

INSTRUCTION MANUAL

DSR-2004

Digital Video Recorder

About this manual

Before installing and using this unit, please read this manual carefully.
Be sure to keep it handy for later reference.



- Refer to the included CD-ROM for the German, French, Spanish and Italian “INSTRUCTION MANUAL”.
- Die “BEDIENUNGSANLEITUNG” in den Sprachen Deutsch, Französisch, Spanisch und Italienisch finden Sie auf der beiliegenden CD-ROM.
- Utilisez le CD-ROM fourni pour consulter le “MANUEL D’INSTRUCTIONS” en allemand, français, espagnol et italien.
- Consulte en el CD-ROM suministrado el “MANUAL DE INSTRUCCIONES” en alemán, francés, español e italiano.
- Per il “MANUALE DI ISTRUZIONI” in Tedesco, Francese, Spagnolo e Italiano, fare riferimento al CD-ROM allegato.

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Safety precautions



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING: To reduce a risk of fire or electric shock, do not expose this product to rain or moisture.

CAUTION: Changes or modifications not expressly approved by the manufacturer may void the user's authority to operate this equipment.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

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 an experienced radio/TV technician for help.

For the customers in Canada

This class B digital apparatus complies with Canadian ICES-003.

Declaration of Conformity

Model Number : DSR-2004
Trade Name : SANYO
Responsible party : SANYO FISHER COMPANY
Address : 21605 Plummer Street, Chatsworth, California 91311
Telephone No. : (818) 998-7322

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

CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.

Discard used batteries according to the manufacture's instructions.

FOR CALIFORNIA, U.S.A. ONLY

This product contains a CR Coin Lithium Battery which contains Perchlorate Material - special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate.

Licensed Under U.S. Patent No. 4,974,088



Please note:

Your SANYO product is designed and manufactured with high quality materials and components which can be recycled and reused.

This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste.

Please dispose of this equipment at your local community waste collection/recycling centre.

In the European Union there are separate collection systems for used electrical and electronic products.

Please help us to conserve the environment we live in!

This symbol mark and recycle system are applied only to EU countries and not applied to the countries in the other area of the world.

Safety precautions

These precautions must be followed for safety reasons.

Warning

■ Do not use if the unit emits smoke, strange sounds are heard or odor is emitted.

Continued use may cause electrocution and/or fire. Immediately remove the power plug from the outlet. Once the unit stops emitting smoke, consult the dealership where this unit was purchased or factory shop for repairs.

Do not attempt repairs on your own.



■ Make sure the power cable is not damaged.

- Always use the power cable supplied with the unit.
- Do not place heavy objects on the power cable or place the power cable near heating equipment. Also, do not bend the power cable forcefully, work upon or staple it.

A damaged power cable may result in fire and/or electrocution.

- Should the power cable become damaged it must be replaced by the dealership where this unit was purchased or factory shop.



■ Make sure there is no dust accumulation on the power plug or the outlet.

- Dust accumulation may result in a short-circuit and heat generation and cause fire.
- Be especially careful when using an outlet situated in a room exposed to high humidity, condensation and/or dust, or in a kitchen.
- Periodically remove the power plug from the outlet and clean any dust and dirt between the plug and the outlet.



■ Caution when connecting the power cable

- Connect the power plug directly with the outlet. Faulty connection may result in heat generation and cause fire.
- Do not use the power cable while it is tied in a bundle. This may result in heat generation and cause fire.
- When using the extension cord supplied, make sure the power consumption of the connected unit does not exceed the electrical rating of the extension cord. Higher power consumption may result in heat generation and cause fire.



■ Disassembly prohibited

- Do not place your hand inside this unit as this may cause fire and/or electrocution.
- Consult the dealership where this unit was purchased or factory shop for diagnostics, adjustments, and repairs.



■ Do not place any foreign objects inside the unit.

- Do not insert or push in any metal or combustible objects through openings such as air ducts. This may cause fire and/or electrocution.
- In the event that a foreign object is inside the unit, turn off and unplug the unit. Consult the dealership where this unit was purchased or factory shop. Continued use may result in fire and/or electrocution.



■ Do not place a container holding water or other liquids above the unit when it is connected to power.

In the event that water gets inside the unit, turn off and unplug the unit. Consult the dealership where this unit was purchased or factory shop.

Continued use may result in a fire or electrocution.



■ Do not allow the unit to get wet.

- This unit is not waterproof. Do not expose the unit to water. This may cause fire and/or electrocution.
Do not use in a bath or shower room.
- In the event that the internal components have been exposed to water, turn the power off and remove the power plug from the outlet. Consult the dealership where this unit was purchased or factory shop. Continued use may cause electrocution and/or fire.



Safety precautions

Warning

■ Do not use during thunder/thunder storms.

Do not use during thunder/thunder storms. Never touch the connection cable during thunder/thunder storms. This may cause electrocution.



■ Do not place in an unstable position.

- Doing so may cause accidents and/or breakdowns through falling or toppling.
- In the event that the unit has been dropped or the casing has been damaged, turn the power off and remove the power plug from the outlet. Consult the dealership where this unit was purchased or factory shop.
Continued use may cause electrocution and fire.



■ Do not expose to shock or vibration.

Stored data may be damaged or lost through hard-disk breakdowns caused by shock/vibration.



■ Do not use this unit in areas where it is exposed to the possibility of explosion.

Do not use this unit in areas where explosive and/or flammable gases are present. This may cause fire and/or explosion.



Caution

■ Do not pull on the power cable when removing the power plug from the outlet.

Hold the power plug when disconnecting the power cable from the outlet. Pulling on the power cable may damage the cord. This may cause fire and/or electrocution.



■ Do not touch the power plug with wet hands.

Doing so may result in electrocution.



■ Do not sit on.

Doing so may cause the unit to fall, be damaged and/or result in injury.



■ Make sure the cables are connected properly.

Connect and install the power cable and connection cable very carefully. Tripping over the cable may result in the unit capsizing or falling and cause injury.



■ Do not place heavy objects on connected units.

Doing so may affect the stability of the unit and cause it to fall which may result in injury. Doing so may also damage the unit depending on the weight of the object.



■ Shipment and portability

- Never move this unit while the power is turned on.
- When shipping, remove the power plug from the outlet, confirm that the connection cable has been removed, and store in original packaging. Ship using a method that causes the least amount of shock and/or damage to this unit. Also, do not drop this unit.



■ Maintenance when the unit is going to remain unused for long periods of time

Remove the power plug from the outlet. Carrying out maintenance without removing the power plug may cause electrocution.



Safety precautions

Caution

■ Cleaning the internal components

Consult the dealership where this unit was purchased or factory shop for cleaning internal components. Leaving the unit unused for long periods of time may attract dust to the internal components, which in turn may cause fire and/or breakdowns.



■ Do not block the cooling fans or air ducts.

- This unit is equipped with air ducts and cooling fans in order to assist the ventilation of hot air produced by the hard disk drive.
- Placing covers, placing in a case, or placing inside bookcases may cause heat build up, and may result in fire and/or electrocution.



When the unit is set up in a rack, leave open space on all sides.

- Leave 1 cm or more of space above and below.
- Leave 5 cm or more of space on both sides and on the rear.

■ Do not expose to extreme temperatures or humidity changes.

- Do not place in areas where the unit will be exposed to extreme temperatures (± 10 degrees C per hour) or humidity changes.



■ Points on unit positioning

This unit is constructed using precision electronic parts. Avoid placing it in areas described below as this may cause faulty operation and/or breakdowns.

- In direct sunlight
- In places exposed to water
- In the vicinity of cooling and heating units or humidifiers
- Near the air conditioner where the unit is exposed to cool air
- Dusty areas
- Areas that contain fire hazards
- Areas that contain magnetic items
- In the vicinity of volatile substances
- Areas where the unit will be exposed to constant vibration (in trains, cars, etc.)



■ Cautionary points on condensation

Droplets may form on the outside when very cold water is poured into a cup. In the same way, droplets may form around the internal components of this unit. This is called condensation.

Do not use this unit if condensation has formed.

Using this unit while condensation is formed may cause breakdowns. In the event of sudden sharp temperature changes, turn off the power and do not use this unit until the temperature of the room where it is positioned stabilizes (about 2 hours).

Condensation will not occur while the power is turned on.

When condensation is likely to occur ...

Use the unit after turning the power off and leaving it for 1~2 hours.

Supplied AC Adapter

Danger

■ Never disassemble or modify.

- Touching the internal parts is dangerous, and can cause fire and electrocution.
- Never use as a DC power source unit.



■ Never get the unit wet.

