ID SET>					
USER ID	PASSWORD	LV	USER ID	PASSWORD	LV
ID04----	4444----	4	-----	-----	-
ID03----	3333----	3	-----	-----	-
ID02----	2222----	2	-----	-----	-
ID01----	1111----	1	-----	-----	-
-----	-----	-	-----	-----	-
-----	-----	-	-----	-----	-
-----	-----	-	-----	-----	-
-----	-----	-	-----	-----	-

LV1:LIVE, LV2:PLAY, LV3:REC, LV4:MENU SET

- Turn the shuttle dial clockwise, and enter the user ID. Using the jog dial, shuttle dial, and INPUT SELECTOR buttons, enter from 1 to 8 alphanumeric characters.
- Turn the shuttle dial clockwise, enter a password. Using the jog dial, shuttle dial, and INPUT SELECTOR buttons, enter from 4 to 8 alphanumeric characters.
- Turn the shuttle dial clockwise, and set the user level.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Notes

- It is not possible to change the “LV” setting of “4” in the top line (the user ID and password can be changed). To change the level, register a separate user in line two or below.
- It is not possible to register a duplicate user ID.

To activate the security lock

After exiting Menu mode, hold the SHUTTLE HOLD button pressed for more than 3 seconds.

The security lock with the specified conditions becomes active, and the LOCK indicator lights.

Note

You cannot activate the security lock when the unit is in Playback mode.

When the security lock is active

When a password input is required, a buzzer will sound, and the password input display will appear on the monitor screen.

RS-232C and RS-485 settings

Make these settings when a computer is connected to the RS-232C connector or a system controller or similar is connected to the RS-485 connectors (A, B) on the rear panel. Carry out the settings in submenu 4. RS-232C/RS-485 SET of the main menu 3. GENERAL SET.

RS-232C/RS-485 SET screen

```
<RS-232C/RS-485 SET>
CONTROL       : RS-232C
DATA SPEED    : 19200
STATUS INFO   : ***
ALARM INFO    : ***
ADDRESS       : ***
```

(Common to RS-232C and RS-485)

CONTROL: Select RS-232C or RS-485.

DATA SPEED: Select the communications speed.

(RS-485 only)

STATUS INFO: Select whether or not to send status information.

ALARM INFO: Select whether or not to send alarm information.

ADDRESS: Enter the address (000 to 127).

Saving/Loading of Menu Settings

You can save the values you set with the menus on a CompactFlash card and load the stored values from the CompactFlash card to restore the menu settings.

Saving the menu settings

- 1 Insert a CompactFlash card into the slot of this unit.
- 2 Display the main menu, then select 7. COPY MENU SETTINGS.

The COPY MENU SETTINGS display appears.

```
<COPY MENU SETTINGS>
DVR TYPE VER. SY99-99

SAVE MENUS TO CF           →
LOAD MENUS FROM CF        →
COPY USER ID SETTINGS     : NO
COPY RECORDING AREA SETTINGS : NO
*IF YOU CHOOSE 'YES' FOR 'AREA SETTINGS',
HARD DISK WILL BE INITIALIZED !
```

- 3 Turn the Jog dial to highlight SAVE MENUS TO CF, and turn the Shuttle dial clockwise to advance to the next display.

A confirmation message is displayed.

- 4 Turn the Jog dial to choose YES, and turn the Shuttle dial clockwise.

Saving begins.

The progress status is displayed during saving.

When saving is completed, a completion message is displayed.

To cancel saving before beginning the operation

Turn the Shuttle dial counterclockwise. Saving once started cannot be stopped.

Preparations

Loading the menu settings

You can restore the previous menu status by loading the values stored in a CompactFlash card. Only the RECORDING AREA SET values (page 35) must be separately determined whether to load, as the hard disk(s) will be initialized if you load these values.

- 1 Insert the CompactFlash card in which the settings are stored into the slot of this unit.
- 2 Display the main menu, then select 7. COPY MENU SETTINGS.

The COPY MENU SETTINGS display appears.

- 3 To load the RECORDING AREA SET values along with other settings:
 - (1) Turn the Jog dial to highlight COPY RECORDING AREA SETTINGS, and turn the Shuttle dial clockwise.
 - (2) Select YES with the Jog dial, and turn the Shuttle dial clockwise to execute.

Note

All picture data will be lost if COPY RECORDING AREA SETTINGS is performed.

- 4 Turn the Jog dial to highlight LOAD MENUS FROM CF, and turn the Shuttle dial clockwise.

A confirmation message is displayed. When you set COPY RECORDING AREA SETTINGS to YES in step 3, a warning message is displayed.

- 5 Turn the Jog dial to choose YES, and turn the Shuttle dial clockwise.

Loading begins.
The progress status is displayed during loading.

When loading is completed, a completion message is displayed.

To cancel loading before beginning the operation

Turn the Shuttle dial counterclockwise. Loading once started cannot be stopped.

Installing the JPEG2000 plug-in

In order to be able to view live images or stored images of this unit on a computer via a network, the JPEG2000 plug-in must be installed.

1 Starting the installer

1. Insert the CD-ROM disc in your CD-ROM drive.
A cover page appears automatically in your browser.
If it does not appear automatically in the browser, double click the index.htm file on the CD-ROM disc.
2. Select and click J2KPlng (JPEG2000 Plug in) to start the installer.

Note

If a previous version of J2KPlng.exe is already installed, the “Repair/Remove J2KPlng” screen appears. Select “Remove J2KPlng” and click “Finish.”

When the old version has been deleted, click “Close” and start the installation again from step 1.

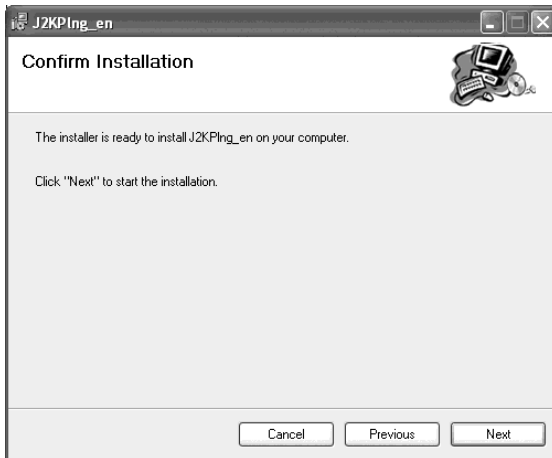
2 Beginning the install process

At the “Welcome to the J2KPlng_en Setup Wizard” screen, click “Next.” The install process begins.



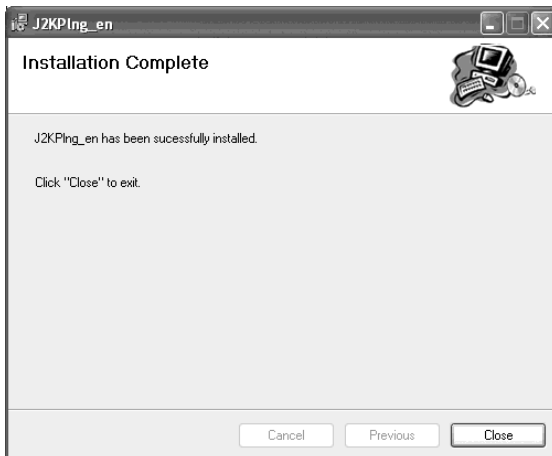
3 Confirming the installation

Click “Next” to start the installation.



4 Ending the installation

When the install process is complete, the following screen appears. Click “Close.”

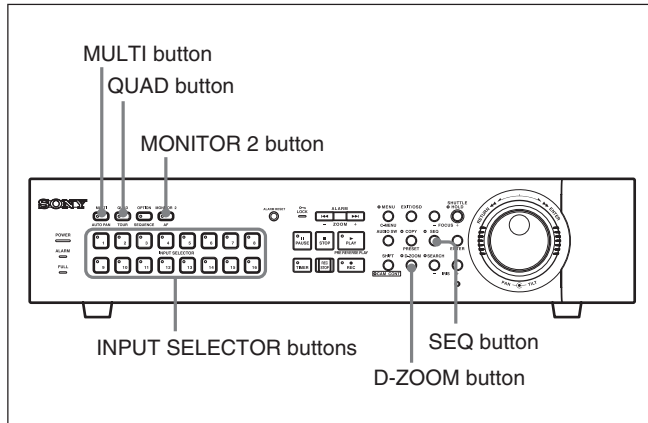


Live Picture Monitoring

You can watch live pictures from cameras by displaying them on the main monitor (MONITOR 1) and/or the monitor 2 (MONITOR 2).

The main monitor and the monitor 2 can be set individually, so you can watch a live picture on the monitor 2, while the main monitor is in playback mode.

Buttons used for live picture monitoring



Observing the Live Picture from a Particular Camera (Full-Screen Mode)

Press the INPUT SELECTOR button of the camera whose picture is to be displayed. The indicator of that button lights, and the picture from the camera you chose is displayed full-screen. Pressing the same button again restores the previous mode.

To change the display on the monitor 2 (MONITOR 2)

After pressing the MONITOR 2 button to light the indicator, press the INPUT SELECTOR button corresponding to the camera you wish to check. You can watch the desired camera picture independently of the main monitor.

To change the main monitor display, press the MONITOR 2 button again so that the indicator goes dark.

Switching the display automatically

Press the SEQ button so that the indicator lights. The pictures are automatically displayed in sequence at regular intervals (1 to 30 sec.). To cancel the automatic switching operation, press the SEQ button again or press one of the INPUT SELECTOR buttons so that the SEQ indicator goes dark.

The switching interval can be specified in a menu operation.

For the interval setting procedure, see “Specifying the automatic switching interval” on page 49.

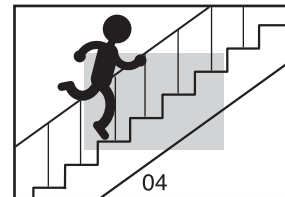
Zooming in on a detail of a picture

In full-screen mode, you can zoom in on a detail of a picture by pressing the D-ZOOM button.

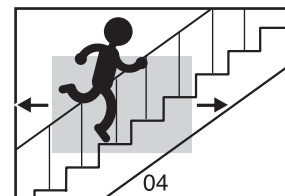
1 Press the INPUT SELECTOR button corresponding to the camera to be monitored and display the picture full-screen.

2 Press the D-ZOOM button.

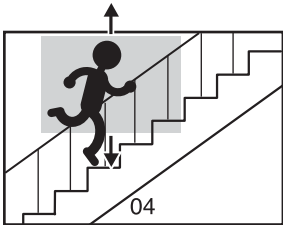
A frame to specify the zoom-in area appears centered on the screen.



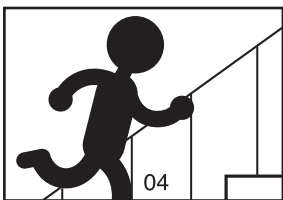
3 Move the frame horizontally to the desired zoom-in area using the Jog dial, then turn the Shuttle dial clockwise to register the horizontal position.



- 4** Move the frame vertically to the desired zoom-in area using the Jog dial, then turn the Shuttle dial clockwise to register the vertical position.



The image of the specified area is enlarged and displayed full-screen.



To cancel Zoom mode

Press the D-ZOOM button again.

When one of the other INPUT SELECTOR buttons is pressed, the picture of the corresponding camera is displayed in Normal mode.

When another mode button, such as the QUAD button or the MULTI button, is pressed, the unit is switched to the corresponding mode.

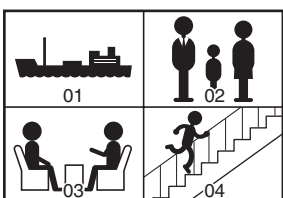
Monitoring Multiple Cameras Simultaneously (Divided Screen)

You can monitor multiple cameras simultaneously by displaying a divided screen.

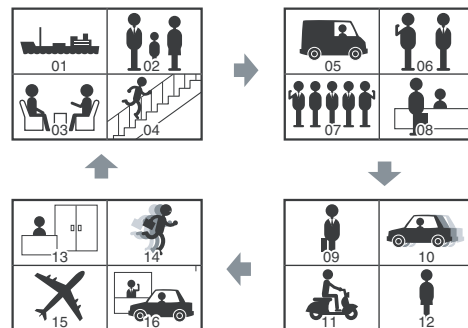
Switching to 4-division mode

Press the QUAD button.

The pictures from 4 cameras are displayed simultaneously on the screen.



With each subsequent press of the QUAD button, the next 4 pictures are displayed.



The indicators of the INPUT SELECTOR buttons corresponding to the camera inputs displayed light. You can change the combination of the 4 camera inputs to be displayed simultaneously and the position of the pictures on the screen by menu operation.

For the setting procedure, see “Changing the position of pictures on a divided screen” on page 48.

To switch the display automatically

Press the SEQ button so that the indicator lights.

The four pictures displayed are automatically switched to the next 4 pictures in sequence at regular intervals (1 to 30 seconds).

To cancel the automatic switching operation, press the SEQ button again so that the indicator goes dark. The switching interval can be specified by menu operation.

For the interval setting procedure, see “Specifying the automatic switching interval” on page 49.

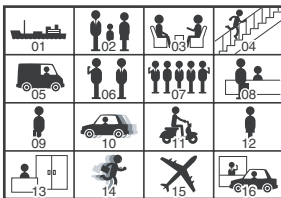
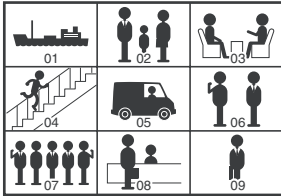
Note

The display cannot be automatically switched in Playback mode.

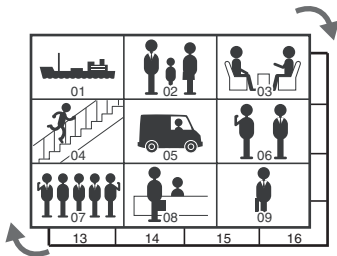
Live Picture Monitoring

Selecting a 9-division or 16-division split screen

Press the MULTI button.
The pictures from up to 16 cameras are displayed simultaneously on the screen.



Each time you press the MULTI button toggles between a 9-division and a 16-division display (HSR-J2016/J2016P only).



You can change the position of the pictures by menu operation.

For the setting procedure, see “Changing the position of pictures on a divided screen” on page 48.

Displaying an option screen

With a 9-division or 16-division split display, press the OPTION button.

Setting the Display Conditions

You can specify the various conditions of the screen display of the monitor by selecting 4. SCREEN SET from the main menu.

SCREEN SET display

<SCREEN SET>	
1.MULTI SCREEN	: NORMAL
QUAD POSITION SET	→
MULTI 9 POSITION SET	→
MULTI 16 POSITION SET	→
2.SEQUENCE SET	
FULL : 1S	QUAD : 1S
MAIN/MON.2 MONITOR SET	→
3.MASK	: OFF
MASK SET	→
4.COLOR LEVEL SET	→

Changing the position of pictures on a divided screen

In 1. MULTI SCREEN select the display positions and the combination of camera inputs to be shown simultaneously on a 4-division split display, and the positions and combinations for a 9-division display and 16-division display.

NORMAL: From the upper-left position to the lower-right position camera pictures are displayed in the order of camera number. Any position with no camera input is displayed in gray.

CHANGE: The position for each camera input can be set in the desired order.

Setting procedure:

- 1 Select CHANGE for 1. MULTI SCREEN, then turn the Shuttle dial clockwise.

- 2 To set 4-screen display,** move the cursor to QUAD POSITION SET, then turn the Shuttle dial clockwise.

The QUAD POSITION SET display appears.

MAIN MON.															
QUAD1				QUAD2				QUAD3				QUAD4			
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18
MON.2															
QUAD1				QUAD2				QUAD3				QUAD4			
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18
CHECK THE MAIN MON. SCREEN →															
CHECK THE MON.2 SCREEN →															

- To set 9-screen display,** move the cursor to MULTI 9 POSITION SET, then turn the Shuttle dial clockwise.

The MULTI 9 POSITION SET display appears.

MAIN MON.									MON.2								
01	02	03	04	05	06	07	08	09	01	02	03	04	05	06	07	08	09
04	05	06	07	08	09	10	11	12	04	05	06	07	08	09	10	11	12
07	08	09	10	11	12	13	14	15	07	08	09	10	11	12	13	14	15
CHECK THE MAIN MON. SCREEN →																	
CHECK THE MON.2 SCREEN →																	

- To set 16-screen display,** move the cursor to MULTI 16 POSITION SET, then turn the Shuttle dial clockwise.

The MULTI 16 POSITION SET display appears.

MAIN MON.																MON.2																																																			
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16																																				
05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36				
09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40				
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
CHECK THE MAIN MON. SCREEN →																																																																			
CHECK THE MON.2 SCREEN →																																																																			

- 3 On the QUAD POSITION SET display,** specify the 4 combinations of 4 camera inputs to be switched by the QUAD button by entering the desired camera numbers for the 4 tiled picture positions.

On the MULTI 9, 16 POSITION SET display, specify the desired camera number for each of the 6 tiled picture positions.

- 1) Turn the Jog dial to move the cursor to one of the picture positions, then turn the Shuttle dial clockwise so that the camera number presently set flashes.

- 2) Change the setting using the INPUT SELECTOR buttons or the Jog dial, then register the new setting using the Shuttle dial.

Repeat steps 1) and 2) for each picture positions.

To check your settings

Move the cursor to CHECK THE MAIN MON. SCREEN or CHECK THE MON.2. SCREEN, and turn the shuttle dial clockwise to check the screen display settings.

To return to the SCREEN SET display, turn the Shuttle dial counterclockwise.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Specifying the automatic switching interval

You can specify the interval of the automatic switching operation with the SEQ button by setting 2. SEQUENCE SET of the SCREEN SET display.

- 1 Move the cursor to FULL: 1S QUAD: 1S, then turn the Shuttle dial clockwise.

The current setting for FULL flashes.

- 2 Display the desired value (1 to 30 sec.) by turning the Jog dial clockwise, then turn the Shuttle dial clockwise.

The current setting for QUAD flashes.

Live Picture Monitoring

- 3 Display the desired value (1 to 30 sec.) by turning the Jog dial clockwise, then turn the Shuttle dial clockwise.

To set the sequence for each camera individually

When you select INDIV. for FULL on 2. SEQUENCE SET, you can set the items for MAIN/MON.2 MONITOR SET, allowing you to set the automatic image switching sequence for each camera (when the SEQ button is lit).

- 1 Move the cursor to the MAIN/MON.2 MONITOR SET line, and turn the Shuttle dial clockwise.

The MAIN/MON.2 MONITOR SET screen appears.

<MAIN/MON.2 MONITOR SET>																
TIME PERIOD : T-1 (09:00 - 12:00)																
CH	01	02	03	04	05	06	07	08								
MAIN MON.	1S	1S	1S	1S	1S	1S	1S	1S								
MON. 2	1S	1S	1S	1S	1S	1S	1S	1S								
CH	09	10	11	12	13	14	15	16								
MAIN MON.	1S	1S	1S	1S	1S	1S	1S	1S								
MON. 2	1S	1S	1S	1S	1S	1S	1S	1S								

- 2 Turn the Shuttle dial clockwise.
- 3 Use the Jog dial to select the time period, and turn the Shuttle dial clockwise.
- 4 Use the Jog dial to select the camera for which to make the setting, and turn the Shuttle dial clockwise.
- 5 Use the Jog dial to select the value (1 - 30), and turn the Shuttle dial clockwise.

When set to OFF, the image of the respective camera is not shown during auto switching.

- 6 To make the setting for other cameras, repeat steps 4 and 5.

- 7 If multiple time periods are defined, make the setting for the other time periods in the same way.

If T-1 is (00:00 - 00:00) and T-2, T-3, and T-4 are (--:-- - -:--), the recorder operates according to the settings for T-1 all day long. You need not make the ON/OFF setting for T-2, T-3 and T-4 as no definition has been made for them.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Masking the screen

You can select the setting of the mask function (ON or OFF) for each camera individually.

Any camera input with the mask function ON is displayed in gray on the monitor screen.

The mask function can be set to be automatically switched for each time period.

To set the mask function to be automatically switched for each time period, set the time periods in advance.

For setting the time period, see "Setting the Time Period" on page 34.

- 1 Set 3. MASK on the SCREEN SET display (page 48) to ON, then turn the Shuttle dial clockwise.

The cursor moves to the MASK SET line.

- 2 Turn the Shuttle dial clockwise.

The MASK SET menu appears.

<MASK SET>																
TIME PERIOD : T-1 (09:00 - 12:00)																
CH	01	02	03	04	05	06	07	08								
MAIN MON.	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF								
MON. 2	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF								
NETWORK	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF								
CH	09	10	11	12	13	14	15	16								
MAIN MON.	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF								
MON. 2	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF								
NETWORK	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF								

- 3 Turn the Shuttle dial clockwise.

- 4 Select the time period to be set (T-1, T-2, T-3 or T-4) using the Jog dial, then turn the Shuttle dial clockwise.

5 Select the camera input to be set using the Jog dial, then turn the Shuttle dial clockwise.

6 Select ON or OFF with the Jog dial, then turn the Shuttle dial clockwise.

The cursor moves to the next camera input.

7 Repeat steps **5** and **6** for each camera input for each monitor.

To mask the live picture to be monitored via a network, set the NETWORK masking to ON (LV1 users only).

Notes

- When you set the MAIN MON. or MON. 2 masking to ON, the playback picture is also masked. (You cannot monitor the playback picture.)
To monitor the playback picture, set the mask setting to OFF.
- Masking via a network is effective only for LV1 users. The LV2 and LV3 users can monitor all the channels in desired mode.

8 If multiple time periods have been specified, perform the settings for other periods.

If T-1 is (00:00 - 00:00) and T-2, T-3, and T-4 are (--:-- --:--), the recorder operates according to the settings for T-1 all day long. You need not make the ON/OFF setting for T-2, T-3 and T-4 as no definition has been made for them.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Setting the color level

You can set the color level (1 to 10) for each camera input.

1 Select 4. COLOR LEVEL SET on the SCREEN SET display (page 48).

The COLOR LEVEL SET display is superimposed to the camera picture being selected.

2 Press the INPUT SELECTOR button to select the camera input for which the color level to be set.

3 Turn the Shuttle dial clockwise.

4 Turn the Jog dial to set the color level (1 to 10), then turn the Shuttle dial clockwise to register your setting.

5 Repeat steps **2** to **4** for each camera input to be set.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Alarm Display

The unit informs you the existence of an alarm with a buzzer, a message display, or flashing indicators when the unit detects an alarm triggered in Live-Picture mode or Playback mode.

You may mute the buzzer by menu operation. See "Buzzer Settings" on page 40.

When an external alarm input is received

When the unit receives a signal from an external alarm sensor which is connected to one of the ALARM IN terminals, the buzzer sounds, and the indicator of the INPUT SELECTOR button of the corresponding camera begins to flash.

The picture from the camera and its camera number are displayed full-screen on the monitor, and the EA (External Alarm) display appears and flashes to the left of the camera title.

When alarm status is released, the screen restores the previous condition.

Note

If no camera is connected to the camera connector corresponding to the ALARM IN terminal that received the alarm signal, only the camera number and the EA display are displayed on a gray screen.

For connection of external alarm sensors, see "Alarm Signal Connection" on page 20.

Live Picture Monitoring

When an input signal is interrupted (no-signal alarm)

If the camera signal is interrupted due to a cable disconnection or other cause, the INPUT SELECTOR button on the related camera starts to flash.

The monitor screen goes gray and VIDEO LOSS flashes on the screen.

When the input signal is restored, the monitor display returns to the state it was in prior to the alarm.

When the activity detection sensor is activated

The internal activity detection sensor can be used as an alarm trigger. When the sensor detects an activity, a buzzer sounds, and the indicator of the INPUT SELECTOR button corresponding to the camera begins to flash.

For details, see “Setting the Activity Detection Sensor” on page 65.

The picture from the camera and the camera number is displayed full-screen on the monitor, and the SA (Sensor Alarm) display flashes to the left of the camera title.

When alarm status is released, the screen is restored to the previous condition.

To reset the alarm display forcibly

Press the ALARM RESET button.

Overview of Recording

Types of Recording

Four recording modes are available: normal recording, timer recording, alarm recording, and pre-alarm recording.

Normal recording

Images from all connected cameras are recorded. Recording is started with the REC button and stopped with the REC STOP button.

Timer recording

Normal recording starts and stops automatically at times you have specified in advance.

Alarm recording

Recording automatically starts when an alarm signal is detected. Alarm signals can be of the following two types and settings can be configured for each camera.

- 1) External alarm input
- 2) Internal activity detection sensor (detects changes in luminance at a specified point in the image)

Pre-alarm recording

By setting pre-alarm recording to “ON” when configuring the alarm recording settings, image recording starts a short time before an alarm is triggered.

Data recorded by normal recording, alarm recording, or timer recording can be stored in the archive area assigned independently from the recording area with a copy operation.

For details on operations, see “Data Storage” on page 72.

Note

Though it is rare case, but it includes the possibility of image loss.

Areas for Recording

The built-in hard disk is partitioned into the recording area, and archive area for data storage.

By default, 80 percent is allocated to the recording area and 20 percent to the archive area.

You may change these percentages using
2. RECORDING AREA SET of the main menu
2. RECORD SET.

You can select whether to stop recording, or to overwrite the recording area when the hard disk becomes full, by selecting in submenu 3. RECORDING CONDITIONS SET of the main menu
2. RECORD SET.

The data in each area can be erased with a reset operation.

For details, see “Recording Area Settings” on page 35.