- Never submerge the unit in water or get it wet. Doing so can cause fire and electrocution.
- Do not use in a bath or shower room.
- In the event that water gets inside the unit, unplug the power plug from the outlet, and consult the dealership where this unit was purchased. Continued use can cause fire, electrocution, and unit breakdowns.



Safety precautions

Supplied AC Adapter

Warning

■ Use only the supplied AC adapter.

Use the supplied AC adapter. Using a different AC adapter can cause fire or electrocution, due to differences in current carrying capacity of the power cord.



■ Do not connect to other appliances.

The AC adapter supplied is to be used with this unit only. Connecting it with other appliances may result in fire and/or electrocution.



■ Do not connect this unit with the AC adapter in areas reachable to children or where pets move freely.

Children or pets may mistakenly wrap the adapter cable around their neck and suffocate.



■ Never touch the AC adapter with wet hands.

Doing so can cause electrocution.



■ If the unit emits smoke, strange sounds or smells immediately remove the AC adapter from the outlet.

- Continued use may result in fire and/or electrocution.
- In the event that the unit does not function correctly, immediately remove the AC adapter from the outlet. Once the unit stops emitting smoke, consult the dealership where this unit was purchased. Do not attempt to repair the unit. Doing so may be dangerous.



■ Do not use during thunder/thunder storms.

Do not touch the AC adapter during thunder/thunder storms. Doing so may result in electrocution.



■ Precaution on AC adapter and plug

- Do not connect the AC adapter to a loose outlet.
- Make sure the AC adapter is properly plugged to the outlet.
- Do not use if the plug of the AC adapter is damaged.



Continued use when insecurely plugged may result in heat generation and cause fire and/or electrocution.



- When removing the AC adapter plug from the outlet do not pull forcefully.

Doing so may damage the plug and/or the cable and cause fire and/or electrocution.



- Do not remove the DC plug from the DC input terminal of the unit while the AC adapter is inserted in the outlet.

Do not touch the plug with wet hands and/or put the plug in your mouth. Doing so may result in electrocution.

- Make sure there is no dust accumulation on the AC adapter and the outlet contact area.

Dust accumulation may result in a short circuit and/or heat generation and cause fire and/or electrocution.

Be especially careful when using an outlet situated in a room exposed to high humidity, condensation and/or dust, or in a kitchen.

Wiping away dust:

Remove the AC adapter from the outlet and wipe away any dust on the metal parts using a dry cloth.

- When using an extension cord with an outlet, make sure the power consumption of the connected unit does not exceed the electrical rating of the extension cord.

Higher power consumption may result in heat generation and cause fire.

Safety precautions

Supplied AC Adapter

Caution

■ Make sure the cable is connected properly.

Make sure the AC adapter cable and the connecting cables are connected properly.

Tripping over the cable may result in the unit capsizing or falling and cause injury.



■ Preventing damage to a cable

Do not place heavy objects on the AC adapter cable or place the adapter cable near heating equipment.

Also, do not bend the power cable forcefully, work upon or staple it.



■ Do not place the unit in an unstable position

- Doing so may result in the unit toppling or falling and cause injuries and/or damages.
- In the event that the unit has fallen or the casing has been damaged, consult the dealership where this unit was purchased. Continued use may result in fire, electrocution and/or breakdown.



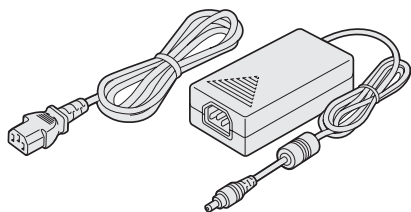
■ Precaution on unit positioning

Do not use this unit where it is exposed to heat (in front of a stove) or direct sunlight.



Warning

The supplied power cable/ AC Adapter is for exclusive use with this unit. Do not use with other appliances.



Safety precautions

Follow the points outlined below for proper use

■ Back up battery.

- A built-in lithium battery allows the date to be set. The lithium battery is not rechargeable.
The life expectancy of the lithium battery is approximately 2 years.
- When the battery is flat the monitor displays the "**THE CLOCK IS NOT RESPONDING**" message. The clock is automatically reset in case of battery fluid leak or when the battery has reached the end of its life expectancy. Consult the dealership where this unit was purchased or the nearest repair center for battery replacement.

Battery fluid leaks

In the event that the battery fluid has leaked rinse hands/ clothes thoroughly with water.

Loss of eyesight may result if battery fluid enters the eyes. Do not rub the eyes. Immediately rinse with clean water and consult a physician.

When disposing of this unit

Consult the dealership where this unit was purchased for information concerning the disposal of the lithium battery.

■ If unused for a lengthy period of time

Remove the power plug from the outlet. Remember to occasionally turn the power on in order to maintain correct function.

■ Pre-confirm important recording assignments

Recording and/or playback functions may be unavailable due to hard-drive or connecting unit failures. Always confirm that recording can be carried out successfully before carrying out important recording assignments. The recorded content cannot be guaranteed.

It is recommended to periodically back up or mirror data in order to prevent the loss of data in the event of breakdowns, recording faults or accidents.

■ Maintaining this unit

Turn the power off and remove the power plug from the outlet. Wipe away any dust using a soft cloth.

When the stains are hard to remove...

Soak a cloth in water with diluted neutral detergent and wring it. Wipe the stain with the moistened cloth and finally dry off with a dry cloth.

CAUTION:

- Do not use paint thinner, benzene, or any other alcohol based agents for cleaning. The exterior may deteriorate or the paint may wear off.
- Follow the instructions supplied on the packaging of the chemical cleaning agent.
- Do not spray volatile substances, such as insecticides, etc. onto the unit. Also, avoid extended contact with rubber or vinyl products.
This may cause exterior damage or wear the paint off.

■ Copyright information

- This manual and software are copyrighted to SANYO Electric Co., Ltd.
- Brand and product names used in this manual are the trademarks or registered trademarks of their respective companies.

Except for personal use, copyright law prohibits the use of recorded copyrighted images without the permission of the copyright holder.

■ Personal data protection

Images or footage recorded by the camera video system in which people are captured and can be identified are considered to be personal information and fall within the scope of the Personal Data Protection Law. It is the responsibility of the user to operate the system in accordance with the above law.

Main Features

- Real time monitoring at 200 IPS (PAL) / 240 IPS (NTSC)
- Maximum recording speed at 100 IPS (PAL) / 120 IPS (NTSC)
- 4ch audio recording
- Remote surveillance and operation via network
- VGA video output
- Comes with IR remote control unit and DVR utility software

Main parts replacement timings

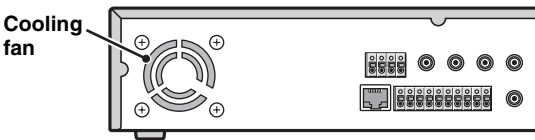
Continued use of this unit in a 25°C environment may result in wear and deterioration of the parts of the unit. We recommend you replace the following parts according to the timings listed below. The replacement timings listed are approximate and do not guarantee the performance of the part in question.

■ **Hard disk:** 2 years (25°C environment)

The life expectancy of each part depends on the environment in which the unit is used. However, the head and motor are particularly prone to wear and deterioration. Therefore, writing errors are more likely to occur after two years of use.

■ **Cooling fan:** 3 years (25°C environment)

Cooling fan failure causes higher internal temperatures which may result in a faulty hard disk. Periodically check whether the cooling fan is working properly.



■ **Battery:** 2 years (25°C environment)

Accessories

Check that all the parts shown below are supplied.

- ① Power cable (x2)

② AC adapter

④ HDD mounting bracket

⑥ HDD fixing screw

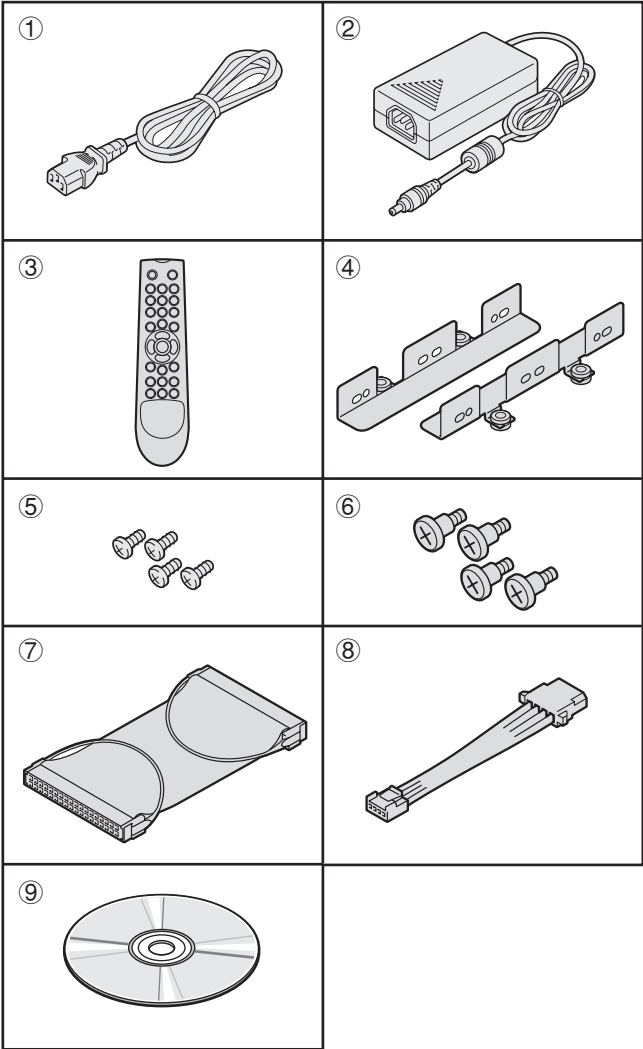
⑧ HDD power cable
- ③ Remote control

⑤ HDD bracket screw

⑦ IDE cable

⑨ CD-ROM

- Instruction Manual (Digital Video Recorder)



Installing a hard disk

No default hard disk is installed at the time of purchase. To purchase and install a hard disk, consult the dealership where this unit was purchased.