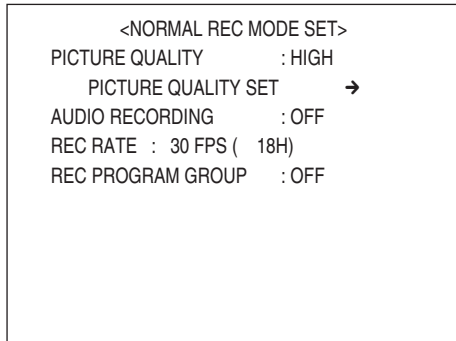
Important! Please read:

- For important recordings, be sure to make a trial recording beforehand in order to confirm that video is recorded correctly.
- In the rare event that the recorder malfunctions during use, Sony assumes no liability for any content lost.

Normal Recording

Settings for Normal Recording

For normal recording, you may select an appropriate picture quality, frame or field recording, audio recording, and a recording cycle. Select the main menu 2. RECORD SET, then the submenu 4. NORMAL REC MODE SET.



PICTURE QUALITY

Select an appropriate picture quality from among 6 levels. The default is HIGH.

HYPER: To record with 42 KB/field (including a header of 2 KB)

SUPER: To record with 34 KB/field (including a header of 2 KB)

HIGH: To record with 26 KB/field (including a header of 2 KB)

MID: To record with 18 KB/field (including a header of 2 KB)

LOW: To record with 10 KB/field (including a header of 2 KB)

INDIV.: The recording image quality can be set for each individual camera.

The lower the mode you select, the longer the possible recording time becomes.

Setting the image quality individual cameras

Select INDIV., and turn the shuttle dial clockwise. Move the cursor to PICTURE QUALITY SET. Turn the shuttle dial clockwise, to display the PICTURE QUALITY SET screen. Select the camera number with the jog dial, and the image quality with the shuttle dial.

AUDIO RECORDING

To record an audio channel along with images, set AUDIO RECORDING to ON.

Note

Audio recording can be activated when you select a REC RATE value more than 1 FPS (HSR-J2009/J2016) or 8.333 FPS (HSR-J2009P/J2016P).

REC RATE

Set the recording rate in FPS (fields per second).

For the table of recording times and recording rates, see page 60.

REC PROGRAM GROUP

Choose one from among P-1 to P-4 to use particular cameras for recording. Use all the connected cameras, select OFF.

For setting P-1 to P-4, see the next paragraph.

Setting procedure

- 1 Display the main menu, then select 2. RECORD SET.
- 2 Select 4. NORMAL REC MODE SET from the submenu.

The NORMAL REC MODE SET display appears.
- 3 Turn the Jog dial to highlight the item to be set and turn the Shuttle dial clockwise to finalize your selection.

The current setting of the selected line flashes.
- 4 Turn the Jog dial to change to the desired setting and turn the Shuttle dial clockwise to register the new setting.

According to the selected picture quality and recording rate, the possible recording time is automatically calculated and displayed (in units of hours) in parentheses at the right end of the REC RATE line.

When you set AUDIO RECORDING to ON, “A” is displayed before the REC RATE value if audio recording is valid with the specified recording cycle.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Making program recording settings

You can choose particular cameras to be used for recording from among the cameras connected to this unit. Up to 4 patterns (P-1 to P-4) can be set.

Setting the recording rate for each camera

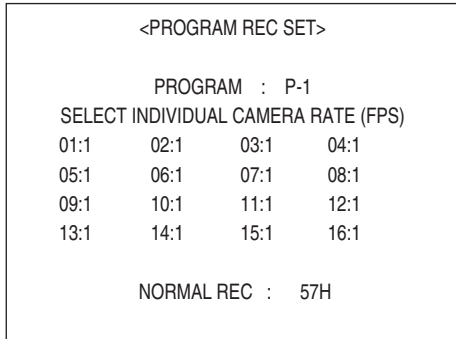
Recording rates can also be specified for each camera.

Perform the setting with the submenu 5. PROGRAM REC SET of the main menu 2. RECORD SET.

Setting procedure

- 1 Display the main menu, then select 2. RECORD SET.
- 2 Select 5. PROGRAM REC SET.

The PROGRAM REC SET menu appears.



- 3 Turn the Shuttle dial clockwise.
- 4 Select a program number (P-1 to P-4) with the Jog dial, then turn the Shuttle dial clockwise.

The cursor moves to the rate (FPS) setting area.

- 5 Specify the recording rate value for the camera input to be used for recording with the Jog dial, then turn the Shuttle dial clockwise.
Set to OFF for a camera input which is not to be used for recording with the Jog dial, then turn the Shuttle dial clockwise.

The cursor moves to the next camera input.

- 6 Repeat step 5 for each camera input.

The available total recording time is displayed in the lower part of the screen according to the number of cameras you chose and the specified recording rate.

Perform settings for other program numbers in the same manner as in steps 4 to 6.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Setting of the program recording is also possible for timer recording.

Available Recording Rates for Program Recording

HSR-J2009/J2016

30, 15, 7.5, 3.75, 1.875, 1, 0.5, 0.33, 0.25, 0.2, 0.1, 0.05, 0.03

Note

The maximum recording rate per channel is 30 FPS, but all cameras cannot be set to 30 FPS simultaneously. The total maximum recording rate of 120 FPS is shared by all cameras that are set to ON. The total recording rate that can be set depends on the number of cameras that are turned ON. The recording rate can be set to 120 FPS when all channels are ON. Otherwise the recording rate is limited.

Examples: program recording rate for HSR-J2016

When 16 cameras are ON (max. 120 FPS)

01: 7.5	02: 7.5	03: 7.5	04: 7.5
05: 7.5	06: 7.5	07: 7.5	08: 7.5
09: 7.5	10: 7.5	11: 7.5	12: 7.5
13: 7.5	14: 7.5	15: 7.5	16: 7.5

When 4 cameras are ON (max. 90 FPS)

01: 30	02: 30	03: 15	04: 15
05: OFF	06: OFF	07: OFF	08: OFF
09: OFF	10: OFF	11: OFF	12: OFF
13: OFF	14: OFF	15: OFF	16: OFF

(Camera to be ON can be selected at will.)

Normal Recording

HSR-J2009P/J2016P

25, 12.5, 6.25, 3.125, 1.563, 1, 0.5, 0.33, 0.25, 0.2, 0.1, 0.05, 0.03

Note

The maximum recording rate per channel is 25 FPS, but all cameras cannot be set to 25 FPS simultaneously. The total maximum recording rate of 100 FPS is shared by all cameras that are set to ON. The total recording rate that can be set depends on the number of cameras that are turned ON. The recording rate can be set to 100 FPS when all channels are ON. Otherwise the recording rate is limited.

Examples: program recording rate for HSR-J2016P

When 16 cameras are ON (max. 100FPS)

01: 6.25	02: 6.25	03: 6.25	04: 6.25
05: 6.25	06: 6.25	07: 6.25	08: 6.25
09: 6.25	10: 6.25	11: 6.25	12: 6.25
13: 6.25	14: 6.25	15: 6.25	16: 6.25

When 4 cameras are ON (max. 81.25FPS)

01: 25	02: 25	03: 25	04: 6.25
05: OFF	06: OFF	07: OFF	08: OFF
09: OFF	10: OFF	11: OFF	12: OFF
13: OFF	14: OFF	15: OFF	16: OFF

(Camera to be ON can be selected at will.)

Audio recording during program recording

Audio recording can be activated when the fastest recording rate set for a camera is 1 FPS or more (HSR-J2009/J2016) or 0.96 FPS or more (HSR-J2009P/J2016P).

Easy Setup Function

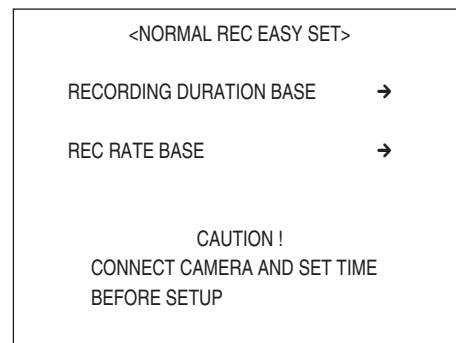
Using 1. NORMAL REC EASY SET of the RECORD SET menu, you can easily perform menu setup for normal recording.

Selecting the setting display

1 Select 2. RECORD SET from the main menu.

2 Select 1. NORMAL REC EASY SET.

The NORMAL REC EASY SET display appears.

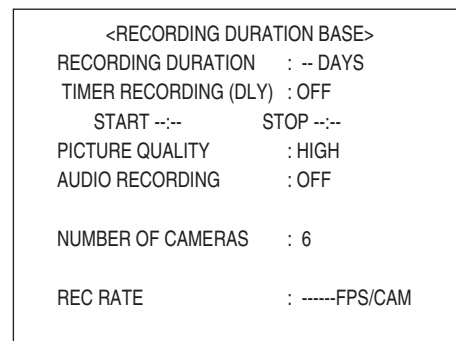


3 To make the settings by entering the number of days for recording, select RECORDING DURATION BASE.

To make the settings by entering the recording rate, select REC RATE BASE.

The corresponding setting display appears.

RECORDING DURATION BASE display



On the RECORDING DURATION BASE display , you need only enter and register Recording duration, Timer recording (Start/Stop), Picture quality and Audio recording (ON/OFF), and the number of connected cameras will be detected, and the recording rate will be calculated automatically. Recording duration must be set to a value from 1 to 99 days.

REC RATE BASE display

```

<REC RATE BASE>
REC RATE           : -----FPS/CAM
TIMER RECORDING (DLY) : OFF
  START --:--      STOP --:--
PICTURE QUALITY    : HIGH
AUDIO RECORDING    : OFF

NUMBER OF CAMERAS  : 6

RECORDING DURATION : ---- DAYS
  
```

On the REC RATE BASE display, you need only enter and register Recording rate, Timer Recording (Start/ Stop), Picture Quality and Audio Recording (ON/ OFF), and the number of connected cameras will be detected, and the recording duration will be calculated automatically.

Example settings with RECORDING DURATION BASE are shown below.

Setting: When only performing normal recording without timer recording

Set the recording duration and the picture quality only. The recording rate (REC RATE) per camera is indicated.

```

<RECORDING DURATION BASE>
RECORDING DURATION : 45 DAYS
TIMER RECORDING (DLY) : OFF
  START --:--      STOP --:--
PICTURE QUALITY    : HIGH
AUDIO RECORDING    : OFF

NUMBER OF CAMERAS  : 6

REC RATE           : 0.185 FPS/CAM
  
```

If audio recording is possible, the indication is changed from “- - -” to OFF. If audio recording is needed, change it to ON. At that time “A” is added to the indication of REC RATE, as shown below:

```

<RECORDING DURATION BASE>
RECORDING DURATION : 45 DAYS
TIMER RECORDING (DLY) : OFF
  START --:--      STOP --:--
PICTURE QUALITY    : HIGH
AUDIO RECORDING    : ON

NUMBER OF CAMERAS  : 6

REC RATE           : A0.185 FPS/CAM
  
```

When setup is completed

- Exit from the EASY SETUP display by turning the Shuttle dial counterclockwise. The following warning appears:

```

<WARNING>

REC RATE SETTING IN THE MENU WILL BE
AUTOMATICALLY ADJUSTED.
HDD INITIALIZE !

ARE YOU SURE ?
NO

CHANGE:JOG SET:SHUTTLE
  
```

Normal Recording

- 2** Change NO to YES using the Jog dial then turn the Shuttle dial clockwise.

If it is executed with NO or if alarm recording is carried out during setup, the initial EASY SETUP status will be resumed. Try setup again.

Confirmation of setup

To confirm the setup result, select Main Menu > 2. RECORD SET > 4. NORMAL REC MODE SET.

<NORMAL REC MODE SET>	
PICTURE QUALITY	: HIGH
PICTURE QUALITY SET	→
AUDIO RECORDING	: OFF
REC RATE	: 30 FPS (18H)
REC PROGRAM GROUP	: OFF

Settings: If timer recording is to be made

Enter the recording duration, change the timer from OFF to ON, then enter the Start/Stop time. Also set the picture quality.

“- - -” to OFF. If audio recording is needed, change it to ON. At that time “A” is added to the indication of REC RATE as shown below:

<RECORDING DURATION BASE>	
RECORDING DURATION	: 30 DAYS
TIMER RECORDING (DLY)	: OFF
START 09:00	STOP 17:00
PICTURE QUALITY	: HIGH
AUDIO RECORDING	: ON
NUMBER OF CAMERAS	: 6
REC RATE	: A1.000 FPS/CAM

When setup is completed

Turn the Shuttle dial counterclockwise.

When the warning is indicated, change NO to YES using the Jog dial, then turn the Shuttle dial clockwise.

Confirmation of setup

Select Main Menu > 2. RECORD SET > 6. TIMER SET.

The first DLY line is automatically set, as shown below. The SET columns of the second and subsequent lines are set to OFF. Note that these columns become OFF even if they were set to ON before EASY SETUP.

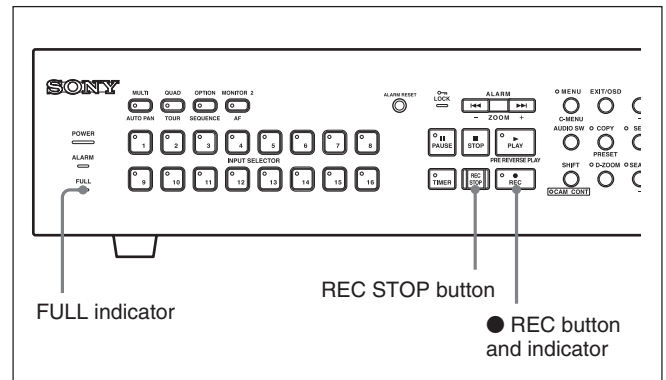
<TIMER SET>					
WEEK	START	STOP	PROGRAM	FPS	SET
SUN	--:--	--:--	OFF	15FPS	OFF
MON	--:--	--:--	OFF	15FPS	OFF
TUE	--:--	--:--	OFF	15FPS	OFF
WED	--:--	--:--	OFF	15FPS	OFF
THU	--:--	--:--	OFF	15FPS	OFF
FRI	--:--	--:--	OFF	15FPS	OFF
SAT	--:--	--:--	OFF	15FPS	OFF
DLY	--:--	--:--	OFF	15FPS	OFF
EXT	****	****	OFF	15FPS	OFF

Notes

- If either Mirroring or Pre-alarm recording is to be set to ON, be sure to make the setting before EASY SETUP.
- If Mirroring is set to ON, the REC RATE is restricted at 30 FPS at maximum. Also, if Pre-alarm recording is set to ON, the REC RATE is restricted at 15 FPS. If Mirroring and Pre-alarm are set to ON after applying EASY SETUP, the normal recording and timer settings may be changed.
- When EASY SETUP is applied after setting Mirroring or Pre-alarm to ON, the condition may not be met as the REC RATE is restricted. In such a case, "ERROR!" is indicated. Change the recording duration or the timer setting and try again. If the normal recording area is set to 0%, "ERROR!" is always indicated. The setup is not accepted unless "ERROR!" is canceled.

<RECORDING DURATION BASE>	
RECORDING DURATION	: 90 DAYS
TIMER RECORDING (DLY)	: OFF
START --:--	STOP --:--
PICTURE QUALITY	: HIGH
AUDIO RECORDING	: OFF
NUMBER OF CAMERAS	: 6
REC RATE	: ERROR !

Procedure of Normal Recording



To start recording

Press the ● REC button.

The indicator on the ● REC button lights, and recording begins.

Recording is made with the specified picture quality and at the specified recording cycle in the recording area.

When you set AUDIO RECORDING to ON and audio recording is valid with the specified recording cycle, audio is recorded with video.

Note

When timer recording has been set (the indicator on the TIMER button lit), recording cannot be started with the ● REC button. First press the TIMER button to cancel timer recording.

When the normal recording area becomes full

If overwriting of the normal recording area has been set to OFF, a warning message will appear on the monitor screen when the remaining capacity drops to the specified value (1% with the default). At the same time, the FULL indicator flashes and a warning signal is output from the FULL terminal on the rear panel. The overwriting ON/OFF setting and the value of the remaining for warning can be changed with the submenu 3. RECORDING CONDITIONS SET of the main menu 2. RECORD SET.

For details, see page 36.

To stop recording

Press the REC STOP button.

Normal Recording

Recording Time

HSR-J2009/J2016

Unit: hours (values with audio recording shown in parentheses)

RECRATE			PICTURE QUALITY				
1 input	16 inputs	TLV values	LOW	MID	HIGH	SUPER	HYPER
fps (sec)	fps (sec)	mode (H)					
120.00 (0.01)	7.500 (0.13)		86 (86)	45 (45)	31 (31)	23 (23)	19 (18)
60.00 (0.02)	3.750 (0.27)	2	173 (171)	91 (91)	62 (62)	47 (47)	38 (37)
30.00 (0.03)	1.875 (0.53)	4	346 (338)	183 (181)	124 (123)	94 (93)	76 (75)
20.00 (0.05)	1.250 (0.80)	6	519 (502)	275 (270)	187 (184)	141 (140)	114 (113)
15.00 (0.07)	0.938 (1.07)	8	692 (663)	366 (358)	249 (245)	188 (186)	152 (150)
10.00 (0.10)	0.625 (1.60)	12	1,039 (974)	550 (531)	374 (365)	283 (278)	228 (224)
7.500 (0.13)	0.469 (2.13)	16	1,385 (1,272)	733 (700)	498 (483)	377 (368)	304 (298)
6.000 (0.17)	0.375 (2.67)	20	1,731 (1,558)	916 (865)	623 (599)	472 (458)	380 (371)
5.000 (0.20)	0.313 (3.20)	24	2,078 (1,833)	1,100 (1,027)	748 (713)	566 (546)	456 (443)
4.286 (0.23)	0.268 (3.73)	28	2,424 (2,098)	1,283 (1,185)	872 (826)	661 (634)	532 (514)
3.750 (0.27)	0.234 (4.27)	32	2,771 (2,352)	1,467 (1,340)	997 (937)	755 (720)	608 (585)
3.333 (0.30)	0.208 (4.80)	36	3,117 (2,597)	1,650 (1,492)	1,122 (1,046)	850 (806)	684 (655)
3.000 (0.33)	0.188 (5.33)	40	3,463 (2,834)	1,833 (1,640)	1,246 (1,154)	944 (890)	760 (724)
2.727 (0.37)	0.170 (5.87)	44	3,810 (3,061)	2,017 (1,786)	1,371 (1,260)	1,039 (974)	836 (793)
2.308 (0.43)	0.144 (6.93)	52	4,503 (3,493)	2,383 (2,067)	1,621 (1,468)	1,228 (1,138)	988 (929)
2.000 (0.50)	0.125 (8.00)	60	5,195 (3,896)	2,750 (2,338)	1,870 (1,670)	1,417 (1,298)	1,140 (1,062)
1.667 (0.60)	0.104 (9.60)	72	6,234 (4,453)	3,300 (2,724)	2,244 (1,962)	1,700 (1,533)	1,368 (1,258)
1.429 (0.70)	0.089 (11.20)	84	7,274 (4,959)	3,851 (3,088)	2,618 (2,242)	1,983 (1,759)	1,596 (1,448)
1.250 (0.80)	0.078 (12.80)	96	8,313 (5,421)	4,401 (3,432)	2,992 (2,510)	2,267 (1,979)	1,824 (1,633)
1.111 (0.90)	0.069 (14.40)	108	9,352 (5,845)	4,951 (3,757)	3,366 (2,768)	2,550 (2,191)	2,052 (1,814)
1.000 (1)	0.063 (16)	120	10,391 (6,234)	5,501 (4,066)	3,740 (3,016)	2,834 (2,398)	2,281 (1,989)
0.500 (2)	0.031 (32)	240	20,783	11,002	7,481	5,668	4,562
0.333 (3)	0.021 (48)	360	31,174	16,504	11,222	8,502	6,843
0.250 (4)	0.016 (64)	480	41,566	22,005	14,963	11,336	9,124
0.200 (5)	0.013 (80)	600	51,958	27,507	18,704	14,170	11,405
0.100 (10)	0.006 (160)	1200	103,916	55,014	37,409	28,340	22,810
0.050 (20)	0.003 (320)	2400	207,832	110,028	74,819	56,681	45,621
0.033 (30)	0.002 (480)	3600	311,748	165,043	112,229	85,022	68,432

The recording times listed in the table are subject to the following conditions:

- The hard disk capacity of this recorder is 500 GB: If you change the capacity, the recording times will also change. If you double the capacity, the recording times will also become doubled, and with the capacity increased fourfold, the recording times will also increase fourfold.
- Of the capacity of the disk, 20% is used as the archive area and the remaining 80% is used as normal recording area.
- If multiple cameras are connected, they will share the recording areas. For example, when you set the recording rate to 1 FPS (1-second cycles) with 16 camera inputs, each input is recorded at 0.063 FPS (6-second cycles).

Note

The size of a picture file may vary, as pictures are recorded with JPEG2000 compression. The recording times, therefore, may not always match the values shown in the tables.

HSR-J2009P/J2016P

Unit: hours (values with audio recording shown in parentheses)

RECRATE			PICTURE QUALITY				
1 input	16 inputs	TLV values	LOW	MID	HIGH	SUPER	HYPER
fps (sec)	fps (sec)	mode (H)					
100.00 (0.01)	6.250 (0.16)		103 (103)	55 (54)	37 (37)	28 (28)	22 (22)
50.00 (0.02)	3.125 (0.32)	3	207 (205)	110 (109)	74 (74)	56 (56)	45 (45)
25.00 (0.04)	1.563 (0.64)	6	415 (404)	220 (216)	149 (148)	113 (112)	91 (90)
16.67 (0.06)	1.042 (0.96)	9	623 (599)	330 (323)	224 (221)	170 (168)	136 (135)
12.50 (0.08)	0.781 (1.28)	12	831 (789)	440 (428)	299 (293)	226 (223)	182 (180)
8.33 (0.12)	0.521 (1.92)	18	1,246 (1,154)	660 (633)	448 (436)	340 (332)	273 (269)
6.25 (0.16)	0.391 (2.56)	24	1,662 (1,502)	880 (8,330)	598 (576)	453 (440)	364 (356)
5.00 (0.20)	0.313 (3.20)	30	2,078 (1,833)	1,100 (1,027)	748 (713)	566 (546)	456 (443)
4.17 (0.24)	0.260 (3.84)	36	2,493 (2,149)	1,320 (1,217)	897 (848)	680 (651)	547 (528)
3.57 (0.28)	0.223 (4.48)	42	2,909 (2,451)	1,540 (1,401)	1,047 (981)	793 (755)	638 (613)
3.13 (0.32)	0.195 (5.12)	48	3,325 (2,740)	1,760 (1,581)	1,197 (1,111)	906 (857)	729 (697)
2.78 (0.36)	0.174 (5.76)	54	3,740 (3,016)	1,980 (1,757)	1,346 (1,239)	1,020 (957)	821 (780)
2.50 (0.40)	0.156 (6.40)	60	4,156 (3,281)	2,200 (1,928)	1,496 (1,365)	1,133 (1,056)	912 (861)
2.27 (0.44)	0.142 (7.04)	66	4,572 (3,535)	2,420 (2,095)	1,646 (1,488)	1,246 (1,154)	1,003 (942)
1.92 (0.52)	0.120 (8.32)	78	5,403 (4,012)	2,860 (2,417)	1,945 (1,729)	1,473 (1,346)	1,186 (1,102)
1.67 (0.60)	0.104 (9.60)	90	6,234 (4,453)	3,300 (2,724)	2,244 (1,962)	1,700 (1,533)	1,368 (1,258)
1.47 (0.68)	0.092 (10.88)	102	7,066 (4,862)	3,740 (3,016)	2,543 (2,186)	1,927 (1,715)	1,551 (1,410)
1.32 (0.76)	0.082 (12.16)	114	7,897 (5,241)	4,181 (3,296)	2,843 (2,404)	2,153 (1,892)	1,733 (1,560)
1.19 (0.84)	0.074 (13.44)	126	8,728 (5,595)	4,621 (3,564)	3,142 (2,615)	2,380 (2,065)	1,916 (1,706)
1.09 (0.92)	0.068 (14.72)	138	9,560 (5,925)	5,061 (3,820)	3,441 (2,819)	2,607 (2,233)	2,098 (1,849)
1.00 (1)	0.063 (16)	150	10,391 (6,234)	5,501 (4,066)	3,740 (3,016)	2,834 (2,398)	2,281 (1,989)
0.50 (2)	0.031 (32)	300	20,783	11,002	7,481	5,668	4,562
0.33 (3)	0.021 (48)	450	31,174	16,504	11,222	8,502	6,843
0.25 (4)	0.016 (64)	600	41,566	22,005	14,963	11,336	9,124
0.20 (5)	0.013 (80)	750	51,958	27,507	18,704	14,170	11,405
0.10 (10)	0.006 (160)	1500	103,916	55,014	37,409	28,340	22,810
0.05 (20)	0.003 (320)	3000	207,832	110,028	74,819	56,681	45,621
0.03 (30)	0.002 (480)	4500	311,748	165,043	112,229	85,022	68,432

The recording times listed in the table are subject to the following conditions:

- The hard disk capacity of this recorder is 500 GB: If you change the capacity, the recording times will also change. If you double the capacity, the recording times will also become doubled, and with the capacity increased fourfold, the recording times will also increase fourfold.
- Of the capacity of the disk, 20% is used as the archive area and the remaining 80% is used as normal recording area.
- If multiple cameras are connected, they will share the recording areas. For example, when you set the recording rate to 1 FPS (1-second cycles) with 16 camera inputs, each input is recorded at 0.063 FPS (6-second cycles).

Note

The size of a picture file may vary, as pictures are recorded with JPEG2000 compression. The recording times, therefore, may not always match the values shown in the tables.

Normal Recording

Recording rate

HSR-J2009/J2016

Display order	(Note 1) REC Rate (fps)	Normal REC rate		Program REC rate		Alarm REC rate	Pre-alarm REC rate	
		Mirroring OFF	Mirroring ON	Mirroring OFF	Mirroring ON		Mirroring OFF	Mirroring ON
1	120	○ (Note 2)					○ (Note 2)	
2	60	○ (Note 3)	○ (Note 3)			○ (Note 3)	○ (Note 3)	○ (Note 3)
3	30	○	○	○	○	○	○	○
4	20	○	○			○	○	○
5	15	○	○	○	○	○	○	○
6	10	○	○			○	○	○
7	7.5	○	○	○	○	○	○	○
8	6	○	○			○	○	○
9	5	○	○			○	○	○
10	4.29	○	○			○	○	○
11	3.75	○	○	○	○	○	○	○
12	3.33	○	○			○	○	○
13	3	○	○			○	○	○
14	2.73	○	○			○	○	○
15	2.31	○	○			○	○	○
16	2	○	○			○	○	○
	1.875			○	○			
17	1.67	○	○			○	○	○
18	1.43	○	○			○	○	○
19	1.25	○	○			○	○	○
20	1.11	○	○			○	○	○
21	1	○	○	○	○	○	○	○
22	0.5	○	○	○	○	○		
23	0.33	○	○	○	○	○		
24	0.25	○	○	○	○	○		
25	0.2	○	○	○	○	○		
26	0.1	○	○	○	○	○		
27	0.05	○	○	○	○	○		
28	0.03	○	○	○	○	○		

(Note 1) This is the maximum recording rate for all channels. This recording rate is shared among all cameras set to ON.

(Note 2) The maximum recording rate for 1 camera is 30 FPS (0.033 s), for 4 or more cameras that are on simultaneously it is 120 FPS (0.008 s).

(Note 3) The maximum recording rate for 1 camera is 30 FPS (0.033 s), for 2 or more cameras that are on simultaneously it is 60 FPS (0.017 s).

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Display order	(Note 1) REC Rate (fps)	Normal REC rate		Program REC rate		Alarm REC rate	Pre-alarm REC rate	
		Mirroring OFF	Mirroring ON	Mirroring OFF	Mirroring ON		Mirroring OFF	Mirroring ON
1	100	○ (Note 2)					○ (Note 2)	
2	50	○ (Note 3)	○ (Note 3)			○ (Note 3)	○ (Note 3)	○ (Note 3)
3	25	○	○	○	○	○	○	○
4	16.67	○	○			○	○	○
5	12.50	○	○	○	○	○	○	○
6	8.33	○	○			○	○	○
7	6.25	○	○	○	○	○	○	○
8	5.00	○	○			○	○	○
9	4.17	○	○			○	○	○
10	3.57	○	○			○	○	○
11	3.13	○	○	○	○	○	○	○
12	2.78	○	○			○	○	○
13	2.50	○	○			○	○	○
14	2.27	○	○			○	○	○
15	1.92	○	○			○	○	○
16	1.67	○	○			○	○	○
	1.563			○	○			
17	1.47	○	○			○	○	○
18	1.32	○	○			○	○	○
19	1.19	○	○			○	○	○
20	1.09	○	○			○	○	○
21	1	○	○	○	○	○	○	○
22	0.5	○	○	○	○	○		
23	0.33	○	○	○	○	○		
24	0.25	○	○	○	○	○		
25	0.2	○	○	○	○	○		
26	0.1	○	○	○	○	○		
27	0.05	○	○	○	○	○		
28	0.03	○	○	○	○	○		

(Note 1) This is the maximum recording rate for all channels. This recording rate is shared among all cameras set to ON.

(Note 2) The maximum recording rate for 1 camera is 25 FPS (0.04 s), for 4 or more cameras that are on simultaneously it is 100 FPS (0.01 s).

(Note 3) The maximum recording rate for 1 camera is 25 FPS (0.04 s), for 2 or more cameras that are on simultaneously it is 50 FPS (0.02 s).

Alarm and Pre-alarm Recording

Settings for Alarm Recording

For alarm recording, you may set the following requirements, including the trigger.

Use the submenu 7. ALARM REC MODE SET of the main menu 2. RECORD SET.

ALARM REC MODE SET display

<ALARM REC MODE SET>	
ALARM RECORDING	: OFF
PICTURE QUALITY	: HIGH
PICTURE QUALITY SET	→
AUDIO RECORDING	: OFF
ALARM INTERLEAVE	: ONLY
REC RATE: 15 FPS , DURATION: 20SEC	
PRE-ALARM RECORDING: ***	
REC RATE: **** FPS , DURATION: ****	
ALARM TRIGGER	: ALARM
ACTIVITY SENSOR	→

ALARM RECORDING

Select the mode to execute alarm recording:

ENABLED: To execute alarm recording regardless of timer recording

AL-REC ON TIMER: To execute alarm recording only while timer recording is in progress

AL-REC OFF TIMER: To execute alarm recording only while timer recording is not in progress

ONLY AL-RC ON TMR: To execute alarm recording during the period(s) set for timer recording (timer recording itself is not performed)

OFF: No alarm recording

PICTURE QUALITY, AUDIO RECORDING

These items can be set the same as for normal recording.

Setting the recording image quality for each camera

Set this in the same way as for normal recording.

ALARM INTERLEAVE

SW: To alternately record the image from the camera in alarm status and the images from all cameras not in alarm status.

Example 1:

When an alarm is triggered on camera 1, images are recorded in the camera sequence 1 → 2 → 1 → 3 → 1 → 4 → 1 → 5 → 1 → 6 → 1 → 7 → 1 and so on.

Example 2:

When an alarm is triggered on cameras 1 and 2, images are recorded in the camera sequence 1 → 3 → 2 → 4 → 1 → 5 → 2 → 6 → 1 → 7 → 2 → 8 → 1 and so on.

ONLY: To record the image from the camera in alarm status only. If multiple alarms are generated, the images of the cameras in alarm status are recorded in sequence.

ALL: To record the images from all connected cameras in order.

REC RATE

Set the recording rate in the same manner as for normal recording.

DURATION

5 SEC–15 MIN: Set the duration of alarm recording for all the active cameras in common.

CC: To make recording as long as the alarm signal is ON (5 second at minimum).

PRE-ALARM RECORDING

To perform pre-alarm recording, set ALARM RECORDING to ON, set PRE-ALARM RECORDING to ON, and then select the REC RATE and DURATION for pre-alarm recording.

Notes

- You cannot highlight PRE-ALARM RECORDING on the display with ALARM RECORDING set to OFF.
- Pre-alarm recording is disabled during a normal recording or timer recording. If you enable pre-alarm recording, it does not take effect until normal recording or timer recording has finished.

HSR-J2009/J2016

REC RATE (fps)	Selectable DURATION values
120.00	5s/10s/20s/40s/1m/2m/3m/4m/5m/10m/15m
60.00	5s/10s/20s/40s/1m/2m/3m/4m/5m/10m/15m
30.00	5s/10s/20s/40s/1m/2m/3m/4m/5m/10m/15m
20.00	5s/10s/20s/40s/1m/2m/3m/4m/5m/10m/15m
15.00	5s/10s/20s/40s/1m/2m/3m/4m/5m/10m/15m
10.00	10s/20s/40s/1m/2m/3m/4m/5m/10m/15m
7.500	10s/20s/40s/1m/2m/3m/4m/5m/10m/15m
6.000	10s/20s/40s/1m/2m/3m/4m/5m/10m/15m
5.000	20s/40s/1m/2m/3m/4m/5m/10m/15m
4.286	20s/40s/1m/2m/3m/4m/5m/10m/15m
3.750	20s/40s/1m/2m/3m/4m/5m/10m/15m
3.333	20s/40s/1m/2m/3m/4m/5m/10m/15m
3.000	20s/40s/1m/2m/3m/4m/5m/10m/15m
2.727	20s/40s/1m/2m/3m/4m/5m/10m/15m
2.308	40s/1m/2m/3m/4m/5m/10m/15m
2.000	40s/1m/2m/3m/4m/5m/10m/15m
1.875	1m/2m/3m/4m/5m/10m/15m
1.667	1m/2m/3m/4m/5m/10m/15m
1.429	1m/2m/3m/4m/5m/10m/15m
1.250	1m/2m/3m/4m/5m/10m/15m
1.111	1m/2m/3m/4m/5m/10m/15m
1.000	1m/2m/3m/4m/5m/10m/15m

HSR-J2009P/J2016P

REC RATE (fps)	Selectable DURATION values
100.00	5s/10s/20s/40s/1m/2m/3m/4m/5m/10m/15m
50.00	5s/10s/20s/40s/1m/2m/3m/4m/5m/10m/15m
25.00	5s/10s/20s/40s/1m/2m/3m/4m/5m/10m/15m
16.67	5s/10s/20s/40s/1m/2m/3m/4m/5m/10m/15m
12.50	5s/10s/20s/40s/1m/2m/3m/4m/5m/10m/15m
8.333	10s/20s/40s/1m/2m/3m/4m/5m/10m/15m
6.250	10s/20s/40s/1m/2m/3m/4m/5m/10m/15m
5.000	10s/20s/40s/1m/2m/3m/4m/5m/10m/15m
4.167	20s/40s/1m/2m/3m/4m/5m/10m/15m
3.571	20s/40s/1m/2m/3m/4m/5m/10m/15m
3.125	20s/40s/1m/2m/3m/4m/5m/10m/15m
2.778	20s/40s/1m/2m/3m/4m/5m/10m/15m
2.500	20s/40s/1m/2m/3m/4m/5m/10m/15m
2.273	20s/40s/1m/2m/3m/4m/5m/10m/15m
1.923	40s/1m/2m/3m/4m/5m/10m/15m
1.667	40s/1m/2m/3m/4m/5m/10m/15m
1.563	1m/2m/3m/4m/5m/10m/15m
1.471	1m/2m/3m/4m/5m/10m/15m
1.316	1m/2m/3m/4m/5m/10m/15m
1.190	1m/2m/3m/4m/5m/10m/15m
1.087	1m/2m/3m/4m/5m/10m/15m
1.000	1m/2m/3m/4m/5m/10m/15m

ALARM TRIGGER

Select the trigger.

ALARM: External alarm input

SENSOR: Internal alarm generated by the built-in activity detection sensor

ALARM AND SENSOR: Simultaneous occurrence of external and internal alarms

ALARM OR SENSOR: Occurrence of either an external or internal alarm

ACTIVITY SENSOR

When you select the activity sensor as the alarm trigger, perform the necessary settings.

Setting the Activity Detection Sensor

When you use the built-in activity detection sensor, it is necessary to set the sensing points, the TIME PERIOD during which the sensor is to be active, the sensitivity, and operation mode for each camera.

On the ALARM REC MODE SET screen, move the cursor to ACTIVITY SENSOR then turn the Shuttle dial clockwise to change to the Activity Detection Sensor Set display.

The 10×14 sensor points are displayed, and the top left point is highlighted in blue. This indicates the cursor position.

blue indication

A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
CH01	T-1	LEVEL : OFF	MODE : A											

① ③ ④ ⑤

1 Select a camera (item ①).

Press the INPUT SELECTOR button corresponding to the camera whose activity detection sensor is to be activated.

The number of the camera selected will be displayed in the lower-left corner of the setting screen.

B TO A: The alarm is triggered when a change of a subject moving from a B point to an A point is detected.

C: The alarm is triggered when the luminance of the whole screen becomes homogeneous (for example, if paint is sprayed on the camera lens).

Repeating steps **3**, **4**, and **5** enables you to vary the settings for Level (item ④) and Mode (item ⑤) for each time period.

Example:

- T-1: LEVEL 1, MODE A
- T-2: LEVEL 5, MODE B TO A
- T-3: LEVEL OFF
- T-4: LEVEL 3, MODE B

Color indications

The point for which the level and operation mode have been specified is indicated in green. It turns to red when an activity is detected.

If an activity is detected while you are setting the sensitivity

The buzzer will sound, and the detected point will be indicated in red. This enables activity checking on the setting display.

To exit the sensor setting screen

When you have finished setting the sensor, turn the Shuttle dial to the left to return to the ALARM REC MODE SET screen.

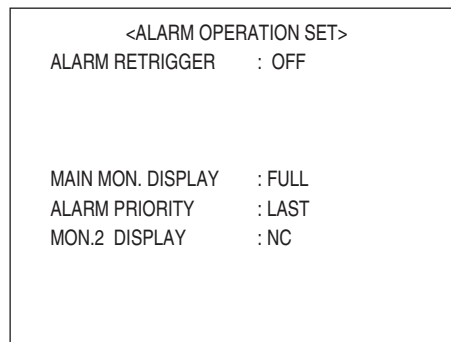
When the settings are completed

Press the EXIT/OSD button to exit the menu.

Setting the Operations and Displays for Alarm Recording

You can specify the operation when multiple alarms are detected and the display mode for alarm recording. Use the submenu 8. ALARM OPERATION SET of the main menu 2. RECORD SET.

ALARM OPERATION SET display



ALARM RETRIGGER

Select the mode for when another alarm signal to the camera which is already in alarm status is detected.

- ON:** To extend the alarm mode duration
- OFF:** Not to extend the alarm mode duration

MAIN MON. DISPLAY

Select the display mode for the main monitor during alarm recording.

- FULL:** To display the picture from a camera in alarm status full-screen
- 9:** To display camera pictures in 9-division mode
- 16:** To display camera pictures in 16-division mode
- NC:** To maintain the previous display even if an alarm is triggered

ALARM PRIORITY

Select the display mode of the monitor for when multiple alarms are detected.

- LAST:** To display the last alarm picture
- FIRST:** To display the first alarm picture
- SWITCH:** To display each alarm picture for 1 second in sequence

Alarm and Pre-alarm Recording

MON. 2 DISPLAY

Select the display mode of the monitor 2 connected via the MON. 2 connector for when an alarm is detected.

FULL: To display the picture from a camera in alarm status full-screen

9: To display camera pictures in 9-division mode

16: To display camera pictures in 16-division mode

NC: To maintain the previous display even if an alarm is triggered

Executing Alarm and Pre-alarm Recording

After setting alarm recording to ON and exiting the menu, alarm recording will start when the specified trigger is detected. Recording is executed according to the conditions specified on the ALARM REC MODE SET screen.

Each time alarm recording is made, the alarm count on the monitor increases by one.

The value returns to 0000000 when it exceeds 9999999.

When you set pre-alarm recording to ON, the recorder immediately starts pre-alarm recording when you exit the menu, and continues recording the camera input, overwriting the data in the recording area for the specified duration. When the trigger is detected, it starts regular alarm recording.

Pre-alarm recording is disabled during a normal recording or timer recording. If you enable pre-alarm recording, it does not take effect until normal recording or timer recording has finished.

During pre-alarm recording, the indicator of the ALARM button lights.

It flashes during alarm recording.

Notes

- If an alarm trigger is detected while normal recording is in progress, alarm recording is executed. When the alarm is over, normal recording continues.
- Up to 2,000,000 alarm recordings can be executed with mirroring set to OFF. Any alarm recordings beyond this limit will overwrite previous alarm recordings. (With mirroring set to ON, the limit is 1,000,000.)

Timer Recording

You can set the HSR-J2009/J2016/J2009P/J2016P to perform recording during a specified time every day or on a specified day of the week.

Up to eight sets of built-in timer recording and external timer (EXT TIMER terminal input) recording can be specified.

On the days specified as holidays with HOLIDAY SET, timer recording will be made with the same conditions as those set for Sunday.

In timer recording, data will be recorded in the recording area with the same picture quality as selected for normal recording.

Before you activate timer recording

Be sure that the built-in clock has been correctly set. Clock setting can be achieved with 1. LANGUAGE/CLOCK SET (page 32) of the main menu
1. INITIAL SET.

Settings for Timer Recording

The day of the week and starting/ending times are to be specified to activate timer recording. Use 6. TIMER SET of the main menu 2. RECORD SET.

<TIMER SET>					
WEEK	START	STOP	PROGRAM	FPS	SET
SUN	--:--	--:--	OFF	15FPS	OFF
MON	--:--	--:--	OFF	15FPS	OFF
TUE	--:--	--:--	OFF	15FPS	OFF
WED	--:--	--:--	OFF	15FPS	OFF
THU	--:--	--:--	OFF	15FPS	OFF
FRI	--:--	--:--	OFF	15FPS	OFF
SAT	--:--	--:--	OFF	15FPS	OFF
DLY	--:--	--:--	OFF	15FPS	OFF
EXT	****	****	OFF	15FPS	OFF

START: Set the time to start recording (hours and minutes in sequence).

STOP: Set the time to stop recording (hours and minutes in sequence).

PROGRAM: To use the program recording function, select a program among P-1 to P-4. If you do not need this function, select OFF.

For details on the program recording, see "Making program recording settings" on page 55.

FPS: Select the recording rate.

SET: To activate timer recording specified on this line, set to ON.

The same picture quality selected for normal recording is used for timer recording.

When audio recording is valid, "A" appears before the FPS value.

Setting procedure

- 1 Display the main menu, then select 2. RECORD SET.
- 2 Select 6. TIMER SET from the submenu.
The TIMER SET display appears.
- 3 Turn the Jog dial to highlight the line to be set and turn the Shuttle dial clockwise to finalize your selection.
The WEEK column of the selected line flashes.
- 4 Turn the Jog dial to set the day of the week and turn the Shuttle dial clockwise to register the setting.

To record with the same condition every day, set to DLY.

DLY includes all the days of a week (MON to SUN).

The left field of the START column flashes.

- 5 Set the remaining items on the line using the Jog and Shuttle dials.

To perform timer recording past midnight

When you specify for the starting time a time earlier than the ending time, "T" (meaning Tomorrow) is indicated at the ending time, and recording will be performed past midnight.

Example:

For recording from 20:00 on Sunday to 6:00 on Monday

SUN	20:00	T06:00	OFF	10FPS	ON
-----	-------	--------	-----	-------	----

To perform timer recording exceeding 24 hours

Use the second and third lines from the bottom. Set the day and time to start recording on the upper line and those to stop recording on the lower line.

Timer Recording

Example:

For recording from 19:00 on Saturday to 6:00 on Monday

SAT	19:00	**:**	***	****	***
MON	**:**	06:00	OFF	A15FPS	ON

Selecting ** on the upper line sets all the columns up to that for the starting time on the lower line to **.

When you turn the Shuttle dial, the WEEK indication on the lower line starts flashing. Set the day of the week and turn the Shuttle dial, upon which the ending time starts flashing. Specify the ending time and subsequent items.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Priority of timer recording

If the specified time for recording overlaps with those on other lines, recording will be made with the following priority for the overlapped parts:

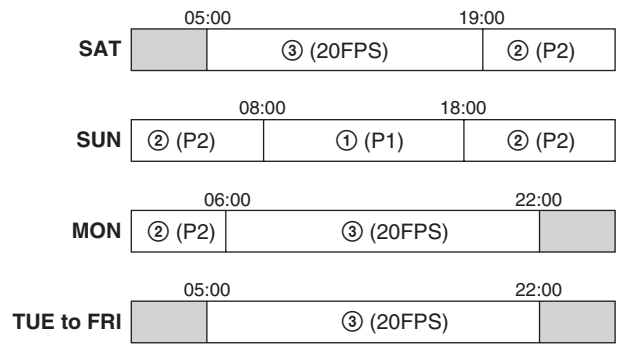
- ① Recording set for a certain day of the week (including that past midnight)
- ② Recording exceeding 24 hours
- ③ Recording set for DLY
- ④ External timer recording

Example:

<TIMER SET>						Priority
WEEK	START	STOP	PROGRAM	FPS	SET	
DLY	05:00	22:00	OFF	20	ON	← ③ DLY
SUN	08:00	18:00	P1	****	ON	← ① a certain day
SAT	19:00	**:**	***	****	***	← ② over 24 hours
MON	**:**	06:00	P2	****	ON	← ④ External timer
EXT	****	****	OFF	10	ON	

The FPS or PROGRAM settings with the above settings are as follows:

The picture quality set on the NORMAL REC MODE SET display is applied.



If an external timer input (the signal to the EXT TIMER IN terminal drops 0 V) is detected in the periods indicated [shaded], recording is performed with the recording rate of 10 FPS.

Setting holidays

On the days you specify as holidays, timer recording will be made with the same conditions set for Sunday. You may select up to 20 days of one year as holidays.

- 1 Select 1. INITIAL SET from the main menu.
- 2 Select 4. HOLIDAY SET from the submenu.

The HOLIDAY SET display appears.

<HOLIDAY SET>	
1.	11.
2.	12.
3.	13.
4.	14.
5.	15.
6.	16.
7.	17.
8.	18.
9.	19.
10.	20.

- 3 Turn the Jog dial to highlight the line to be set and turn the Shuttle dial clockwise to finalize your selection.

The month (HSR-J2009/J2016)/day (HSR-J2009P/J2016P) column of the selected line flashes.

- 4 Turn the Jog dial to set to the month (HSR-J2009/J2016)/day (HSR-J2009P/J2016P) and turn the Shuttle dial clockwise to register the setting.

The day (HSR-J2009/J2016)/month (HSR-J2009P/J2016P) column of the selected line flashes.

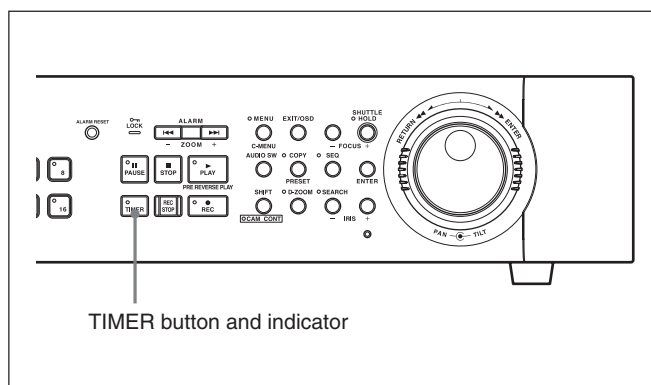
- 5** Turn the Jog dial to set to the day (HSR-J2009/J2016)/month (HSR-J2009P/J2016P) and turn the Shuttle dial clockwise to register the setting.

Up to 20 days can be set in the same manner.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Timer Recording Procedure



To activate timer recording

Press the TIMER button.

The indicator of the TIMER button lights, and the unit enters Timer Recording Standby mode.

Recording will automatically begin at the specified START time on the specified day, and the indicator of the ● REC button will light.

In timer recording, data are recorded in the picture quality specified for normal recording.

Recording will stop at the specified STOP time.

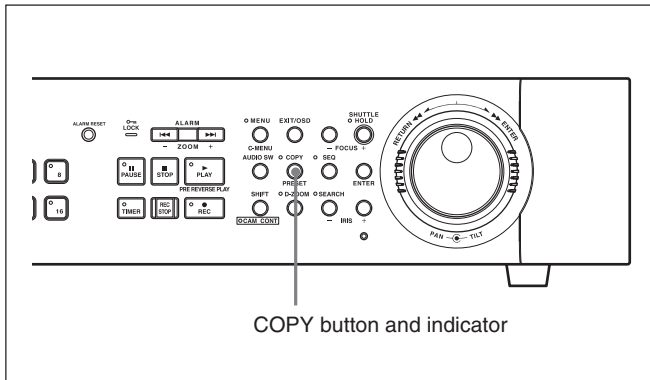
To cancel timer recording

Cancel Timer Recording Standby mode by pressing the TIMER button so that the indicator goes dark.

Timer recording in progress can also be stopped by pressing the TIMER button. Recording stops immediately.

Data Storage

The COPY button enables you to copy data recorded in the recording areas to the archive (data storage) area, or to CompactFlash cards, “Memory Sticks,” CD-R/RW, DVD+R/+RW and other external media for storage.



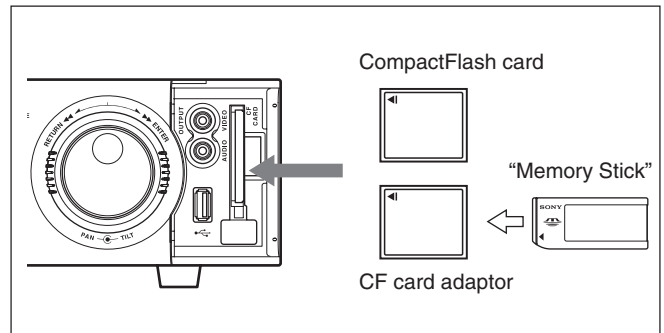
Notes

- The number of pictures that can be copied to a CompactFlash card or a “Memory Stick” at one time is limited to 40,000.
- It is not possible to make a copy of a split-screen display. Set to Full-screen mode.
- Audio data is not copied when data is copied to the archive (data storage) area.
- Audio data is not copied if the initial file contains no audio recording.
- Even if the initial file contains an audio recording, the presence of a file without audio recording in the subsequent files will turn off the copying of audio data for the subsequent files.

Using external memory

In addition to saving data through the USB connection to CD-R/RW or DVD+R/+RW, you can also save data to CompactFlash card in the CF card slot on the front panel.

Using a commercially available CF card adaptor enables data copying to “Memory Sticks,” etc.



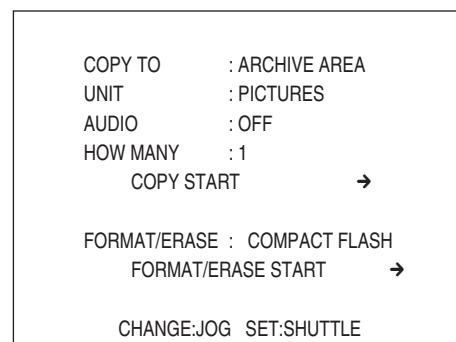
Copying data to the archive area, CompactFlash card, CD-R/RW, or DVD+R/+RW

Use the following procedure to copy image data within the recording area.