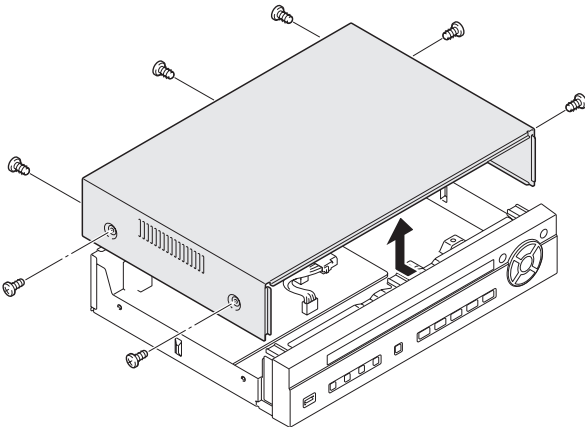


Make sure the unit is turned off before installing the hard disk.

1

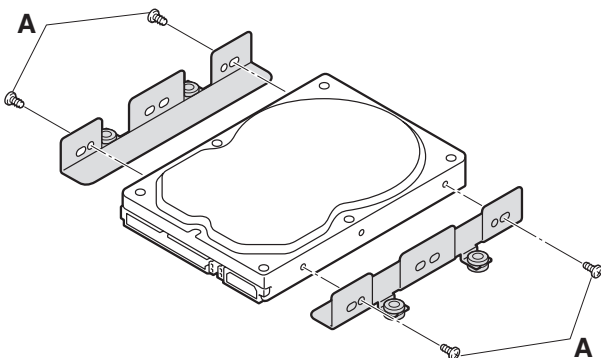
Unfasten the cover of the unit.

Set the mode of the hard disk to be installed to "Master". For more information, read the hard disk installation manual.



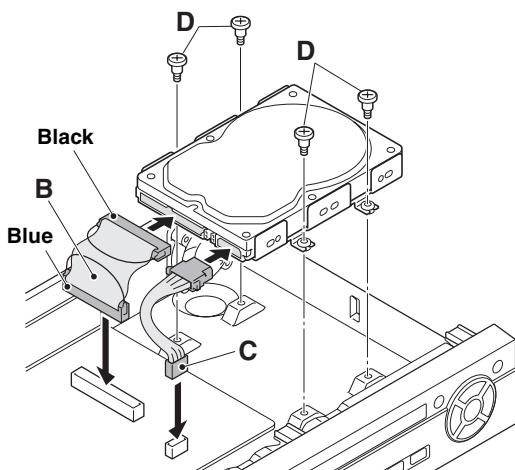
2

Fix the brackets to the hard disk using the supplied HDD mounting bracket screws (A).



3

Connect the supplied IDE cable (B) and HDD power cable (C) to the hard disk and fix the hard disk to the unit using the supplied HDD fixing screws (D).



Warning

The hard disk is a precision instrument. To avoid damage, handle the hard disk with care and do not expose it to shock. Do not block the ventilation holes and do not allow the cooling fan to stop. Doing so may cause heat build up and may shorten the life expectancy of the hard disk.

☐ This unit is designed to be positioned horizontally. Do not position vertically.

☐ Do not expose to shock or vibration and do not transport while power is turned on.

Always turn the power off when moving in and out of racks or other shelves.

☐ Do not remove the power plug while recording or playing images back.

☐ Do not move the unit for approximately 30 seconds after turning the power off.

The hard disk continues to rotate for a short duration after the power has been turned off. The unit is further susceptible to damage through shock and vibration during that period. It is imperative that you do not move the unit during that time.

☐ Do not expose to shock or vibration.

Avoid placing this unit directly on the floor. Make sure that the four stands attached to the base of this unit are used when placing it on the floor.

☐ Always use the original packaging (packaging supplied at the time of purchase), when shipping the unit.

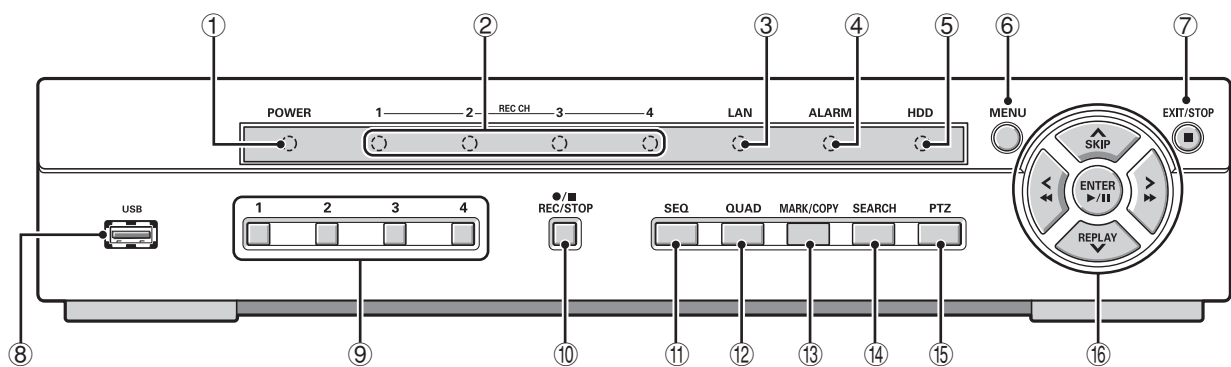
Make sure you use the packaging materials supplied at the time of the original purchase when shipping the unit or a single internal component of the unit. Select a shipping method that will cause the least amount of shock to the unit during shipping.

Consult the dealership where this unit was purchased for hard disk replacement.

- The hard disk is vulnerable to static electric shocks. Take appropriate measures to prevent exposure to static electricity.
- Unpackaged drives should be placed horizontally with their base plate facing upwards on top of a soft cloth. Exposing the hard disk to shocks and vibration may cause breakdowns.
- Do not expose the drive to shocks and/or vibrations when removing/tightening the screws at the time of hard disk replacement. Firmly tighten the screws after replacement.

Names and functions of parts

Front panel



There is no power switch on this unit.

① **Power indicator (POWER)**

The power indicator blinks when the supplied AC adapter is connected.

② **Recording indicator (CH 1/CH 2/CH 3/CH 4)**

The indicator blinks when a channel is recording.

③ **LAN indicator (LAN)**

The indicator blinks when the unit is connected and used through the LAN cable.

④ **Alarm indicator (ALARM)**

The indicator blinks when an alarm recording occurs.

⑤ **Hard disk drive indicator (HDD)**

The indicator blinks when the hard disk is being accessed.

⑥ **Menu button (MENU) (P7/24)**

Displays the settings menu screen and switches to setting mode.

⑦ **Exit/Stop button (EXIT/STOP) (P13)**

During settings: Returns to the previous screen.
During playback: Interrupts playback operation.

⑧ **USB terminal (USB) (Exclusively for 2.0) (P21)**

Connect the USB memory. Video can be saved.

⑨ **Camera selection 1 - 4 buttons (P7)**

The video of each live is displayed on single-screen.

⑩ **Record/Stop button (REC/STOP) (P12)**

Starts/Stops the recording of the monitored live image displayed.

⑪ **Automatic camera scrolling button (SEQ) (P10)**

Automatically switches through and displays the images of each live.

⑫ **Quad-screen display button (QUAD) (P10)**

Displays a quad-screen.

⑬ **Mark/Copy button (MARK/COPY) (P21)**

Switches to image saving mode.