When copying data in the archive area to a CompactFlash card, etc., follow the steps in “Copying data from the archive area to CompactFlash card, CD-R/RW or DVD+R/+RW” on page 74.

- 1** Set the unit to Playback mode in Full-Screen mode, and when an image to start copying is displayed, press the **||** PAUSE button to switch to Still-Picture mode.
- 2** Press the COPY button.

The indicator of the COPY button lights, and the copy set display is superimposed on the image.



3 Turn the Shuttle dial clockwise when selecting the destination of the data on the COPY TO line.

ARCHIVE AREA: To copy the data to the archive area.

COMPACT FLASH: To copy the data to a CompactFlash card, etc.

DISK WRITER: To copy to CD-R/RW or DVD+R/+RW (only appears when a drive is connected to the USB port)

Select the destination with the Jog dial and turn the Shuttle dial clockwise to finalize your selection.

The UNIT line is highlighted.

4 Turn the Shuttle dial clockwise to specify the quantity of images to be copied on the UNIT line.

5 Set the unit with the Jog dial and turn the Shuttle dial clockwise to register the setting.

PICTURES: To specify the number in units of picture frames

TIME: To specify the duration (hours:minutes:seconds)

MAXIMUM: Copy until the destination is full, or to the end of the source data.

Reflects the HOW MANY setting.

When MAXIMUM was selected, proceed to step 7.

6 Turn the Shuttle dial clockwise.

Specify the number of copies or the time, and turn the Shuttle dial clockwise.

COPY START is highlighted.

7 Turn the Shuttle dial clockwise.

This checks the copy data and the capacity of the copy destination.

When the check is completed, a write confirmation screen appears.

```
COPY TO   : DISK WRITER
TYPE      : DVD+R
FREE AREA : 5000MB
DATA SIZE : 3526MB
NO. OF COPY : 1

COPY START →
```

NO. OF COPY: Set the number of media to copy (shown only when DISK WRITER has been selected as copy target).

8 Turn the Shuttle dial clockwise.

Copying begins.

When copying is completed, the indicator of the COPY button goes dark.

To stop copying in progress

Press the COPY button. The copy operation is canceled.

When the archive area becomes full

You can clear all the data in the area using the submenu 2. RECORDING AREA SET of the main menu 2. RECORD SET.

You cannot delete specific events only.

Note

When you copy to CompactFlash cards, the maximum number of images for continuous copying is 40,000. Copying is interrupted when the count reaches 40,000 after a copying operation is started. To copy to 40,001 images or more, copy to fewer than 40,000 images per operation.

To format CompactFlash card, CD-RW, or DVD+RW

By performing formatting, you can erase all previously stored data on a CompactFlash card, CD-RW, or DVD+RW.

Use the copy setting display for formatting.

1 Insert the CompactFlash card, CD-RW, or DVD+RW.

2 Set the unit to Still-Picture mode and press the COPY button.

The copy set display is superimposed on the image.

3 Turn the Jog dial to highlight FORMAT/ERASE and turn the Shuttle dial clockwise.

A confirmation message appears.

Data Storage

- 4 Select the medium to be formatted, and turn the shuttle dial clockwise.
 - 5 Turn the Jog dial to choose **FORMAT/ERASE START** then turn the Shuttle dial clockwise.
- Formatting begins.
The progress status is displayed during formatting.

When formatting is completed, a completion message is displayed, and the indicator of the **COPY** button goes dark.

Copying data from the archive area to CompactFlash card, CD-R/RW or DVD+R/+RW

Use the following procedure to copy data already saved in the archive area to CompactFlash card, CD-R/RW or DVD+R/+RW.

- 1 Press the **SEARCH** button to call the **SEARCH** menu (page 87) highlight **ARCHIVE AREA SEARCH**, and turn the Shuttle dial clockwise.
- 2 Select an event to be copied, and turn the Shuttle dial clockwise.
- 3 When an image to start copying is displayed, press the **PAUSE** button to switch to Still-Picture mode.
- 4 Press the **COPY** button.

The indicator of the **COPY** button lights, and the copy set display is superimposed on the image.
- 5 Turn the shuttle dial clockwise, and select the copy destination.
(Select **COMPACT FLASH** on the **COPY TO** line even when copying to a “Memory Stick,” etc. using a CF card adaptor.)

The **UNIT** line is highlighted.
- 6 Turn the Shuttle dial clockwise to specify the quantity of images to be copied on the **UNIT** line.

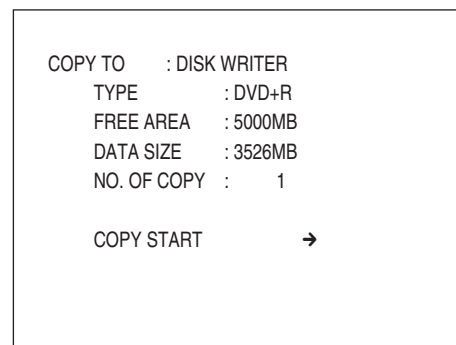
- 7 Set the unit with the Jog dial and turn the Shuttle dial clockwise to register the setting.
PICTURES: To specify the number in units of picture frames
TIME: To specify the duration (hours:minutes:seconds)
MAXIMUM: Copy until the destination is full, or to the end of the source data.

Reflects the **HOW MANY** setting.
When **MAXIMUM** was selected, proceed to step 9.

- 8 Turn the Shuttle dial clockwise.

Specify the number of copies or the time, and turn the Shuttle dial clockwise.
COPY START is highlighted.
- 9 Turn the shuttle dial clockwise.

This checks the copy data and the capacity of the copy destination.
When the check is completed, a write confirmation screen appears.



NO. OF COPY: Set the number of media to copy (shown only when **DISK WRITER** has been selected as copy target).

- 10 Turn the Shuttle dial clockwise.

Copying begins.
While the copying is proceeding, the progress is shown in percent.

When copying is completed, a completion message is displayed, and the indicator of the **COPY** button goes dark.

To stop copying in progress

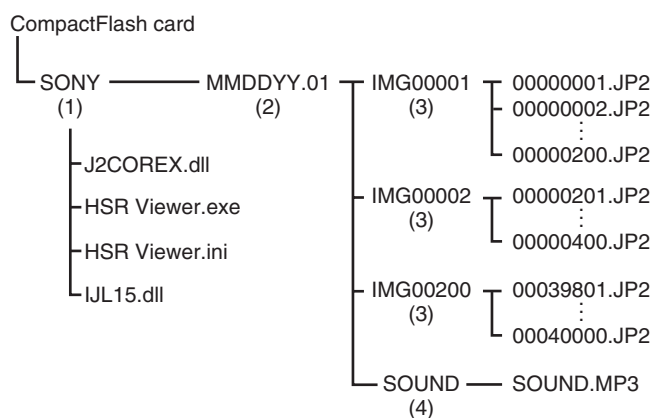
Press the **COPY** button. The copy operation is canceled.

Playing back copied video on a computer

You can view the video copied to CompactFlash card, CD-R/RW or DVD+R/+RW, on a computer.

Viewing video copied to CompactFlash card, on a computer

The CompactFlash card has the images saved in the following folders.

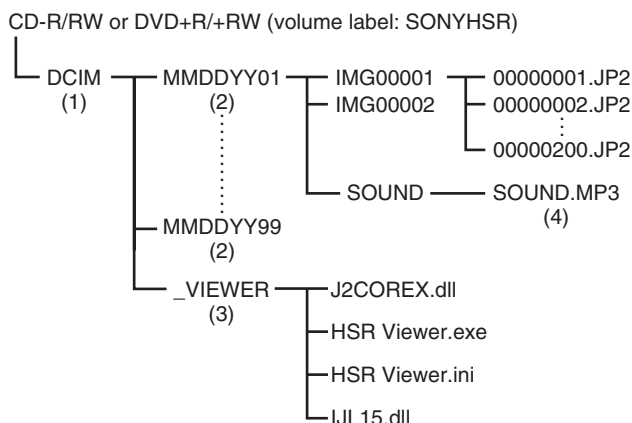


- (1) A directory “SONY” is created below the root directory.
- (2) Below the “SONY” directory is a folder named by the date of recording of the first image plus a two-digit serial number.
- (3) Below the date folder are subdirectories starting from “IMG00001.” Each subdirectory holds 200 images.
- (4) Below the date folder is also a “SOUND” subdirectory (not created when copying from the archive area).

To view the video on the computer, open “MMDDYY01” in a browser.

Viewing video copied to CD-R/RW or DVD+R/+RW on a computer

The CD-R/RW or DVD+R/+RW has the images saved in the following folders.



- (1) A directory “DCIM” is created below the root directory.
- (2) Below “DCIM” is a folder named by the date of the recording of the first image plus a 2-digit serial number. Each subdirectory holds 200 images.
- (3) Below the “DCIM” directory is also a “_VIEWER” folder.
- (4) Below the date folder is also a “SOUND” subdirectory (not created when copying from the archive area).

To view the video on the computer, open “MMDDYY01” in a browser.

Installing HSR Viewer

HSR Viewer is a program designed specifically for HSR-J2000 series.

It can be used to play back image and sound data that has been copied from this unit onto media such as computer hard disk drives, and CompactFlash card.

Installing HSR Viewer

Use the following steps to install the HSR Viewer.

1 Starting the installation wizard

1. Insert the CD-ROM disc in your CD-ROM drive.
A cover page appears automatically in your browser.
If it does not appear automatically in the browser, double click the index.htm file on the CD-ROM disc.
2. Select and click “HSR Viewer” to start installation.

Note

If a previous version of HSR Viewer is already installed, the “Repair/Remove HSR Viewer” screen appears. Select “Remove HSR Viewer” and click “Finish.”



When the old version has been deleted, click “Close” and start the installation again from step 1.

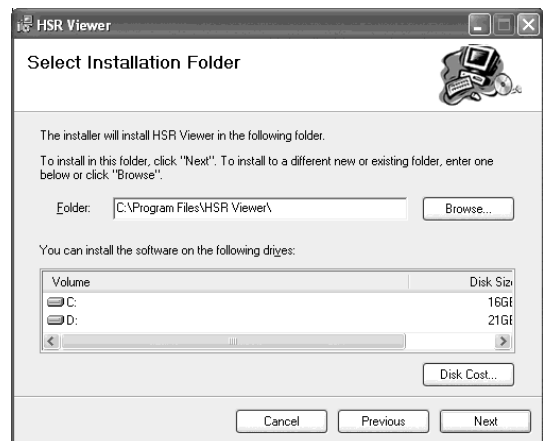
2 Starting the installation

Click on the “Next” button in the “Welcome to the HSR Viewer Setup Wizard” window to start the installation process.



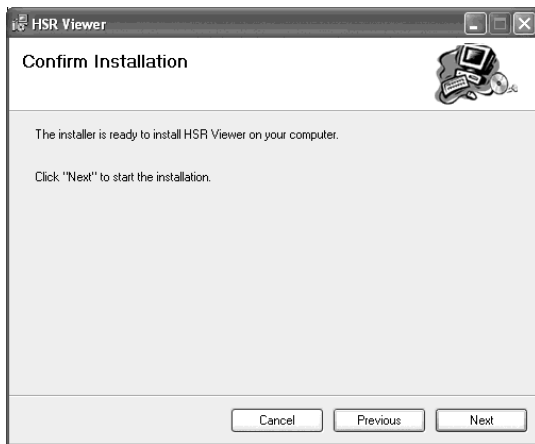
3 Choosing the destination location

Check that the installation folder shown in the “Select Installation Folder” window is correct, and then click on the “Next” button. If you wish to change the folder, click on the “Browse” button and specify the desired folder.



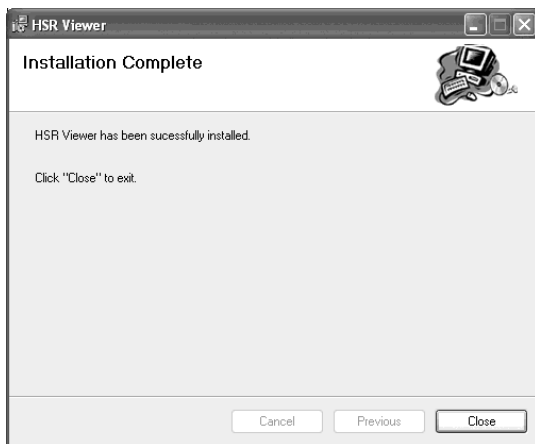
4 Confirming the installation

Click “Next” to start the installation.



5 Completion of installation

When the installation is complete, the following window appears. Click on the “Close” button.



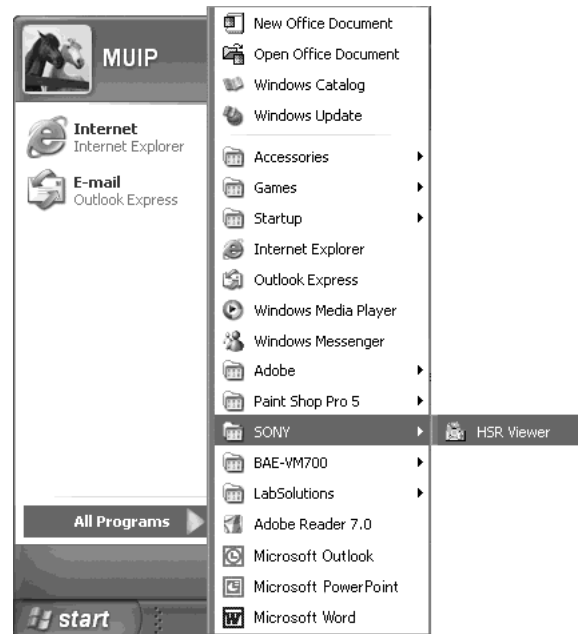
The setup process is completed, and a HSR Viewer shortcut icon is created on the desktop.



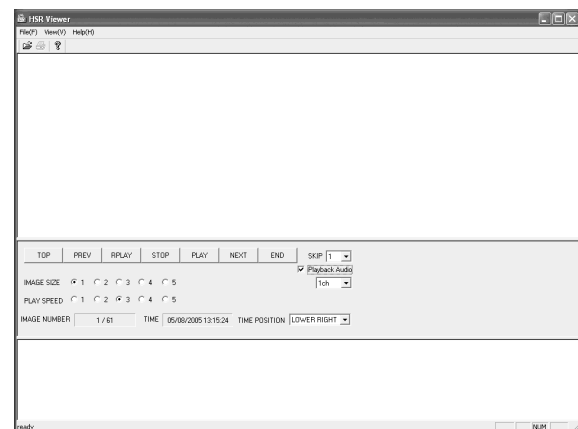
Opening HSR Viewer

Double-click the HSR Viewer shortcut icon on the desktop.

Alternatively, from the Start menu, select [All Programs] - [SONY] - [HSR Viewer] and left click to start the HSR Viewer program.




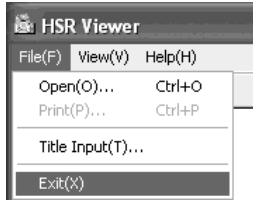
HSR Viewer starts up, and the following default window appears.



Data Storage

To close HSR Viewer

Click the  (close) button in the top-right corner of the program window, or select “Exit” from the File menu to close HSR Viewer.

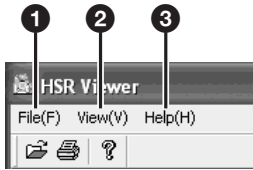


Menu structure

The basic menus for HSR Viewer are located on the menu bar and toolbar in the upper-left of the window. Click a command to open the corresponding menu.

1. Menu Bar

This is the basic menu for HSR Viewer. Click a command to view the details for that command.



1 File (F)

Open (O): Displays the Open file dialog box.

Print (P): Prints the specified file.

Title Input (T): Displays the dialog box for entering titles for printed images.

Exit (X): Closes HSR Viewer.

2 View (V)

Toolbar (T): Displays and hides the toolbar.

Status bar (S): Displays and hides the status bar at the bottom of the window.

Split (P): Moves the boundary line at the bottom of the window up and down.

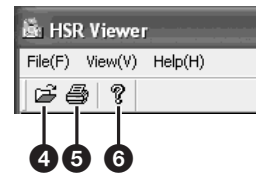
Date format (D): Sets the date display format.

3 Help (H)

Displays the version information for HSR Viewer that is currently open.

2. Toolbar

This contains commands that are most often used.



4 Corresponds to the “Open (O)” command in the “File (F)” menu.

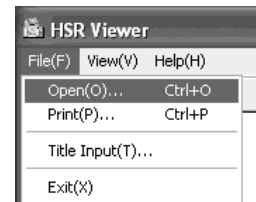
5 Corresponds to the “Print (P)” command in the “File (F)” menu.

6 Corresponds to the “Help (H)” command.

Opening files

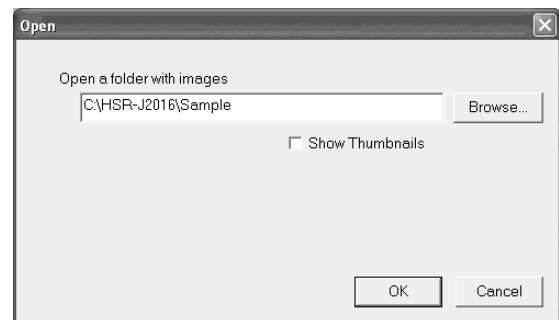
When HSR Viewer is opened, you can open files to be played back by the following procedure.

1 Click “Open (O)” in the File menu.



Alternatively, click on  on the toolbar. The “Open” dialog appears.

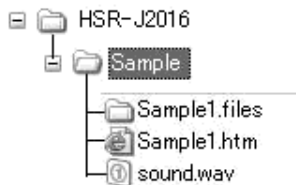
2 Specify the drive and folder containing the file to be opened.



Click on the Browse button to display the folder tree. Specify the folder to be viewed and then click on OK. If you wish thumbnail images to appear, check “Show Thumbnails.”

Notes

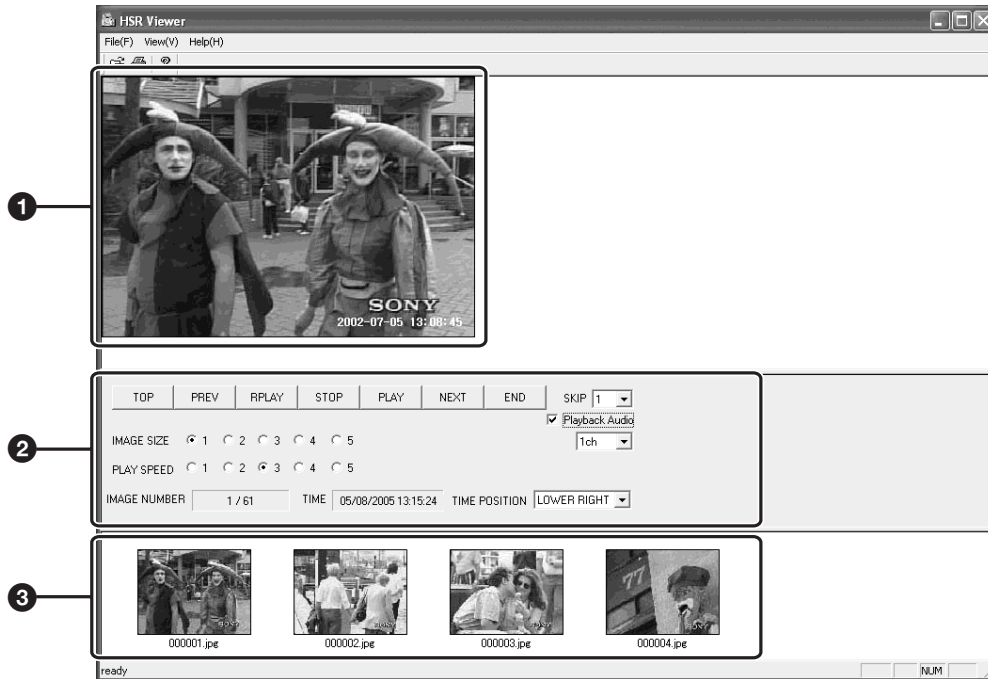
- To play back sound, be sure to specify a folder that contains “ sound.wav” files.
In the following case, specify D:\HSR-J2016\Sample.



- Images copied to a CD-R using a SCSI connection cannot be opened on the HSR-X200 and the HSR-X209. Use the HSR-X200 Viewer to open images copied to a CD-R from the HSR-X200 and the HSR-X209.
- To view single images in image files transferred by alarm notification or in image files that have been copied or downloaded, select the image file and open it with Internet Explorer.

Viewing images

When image files are opened, the images that have been loaded appear. The display window consists of a main window and a thumbnail window, and you can use various operations in these windows such as a slideshow.



1 Main window

When you double-click a thumbnail image, the image appears larger in the main window. The following images appear at the time when files are opened:

- For CD-R image data: First image
- For JPEG image data: Image with the smallest filename number

2 Control panel

This is used for playback operations in the main window and to adjust the images.

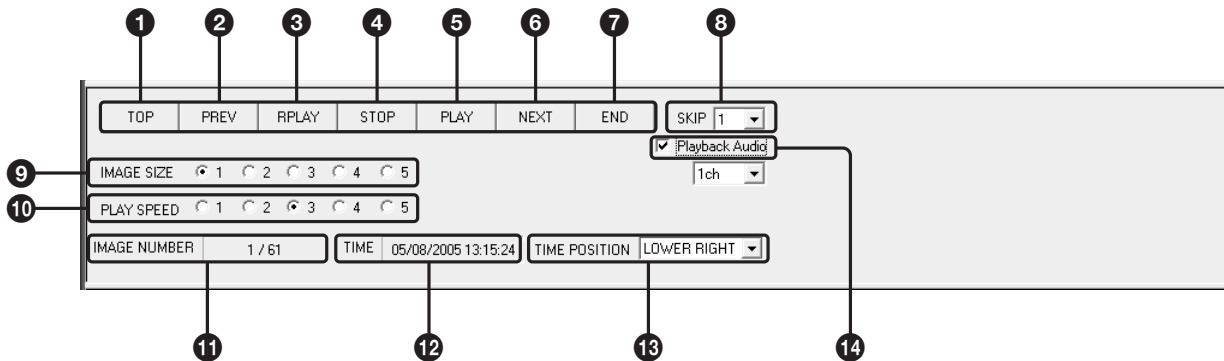
For details, see the next page.

3 Thumbnail window

All images that are stored in the specified folder appear as thumbnail images (compressed images) in ascending order of filename number.

Thumbnail images that will not fit in the window can be viewed using the scroll bar.

Control panel



1 TOP button

Moves to the start of a slideshow.

2 PREV button

Moves to the previous image in a slideshow regardless of the setting for “SKIP” **8**.

3 RPLAY button

Reverses back through the slideshow by skipping past the number of images specified by the setting for “SKIP” **8**.

4 STOP button

Stops the slideshow.

5 PLAY button

Starts continuous playback of the slideshow by skipping through the number of images specified by the setting for “SKIP” **8**.

6 NEXT button

Moves to the next image in a slideshow regardless of the setting for “SKIP” **8**.

7 END button

Moves to the end of a slideshow.

8 SKIP (Default setting: 1)

This sets the number of images that are skipped when playing and reverse playing slideshows. When using the default setting (= 1), all images are played back one at a time.

Set values: 1, 2, 3, 4, 5, 10, 20, 30, 40, 50, 100, 200

9 IMAGE SIZE (Default setting: 1)

The display size for images in the main window can be set to one of five sizes.

10 PLAY SPEED (Default setting: 3)

The playback speed for slideshows can be set to one of five speeds.

Playback speed	1	2	3	4	5
Playback interval	1 s	0.5 s	0.25 s	0.125 s	0.05 s

Note

The actual playback speed may vary depending on the computer’s performance. These values are not guaranteed.

11 IMAGE NUMBER

Shows “Current image number / Total number of images.”

12 TIME

Shows the time stamp for the displayed image.

Note

The year, month and day order is defined by the settings at the computer.

13 TIME POSITION (Default setting: LOWER RIGHT)

This specifies the display position for the time stamp. Available settings: LOWER RIGHT, UPPER RIGHT, UPPER LEFT, LOWER LEFT

Data Storage

14 Playback Audio

Specify the audio channels to be played from an image file with attached audio.

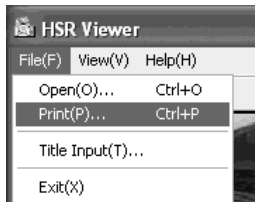
1ch	Play the audio recorded from the device connected to the AUDIO1 IN connector on the rear panel of the main unit.
2ch	Play the audio recorded from the device connected to the AUDIO2 IN connector on the rear panel of the main unit.
1+2ch	Play the audio recorded from the devices connected to both of the AUDIO1 IN and AUDIO2 IN connectors on the rear panel of the main unit.

Printing images

Specified images can be printed as full images together with date and time information.

1. To print the image in the main window

Select “Print” from the File menu, or click on  on the toolbar.



The Windows Print dialog box appears.

Make any settings that are required such as selecting the printer and the number of copies to be printed, and then click on OK. The main window will then be printed with the time stamp embedded in the image.

2. To print thumbnail images

Click the thumbnail image to be printed so that it appears in blue, and then repeat step 1 above.



3. To print several images all at once

Hold down the **[Ctrl]** key on the keyboard, and then click on the images to be printed in the thumbnail window to select them. To select a contiguous range of images, hold down the **[Shift]** key and then select the images.

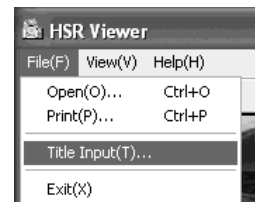
After selecting the images, perform step 1. Printing will be carried out successively, with one image per sheet.



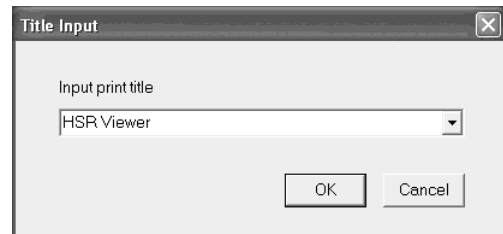
4. To display titles

To display titles for the images being printed, select “Title Input (T)” from the File menu to display the Title Input dialog box.

The title entered will appear underneath the printed image.



Title Input dialog box



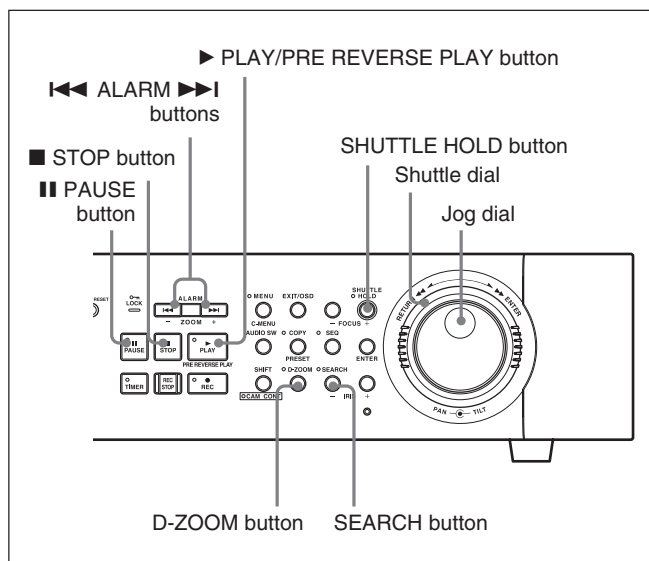
Up to 10 entered titles can be saved and selected from a list.

Playback

Using the ► PLAY button or through a search operation, you can view the recorded images. Once the playback starts, you may also select high-speed or slow-motion playback in both the forward and backward directions, still-picture playback, and frame-by-frame playback in both the forward and backward directions. The pre-reverse playback function permits you to check the recorded picture without stopping recording in progress.

For search operations, see “Picture Searching” on page 87.

Buttons and dials for playback operations



Normal Playback

Press the ► PLAY button.

The indicator of the button lights, and playback of pictures recorded on the recording area begins from the oldest recording or the position you have stopped previous playback operation.

When playback reaches the last of the recorded pictures, the unit automatically enters Still-Picture mode.

For playback of the archive area, see “Picture Searching” on page 87.

Playback of audio

If audio has been recorded, it will be played only when the unit is set to a split-screen mode.

Note that audio cannot be played back in variable-speed playback.

To stop playback

Press the ■ STOP button.

The display switches to the live picture.

Zooming on the playback picture

By pressing the D-ZOOM button, you can zoom to a part of the playback picture.

The area to zoom can be changed in the same manner as with the live picture.

For details on the operation, see “Zooming in on a detail of a picture” on page 46.

Multi-screen playback

When recording video from multiple cameras, you can play back the recorded video displayed as a multi-screen.

Four-screen playback

- 1 During playback, press the QUAD button.

The QUAD indicator lights, and the four-screen display appears.

- 2 To view the video from different cameras, press the QUAD button once more.

Each time you press the button switches to the next set of four cameras (default setting is for camera numbers 1 to 4, 5 to 8, 9 to 12, and 13 to 16).

- 3 To return to the screen, press the INPUT SELECTOR button.

Multi-screen (9 screen/16 screen) playback

- 1 Press the MULTI button during playback.

The MULTI indicator lights, and the 9-screen display appears. Press the MULTI button once more to switch to the 16-screen display.

- 2 To return to the screen, press the INPUT SELECTOR button.

Playback with an option screen

- 1 During 9-screen/16 screen playback, press the OPTION button.

The OPTION indicator lights up and the image from one camera is enlarged.

When the OPTION button was pressed during 9-division screen display

The screen switches to 6-division display (enlarged image + 5 images).

When the OPTION button was pressed during 16-division screen display

The screen switches to 13-division display (enlarged image + 12 images). (HSR-J2016/J2016P only)

- 2 Press the INPUT SELECTOR button for the camera whose image you want to enlarge.

An enlarged playback image from the selected camera appears.

Other displays

- In the option screen display, by pressing the MULTI button you can switch to a 6-screen (one enlarged screen + 5 screens) or 13-screen (one enlarged screen + 12 screens) (HSR-J2016/J2016P only).
- In the option screen display, by pressing the OPTION button, you can hold the playback image of the camera with the enlarged display, while monitoring the video (live video) of the other camera numbers.

To return to the 9-screen/16-screen display

Press the OPTION button.

Pre-Reverse Playback – Playback During Recording

Press the ► PLAY/PRE REVERSE PLAY button during recording.

While maintaining recording in progress, playback begins from the point in the recording area just before the specified pre-reverse play time (1 to 99 minutes) from the current time.

If you press the ► PLAY/PRE REVERSE PLAY button shortly after starting recording and the duration of recorded data in the normal recording area is still shorter than the specified pre-reverse play time, playback begins from the starting point of recording. When playback reaches to the current time, pre-reverse playback is canceled.

Setting the pre-reverse play time

Use the submenu 6. PRE REVERSE of the main menu 1. INITIAL SET.

1 Select 1. INITIAL SET from the main menu.

2 Select 6. PRE REVERSE from the submenu.

The PRE REVERSE PLAY display appears.



3 Turn the Jog dial to highlight PRE REVERSE PLAY TIME line and turn the Shuttle dial clockwise.

The current PRE REVERSE PLAY TIME setting flashes.

4 Turn the Jog dial to set the desired time and turn the Shuttle dial clockwise to register the setting.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Still-Picture Playback

During playback, press the ■■ PAUSE button.

The indicator of the ■■ PAUSE button lights, and the playback picture freezes.

Press the ■■ PAUSE button again to restore normal playback.

To advance or reverse the still picture frame by frame

Using the Jog dial, frame-by-frame playback can be done in both the forward and reverse directions.

Turning the Jog dial clockwise advances the pictures frame by frame, and turning it counterclockwise reverses the pictures frame by frame.

Variable-Speed Playback

The Jog and Shuttle dials enable playback at various speeds.

With the Jog dial

Using the Jog dial, you may change the playback speed (playback rate specified in frames per second).

Set the unit in Playback mode and turn the Jog dial.

If you rotate it clockwise, the playback speed increases. Counterclockwise rotation decreases the playback speed.

To return to standard speed playback, turn the Jog dial left or right to set the screen status display to ►.

Playback

With the Shuttle dial

Using the Shuttle dial, you may play the pictures at a high speed or in slow motion.

Set the unit to Playback mode (PLAY button indicator lit) or Still-Picture mode (PAUSE button indicator lit) and rotate the Shuttle dial.

Playback will be performed in the direction and speed indicated by the direction and orientation of the Shuttle dial.

When you release the dial, the previous mode is restored.

To hold the variable-speed playback

The SHUTTLE HOLD button enables you to lock the direction and speed obtained with the Shuttle dial.

Turn the Shuttle dial in the desired direction and hold it at the angle for the desired speed, then press the SHUTTLE HOLD button so that the indicator of the SHUTTLE HOLD button lights.

Playback of the direction and speed set by the Shuttle dial are maintained even after you release the Shuttle dial.

To restore the previous mode, press the SHUTTLE HOLD button again.

Direction and degrees of Shuttle dial rotation	Playback	Still-Picture
+70° to +80°	Skip playback in the forward direction	4-time normal speed in the forward direction
+50° to +70°	8-time normal speed in the forward direction	2-time normal speed in the forward direction
+30° to +50°	4-time normal speed in the forward direction	Normal speed in the forward direction
+10° to +30°	2-time normal speed in the forward direction	1/2-time normal speed in the forward direction
+10° to -10°	Normal speed in the forward direction	Still picture
-10° to -30°	Normal speed in the reverse direction	1/2-time normal speed in the reverse direction
-30° to -50°	2-time normal speed in the reverse direction	Normal speed in the reverse direction
-50° to -70°	4-time normal speed in the reverse direction	2-time normal speed in the reverse direction
-70° to -80°	Skip playback in the reverse direction	4-time normal speed in the reverse direction

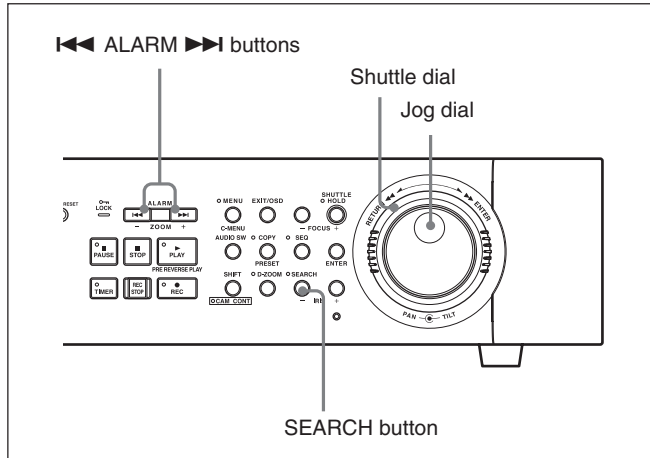
+: Clockwise rotation

-: Counterclockwise rotation

Picture Searching

You can find and play back the pictures recorded/stored on each area of the hard disk.
You may select from among six Search modes.

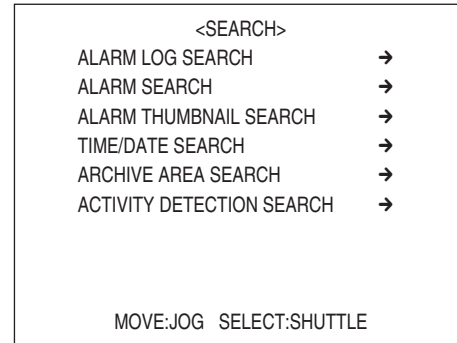
Buttons and dials for search operations



Search Mode Selection

- 1 Press the SEARCH button.

The SEARCH menu (search mode select display) appears.



- 2 Turn the Jog dial to highlight the desired search mode.

ALARM LOG SEARCH: To search for images recorded in the recording area, restricted to a specified time interval.

ALARM SEARCH: To find a picture recorded in the recording area from the list.

ALARM THUMBNAIL SEARCH: To find a picture recorded in the recording area by the thumbnail images.

TIME/DATE SEARCH: To find a picture recorded in the recording area by the recording date and time.

ARCHIVE AREA SEARCH: To find a picture stored in the archive area.

ACTIVITY DETECTION SEARCH: To find a picture recorded in the recording area using the built-in activity detection sensor.

- 3 Turn the Shuttle dial clockwise.

The setting display for the selected search mode appears.

To exit search operations

Press the SEARCH button again.

Picture Searching

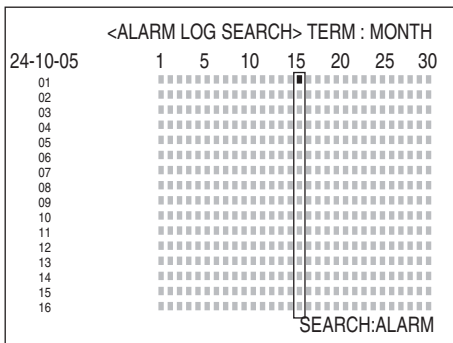
Searching for images in the Alarm log

You can search in the alarm recording images, narrowing down to a specified interval (month, week, day, or time).

- 1 In the SEARCH menu select ALARM LOG SEARCH.

The Restricted search screen appears, and shows months including the current date.

To change the interval, press the ALARM ◀◀ or ALARM ▶▶ button.



- 2 Turn the shuttle dial clockwise.
- 3 Turn the jog dial to select the interval, and turn the shuttle dial clockwise.

The screen for the selected interval appears.

- 4 Turn the jog dial to select the search date (or time), and turn the shuttle dial clockwise.

The selected date appears in yellow. Alarm recording sections appear in red, and sections with no recording appear in gray.

- 5 Turn the jog dial to select SEARCH, and turn the shuttle dial clockwise.

- 6 Turn the jog dial to select ALARM or THUMBNAILS, and turn the shuttle dial clockwise.

This switches to the ALARM SEARCH screen or ALARM THUMBNAIL SEARCH screen, and the search results then appear.

Searching From the Alarm Recording List

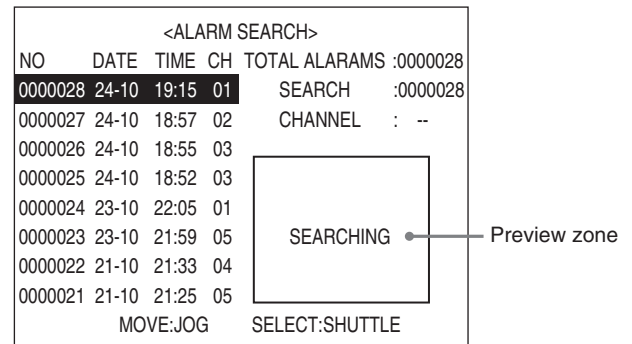
You can find and play back a picture recorded in the alarm recording area from the Alarm Recording list.

- 1 Select ALARM SEARCH on the SEARCH menu.

The ALARM SEARCH display appears, listing the number, time, date, and channel number of alarm recording events.

The total number of alarm events recorded in the alarm recording area is shown below TOTAL ALARMS.

The list can show up to 8 events at once.



Press the SHIFT button to move the cursor to the search options on the right side of the screen. You can search the list of alarms by entering an alarm number or channel.

- 2 Turn the Jog dial to highlight the desired alarm event.

When one second has elapsed after you highlight, the thumbnail image of the selected event is displayed in the preview zone.

- 3 Turn the Shuttle dial clockwise.

The picture of the selected event is played in multi-split mode. Note, however, that the picture of the selected event is played in full-screen mode if you specified a channel number in step 1.

Note

When playback of the selected alarm event is finished, the unit enters Still-Picture mode. To replay the alarm event, turn the Shuttle dial to the left. When the beginning of the alarm event appears in Still-Picture mode, press the PAUSE button to start playback again.

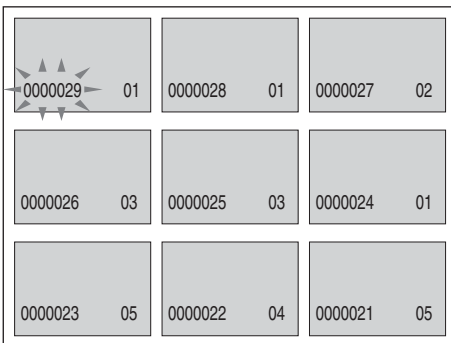
You may skip to the previous alarm event with the ALARM ◀◀ button and to the next alarm event with the ALARM ▶▶ button.

Searching by the Thumbnail Image

You can find and play back a picture recorded in the alarm recording area by the thumbnail image.

- 1 Select ALARM THUMBNAIL SEARCH on the SEARCH menu.

The ALARM THUMBNAIL SEARCH set display appears, showing thumbnail images of the latest 9 alarm recording events.



When you turn the Jog dial counterclockwise with the upper left picture (0000029 in above example) selected (the picture number flashes), the next 9 events are displayed.

When you turn the Jog dial clockwise with the lower right picture (0000021) selected, the previous 9 events are displayed.

- 2 Turn the Jog dial so that the number of the desired event flashes.

- 3 Turn the Shuttle dial clockwise.

The unit enters Playback mode, and the picture of the selected event is played.

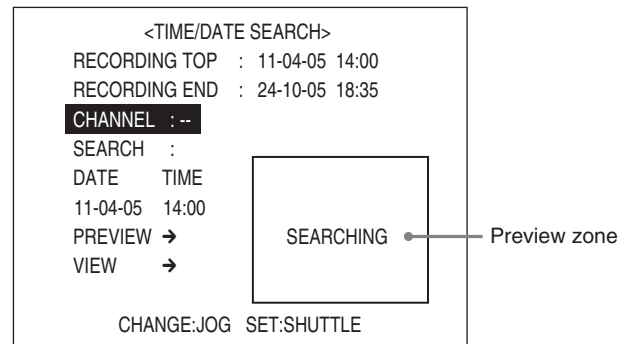
You may skip to the previous alarm event with the ALARM ◀◀ button and to the next alarm event with the ALARM ▶▶ button.

Searching by the Time/Date of Recording

You can find and play back a picture recorded at the specified time and date.

- 1 Select TIME/DATE SEARCH on the SEARCH menu.

The TIME/DATE SEARCH display appears



The date and time of the oldest recording is displayed on the RECORDING TOP line, and that of the latest one is on the RECORDING END line.

- 2 Specify the channel (camera number).

Set the cursor to the CHANNEL column with the Jog dial and turn the Shuttle dial clockwise so that “--” flashes. Select the channel with the Jog dial and turn the Shuttle dial clockwise.

- 3 Specify the recording date and time of the picture to be found.

Set the cursor to the DATE/TIME line with the Jog dial and turn the Shuttle dial clockwise so that the first column flashes. Select the value with the Jog dial and turn the Shuttle dial clockwise to register the setting and move to the next column. Set the remaining columns in the same manner. (Turn the Shuttle dial counterclockwise to return.)

Picture Searching

To preview the picture as a thumbnail image

Highlight PREVIEW and turn the Shuttle dial clockwise.

The unit searches for the event recorded at the date and time you specified and displays its thumbnail image in the preview zone.

If there is no event recorded at the specified date/time, the image from the closest date and time is displayed.

To perform playback

Highlight VIEW and turn the Shuttle dial clockwise.

The recorded pictures are played back on the specified date and time.

Searching on the Archive Area

You can find and play back the pictures stored in the archive area.

- 1 Select ARCHIVE AREA SEARCH on the SEARCH menu.

The ARCHIVE AREA SEARCH display appears, showing the list of the events stored in the archive area.

Each event is listed with its number, date and the time of the first picture.

<ARCHIVE AREA SEARCH>				
NO	DATE	TIME	CH	CAPACITY
0000001	24-10	19:15	01	TOTAL - 3264MB
0000002	21-10	21:33	04	USED - 400MB
0000003	23-10	22:05	01	
0000004	18-09	18:26	09	

SEARCHING

Preview zone

MOVE:JOG SELECT:SHUTTLE

The total size and used size of the archive area are displayed under CAPACITY.

The list can display up to 8 events at once.

- 2 Turn the Jog dial to highlight the desired events.

When one second has elapsed after you highlight, the thumbnail image of the first picture of the selected event is displayed in the preview zone.

- 3 Turn the Shuttle dial clockwise.

The unit enters Playback mode, and the pictures of the selected event are played full-screen.

Searching Using the Activity Detection Sensor

The activity detection sensor enables you to search among recorded images for those in which a change in luminance can be detected at a specified point in the image.

For instance, when an object located in a certain place is removed, you can select that location and search for the image corresponding to the time the object was removed.

You can also specify a time period to search for images captured with alarm recording and normal recording.

- 1 Select ACTIVITY DETECTION SEARCH on the SEARCH menu.

The ACTIVITY DETECTION SEARCH display appears.

<ACTIVITY DETECTION SEARCH>	
SEARCH FORM	: NORMAL
START	: 24-10-05 19:00
END	: 24-10-05 23:00
CHANNEL	: :-
START PREVIEW →	
MOVE:JOG SELECT:SHUTTLE	

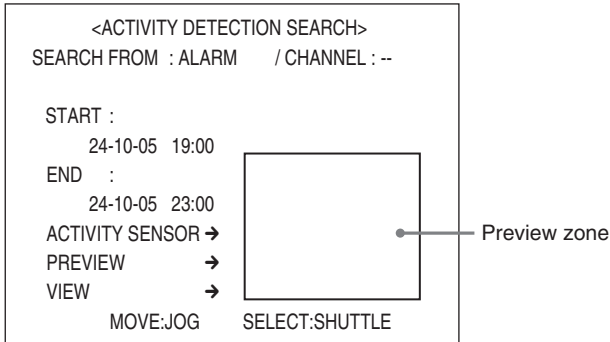
- 2 Turn the Shuttle dial clockwise to specify the area to search on the SEARCH FROM line.

The current setting flashes.

- 3 Select the area(s) with the Jog dial and turn the Shuttle dial clockwise to finalize your selection.
ALARM: Search alarm recording
NORMAL: Search normal recording
ALARM & NORMAL: Search normal recording and alarm recording

- 4 Specify the channel on the CHANNEL line.
- 5 Highlight START PREVIEW and turn the Shuttle dial clockwise.

The display changes and the thumbnail image of the oldest picture recorded in the specified area(s) is displayed in the preview zone.



To preview the thumbnail images

Highlight PREVIEW and turn the Shuttle dial clockwise.

Each time you turn the Shuttle dial clockwise, the unit searches for events recorded during the specified period and displays in sequence thumbnail images of the pictures for which activity was detected in the preview zone.

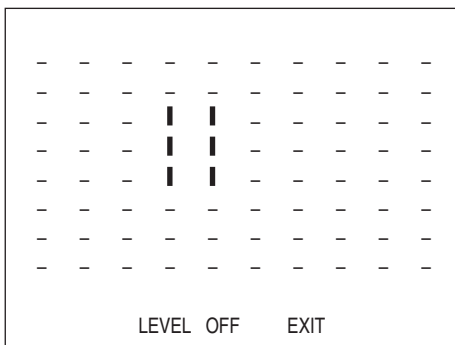
To play back a picture

Move the cursor to VIEW with the Jog dial, and then turn the Shuttle dial to the right.

The selected picture is played back.

- 6 Set the starting date and time of the period for searching at START.
- 7 Set the ending date and time of the period for searching at END.
- 8 To set the activity detection sensor, highlight ACTIVITY SENSOR and turn the Shuttle dial clockwise.

The sensor marks are displayed on a 8 × 10 grid the monitor, and the top left mark flashes. You may set the sensing points and the sensitivity. Using the Jog and Shuttle dials, set the marks at the points where you wish to activate the sensor to **I** and set LEVEL for the desired sensitivity value (1 to 10).



Application Settings

ROI settings

By making region of interest (ROI) settings, you can record with different image quality for preset areas of the screen, or for areas where movement is detected. Thus the part of the image including the intruder only can be recorded at a high image quality.

Making ROI settings

The ROI function allows you to set three fixed areas. Carry out the settings in submenu 1. ROI SET of the main menu 8. ADVANCED MENU SET.

- 1 In the main menu, select 8. ADVANCED MENU SET.
- 2 In the administrator settings menu select 1.ROI SET.

The ROI SET screen appears.

<ROI SET>		
CH-01	QUALITY	ACTIVE ROI
STATIC AREA 1	: OFF	OFF
STATIC AREA 2	: OFF	OFF
STATIC AREA 3	: OFF	OFF
EFFECTIVE REC MODE : NORMAL REC		
AREA/SENSITIVITY SET --->		

CH: Select the camera number for the ROI setting.

QUALITY: Set the image quality for the three fixed areas.

ACTIVE ROI:

OFF: ROI is permanently active regardless of movement.

ON: ROI is active only when movement is detected in a fixed area.

EFFECTIVE REC MODE: Select whether to carry out normal recording or alarm recording.

AREA/SENSITIVITY SET: Set the time cycle and sensitivity, and delay time after reaction stops. Align the cursor with AREA/SENSITIVITY SET and turn the shuttle dial clockwise to display the Area/sensitivity setting screen appears.

- 3 Turn the jog dial to align the cursor with the item to be set, then turn the shuttle dial clockwise to confirm.

Making the ROI area settings

You can set the position of the areas corresponding to the ROI.

Carry out the settings in the AREA/SENSITIVITY SET screen of the ROI SET submenu.

- 1 In the ROI SET screen, align the cursor with AREA/SENSITIVITY SET, and turn the shuttle dial clockwise.

The AREA/SENSITIVITY SET screen appears only for a fixed area where QUALITY has been set. TIME PERIOD, LEVEL and TIME LAG appear only for an ACTIVE ROI setting.

2
1
CH01 T-1 LEVEL : OFF TIME LAG: OFF

CH: The camera number selected in the ROI setting screen appears.

T-1 to T4: Set the time cycle.

LEVEL: Set the response sensitivity. Lower numeric values represent higher sensitivity.

TIME LAG: Set the delay operation time after reaction stops.

- 2 Turn the shuttle dial clockwise.

This switches to the area setting mode, and a [◀▶] mark appears at the lower right of the screen.

- 3 Turn the Shuttle dial to move the cursor (orange box) to the top left or top right and turn the Jog dial to set the vertical area of the frame.

Use the SHIFT button to set the horizontal area, the mark on the screen changes accordingly.

The cursor moves to the bottom right.

To move the cursor horizontally: Turn the jog dial.

To move the cursor vertically: Hold down the SHIFT button, turn the jog dial.

- 4 When the area of frame 1 is set, turn the Shuttle dial clockwise to move the cursor (orange box) to the lower right of the frame to be set.

- 5 Similarly, set the areas of frame 2 and frame 3.

When area settings are completed, turn the Shuttle dial counterclockwise without displaying the cursor.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Checking the alarm notification settings

When this unit is used with a network, alarm events that occur can be notified via e-mail. It is not possible to make the alarm notification settings on this unit. Make the settings on the computer on the network connection.

You can check the settings on submenu 2. ALARM NOTICE SET of the main menu 8. ADVANCED MENU SET.