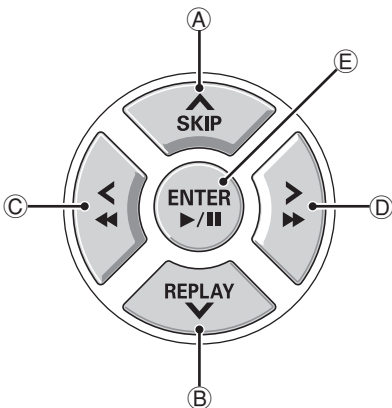
⑭ **Search button (SEARCH) (P18)**

Switches to recorded-images searching mode.

⑮ **Pan/Tilt/Zoom button (PTZ) (P11)**

Switches the dome camera connected to the RS 422/485 terminal to Pan/Tilt/Zoom/Focus mode.

⑯ **Control button**



	Playback in progress	Setting in progress (Cursor operation)
A	Skip button (SKIP): The player jumps one minute forward.	▲ : Moves the cursor upward.
B	Replay button (REPLAY): The player jumps one minute backward.	▼ : Moves the cursor downward.
C	◀ button: The player fast rewinds.	◀ : Changes the settings value or moves the cursor to the left.
D	▶ button: The player fast-forwards.	▶ : Changes the settings value or moves the cursor to the right.
E	▶/ button: The player displays a still image. Plays the image selected during the image search operation.	ENTER : Sets the selected item or displays the settings screen.

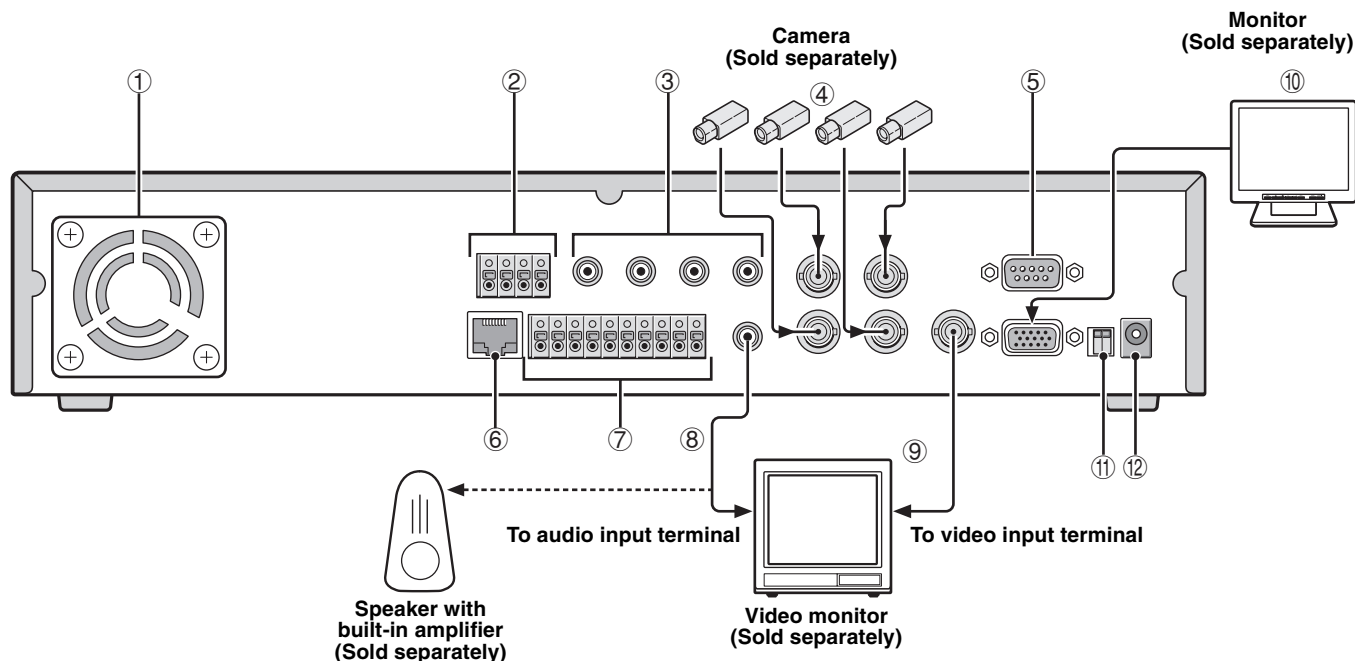
Names of each part and connections

Rear panel

Basic connections



- Do not turn this unit on before all the connections are complete. Read the instruction manual of each unit carefully.
- Make sure each unit is connected properly as faulty connection may result in the unit emitting smoke and/or being damaged.
- Feed additional units with the same power source. Stored data may be lost.
- The DC plug of the AC adapter is very easily unplugged. When shifting this unit, remove the plug carefully.



① Cooling fan (P1)

② PTZ camera control terminal (RS-422/485: P11)

③ Audio input (AUDIO IN: CH1 - CH4)

④ Video input terminal (VIDEO IN: CH1 - CH4)

⑤ RS 232 terminal (RS-232C)
For maintenance purposes.

⑥ Network terminal (ETHERNET: P5)

⑦ External sensor terminal (SENSOR/ALARM OUT: P14)

⑧ Audio output terminal (AUDIO OUT)

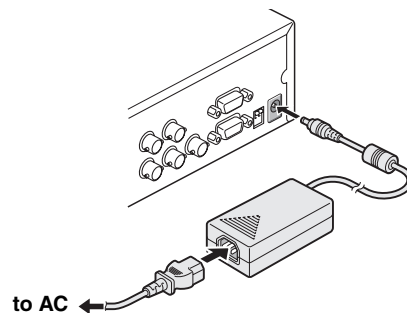
⑨ Video output terminal (VIDEO OUT)

⑩ VGA (Video Graphics Array) output terminal
Connects to the PC VGA monitor.

⑪ System changeover switch (PAL/VGA: P7)

⑫ DC12V input terminal (DC 12V)

Connect the power cable to the unit as shown in the illustration and insert the power plug into the outlet. The POWER indicator situated on the front panel blinks.



Names of each part and connections

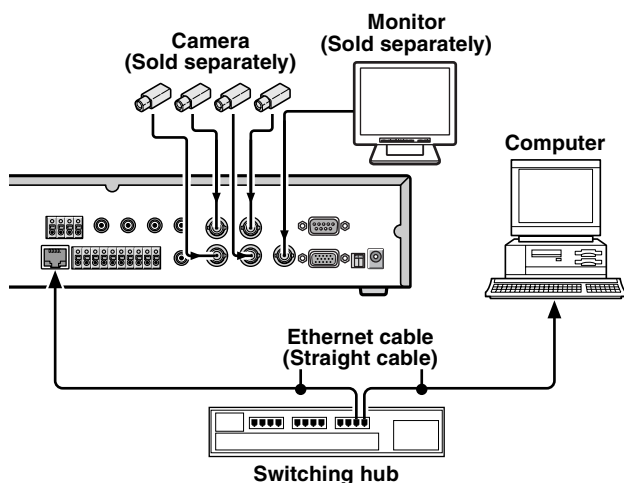
Network connection (ETHERNET)

LAN connection

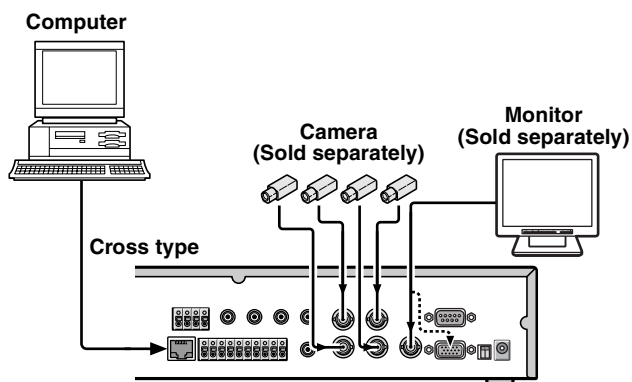
■ Using the switching hub

Use a 10BASE-T/100BASE-TX CAT 5 LAN cable.

When controlling the network, connect to hubs such as the switching hub using an Ethernet cable.



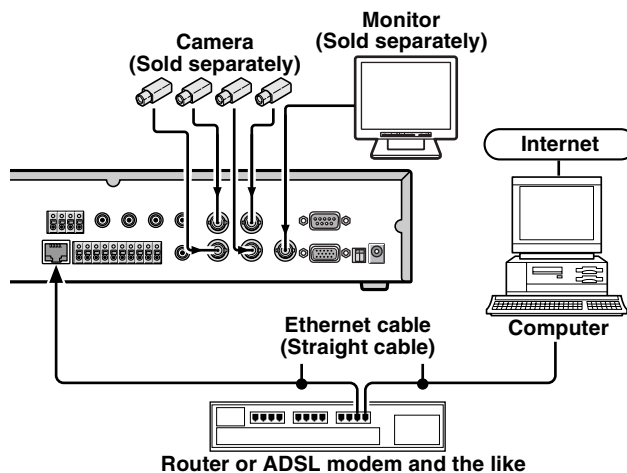
■ Without using a switching hub



Internet (DHCP, ADSL) connection

Connect to the Internet using a router and the like.

When connecting to an ADSL modem or other device, read the instruction manual of the device for information on how to connect.



Memo: The type of network must be set on the NETWORK screen. (P33)

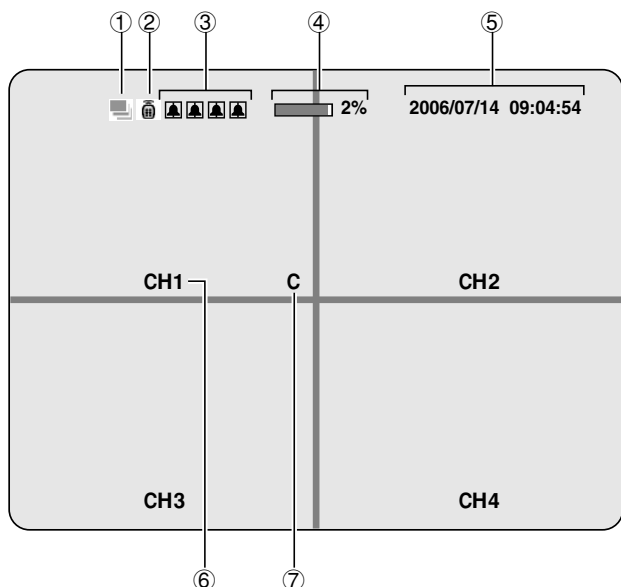
Pre-operation preparation

Screen display

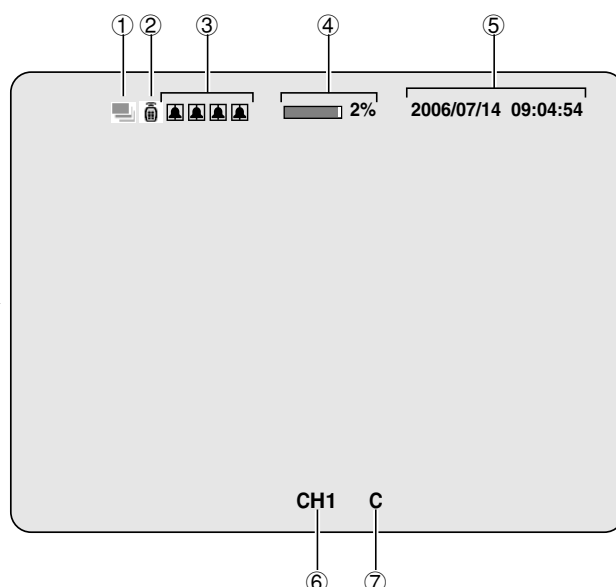
After turning on the power, the message "INITIALIZING" is displayed. Next, the live videos are displayed on a quad-screen. The screen display necessary to operations is displayed on the screen.

- The screen display can be hidden except for the recording screen display. (P25)

■ Quad-screen



■ Single-screen



① Operation display

- : Displayed during live video sequencing.
- : Displayed during alarm output.
- : Displayed during remote operation by PC.

② Remote control display (P32)

- : This icon shows that remote operations are possible. Depending on the remote ID number settings, this icon may not be displayed and remote operations may not be available.

③ Alarm input display

- : Blinks during motion or sensor alarm input. The mark is one channel from the left.

④ Hard disk used capacity display

Displays the amount of recording on the hard disk from 0-99%. When the disk is full, "99%" changes to "FULL". When the recording settings are set to overwrite and the hard disk is full, 99% changes to which represents overwriting mode.

⑤ Date and time display

This unit manages the recorded videos according to their date and time. Make sure the correct date and time are set in the menu setting. (P7)

⑥ Camera channel display

CH1/CH2/CH3/CH4

⑦ Recording display

Factory default settings start continuous recordings (C) automatically once the power is turned on. Change the recording mode using the menu settings. (P27)

C: Recording in the continuous mode (CONTINUOUS)

R: Recording in the real time mode (When pressing the REC/STOP button)

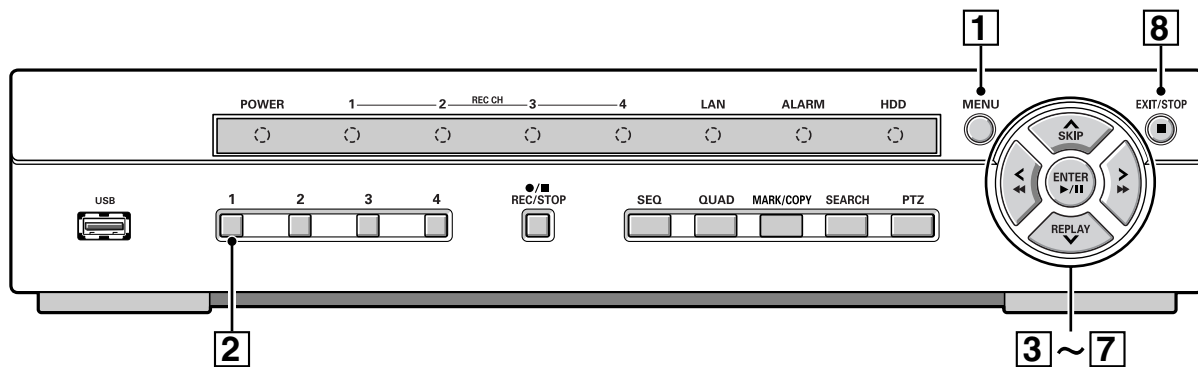
M: Recording in the motion detection mode (BY EXT. MOTION)

S: Recording in the sensor detection mode (BY SENSOR)



- If a live video is disconnected, the message "VIDEO LOSS" is displayed on the monitor.
- If a video signal is not connected to the video input terminal, the message "NO VIDEO" is displayed on the monitor.

Pre-operation preparation



A Setting the television system and the monitor output

If the television system of the camera to be connected and the type of monitor differ, live videos cannot be monitored on the normal screen. Check the specifications of the equipment to be connected and set the system changeover switch on the rear panel.

- Do not forget to turn off the power when adjusting the settings.

Matching the television system of the camera (PAL)



Up: When using a NTSC camera

Down: When using a PAL camera

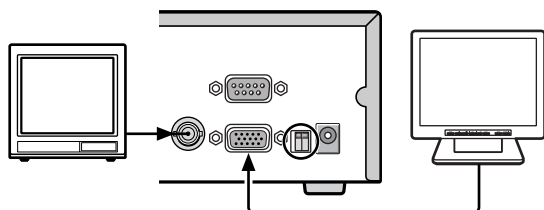
Cannot be used when PAL and NTSC system are mixed.

Selecting the type of monitor (VGA)



Up: When connecting the general monitor to the video output terminal

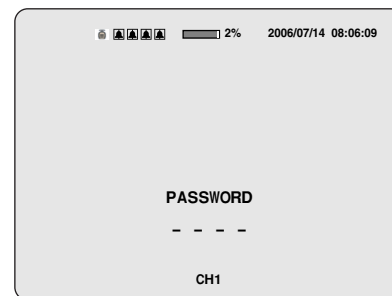
Down: When connecting a PC monitor to the VGA terminal



The VGA terminal and the video output terminal cannot be used simultaneously.

B Setting the clock (CLOCK SET)

- Press the MENU button.
The PASSWORD input screen is displayed.

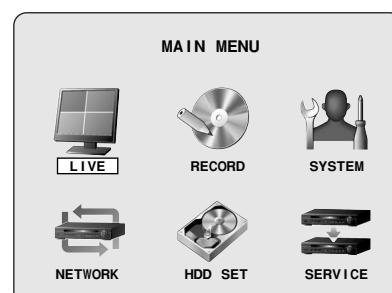
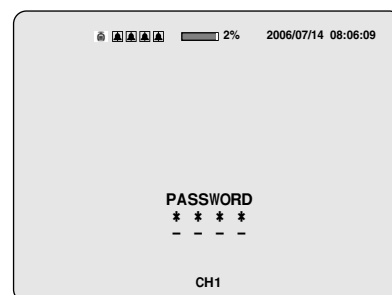
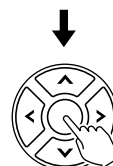


- To return to the previous screen, press the EXIT/STOP button.

- Press the button 1 four times to enter "1111" and press the ENTER button.