For details of how to make the alarm notification settings, and the items on each screen, see "Alarm notification settings" (page 112).

Camera control settings

Make these settings when a camera capable of remote control (PTZ camera) is connected to this unit.

If you connect a camera as follows, and make the camera control settings, it is possible to control the camera in the single screen display.

Connections for remote control

Connect a camera with coaxial control to the VIDEO IN terminal.

Connect a camera with RS-485/422 control to RS-485A/B push lock connector in the control terminal.

For details of the method of camera connection, see "Camera connection (cameras, PTZ cameras)" (page 19).

Camera settings

Carry out the settings in submenu 3. CAMERA CONTROL SET of main menu 8. ADVANCED MENU SET.

- 1 In the main menu, select 8. ADVANCED MENU SET.

- 2 Select 3. CAMERA CONTROL SET.

The Camera control setting screen appears.

- 3 Turn the jog dial to select the camera number for which a PTZ camera is connected, and turn the shuttle dial clockwise.

The protocol item flashes.

Application Settings

- 4** Turn the jog dial to select the protocol, and turn the shuttle dial clockwise.

OFF: No camera control.

BBV COAX: Coaxial multiplexed control using BBV protocol.

PELCO COAX: Coaxial multiplexed control using PELCO protocol.

RS-485/422: Control a camera connected to the push-lock connector on the rear panel.

Note

Address selection is not available since this unit automatically assigns an address.

Changing addresses

Hold down the SHUTTLE HOLD button 3 seconds or more in the Camera control setting screen, to enable address selection. Turn the Jog dial to set an address (000-127) and turn the Shuttle dial clockwise.

- 5** Repeat steps 3 to 4 to set the other cameras.

When RS-485/422 is selected

- (1)** Align the cursor with RS-485/422 PROTOCOL, and turn the shuttle dial clockwise.
- (2)** Turn the jog dial to select the protocol to set, and turn the shuttle dial clockwise.
- BBV: Use BBV.
KALATEL: Use KALATEL.
PELCO: Use PELCO
SENSORMATIC: Use SENSORMATIC.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

Controlling the cameras

- 1** Press the SHIFT button.

The SHIFT button indicator lights, and the system switches to camera control mode.

- 2** Press the buttons to control the cameras.

Button name	Function in camera control mode
INPUT SELECTOR	Select the camera number to be controlled.
AUTO PAN (MULTI)	Carries out auto pan action. Specify the preset number with the INPUT SELECTOR buttons.
TOUR (QUAD)	Carries out a tour action.
SEQUENCE (OPTION)	Carries out a sequence action.
AF (MONITOR 2)	Automatically adjusts focus.
ZOOM - (ALARM ◀◀)	Adjusts zoom in the negative direction.
ZOOM + (ALARM ▶▶)	Adjusts zoom in the positive direction.
TIMER	Appears when timer is on standby, and puts timer on or off standby.
REC STOP	Stops recording.
REC	Appears in the recording state, and starts manual recording.
C-MENU (MENU)	Displays the camera internal menu.
FOCUS -	Adjusts focus in the negative direction.
FOCUS + (SHUTTLE HOLD)	Adjusts focus in the positive direction.
PRESET(COPY)	Recall a preset.
ENTER	Confirms an item in the camera internal menu.
CAM CONT (SHIFT)	Switch camera control mode on or off.
IRIS - (SEARCH)	Adjusts iris in the negative direction.
IRIS +	Adjusts iris in the positive direction.
TILT (JOG)	Tilts the camera (vertically).
PAN (SHUTTLE)	Pans the camera (horizontally).

* The names in parenthesis are the button names in the normal mode.

Notes

- The camera control is only possible during live video monitoring. During playback, control is not possible.
- The camera control is only possible on a single-screen display. On a multi-screen display, control is not possible.

Checking PPP settings

This displays the settings for a dial-up Internet connection.

It is not possible to make the PPP settings on this unit. Make the settings on the computer on the network connection.

You can check the settings in submenu 4. PPP SET of the main menu 8. ADVANCED MENU SET.

For details of the PPP setting method and the items in the settings, see PPP settings (page 113).

NTP settings

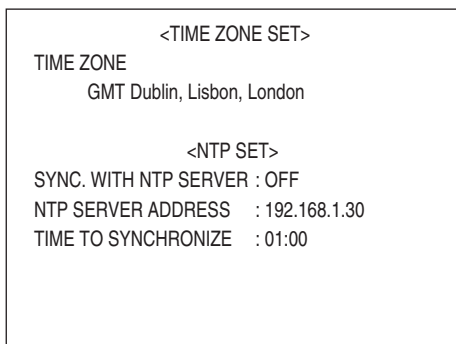
You can set the time, using an NTP server on the Internet or LAN.

Carry out the settings in submenu 5. TIME ZONE/NTP SET of main menu 8. ADVANCED MENU SET.

1 In the main menu, select 8. ADVANCED MENU SET.

2 Select 5. TIME ZONE/NTP SET.

The TIME ZONE/NTP SET screen appears.



SYNC. WITH NTP SERVER: Select whether to use the NTP server.

NTP SERVER ADDRESS: Enter the address of the NTP server.

TIME TO SYNCHRONIZE: Set the time at which synchronization takes place. Every 24 hours, the system will be resynchronized to the NTP server at the set time.

When the settings are completed

Press the EXIT/OSD button to exit the menu.

The HSR-J2009/J2016/J2009P/J2016P can be connected to a network operated through the network. You can also monitor, record, playback and download images and audio data via a network.

Operational conditions

To operate the HSR-J2009/J2016/J2009P/J2016P via a network, use under the following conditions.

Computer: Pentium IV 2 GHz, 256 MB or more

OS: Microsoft Windows 2000 SP2 or better, Windows XP Professional or Windows XP Home Edition

Web browser: Internet Explorer 5.5 SP2 or better

For the connections and the preparatory settings on the HSR-J2009/J2016/J2009P/J2016P, see "Network Settings" on page 39.

HSR Viewer and JPEG2000 plug-in software

To play back downloaded image and sound data, the special program HSR Viewer is to be installed in your Computer.

Plug-in software is required to monitor, record, playback and download images and audio data via a network.

The supplied CD-ROM disc contains HSR Viewer (HSR_Viewer.msi) and the plug-in software (J2KP1ng.msi).

For details on how to install the plug-in software, see page 44.

For how to install and use HSR Viewer, see pages 76 to 82.

Note

If the Proxy ON setting has been selected with the browser software on the Computer for control via the network, entire or partial loss of a downloaded picture may occur. In addition, the proxy server model setting may cause various unexpected phenomena. To eliminate such problems, it is strongly recommended to use the Proxy OFF setting.

Accessing the Recorder

- 1 Start Internet Explorer.
- 2 Type the following in the Address box and press the Enter key.

`http://<IP address for the HSR-J2009/J2016/J2009P/J2016P>/`

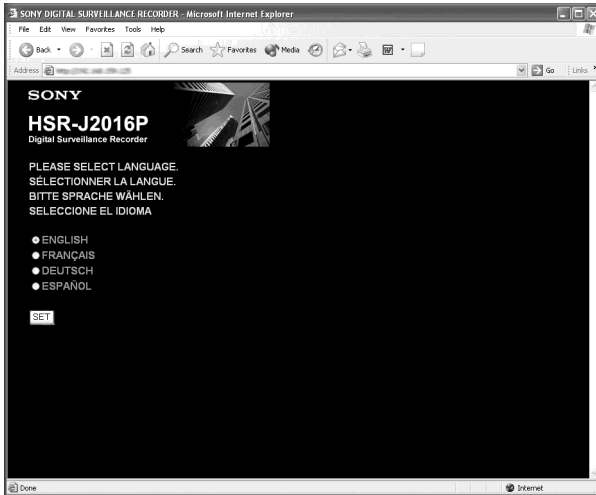
The IP address for the HSR-J2009/J2016/J2009P/J2016P is the one that has been set with the submenu 6. NETWORK SET of the main menu 3. GENERAL SET.

The Network Password input window opens.



- 3** In the User Name and Password boxes, enter the User ID and password entered in 3. GENERAL SET > 7. NETWORK CONTROL SET > USER ID SET and click OK.

When the password is verified, the SELECT LANGUAGE display for the HSR-J2009/J2016/J2009P/J2016P is displayed.



Note

The number of users that have access depends on user level. For details regarding “Setting user IDs”, see page 42. Access is not allowed when the menu screen is displayed on this unit. An error message appears when access is attempted when not allowed.

The functions that are available depend on user level (LV).

If you accessed with LV1: You are enabled only to view the current camera input.

If you accessed with LV2: You are allowed to view current camera input and playback images as well as perform camera control and search operations. Recording and menu operations are not allowed.

If you accessed with LV3: You are allowed to carry out all operations other menu operations.

If you accessed with LV4: You are enabled to perform operations using all the browser buttons.

If you accessed with LV1 to LV4 and try to perform an operation not allowed, a warning message will be displayed.

Note

Copy/Download and camera control restrictions

Use NETWORK CONTROL SET to change control restrictions.

- 4** Click on the radio button of the desired language and click on SET.

The Web Operations display for the HSR-J2009/J2016/J2009P/J2016P (see below) appears.

When NETWORK STATUS of NETWORK CONTROL SET (page 39) has been set to ON, a message NETWORK CONTROL is displayed on the monitor screen connected to the HSR-J2009/J2016/J2009P/J2016P.

The operation that was in progress when logged on is continued.

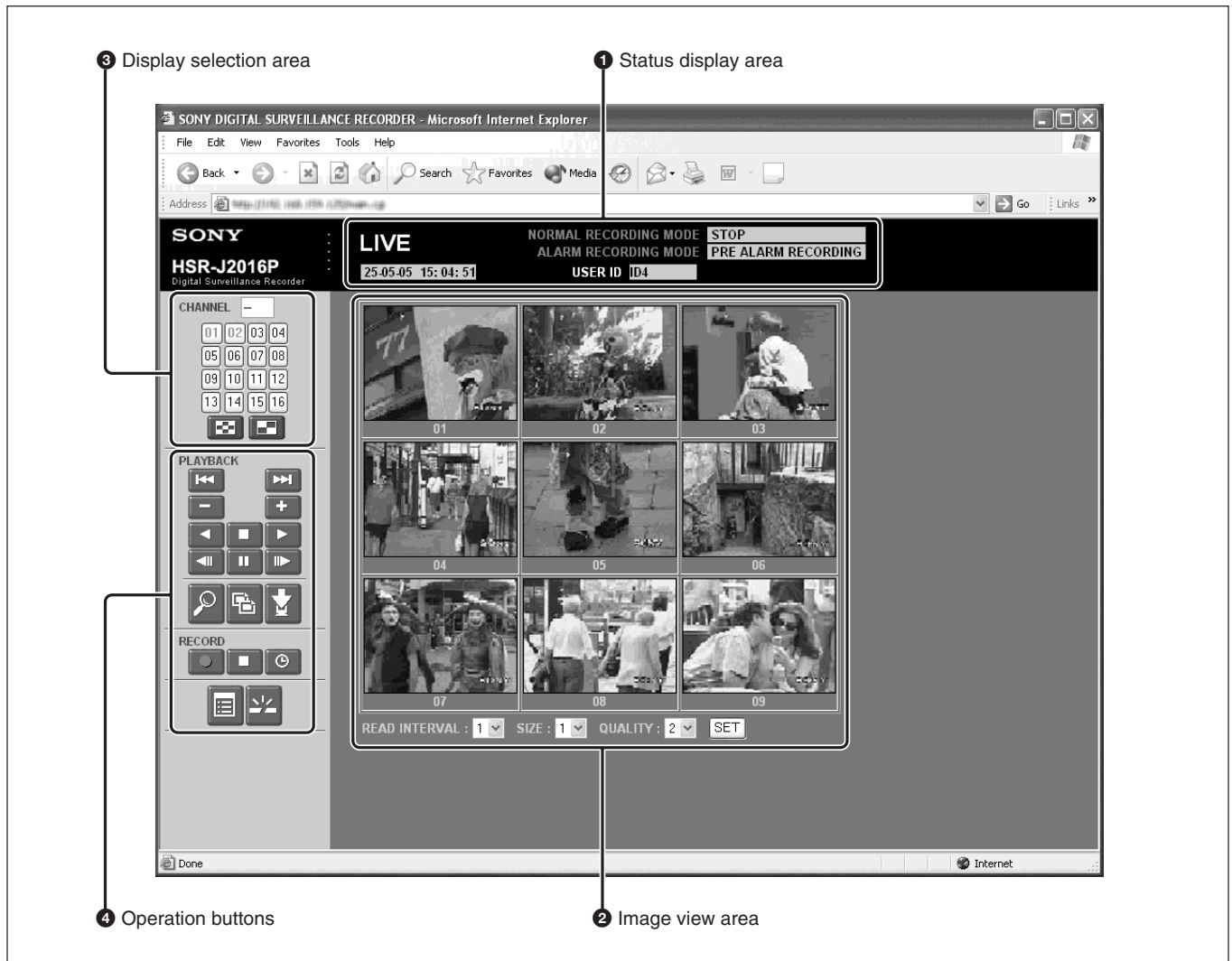
Note

If communication with the Computer is not detected for 2 minutes, the network is automatically disconnected.

To disconnect the network from the HSR-J2009/J2016/J2009P/J2016P

Hold the SHUTTLE HOLD button pressed for more than 3 seconds.

Web Operations Display



1 Status display area

Operation mode field: Shows LIVE when the HSR-J2009/J2016/J2009P/J2016P is in stop status or in a recording mode or PLAY when the HSR-J2009/J2016/J2009P/J2016P is in playback mode.

Date/time field: Shows the current date and time when the HSR-J2009/J2016/J2009P/J2016P is in stop status or in a recording mode. In a playback mode, the date and time when the recording was made are displayed.

NORMAL RECORDING MODE field: Shows the status of normal or timer recording that uses the normal recording area.

STOP: No recording is being made.

RECORDING: Normal recording is in progress.

TIMER STANDBY: The unit is in timer-recording standby status.

TIMER RECORDING: Timer recording is in progress.

AREA FULL: The normal recording area is full.

ALARM RECORDING MODE: Shows the status of alarm recording that uses the alarm recording area.

STOP: No recording is being made.

PRE ALARM RECORDING: Pre-alarm recording is in progress.

ALARM RECORDING: Alarm recording is in progress.

AREA FULL: The alarm recording area is full.

PLAYBACK AREA: Shows the type of data being played in playback mode.

ALARM: Alarm recording

PRE ALARM: Pre-alarm recording

NORMAL: Normal recording

ARCHIVE: Data stored in the archive area

SPEED: Shows the playback status in playback mode.

PLAY: Normal playback in the forward direction

PAUSE: Still-Picture mode

CUE: High-speed playback in the forward direction

SLOW: Slow-motion playback in the forward direction

R.PLAY: Normal playback in the reverse direction

REVIEW: High-speed playback in the reverse direction

R.SLOW: Slow-motion playback in the reverse direction

② Image view area

The current image from the camera input is displayed when the HSR-J2009/J2016/J2009P/J2016P is in stop status or in recording mode. The playback image is displayed when the HSR-J2009/J2016/J2009P/J2016P is in playback mode.

You may change the READ INTERVAL, SIZE, QUALITY, AUDIO and SAVE TO PC by selecting from the dropdown lists and clicking on SET.

READ INTERVAL: You may select the speed to display images in the range of 1 to 5. The higher the value, the higher the speed. The maximum speed is obtained with 5.

SIZE: You may select the image size:

(unit: pixels)

	Full screen	Quad screen	9-channel multi screen	16-channel multi screen
1	320 × 240	240 × 180	160 × 120	120 × 90
2	400 × 300	320 × 240	220 × 165	160 × 120
3	640 × 480	400 × 300	260 × 195	240 × 180
4	800 × 600	480 × 360	320 × 240	320 × 240
5	1024 × 768	560 × 420	380 × 285	400 × 300
6	1280 × 960	640 × 480	420 × 315	480 × 360

QUALITY (live mode only): You may select the picture quality in the range of 1 to 4. The higher the value, the higher the quality.

AUDIO (in full screen mode only): Select the audio channel to transmit.

OFF: No sound is transmitted.

A1: The sound of audio channel 1 is transmitted.

A2: The sound of audio channel 2 is transmitted.

A12: The sound of audio channels 1 and 2 are mixed before being transferred.

SEC: Sets the buffer time.

For details, see “Transmitting audio via a network” (page 108).

SAVE TO PC (in full screen mode only): Save monitored images and audio on the computer.

For details, see “Downloading picture and audio being monitored” on pages 109 to 111.

CAMERA CONTROL (live mode only): When a remote control enabled camera (PTZ camera) is connected to the unit, the camera can be controlled from the computer (only during single-image display).

When you click the CAMERA CONTROL button, the operation buttons are switched to camera control.

To cancel camera control, click the CAMERA CONTROL button again.

③ Display selection area

The CHANNEL box shows the channel number being displayed.



: To select the channel for monitoring or playback by the number.

: Show 9-division or 16-division screen. Each click of the button toggles between 9-division and 16-division screen.

: Show 4-division screen. Each click of the button cycles through the channels four at a time.

Web Operations

4 Operation buttons

Button image	Button name	Function	Accessibility			
			LV1	LV2	LV3	LV4
	REVERSE SKIP	Skips to the previous alarm-recording event when clicked on during playback of an alarm-recording event (corresponds to pressing the ALARM I◀◀ button of the recorder).	no	yes	yes	yes
	FORWARD SKIP	Skips to the next alarm-recording event when clicked on during playback of an alarm-recording event (corresponds to pressing the ALARM ▶▶ button of the recorder).	no	yes	yes	yes
	SPEED DOWN	Decreases the playback speed by one step (corresponds to turning the Jog dial of the recorder to the left during playback).	no	yes	yes	yes
	SPEED UP	Increases the playback speed by one step (corresponds to turning the Jog dial of the recorder to the right during playback).	no	yes	yes	yes
	REVERSE PLAY	Plays in the reverse direction.	no	yes	yes	yes
	PLAY STOP	Stops playback to display the current camera input. Returns to Live mode from a mode other than Live.	no	yes	yes	yes
	PLAY	Starts playback.	no	yes	yes	yes
	PREVIOUS	Reverses the still picture by one when clicked on in Still mode (corresponds to turning the Jog dial of the recorder to the left in Still mode).	no	yes	yes	yes
	PAUSE	Sets playback to Still mode.	no	yes	yes	yes
	NEXT	Advances the still picture by one when clicked on in Still mode (corresponds to turning the Jog dial of the recorder to the right in Still mode).	no	yes	yes	yes
	REC	Starts recording.	no	no	yes	yes
	REC STOP	Stops recording.	no	no	yes	yes
	TIMER	Turns ON/OFF timer recording.	no	no	yes	yes
	SEARCH	Search for image. (Same menu appears as when SEARCH button on unit is pressed.)	no	yes	yes	yes
	COPY	Copy image data from recording area to archive area.	no	no	yes	yes
	DOWNLOAD	Download image data from recording area or archive area to a computer.	no	no	yes	yes
	MENU SETTING	Make menu settings. (Same menu appears as when MENU button on unit is pressed.)	no	no	no	yes
	RETURN	Return to monitored image from menu screen.	no	no	no	yes
	DISCONNECT	Disconnect from network.	yes	yes	yes	yes

Operation buttons (for camera control)

Button icon	Button name	Function
	Pan/tilt	Change the camera angle. When the built-in menu screen of the camera is shown, the buttons serve to select menu items.
	ENTER	Accepts a setting made with the built-in menu screen of the camera.
	MENU	Calls up the built-in menu screen of the camera.
	Control speed	Adjusts the operation speed for pan and tilt operations. The setting range is 1 to 7, in seven steps. Higher values mean higher speed.
	ZOOM	After clicking here, use the -/+ buttons to perform a zoom operation.
	FOCUS	After clicking here, use the -/+ buttons to perform focus adjustment.
	IRIS	After clicking here, use the -/+ buttons to perform iris adjustment.
	-/+	These buttons are used for zoom operation and for focus and iris adjustment.
	AF	Activates auto-focus.
	SEQ	Activates the function for automatic camera switching in sequence. To turn the function off, click the [SEQ] button again or perform another operation (auto pan or tour).
	PAN	Activates the function for automatic panning. To turn the function off, click the [PAN] button again or perform another operation (sequence or tour).
	TOUR	Activates the tour operation stored in the camera. To turn the function off, click the [TOUR] button again or perform another operation (sequence or pan).
	Call preset	Moves the camera to a position stored as a preset. To use a preset number higher than 9, select it from the drop-down list and click the [GO] button.
	Store preset	Select a preset number from the drop-down list and click the [ENTER] button. This will store the current camera position.

Searching for a Picture

A search operation is allowed if you logged on with LV2 to LV4.

Click  (SEARCH) to bring up the search menu.



Click on the desired search.

1. ALARM LOG SEARCH

You can narrow down alarm images saved in the recording area by period (month, week, day, hour) and then perform alarm search or alarm thumbnail search on the defined set of images.

Similar information is displayed as when "ALARM LOG SEARCH" is selected on the main unit (page 88).

To change pages, use the PAGE BACK/NEXT buttons.

2. ALARM SEARCH

You can search alarm images saved in the recording area from a list.

The same information can be obtained as when you select ALARM SEARCH on the recorder on page 88.

Use the PAGE BACK/NEXT buttons to flip the pages.

Click on a numeric button to display the Preview image of the selected picture. When you click on the Preview image, the main window reappears and the image for the selected event is played back.

3. ALARM THUMBNAIL SEARCH

You can search alarm images saved in the recording area from thumbnail images.

The same information can be obtained as when you select ALARM THUMBNAIL SEARCH on the recorder on page 89.

Use the PAGE BACK/NEXT buttons to flip the pages. When you click on a thumbnail image, the main window reappears and the image for the selected event is played back.

Note

If you repeat PAGE BACK/NEXT operations before all nine thumbnails are displayed, alarm numbers may be displayed at random. These numbers may not be sequential, but are not misindications.

Change the page only after all nine thumbnails are completely displayed.

4. TIME/DATE SEARCH

To find a recorded picture by recording date/time.

The same information can be obtained as when you select TIME/DATE SEARCH on the recorder on page 89.

Specify the recording date and time of the picture to be found using the SEARCH dropdown lists and click on PREVIEW button. A search operation for the event recorded at specified the date and time is performed, and the Preview image is displayed.

When you click on a Preview image, the main window reappears and the image recorded on the specified date/time is played back.

Note

If there is no event recorded at the specified date/time, the unit searches for the image whose date/time most closely matches the specified date/time.

5. ARCHIVE AREA SEARCH

To find a picture stored in the archive area.

The same information can be obtained as when you select ARCHIVE AREA SEARCH on the recorder on page 90.

Use the PAGE BACK/NEXT buttons to flip the pages. Click on a numeric button in the list to display the Preview image. When you click on the Preview image, the playback mode is invoked and the image of the selected event fills the entire screen.

6. ACTIVITY DETECTION SEARCH

To find a picture recorded in the alarm or normal recording area in response to the built-in activity detection sensor.

The same information can be obtained as when you select ACTIVITY DETECTION SEARCH on the recorder on page 90.

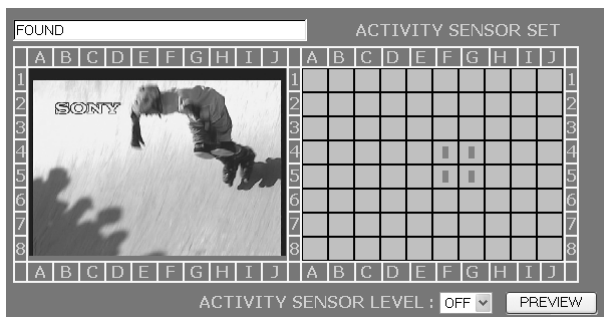
To specify the search range

Select AREA, CH, START, and END for searching from the dropdown lists, and register the settings by clicking on SET button.

To turn on the sensor on or off

Check cells that correspond to the points on the screen where you wish to activate the sensor.

To turn off the sensor for a cell, click on the cell again to remove the check mark.



To set the sensor level (sensitivity)

Select the level from the dropdown list.

You may select it in the range from 1 to 10. The smaller the value, the higher the level. The maximum level is obtained with 1.

To execute searching

Clicking on PREVIEW button starts the search. When searching is finished, a Preview image is displayed.

Each time you click on PREVIEW button, searching for the next image is executed.

When you click on the displayed preview image, playback begins.


Copying and Downloading

If you logged on with LV3 or LV4, you can copy images in the recording area of the HSR-J2009/J2016/J2009P/J2016P to the archive area or a CF card or download them to the computer. You can also download images from the archive area to the computer.


Copying a picture

Note

Copying cannot be made in Multi-screen mode. For copy operation, select one of channels 01 to 16 to set to Full-screen mode.

- 1 Display the picture you wish to copy in Still picture.
To copy pictures in series, display the first picture.
- 2 Click on  (COPY).
The Copy Set display appears.
- 3 Specify the quantity of the images to be copied and click on START button.
During copying COPYING TO ARCHIVE AREA is displayed.
When copying finished, COPY FINISHED is displayed.

To exit Copy mode

Click on  (PLAY STOP).

Downloading a picture

Note

Downloading cannot be made in Multi-screen mode. For download operation, select one of channels [01] to [16] to set to Full-screen mode.

- 1 Display the picture you wish to download in Still picture.

To download pictures in series, display the first picture.

- 2 Click on  (DOWNLOAD).

The Download display appears.



- 3 Set the number of images or the time for download.

When you download images recorded with audio, audio can be simultaneously downloaded by setting AUDIO to ON.