The MAIN MENU screen is displayed.

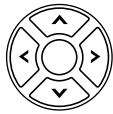
- "1111" is the factory default setting password. We recommend you change the password to avoid unauthorized use. (P30)



Pre-operation preparation

- 3** Press the control button (>) twice and select the **SYSTEM**, press the ENTER button.

The SYSTEM settings screen is displayed.



SYSTEM	
DVR ID	DVR
DESCRIPTION	
LOAD DEFAULT	
ADMIN PASSWORD	
NETWORK PASSWORD	
DATE FORMAT	YYYY/MM/DD
CLOCK SET	
PTZ CONTROL	
LANGUAGE	ENGLISH
REMOTE CONTROLLER ID	0
D.S.T./SUMMER TIME	OFF

- 4** Select **DATE FORMAT** using the control button (▲▼) and select the date display format using the control button (<>).

- YYYY/MM/DD (Example: 2006/12/15)
- YYYY-MM-DD (Example: 2006-12-15)
- MM/DD/YYYY
- MM-DD-YYYY
- DD/MM/YYYY
- DD-MM-YYYY

- 5** Select **CLOCK SET** using the control button (▲▼) and press the ENTER button.

The CLOCK SET screen is displayed.

- 6** Select the date/time to be changed using the control button (<>), select a value using the control button (▲▼), repeat to set the date/time and press the ENTER button.

The UPDATE DATE&TIME screen is displayed.

CLOCK SET	
2006/12/15	10:20:30

UPDATE DATE&TIME	
CANCEL	CONFIRM



In the event that the clock is early

Reset the clock using the CLOCK SET, select "CONFIRM" under "UPDATE DATE&TIME". The TIME MISMATCH screen is displayed, select "YES".

- **YES:**
The videos between "SYSTEM TIME" and "HDD LAST TIME" are lost.
- **GO TEST MODE:**
Do not select. (Maintenance mode)

UPDATE DATE&TIME	
CANCEL	CONFIRM

SANYO			
--------------	--	--	--

INITIALIZING...			
CH1	C	CH2	C
CH3	C	CH4	C

TIME MISMATCH.					
WILL YOU ERASE INDEX?					
IF YES, SOME DATA WILL BE ERASED FROM HDD.					
IF THE DATA IS TO BE KEPT, SELECT GO TEST MODE.					
<table border="1"> <tr> <td>SYSTEM TIME:</td> <td>2006-09-09 19:56:36</td> </tr> <tr> <td>HDD LAST TIME:</td> <td>2006-09-09 20:05:45</td> </tr> </table>		SYSTEM TIME:	2006-09-09 19:56:36	HDD LAST TIME:	2006-09-09 20:05:45
SYSTEM TIME:	2006-09-09 19:56:36				
HDD LAST TIME:	2006-09-09 20:05:45				
GO TEST MODE	YES				



The time on this CLOCK SET screen has not been calculated considering summer time.

- 7** Select **CONFIRM** using the control button (<>) and press the ENTER button.

The screen switches to the "INITIALIZING..." screen. The live videos as well as the set date/time are displayed on the monitor.

Pre-operation preparation

C Setting the language (LANGUAGE)

1 Follow steps 1 to 3 of the CLOCK SET procedure

2 Select LANGUAGE using the control button (▲▼) and select the display language using the control button (<>).

Once a language has been selected the display language changes.

SYSTEM	
DVR ID	DVR
DESCRIPTION	
LOAD DEFAULT	
ADMIN PASSWORD	
NETWORK PASSWORD	
DATE FORMAT	YYYY/MM/DD
CLOCK SET	
PTZ CONTROL	
LANGUAGE	ENGLISH
REMOTE CONTROLLER ID	0
D.S.T./SUMMER TIME	OFF

Language selection:

ENGLISH, 日本語, DEUTSCH, Français, ESPAÑOL, ITALIANO, Русский язык, 中文 (繁體), POLSKI, CĚSKY, Български език, Română, Srpski, SVENSKA

D Setting the summer time (D.S.T./SUMMER TIME)

Summer time setting is available.

1 Select D.S.T./SUMMER TIME using the control button (▲▼) and select "ON" using the control button (<>).

It becomes possible to input summer time.

SYSTEM	
DVR ID	DVR
DESCRIPTION	
LOAD DEFAULT	
ADMIN PASSWORD	
NETWORK PASSWORD	
DATE FORMAT	YYYY/MM/DD
CLOCK SET	
PTZ CONTROL	
LANGUAGE	ENGLISH
REMOTE CONTROLLER ID	0
D.S.T./SUMMER TIME	ON
BEGIN	2/1 0H
END	8/1 0H

Initial value

2 Select "BEGIN" using the control button (▲▼) and press the ENTER button.

D.S.T./SUMMER TIME BEGIN is displayed.

3 Input the starting date (31 March, 23:00).

① Display "0" using the control button (▲▼) and move to the right using the control button (<>).

② Display "3" using the control button (▲▼) and move to the right using the control button (<>), repeat to set other settings and press the ENTER button.

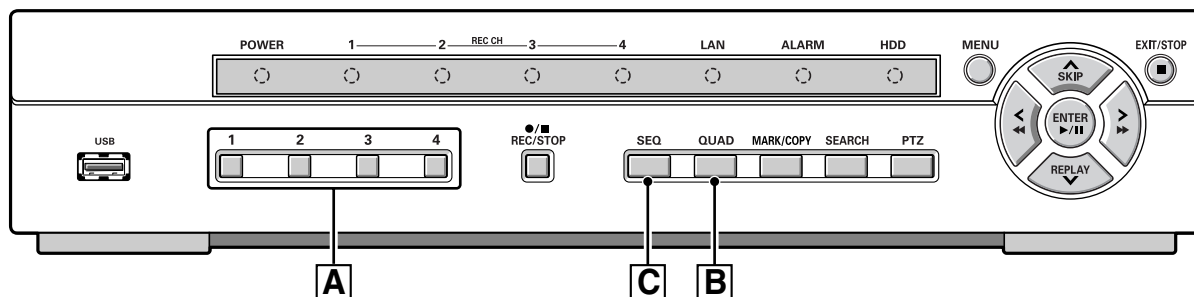
The summer time input selection screen is displayed again.

D.S.T./SUMMER TIME BEGIN	
0 3 / 3 1 2 3 H	

4 Repeat the procedure to input the end date (31 August, 23:00).

D.S.T./SUMMER TIME END	
0 8 / 3 1 2 3 H	

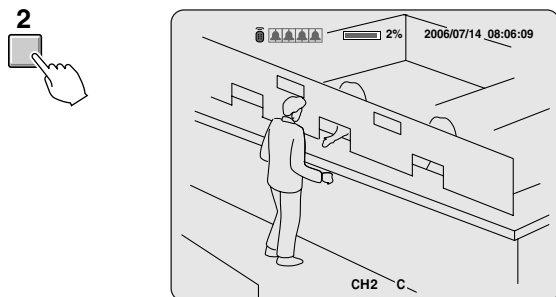
Monitoring the camera videos



A Single-screen display

Example: Displaying camera 2 on single-screen

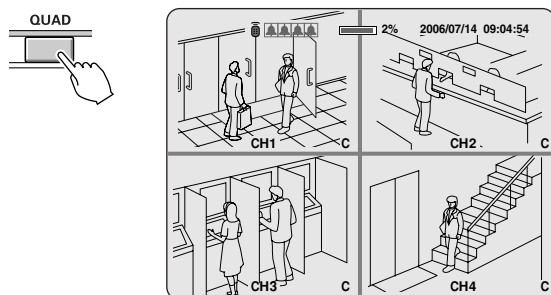
- 1 Press "2" on the camera selection button.
The video of camera 2 is displayed on single-screen.



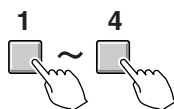
B Quad-screen display

Displays the 4 cameras video connected at once.

- 1 Press the QUAD button.
The quad-screen is displayed.



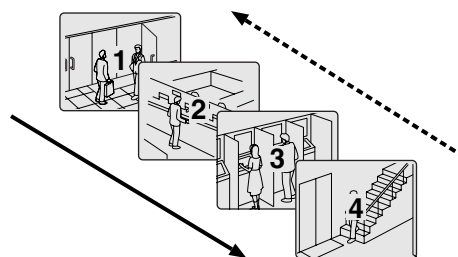
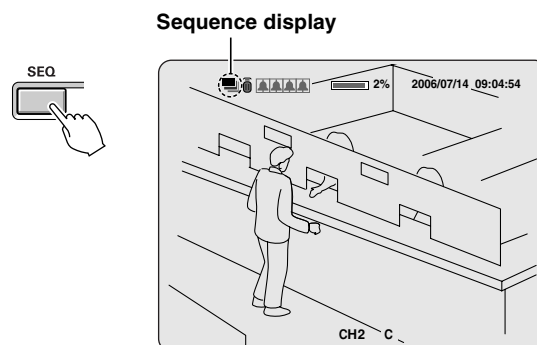
- 2 To return to single-screen press any of the camera selection buttons.



C Camera sequencing

Switches the cameras video in sequence.

- 1 Press the SEQ button while in single-screen display.
The cameras automatically switch in sequence starting with the channel of the camera being displayed. If there is an audio input, the audio also switches in channel sequence order.



Memo: The sequence interval from one camera video to another can be set. (P25)

- 2 Press the SEQ button once operations are complete.
The sequence mode is cancelled.



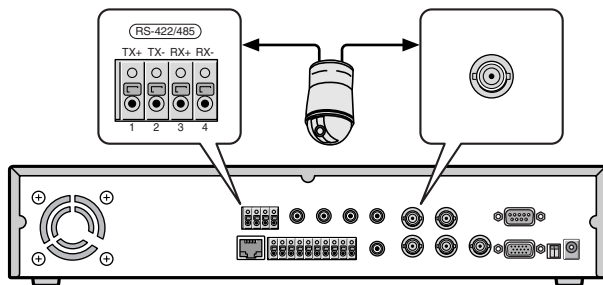
Operating the PTZ camera

If a PTZ camera is connected to the RS422/485 terminal, Pan/Tilt, Zoom/Focus operations are available from this unit.

1 Connection

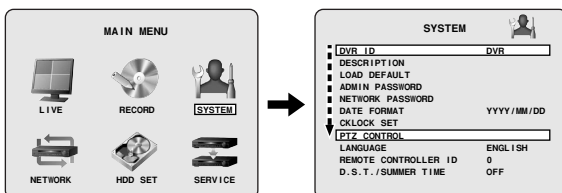
Connect the RS422/485 terminal and the camera using a twisted pair cable.

	RS422	RS485
1	TX+ (+Transmit Data)	A
2	TX- (-Transmit Data)	B
3	RX+ (+Receive Data)	—
4	RX- (-Receive Data)	—



2 Settings

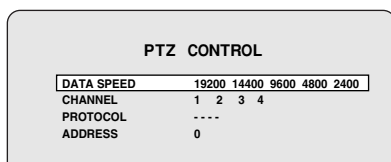
- Press the MENU button (the MAIN MENU is displayed) and select SYSTEM using the control button (<>).



- A password is requested when pressing the MENU button. (P7)

- Place the cursor on PTZ CONTROL and press the ENTER button.

The PTZ CONTROL screen is displayed.



- Place the cursor on the settings item and setting.
DATA SPEED: Selecting the communication speed
CHANNEL: Selecting a connected channel
PROTOCOL: Selecting the type of protocol
ADDRESS: Selecting the camera ID (0-63)



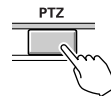
When several cameras are connected, select the same protocol for all cameras.

- Press the EXIT/STOP button once the settings are complete.

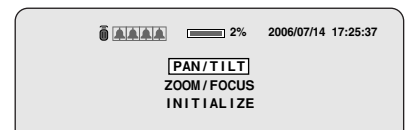
3 Operation

- Select the number of the dome camera connected using the camera selection button.

- Press the PTZ button.
The control screen is displayed.



- Controlling the camera



■ Pan/Tilt operations

- Select "PAN/TILT" using the control button (▲▼) and press the ENTER button.
 - Adjust the tilt position using the control button (▲▼) and adjust the pan position using the control button (<>).
- The following message is displayed on the screen during operations.

Up/Down key: Tilt Up/Down

Left/Right key: Pan Left/Right

■ Zoom/Focus operations

- Select "ZOOM/FOCUS" using the control button (▲▼) and press the ENTER button.
 - Adjust the zoom using the control button (▲▼) and adjust the focus position using the control button (<>).
- The following message is displayed on the screen during operations.

Up/Down key: Zoom In/Out

Left/Right key: Focus Near/Far

■ Initializing the camera position

Select "INITIALIZE" using the control button (▲▼) and press the ENTER button.

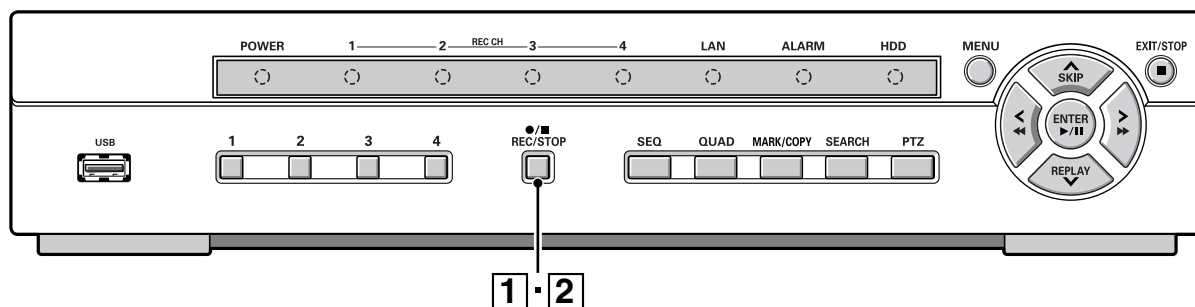
- Once the initialization is complete, the following message is displayed on the screen and the adjustment position is reset to its default values.
"INITIALIZE SUCCESS!"

- Press the EXIT/STOP button once operation are complete.



- If a PTZ camera is not connected to this unit, the following message is displayed on the screen.
"Please set up a camera type in setup menu."
- The terminator settings of this unit are set to "ON". Consult the dealership where this unit was purchased for any changes.

Recording



This unit allows the following recording modes.

Select the recording mode, recording resolution, frame rate and video quality from **"RECORD"** under the MAIN MENU. (P27)

The symbol on the right side of each recording mode (Ex: R) is displayed while recording is in progress.

■ Types of recording modes

A Real time recording (R) P12

Records manually videos being monitored.

B CONTINUOUS recording (C) P13

Records continuously when this unit is turned on.

C BY MOTION recording (M) P13

Records when set off by the motion sensor integrated in this unit.

D BY EXT. SENSOR recording (S) P14

Records when set off by a sensor connected to the external sensor (SENSOR) terminal of this unit.

E BY SCHEDULE recording P15

Records according to the daily time slot set under the SCHEDULE screen of the recording settings.

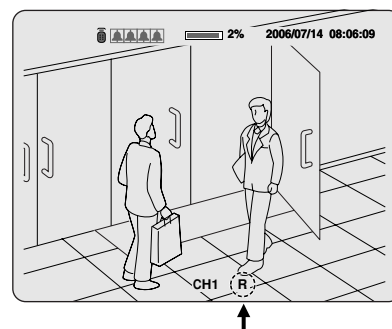


- The initial screen requests a password. (P24)
- It is possible to cancel the password request. See "Settings for no password" (P30)

A Real time recording

1 Press the REC/STOP button while monitoring live videos.

"R" is displayed on the recording display and recording starts.



Memo: • Setting the OVERWRITE (P37)

ON: Overwrites earlier data once the hard disk capacity is full.

OFF: Stops recording operations once the hard disk capacity is full.

2 Press the EXIT/STOP button once operations are complete.

"R" disappears from the recording display and real time recording is stopped.



- When recording rate is high, the audio may be difficult to hear at the time of playback and playback time may increase.
- Recording time varies depending on the screen being recorded. Furthermore, recording rate may decrease depending on the settings.

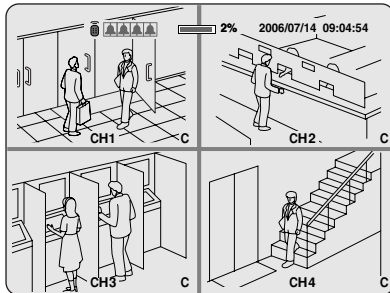
Recording

B CONTINUOUS recording

- 1 Recording starts automatically when this unit is turned on.

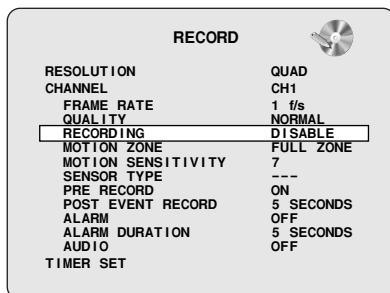
"C" is displayed on the screen. The connected cameras are simultaneously recorded.

The recording mode can be changed using RECORDING under RECORD settings. Settings, such as image quality, can also be set. (P27)



- 2 To stop recording, select RECORDING under RECORD settings using the control button (▲▼) and select "DISABLE" using the control button (<>).