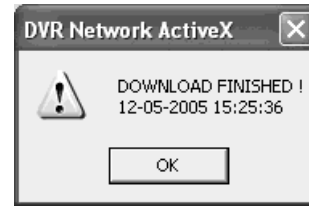
For details, see "Downloading audio" (page 108).

- 4 Click the [BROWSE] button and specify the folder for saving.
- 5 Click on START.

When a picture in the archive area is displayed, downloading immediately begins.

When downloading is finished

The message DOWNLOAD FINISHED is displayed. Click on OK.




Notes

- Max. 40,000 images can be downloaded to a Computer via network.
- When controlling two HSR-J2009/J2016/J2009P/J2016P via a network using two browsers on a single Computer, note that simultaneous downloading from both units is not possible. The data will not be correctly downloaded.
- Normally, playback is disabled during downloading. However, if the network response is extraordinarily slow, the unit may accept a playback attempt. Do not to attempt playback during downloading. Any playback during downloading is not guaranteed.

Menu Settings

If you logged on with LV4, menu operations are allowed.

Click on  (MENU SETTING) to display the Menu Select display and click on the menu item on the display to select it.

Menu settings are achieved with selections from dropdown lists and registration by clicking on SAVE.

1. INITIAL SET

- 1. CLOCK SET:** To set the built-in clock of the HSR-J2009/J2016/J2009P/J2016P.

Gives access to the same settings as the submenu 1. LANGUAGE/CLOCK SET under 1. INITIAL SET on the main menu of the unit (page 32).

- 2. SUMMER TIME (DAYLIGHT SAVINGS) SET/EXT. CLOCK SET:** To perform the settings required for the summer (daylight-savings) time and external clock adjustment.

Gives access to the same settings as the submenu 1. LANGUAGE/CLOCK SET under 1. INITIAL SET on the main menu of the unit (page 32).

- 3. HOLIDAY SET:** To specify holidays.

Gives access to the same settings as the submenu 4. HOLIDAY SET under 1. INITIAL SET on the main menu of the unit (page 70).

- 4. PRE REVERSE PLAY:**

Gives access to the same settings as the submenu 6. PRE REVERSE under 1. INITIAL SET on the main menu of the unit (page 85).

2. RECORD SET

- 1. RECORDING AREA SET:** To show information regarding the recording area. While you cannot change the area assignment via the network, the AREA FULL RESET buttons are valid.

Gives access to the same settings as the submenu 2. RECORDING AREA SET under 2. RECORD SET on the main menu of the unit (page 35).

- 2. RECORDING CONDITIONS SET:** To set OVERWRITE function, etc.

Gives access to the same settings as the submenu 3. RECORDING CONDITIONS SET under 2. RECORD SET on the main menu of the unit (page 36).

- 3. NORMAL REC MODE SET:** To set the conditions for normal recording.

Gives access to the same settings as the submenu 4. NORMAL REC MODE SET under 2. RECORD SET on the main menu of the unit (page 54).

- 4. PROGRAM REC SET:** Serves for making settings for program recording.

Gives access to the same settings as the submenu 5. PROGRAM REC SET under 2. RECORD SET on the main menu of the unit (page 55).

- 5. TIMER SET:** To set the conditions for timer recording.

Gives access to the same settings as the submenu 6. TIMER SET under 2. RECORD SET on the main menu of the unit (page 69).

- 6. ALARM REC MODE SET:** To set the conditions for alarm recording.

Gives access to the same settings as the submenu 7. ALARM REC MODE SET under 2. RECORD SET on the main menu of the unit (page 64).

3. GENERAL SET

- 1. DISPLAY SET:** To turn on/off the on-screen data items.

Gives access to the same settings as the submenu 1. DISPLAY SET under 3. GENERAL SET on the main menu of the unit (page 40).

- 2. BUZZER SET:** To turn on/off the buzzers.

Gives access to the same settings as the submenu 2. BUZZER SET under 3. GENERAL SET on the main menu of the unit (page 40).

- 3. SECURITY LOCK SET:** Carry out settings relating to security.

Gives access to the same settings as the submenu 3. SECURITY LOCK SET under 3. GENERAL SET on the main menu of the unit (page 41).

- 4. USER ID SET:** Set the user ID.

Gives access to the same settings as setting item USER ID SET of submenu 3. SECURITY LOCK SET under main menu 3. GENERAL SET on the unit (page 42).

- 5. RS-232C/RS-485 SET:** Make the settings for connecting an external device to the RS-232C/RS-485 connector.

Gives access to the same settings as the submenu 4. RS-232C/RS-485 SET under 3. GENERAL SET on the main menu of the unit (page 43).

6. HDD SET: To show information on the hard disk set in submenu 5. HDD SET (page 35) of 3. GENERAL SET in the main menu of the unit. Only selection of drive for playback is allowed via the network.

7. NETWORK SET: To set the conditions for network connection.

Gives access to the same settings as the submenu 6. NETWORK SET under 3. GENERAL SET on the main menu of the unit (page 39).

You can select NETWORK SPEED from the dropdown list. Change items other than NETWORK SPEED by entering a new value.

Note

When you change the settings, network connection is automatically cut off and the message NETWORK DISCONNECTED will be displayed. Make network connection again with the new settings.

8. NETWORK CONTROL SET: Serves for making settings for control restrictions on a network connection.

Gives access to the same settings as the submenu 7. NETWORK CONTROL SET under 3. GENERAL SET on the main menu of the unit (page 39).

4. SCREEN SET

1. SEQUENCE SET: Carry out settings relating to automatic switching of camera video.

Gives access to the same settings as the submenu 2. SEQUENCE SET under 4. SCREEN SET on the main menu of the unit (page 49).

2. MASK SET: To set the conditions for masking.

Gives access to the same settings as the submenu 3. MASK SET under 4. SCREEN SET on the main menu of the unit (page 50).

5. POWER LOSS/USED TIME: Displays the same power failure information, accumulated usage time(s), and firmware version as main menu 5. POWER LOSS/USED TIME on the main unit (page 115).

6. INITIALIZATION LOG: Details the eight most recent instances of hard disk drive initialization and recording restart in each area, displaying the same log (date, time, and area) as main menu 6. INITIALIZATION LOG on the main unit (page 115).

7 COPY MENU SETTINGS: Save the menu settings on a computer, or read in the saved settings.

8. ADVANCED MENU SET

1. ALARM NOTICE SET: Sends an e-mail to notify alarm events.

2. CAMERA CONTROL SET: Make these settings when connecting a camera capable of remote control to this unit.

Gives access to the same settings as the submenu 3. CAMERA CONTROL SET under 8. ADVANCED MENU SET on the main menu of the unit (page 93).

3. PPP SET: Make these settings for a dial-up Internet connection.

Gives access to the same settings as the submenu 4. PPP SET under 8. ADVANCED MENU SET on the main menu of the unit (page 95).

4. TIME ZONE/NTP SET: Make these settings to use an NTP server on the Internet or LAN to synchronize the time.

Gives access to the same settings as the submenu 5. TIME ZONE/NTP SET under 8. ADVANCED MENU SET on the main menu of the unit (page 95).

Audio Operations

In Full-Screen (single image) mode, you can transmit and download audio data via a network.

Note

You cannot transmit/download audio in Multi-Screen mode.

1. Audio transmission via a network

The audio can be transmitted via a network in the live mode and the playback mode.

The audio can be monitored by Computer.

For details, see “Transmitting audio via a network” on page 108.

Notes

- Since the audio is transmitted prior to the video image, the image will be displayed later than audio. To keep the buffer for intermittent audio, the delay will occur even in the live mode. As the buffer time can be selected from 5, 10, 15, 20 and 30 seconds, select the time according to the environment of the network. Longer time is effective for the intermittent audio, but the delay will be extended accordingly.
- Audio transmission is possible with LV2 to LV4. The menu of audio transmission is not indicated with LV1.
- When the audio transmission mode is selected, the live mode and the normal playback mode is only available. Cancel the audio transmission mode when the particular playback such as PAUSE or SEARCH is executed.

2. Audio download function

You can download audio to CF cards. Furthermore, it also possible to download audio to Computer via a Network.

For details, see “Downloading audio” on page 108.

Notes

- To playback the downloaded image and audio, HSR Viewer is necessary.
For details on HSR Viewer, see pages 76 to 82.
- Plug-in software is required to transfer audio data to the computer via a network as well as to monitor and download the audio data.
For details on plug-in software, see page 44.

3. Alarm event audio notification via a network

When the alarm recording starts, it can be notified to the Computer connected via a network by the original sound.

For details, see “Notifying an alarm event by audio via a network” on page 109.

4. Monitored picture and audio download function


The pictures and audio being monitored via a network can be downloaded to the Computer.

When the pictures and audio are being monitored in LIVE or PLAY mode on your Computer, the data can be saved to a designated Computer folder by just clicking on the START button.

You can specify the period of downloading before starting it, and it can be canceled whenever necessary. Using this function, the picture and audio transmitted via a network are downloaded as-is.

For details, see “Downloading picture and audio being monitored” on page 109.

Notes

- Downloading is limited to 5 to 6 pictures per second at maximum to enable live video and audio to be transferred to a computer over a network. Depending on the network environment, some failures, such as intermittent audio or delay in picture updating, may occur. Set the appropriate QUALITY and buffer timer for audio according to the network environment.
- To download all the recorded pictures and audio, use the  (DOWNLOAD) button as usual.

For details, see “Downloading a picture” on page 104.

Transmitting audio via a network



Audio transmission (Initial setting: OFF)

You may set audio transmission at AUDIO ①.

AUDIO: Select the audio channel to transmit.

OFF: No sound is transmitted.

A1: The sound of audio channel 1 is transmitted.

A2: The sound of audio channel 2 is transmitted.

A12: The sound of audio channels 1 + 2 is transmitted.

SEC: Sets the buffer time. The number set here is the buffer duration in seconds, which also becomes the sound delay time. The delay will occur even in the live mode. In case that the network speed is slow, set the longer time to prevent intermittent audio.

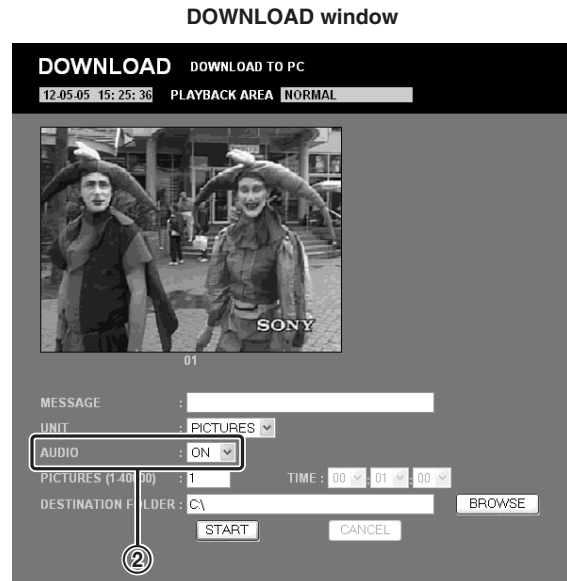
To transmit audio, select the audio channel whose sound to transmit, and the buffer time, and then click the [SET] button.

Notes

- Longer time is effective for the intermittent audio, but the delay will be extended accordingly. Since audio is transmitted prior to the video image, the image may not be displayed depending on the computer environment.
- Audio transmission is possible with LV2 and LV3. The menu of audio transmission is not indicated with LV1.

- When the audio transmission mode is selected, the live mode and the normal playback mode is only available. Cancel the audio transmission mode when the particular playback such as PAUSE or SEARCH is executed.
- The time and the status data which is indicated at the upper part of WEB is updated per 1 second in the normal mode. When the audio transmission mode is selected, it will be updated per 5 seconds.
- When playing a video with no recorded audio track, if audio transmission is set to ON, the audio buffering repeats continually and video playback fails. In this case, set audio transmission to OFF before playing the video.

Downloading audio

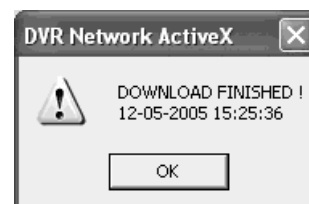


Audio download (Initial setting: OFF)

To download audio along with video, set AUDIO ② to ON when the data with audio.

Leave it OFF when you download video only.

Click on OK when the message below is displayed after downloading.



Notifying an alarm event by audio via a network

When the alarm recording starts, it can be notified to the Computer connected via a network by the original sound.

The sound file stored in the specified folder is repeatedly played back per 1 second. The initial one-second of sounds lasting longer than 1 second is played back repeatedly.

- 1 Create the original sound for warning (WAV file).
- 2 Give the file the specified file name (BUZZER.WAV) and save it in the C:\BUZZER directory, as follows:

C:\BUZZER\BUZZER.WAV

The warning sound plays continuously during alarm recording.

To stop the warning sound

Click the PLAY STOP button on the operating panel.

Downloading picture and audio being monitored

When you connect to a network with LV3 or LV4, SAVE TO PC ② is displayed on the screen.



1 Activate the download function.

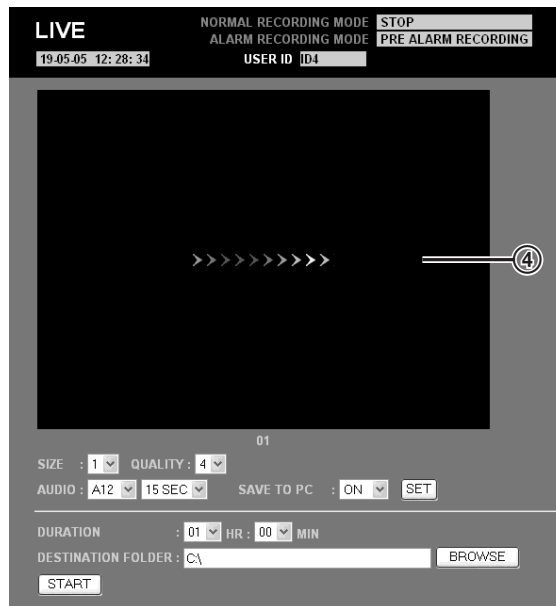
Choose ON from the SAVE TO PC ② pulldown menu.

To also save the audio

From the AUDIO ① pull-down menu, select the audio channel to save.

Refer to "Transmitting audio via a network" on page 108 for the setup of the AUDIO.

When you click on the SET button ③, audio buffering begins, and the picture area changes to the status of ④. This status remains until the audio buffer becomes full. The buffering time depends on the AUDIO setup ①. When the audio buffer becomes full, you can view the pictures and hear the audio.



2 Set the download time and specify the folder in which to save the data.



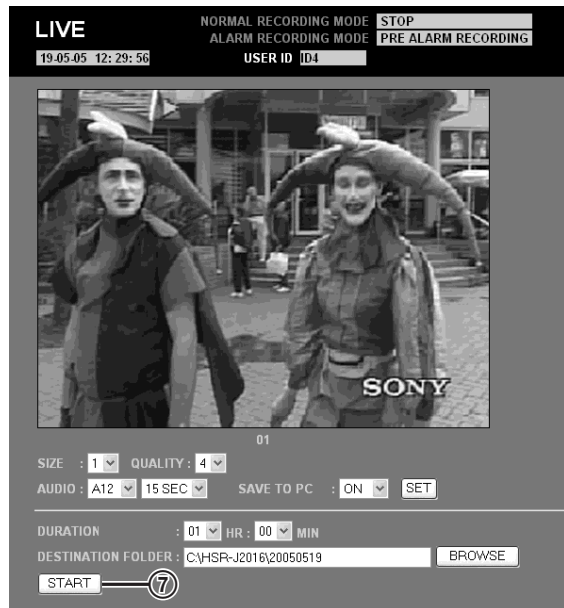
The download time is set at DURATION ⑤. After downloading begins, it will stop automatically when the specified time elapses.

It is also possible to stop it before downloading is completed. For example, even if the duration time has been set to 1 hour, you can save the pictures and audio for 10 minutes only by clicking on the CANCEL button 10 minutes after starting downloading.

The initial DESTINATION FOLDER setting is “C:\.” Select the folder in which to store the data by clicking on the BROWSE button ⑥¹⁾ or by directly typing in the appropriate one²⁾.

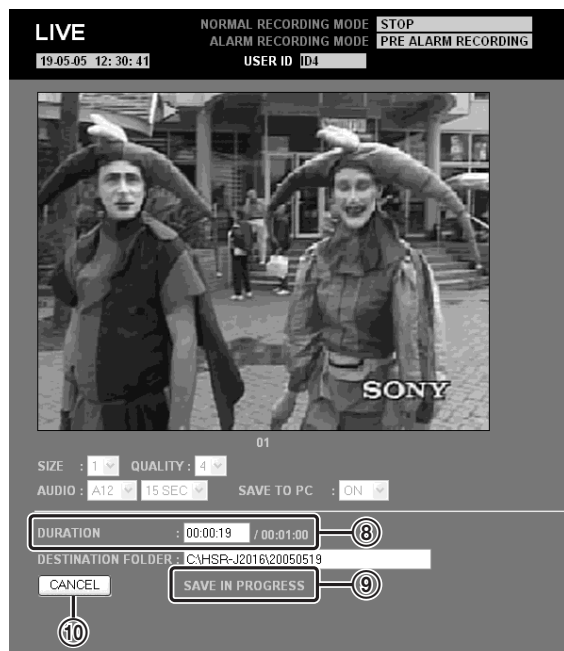
- 1) Clicking on the BROWSE button permits you to specify the folder using Windows Explorer. It is also possible to create a new folder.
- 2) If you type in an nonexistent drive, STOP SAVE, ERROR will be displayed. If you type in an nonexistent folder, the folder will be newly created.

3 Start downloading.



By your clicking on the START button ⑦, downloading of the pictures and audio begins.

While downloading the data



The DURATION value ⑧ is counted upward, and SAVE IN PROGRESS ⑨ is indicated. If you click on the CANCEL button ⑩, downloading immediately stops. In this case, the data up to the point where you stopped the downloading will be saved.

When downloading is finished

The popup ⑪ shows SAVE COMPLETE.

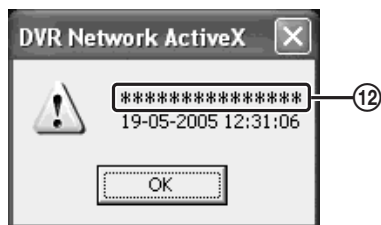
To terminate downloading, click on the OK button.

The screen returns to its status before you clicked on the START button.



Note

The popup message may change, according to the condition.



- If the HDD capacity of the Computer becomes full, and downloading is forcibly terminated before the end, STOP SAVE, PC DISK FULL will be indicated at ⑫.
- If any other error occurs, and downloading is forcibly terminated before the end, STOP SAVE, ERROR will be indicated at ⑫.

Saving and reading in menu settings

Saving the menu settings

You can save the menu settings of this unit on a computer.

- 1 Click the  button.

The Main menu screen appears.

- 2 Click 7. COPY MENU SETTINGS.

The COPY MENU SETTINGS screen appears.

- 3 Click the SAVE button.

- 4 Set the destination for saving, and execute.

This saves the menu settings.

Reading in menu settings

You can read a file of menu settings saved on the computer into this unit.

You can also select whether to read in the user ID settings and network settings.

Note

It is also possible to read in the recording area settings, but if you execute this, the hard disk will be reformatted.

- 1 Click the  button.

The Main menu screen appears.

- 2 Click 7. COPY MENU SETTINGS.

The COPY MENU SETTINGS screen appears.

- 3 Click the Browse button, and select the folder in which to save the menus.


- 4 In COPY USER ID SETTINGS, select whether or not to read in the user ID settings.

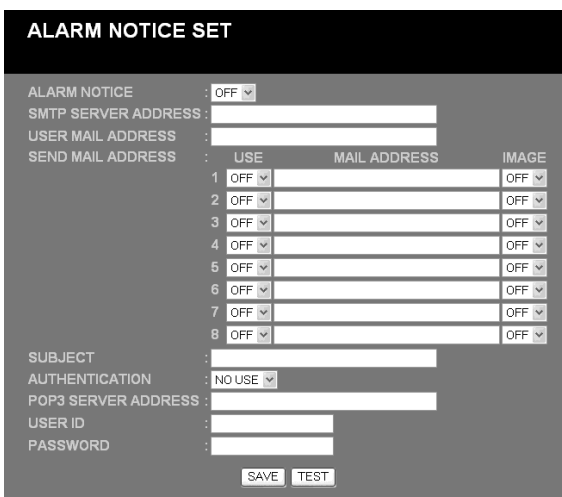
Web Operations

- 5 Under COPY RECORDING AREA SETTINGS, select whether to load the recording area settings or not.
- 6 In COPY NETWORK SETTINGS, select whether or not to read in the network settings.
- 7 Click the LOAD button.
Reading in starts.

Alarm notification settings

When using this unit on a network, an email notification if an alarm event or device fault occurs.

- 1 Click the  button.
The Main menu screen appears.
- 2 Click 8. ADVANCED MENU SET.
The ADVANCED MENU SET screen appears.
- 3 Click 1. ALARM NOTICE SET.
The ALARM NOTICE SET screen appears.



SEND MAIL ADDRESS	USE	MAIL ADDRESS	IMAGE
1	OFF		OFF
2	OFF		OFF
3	OFF		OFF
4	OFF		OFF
5	OFF		OFF
6	OFF		OFF
7	OFF		OFF
8	OFF		OFF

- ALARM NOTICE:** Set whether or not to send alarm notification.
- SMTP SERVER ADDRESS:** Set the SMTP server address.
- USER MAIL ADDRESS:** Set the source email address for the notification.


SEND MAIL ADDRESS SET

- USE:** Set whether or not to send the alarm notification to the destination address.
- MAIL ADDRESS:** Set the destination email address.
- IMAGE:** Set whether to attach the alarm image to the email.
- SUBJECT:** Set the subject for the email.
- AUTHENTICATION:** Set whether to carry out user authorization. When POP3 is selected, set the POP3 SERVER ADDRESS, USER ID, and PASSWORD.
- POP3 SERVER ADDRESS:** Set the POP3 server address.
- USER ID:** Set the user ID.
- PASSWORD:** Set the password.

- 4 Set the items.
- 5 Click the SAVE button.
The settings are now reflected on the main unit.

Camera control settings

Make these settings when a camera capable of remote control is connected to this unit.

- 1 Click the  button.
The Main menu screen appears.
- 2 Click 8. ADVANCED MENU SET.
The ADVANCED MENU SET screen appears.
- 3 Click 2. CAMERA CONTROL SET.
The CAMERA CONTROL SET screen appears.
- 4 Make the settings.
For details of the settings, see "Camera control settings" (page 93).
- 5 Click the SAVE button.
This reflects the settings on the main unit.

PPP settings

Make these settings for a dial-up Internet connection.

- 1 Click the  button.

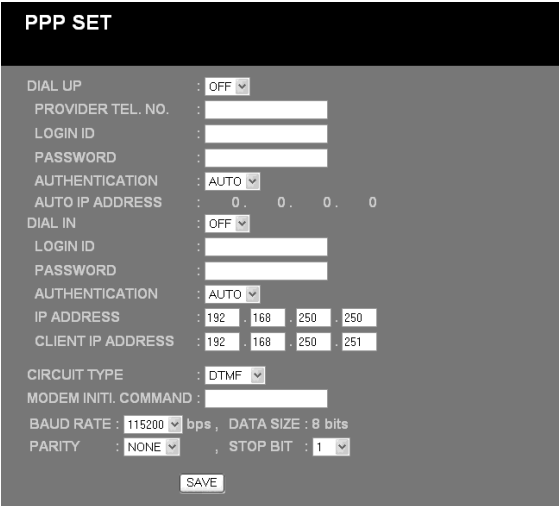
The Main menu screen appears.

- 2 Click 8. ADVANCED MENU SET.

The ADVANCED MENU SET screen appears.

- 3 Click 3. PPP SET.

The PPP SET screen appears.



DIAL UP: Set whether or not to use a dial-up connection.

PROVIDER TEL. NO.: Set the ISP telephone number.

LOGIN ID: Set the login ID.

PASSWORD: Set the password.

AUTHENTICATION: Set the authorization protocol.

AUTO IP ADDRESS: Shows the IP address.

DIAL IN: Set whether to use a dial-in connection.

LOGIN ID: Set the login ID.

PASSWORD: Set the password.

AUTHENTICATION: Set the authorization protocol.

IP ADDRESS: Set the IP address of the main unit.

CLIENT IP ADDRESS: Set the computer's IP address.

CIRCUIT TYPE: Set type of telephone circuit to which the modem is connected.

MODEM INIT. COMMAND: AT commands for controlling the modem.

BAUD RATE: Set the communications rate.

DATA SIZE: The number of data bits appears.

PARITY: Set the parity.

STOP BIT: Set the number of stop bits.

- 4 Make the settings.

- 5 Click the SAVE button.

This reflects the settings on the main unit.

NTP settings

Make these settings to use an NTP server on the Internet or LAN to synchronize the time.

- 1 Click the  button.

The Main menu screen appears.

- 2 Click 8. ADVANCED MENU SET.

The ADVANCED MENU SET screen appears.

- 3 Click 4. TIME ZONE/NTP SET.

The TIME ZONE/NTP SET screen appears.

- 4 Make the settings.

For details of the settings, see "NTP settings" (page 95).

- 5 Click the SAVE button.

This reflects the settings on the main unit.

Troubleshooting

This section may help you isolate a problem. Should the problem persist, unplug the unit and contact your Sony dealer or local authorized Sony service facility.

Symptom	Possible cause	Corrective action
The picture does not appear on the monitor screen.	Wrong connection	Check the connection.
	No power is provided to the video camera and/or monitor.	Turn on the power.
The recorder does not respond when you press any button.	The recorder is in alarm recording.	Wait for the alarm recording to finish.
	The security lock function is working.	Release the security lock. <i>See page 41.</i>
	The recorder is in timer-recording standby status or during timer recording.	Press the TIMER button so that the indicator goes dark. <i>See page 71.</i>
Timer recording was not made.	The clock setting is not correct.	Set the clock to the correct time. <i>See page 32.</i>
	Timer recording is not set to ON.	Press the TIMER button so that the indicator lights. <i>See page 71.</i> Check the TIMER SET display to see whether ON is displayed in the SET column. <i>See page 69.</i>
The time and date were not recorded.	The on-screen data is made undisplayed.	Press the EXIT/OSD button. <i>See page 16.</i>
	The TIME/DATE displays are set to OFF.	Set them to ON with DISPLAY SET. <i>See page 40.</i>
A warning message appears that cannot be cleared from the screen.	There is a problem with your unit.	Please contact your Sony dealer.

If a system shutdown occurs

If the recorder does not operate at all, do the following:

- 1** Make sure the recorder is connected to the power supply.
- 2** Press the ALL RESET button on the rear panel, and check whether the system revives. If it does not, perform steps 3 and 4.
- 3** Turn the power off by disconnecting the power cord from the outlet, and then wait about 10 minutes.
- 4** Reconnect the power cord to turn the power on.

If the recorder still does not operate, please consult your Sony dealer.

Hard disk drive error detection

If a hard disk drive error is detected at startup or during operation, the error message DISK ERROR appears on the monitor, and the POWER indicator on the front panel starts blinking.

If a hard disk drive error occurs, consult your Sony dealer.

Checking the Information on Power Failure and Usage Times

The main menu 5. POWER LOSS /USED TIME permits you to know whether interruption of recording owing to a power failure.

You can also check the accumulated usage time(s) of the built-in hard disk(s), the powered time of the recorder, and the firmware version of the recorder.

- 1 Press the MENU button to display the main menu.
- 2 Select 5. POWER LOSS /USED TIME.

The POWER LOSS /USED TIME display appears.

<POWER LOSS/USED TIME>		
POWER	LOSS	RECOVER
#002	18-04 23:02	18-04 23:06
	21-07 02:12	21-07 03:05
----	--:--	-----
----	--:--	-----
----	--:--	-----
----	--:--	-----
----	--:--	-----
----	--:--	-----
----	--:--	-----
----	--:--	-----
USED TIME	→	

POWER

The occurrence time and recovery time of the eight most recent power failures are displayed.

Align the cursor with USED TIME and turn the shuttle dial clockwise, to display the USED TIME screen.

USED TIME

The accumulated usage time(s) of the built-in hard disk(s) and the recorder are displayed.

F/W

The firmware version of the recorder is displayed. If extra hard disks have been installed, the hours of use and total powered on time appears.

To exit this menu, press the EXIT/OSD button.

Checking the Initialization Logs

The main menu 6. INITIALIZATION LOG permits you to know when the HDD was initialized (for all the areas) and when recording was restarted in each area. You can check the latest 8 logs.

- 1 Press the MENU button to display the main menu.
- 2 Select 6. INITIALIZATION LOG.

The INITIALIZATION LOG display appears.

<INITIALIZATION LOG>				
DATE	TIME	AREA	ACTION	USER
25-03	12:00	ALL	(INITI.)	ID4
----	--:--	-----	(-----)	-----
----	--:--	-----	(-----)	-----
----	--:--	-----	(-----)	-----
----	--:--	-----	(-----)	-----
----	--:--	-----	(-----)	-----
----	--:--	-----	(-----)	-----
----	--:--	-----	(-----)	-----

Initialization and recording restart are reported, along with the date, time and area.

To exit this menu, press the EXIT/OSD button.

Specifications

General

Recording method	JPEG2000 compression
Color system	HSR-J2009/J2016: NTSC color HSR-J2009P/J2016P: PAL color
Picture resolution	HSR-J2009/J2016: 720 × 240 pixels HSR-J2009P/J2016P: 720 × 288 pixels
Operating temperature range	5°C to 40°C (41°F to 104°F)
Operating humidity range	20% to 80% (maximum wet-bulb temperature 29°C or 84°F) (no condensation)
Power supply	120 to 240 V AC, 50/60 Hz
Current consumption	HSR-J2016/J2016P: 0.8 A HSR-J2009/J2009P: 0.68 A
External dimensions	420 × 96 × 371 mm (w/h/d) (16 ⁵ / ₈ × 3 ⁷ / ₈ × 14 ⁷ / ₈ in.)
Mass	HSR-J2016/J2016P: 7.2 kg (15 lb 14 oz) HSR-J2009/J2009P: 7.1 kg (15 lb 10 oz)

Video input/output

Camera input	IN 1 to 16 (HSR-J2016/J2016P), IN 1 to 9 (HSR-J2009/J2009P): 1 Vp-p, 75 Ω, unbalanced (BNC type)
Camera output	OUT 1 to 16 (HSR-J2016/J2016P), OUT 1 to 9 (HSR-J2009/J2009P): Through outputs of the corresponding camera inputs, 1 Vp-p, 75 Ω, unbalanced (BNC type)
Monitor output	MONITOR (MON1): 1 Vp-p, 75 Ω, unbalanced (BNC type) MONITOR 2 (MON2): 1 Vp-p, 75 Ω, unbalanced (BNC type) Front VIDEO output: RCA
Horizontal resolution	500 lines or more (HYPER mode)
S/N	48 dB (HYPER mode)

Audio input/output

Input	−8 dBs, 27 kΩ, unbalanced RCA × 2
Output	−8dBs, 600 Ω, unbalanced RCA × 2 (front and rear)
Microphone input	−60 dBs, 10 kΩ, unbalanced, ø3.5-mm minijack
S/N	40 dB

Alarm and control input/output

SCSI	Ultra 160 SCSI (68-pin high-density)
USB	USB 2.0 × 2 (front and rear)
LAN	10Base-T/100Base-TX, RJ-45
RS-485 A/B	RJ-11 × 2
RS-232C	D-SUB 9 pin
R1/R2	Resistor alley switches
CLOCK IN	Normal open (Pulse width 100 ms or more)
CLOCK OUT	Open collector / 1 kΩ (Low active)
EXT TIMER IN	Normal open (Pulse width 100 ms or more)
SENSOR ALARM OUT	Open collector / 1 kΩ (Low active)
ALARM RESET	Normal open (Pulse width 100 ms or more)
NON REC (VIDEO LOSS and switching)	+5 V, 5.7 kΩ (Low active)
WARNING	+5 V, 5.7 kΩ (Low active)
FULL	+5 V, 5.7 kΩ (Low active)
ARCHIVE FULL	+5 V, 5.7 kΩ (Low active)
TIMER REC OUT	+5 V, 5.7 kΩ (Low active)

Supplied accessories

HSR-J2009/J2016

AC power cord (1)

Power cord tie (1)

Ferrite cores (1 small, 4 large)

Rack mount brackets (1 set)

Quick Start Guide (1)

CD-ROM (1)

Booklet, B&P Warranty (1)

HSR-J2009P/J2016P

AC power cord (1)

Power cord tie (1)

Ferrite cores (2 small, 6 large)

Rack mount brackets (1 set)

Quick Start Guide (2)

CD-ROM (1)

Booklet, B&P Warranty (1)

Flyer (WEEE) (1)

Design and specifications are subject to change without notice.

Commands

Data Format

RS-232C

The data format is as follows:

Mode	Asynchronous
Character length	8 bits
Baud rate	2400, 4800, 9600 or 19200
Parity check	None
Stop bit	1 bit

Only the baud rate (data transmission speed) can be selected using submenu 4. RS-232C/RS-485 SET of main menu 3. GENERAL SET on the recorder (*page 43*).

Communication protocol

The communication is based on 1-byte units. When the computer has transmitted 1 byte, it will wait for a response from the recorder, then send the next.

The response from the recorder consists of 1 byte or more.

Note on RS-232C communication

To initiate command operation, send RS-232C TABLE ON (F6H) to the recorder.

The recorder will respond with ACK (0AH).

The recorder will accept commands until you send RS-232C TABLE OFF (F7H) to end command operations.

RS-485

The data format is as follows:

Mode	Asynchronous
Character length	8 bits
Baud rate	2400, 4800, 9600 or 19200
Parity check	None
Start bit	1 bit
Stop bit	1 bit

Transmission line: 2 conductors

Transmission system: Half duplex

Only the baud rate (data transmission speed) can be selected using submenu 4. RS-232C/RS-485 SET of main menu 3. GENERAL SET on the recorder (*page 43*).

Note on RS-485 communication

- If the address set using submenu 4. RS-232C/RS-485 SET of main menu 3. GENERAL SET (*page 43*) does not match the recorder's address, the recorder will not operate.
- When a group number is set, if it does not match the group number of the recorder, the recorder will not operate.

Regular Commands

For the commands discussed below, the recorder always respond with ACK (0AH) or NAK (0BH) (except in broadcast transmission).

RS-232C commands

RS-232C TABLE ON (F6H)

Starts RS-232C control.

RS-232C TABLE OFF (F7H)

Ends RS-232C control.

RS-485 commands

RS-485 TRANS START (FDH)

Starts RS-485 control.

RS-485 RCV CHK (FEH)

Checks whether the unit is ready to receive RS-485 commands.

RS-232C/RS-485 commands

PLAY (3AH)

Starts playback.

STOP (3FH)

Stops playback.

SEARCH (4AH)

Displays the SEARCH menu when the recorder is in Recording mode or Stop status.

PAUSE (4FH)

Sets the recorder to Still-Picture mode from Playback mode.

SHIFT ← (53H)

Functions the same as counterclockwise rotation of the Shuttle dial on the recorder.

SHIFT ↑ (54H)

Functions the same as counterclockwise rotation of the Jog dial on the recorder.

Exceptions:

1. Increases the speed of playback in progress.
2. Increases values on a menu display.

TIMER ON/OFF (60H)

Turns on/off timer recording.

SHIFT → (63H)

Functions the same as clockwise rotation of the Shuttle dial on the recorder.

SHIFT ↓ (64H)

Functions the same as clockwise rotation of the Jog dial on the recorder.

Exceptions:

1. Decreases the speed of playback in progress.
2. Decreases values on a menu display.

PLAY SPEED UP (65H)

- Increases values on a menu display.
- Increases the playback speed in Playback mode.

PLAY SPEED DOWN (66H)

- Decreases values on a menu display.
- Decreases the playback speed in Playback mode.

SECURITY LOCK ON (69H)

Set the SECURITY LOCK to ON.

SECURITY LOCK OFF (6AH)

Set the SECURITY LOCK to OFF.

MENU (74H)

- Sets the recorder to Menu mode.
- Selects the menu displays in Menu mode.

MULTI (82H)

Divides the display of the main monitor into 9 or 16 screens.

QUAD (83H)

Divides the display of the main monitor into 4 screens.

OPTION (84H)

Sets the display of the main monitor to a divided screen mode including an option screen.

ZOOM (85H)

- Sets the zoom setting mode. Then, proceed as follows:

- 1 Specify the horizontal position of the area to be zoomed with SHIFT ↑ (54H) or SHIFT ↓ (64H).
 - 2 Register the horizontal position with SHIFT → (63H).
 - 3 Specify the vertical position of the area to be zoomed with SHIFT ↑ (54H) or SHIFT ↓ (64H).
 - 4 Register the vertical position with SHIFT → (63H).
- Cancels Zoom mode.

SEQUENCE (87H)

Automatically changes the displays of the main monitor

MONITOR 2 (88H)

Selects the mode to set the monitor 2.

ALARM RESET (8AH)

Releases alarm operation.

COPY (8DH)

Turns on/off the copy set display.

OSD/EXIT (8EH)

- Turns on/off the on-screen data and changes the display position.
- Cancels Menu mode.

FULL 1 - FULL 16 (90H - 9FH)

Switches the input for the full-screen display.

ALARM F SKIP (ABH)

Searches for the next alarm event in Playback mode, and plays it back.

ALARM R SKIP (ACH)

Searches for the previous alarm event in Playback mode, and plays it back.

REC STOP (CFH)

Stops recording.

CLOCK ADJUST (E0H)

Resets the minute and second settings of the built-in clock to 00.

For example, when this command is sent between 13:30:00 and 14:29:59, the clock is reset to 14:00:00.

MENU RESET (E1H)

Resets the settings of the menu being displayed only.

Commands

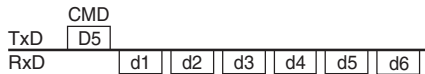
Status Commands

Status acquire command

MPX STATUS SENSE (D5H)

(Effective only in one-to-one communication with the specified device)

Acquires the status of each channel of the recorder.



	Bit	Meaning
(First byte) d1	7	ALARM ON 8
	6	ALARM ON 7
	5	ALARM ON 6
	4	ALARM ON 5
	3	ALARM ON 4
	2	ALARM ON 3
	1	ALARM ON 2
	0	ALARM ON 1
(Second byte) d2	7	ALARM ON 16 (HSR-J2009/J2009P: Reserved)
	6	ALARM ON 15 (HSR-J2009/J2009P: Reserved)
	5	ALARM ON 14 (HSR-J2009/J2009P: Reserved)
	4	ALARM ON 13 (HSR-J2009/J2009P: Reserved)
	3	ALARM ON 12 (HSR-J2009/J2009P: Reserved)
	2	ALARM ON 11 (HSR-J2009/J2009P: Reserved)
	1	ALARM ON 10 (HSR-J2009/J2009P: Reserved)
	0	ALARM ON 9
(Third byte) d3	7	SENSOR ON 8
	6	SENSOR ON 7
	5	SENSOR ON 6
	4	SENSOR ON 5
	3	SENSOR ON 4
	2	SENSOR ON 3
	1	SENSOR ON 2
	0	SENSOR ON 1
(Fourth byte) d4	7	SENSOR ON 16 (HSR-J2009/J2009P: Reserved)
	6	SENSOR ON 15 (HSR-J2009/J2009P: Reserved)
	5	SENSOR ON 14 (HSR-J2009/J2009P: Reserved)
	4	SENSOR ON 13 (HSR-J2009/J2009P: Reserved)
	3	SENSOR ON 12 (HSR-J2009/J2009P: Reserved)
	2	SENSOR ON 11 (HSR-J2009/J2009P: Reserved)
	1	SENSOR ON 10 (HSR-J2009/J2009P: Reserved)
	0	SENSOR ON 9

(Fifth byte) d5	7	VIDEO LOSS ON 8
	6	VIDEO LOSS ON 7
	5	VIDEO LOSS ON 6
	4	VIDEO LOSS ON 5
	3	VIDEO LOSS ON 4
	2	VIDEO LOSS ON 3
	1	VIDEO LOSS ON 2
	0	VIDEO LOSS ON 1
(Sixth byte) d6	7	VIDEO LOSS ON 16 (HSR-J2009/J2009P: Reserved)
	6	VIDEO LOSS ON 15 (HSR-J2009/J2009P: Reserved)
	5	VIDEO LOSS ON 14 (HSR-J2009/J2009P: Reserved)
	4	VIDEO LOSS ON 13 (HSR-J2009/J2009P: Reserved)
	3	VIDEO LOSS ON 12 (HSR-J2009/J2009P: Reserved)
	2	VIDEO LOSS ON 11 (HSR-J2009/J2009P: Reserved)
	1	VIDEO LOSS ON 10 (HSR-J2009/J2009P: Reserved)
	0	VIDEO LOSS ON 9

STATUS SENSE (D7H)

(Effective only in one-to-one communication with the specified device)

Acquires the status of the recorder.



	Bit	Meaning
(First byte) d1	7	00: Play stop, 01: Still-picture, 10: Play
	6	11: Menus
	5	1: Alarm recording area full
	4	00: Stop, 01: Pre-alarm recording
	3	10: Alarm recording, 11: Use prohibited
	2	1: Normal recording area full
	1	00: Recording stop, 01: Normal recording
	0	10: Timer recording, 11: Timer recording standby
(Second byte) d2	7	Playback modes 00: Normal, 01: Alarm
	6	10: Storage 11: Reserved
	5	Fixed at 0
	4	1: Forward 0: Reverse
	3	Playback speed 00H to 0FH
	2	
	1	
	0	

d3 (Third byte)	7	1: Channel selected
	6	Reserved
	5	Reserved
	4	Reserved
	3	Channel number 00H to 0FH: channel 1 to 16
	2	
	1	
	0	
d4 (Fourth byte)	7	
	6	Reserved
	5	Reserved
	4	Reserved
	3	Reserved
	2	Reserved
	1	Reserved
	0	Reserved
d5 (Fifth byte)	7	Reserved
	6	Reserved
	5	Reserved
	4	Reserved
	3	Reserved
	2	Reserved
	1	Reserved
	0	Reserved

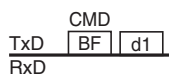
Bit				Operating mode
3	2	1	0	
0	0	0	0	No mode change
0	0	0	1	Play Stop
0	0	1	0	Still-Picture
0	0	1	1	Forward Slow Play
0	1	0	0	Backward Slow Play
0	1	0	1	Forward Play
0	1	1	0	Backward Play
0	1	1	1	Fast Forward
1	0	0	0	Fast Backward
1	0	0	1	Normal Recording Stop
1	0	1	0	Normal Recording
1	0	1	1	Timer Recording
1	1	0	0	Timer Recording Standby
1	1	0	1	Alarm Recording Stop
1	1	1	0	Alarm Recording
1	1	1	1	Reserved

Group Control Commands

Status information send commands

(Effective only in broadcast transmission)
 These commands are to occasionally send information of the recorder. With these commands, you can send one byte of data following each command. These data must be in the range of 00H to EFH. F0H to FFH are forbidden.

STATUS LOG-1 (BFH)



Bit	Meaning
7	1: Warning, 0: Normal
6	10: Alarm Recording Start
5	01: Alarm Recording Stop, 00: Normal
4	Reserved
3	Operating mode (listed below)
2	
1	
0	

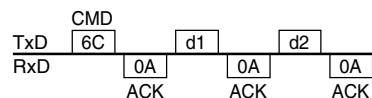
RS-485 commands

You can group devices to control them as a group. Simultaneous registration/deletion of multiple groups is possible.

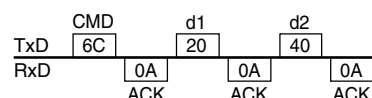
- If you set both d1 and d2 to 00 in GROUP SET or GROUP CLEAR, the recorder will return ERROR (02H) in place of ACK (0AH) when it receives d2.
- If you set the least-significant bit of d1 to 1 in GROUP SET or GROUP CLEAR, the recorder will return ERROR (02H) in place of ACK (0AH) when it receives d1.

GROUP SET (6CH)

Registers the recorder in the specified group(s).



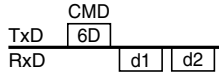
Example: Setting to group 5 and group 14



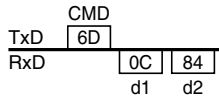
Commands

GROUP CHECK (6DH)

Acquires the group(s) to which the recorder has been registered.

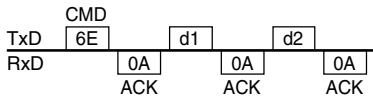


Example: When registered to groups 2, 3, 10 and 15

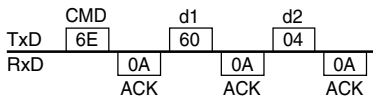


GROUP CLEAR (6EH)

Clears the group registration.



Example: When clearing groups 5, 6, and 10



	Bit	Meaning
d1 (First byte)	7	GROUP 7
	6	GROUP 6
	5	GROUP 5
	4	GROUP 4
	3	GROUP 3
	2	GROUP 2
	1	GROUP 1
	0	Always 0
d2 (Second byte)	7	GROUP 15
	6	GROUP 14
	5	GROUP 13
	4	GROUP 12
	3	GROUP 11
	2	GROUP 10
	1	GROUP 9
	0	GROUP 8

Special Commands

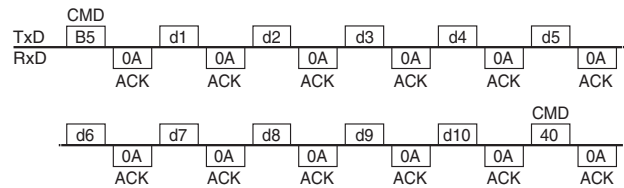
RS-232C commands

(Effective only in one-to-one communication with the specified device)

T/D SEARCH 4 (B5H)

Initiates search for a specific time and date.

Send this command, followed by numeric data commands 30H (0) to 39H (9) that specify the date and time.

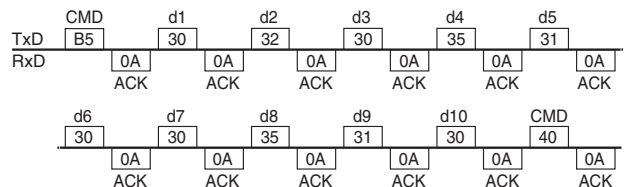


- d1: Ten's digit of the year (30H to 39H)
- d2: One's digit of the year (30H to 39H)
- d3: Ten's digit of the month (30H or 31H)
- d4: One's digit of the month (30H to 32H)
- d5: Ten's digit of the day (30H to 33H)
- d6: One's digit of the day (30H to 39H)
- d7: Ten's digit of the hour (30H to 32H)
- d8: One's digit of the hour (30H to 39H)
- d9: Ten's digit of the minute (30H to 35H)
- d10: One's digit of the minute (30H to 39H)

If data other than 30H to 39H are sent, ERROR (02H) will be returned instead of ACK (0AH).

If a value out of the specified range is sent for any digit, ERROR (02H) will be returned after ENTER (40H) is sent.

Example: To search 5:10 on May 10, 2002



ENTER (40H)

Indicates the end of numeric data of the T/D SEARCH 4.

CLEAR ERROR (41H)

- Clears only the last entered numeric data command while entering the time and date values for T/D SEARCH 4.
- If an error is generated by an invalid data input for the T/D SEARCH 4 command, it clears only the invalid data item to clear the error.

CLEAR (56H)

- Clears the T/D SEARCH 4 command while entering the time and date values.
- If an error is generated by an invalid data input for the T/D SEARCH 4 command, it cancels the command to clear the error.

RS-232C/RS-485 commands

REC REQUEST (FAH)

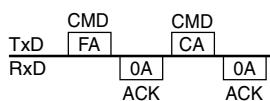
To be sent preceding a REC (CAH) command.

REC (CAH)

Starts recording when it is sent after REC REQUEST (FAH).

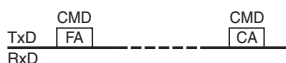
In one-to-one communication with the specified device:

Send REC (CAH) when ACK (0AH) is returned after you send FAH.



In broadcast transmission:

Send REC (CAH) when you confirm that the bus is opened after you send FAH.



Other Commands

RS-485 command

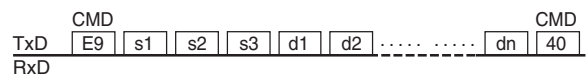
CLOCK DOWNLOAD (E9H)

(Effective only in broadcast transmission)

Downloads data specified by subcommands s1, s2, and s3.

If s1, s2, s3 = 30H, 30H, 30H, the date (year/month/day) will be downloaded.

If s1, s2, s3 = 30H, 30H, 31H, the time will be downloaded.



s1, s2, s3, dn: ASCII numeric codes 30H to 39H

d1 to dn: Download data

The device that issues E9H will continuously send the data up to 40H without waiting until the bus opens.

Special Code

ERROR (02H)

- Indicates that the recorder has entered the error status as an invalid data item was sent while the time and date values for T/D SEARCH 4 were being entered.
- Indicates that the recorder has received invalid data for GROUP SET (6CH) or GROUP CLEAR (6DH) via the RS-485.

Commands

Command Table

Upper Lower	0	1	2	3	4	5	6	7
0				0	ENTER		TIMER ON/OFF	
1				1	CLEAR ERROR			
2	ERROR			2				
3				3		SHIFT←	SHIFT→	
4				4		SHIFT↑	SHIFT↓	MENU
5				5			RP UP (PLAY SPEED UP)	
6				6		CLEAR (PLAY SPEED DOWN)	RP DOWN	
7				7				
8				8				
9				9			SECURITY LOCK ON	
A	ACK			PLAY	SEARCH		SECURITY LOCK OFF	
B	NAK							
C							GROUP SET	
D							GROUP CHECK	
E							GROUP CLEAR	
F				PLAY STOP	PAUSE			

□ : RS-232C only

■ : RS-485 only

Upper Lower	8	9	A	B	C	D	E	F
0		FULL 1					CLOCK ADJUST	
1		FULL 2					MENU RESET	
2	MULTI	FULL 3						
3	QUAD	FULL 4						
4	OPTION	FULL 5						
5	ZOOM	FULL 6		T/D SEARCH 4		MPX STATUS SENSE		
6		FULL 7						RS-232C TABLE ON
7	SEQUENCE	FULL 8				STATUS SENSE		RS-232C TABLE OFF
8	MONITOR 2	FULL 9						
9		FULL 10					CLOCK DOWNLOAD	
A	ALARM RESET	FULL 11			REC			REC REQUEST
B		FULL 12	ALARM F SKIP					
C		FULL 13	ALARM R SKIP					
D	COPY	FULL 14						RS-485 TRANS START
E	OSD/EXIT	FULL 15						RS-485 RCV CHK
F		FULL 16		STATUS LOG 1	REC STOP			

□ : RS-232C only

■ : RS-485 only

- With the commands BFH, you can send one byte of data following each command.
These data must be in the range of 00H to EFH. F0H to FFH are forbidden.
- For command D5H and D7H, a series of data specified for the command will be returned.

<http://www.sony.net/>

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