"C" disappears.



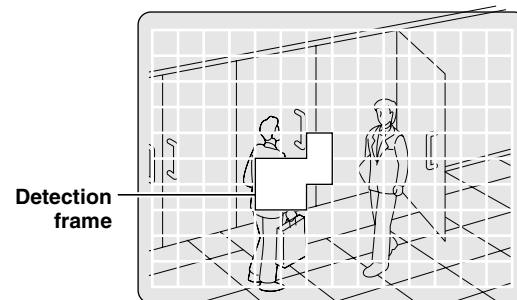
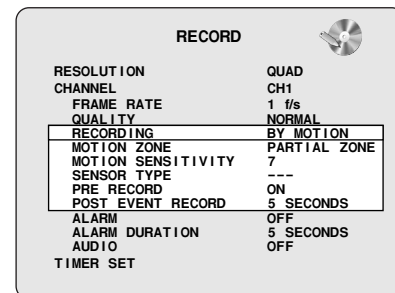
- 3 Select MOTION ZONE using the control button (▲▼) and select the PARTIAL ZONE using the control button (<>), press the ENTER button.

The motion setting screen is displayed.

- PARTIAL ZONE
- FULL ZONE



If FULL ZONE is selected, the motion setting screen is not displayed. Only set the level of sensitivity for MOTION SENSITIVITY.



- 4 Select the sensor detection position using the control button (▲▼<>) and press the ENTER button.

The frame set for the sensor detection is grainy.

Select a sensor detection position by repeating the operation.

- 5 Select MOTION SENSITIVITY using the control button (▲▼) and select the level of sensitivity using the control button (<>).

Selections: 1-9 (Low sensitivity)

- 6 Select PRE RECORD using the control button (▲▼) and select the pre recording as necessary using the control button (<>).

- 7 Select POST EVENT RECORD using the control button (▲▼) and select the recording time as necessary using the control button (<>).

Selections: 2 - 30 SECONDS

- 8 Press the EXIT/STOP button once operations are complete.

Press the EXIT/STOP button repeatedly to return to the live video.

C BY MOTION recording

A motion sensor can be set for each channel.

- 1 Adjusting the following settings using the control button (▲▼<>).

- RESOLUTION
- FRAME RATE
- CHANNEL
- QUALITY

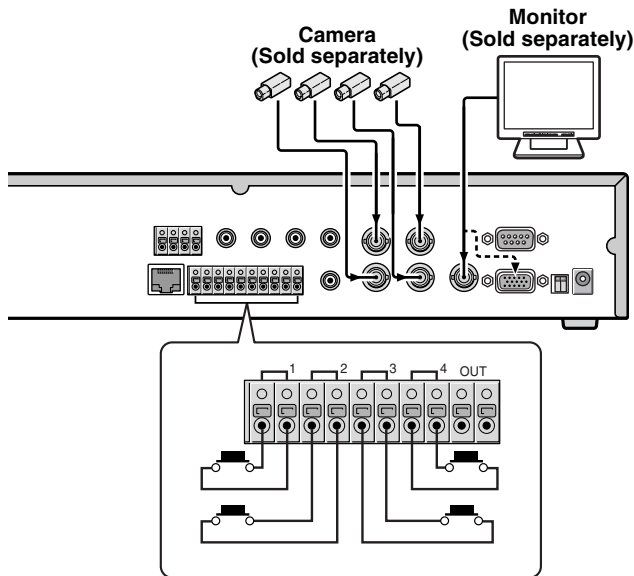
- 2 Select RECORDING using the control button (▲▼) and select BY MOTION using the control button (<>).

Recording

D BY EXT. SENSOR recording

An external sensor can be connected to each channel.

1 Connecting an external switch to an external sensor terminal.



2 Set the following items using the control button (▲▼<>).

- RESOLUTION
- FRAME RATE
- CHANNEL
- QUALITY

3 Select RECORDING using the control button (▲▼) and select BY EXT. SENSOR using the control button (<>).

RECORD	
RESOLUTION	QUAD
CHANNEL	CH1
FRAME RATE	1 f/s
QUALITY	NORMAL
RECORDING	BY EXT.SENSOR
MOTION_ZONE	FULL_ZONE
MOTION_SENSITIVITY	7
SENSOR_TYPE	---
PRE_RECORD	ON
POST_EVENT_RECORD	5 SECONDS
ALARM	OFF
ALARM_DURATION	5 SECONDS
AUDIO	OFF
TIMER_SET	

4 Select SENSOR TYPE using the control button (▲▼) and select detection mode using the control button (<>).

5 Select PRE RECORD using the control button (▲▼) and select the pre recording as necessary using the control button (<>).

6 Select POST EVENT RECORD using the control button (▲▼) and select the recording time as necessary using the control button (<>).

Selections: 2 - 30 SECONDS

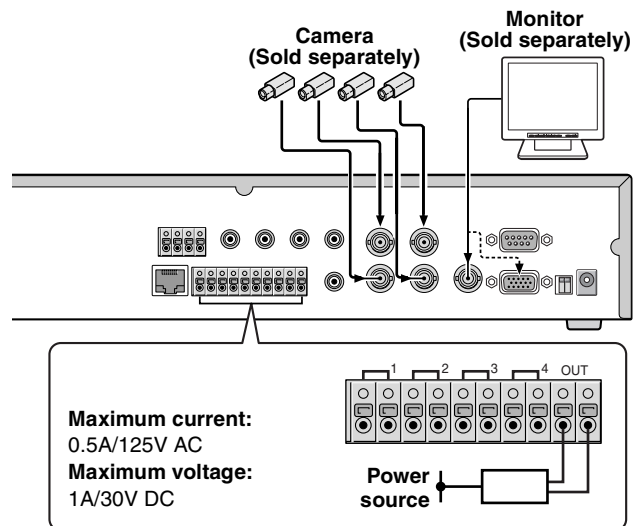
7 Press the EXIT/STOP button once operations are complete.

Press the EXIT/STOP button repeatedly to return to the live screen.

Output settings at the time of external switch operation

When a motion sensor of this unit or an external sensor is activated, a relay signal is output to the external alarm device connected to the ALARM OUT terminal. It is normally open.

1 Connecting an external alarm to the OUT terminal of the external sensor.



2 Select ALARM using the control button (▲▼) and select ON using the control button (<>).

3 Select ALARM DURATION using the control button (▲▼) and select the alarm signal output duration using the control button (<>).

Selections: 1 - 60 SECONDS

RECORD	
RESOLUTION	QUAD
CHANNEL	CH1
FRAME RATE	1 f/s
QUALITY	NORMAL
RECORDING	BY EXT.SENSOR
MOTION_ZONE	FULL_ZONE
MOTION_SENSITIVITY	7
SENSOR_TYPE	---
PRE_RECORD	ON
POST_EVENT_RECORD	5 SECONDS
ALARM	OFF
ALARM_DURATION	5 SECONDS
AUDIO	OFF
TIMER_SET	

4 Press the EXIT/STOP button once operations are complete.

Press the EXIT/STOP button repeatedly to return to the live screen.

Recording

■ Copying a set recording schedule to other channels

Example 1 Copying the channel 1 schedule to channel 3 (COPY FROM)

- 1 Set the channel 1 schedule and press the EXIT/STOP button.

The RECORD screen is displayed again.

TIMER SET-CH1	
COPY FROM	CH1
COPY TO	CH1
ALL	0 3 6 9 12 15 18 21 24
SUN	- C - M - S - - - C - M - S - - - C - M - S - - -
MON	S - C - M - S - - - C - M - S - - - C - M - S - - -
TUE	- S - C - M - S - - - C - M - S - - - C - M - S - - -
WED	M - S - C - M - S - - - C - M - S - - - C - M - S - - -
THU	- M - S - C - M - S - - - C - M - S - - - C - M - S - - -
FRI	C - M - S - C - M - S - - - C - M - S - - - C - M - S - - -
SAT	- C - M - S - C - M - S - - - C - M - S - - - C - M - S - - -

- 2 Select CHANNEL using the control button (▲▼) and select CH3 using the control button (<>).

- 3 Select TIMER SET using the control button (▲▼) and press the ENTER button.

The "TIMER SET-CH3" screen is displayed.

RECORD	
RESOLUTION	QUAD
CHANNEL	CH3
FRAME RATE	1 /s
QUALITY	NORMAL
RECORDING	CONTINUOUS
MOTION ZONE	FULL ZONE
MOTION SENSITIVITY	7
SENSOR TYPE	---
PRE RECORD	ON
POST EVENT RECORD	5 SECONDS
ALARM	OFF
ALARM DURATION	5 SECONDS
AUDIO	OFF
TIMER SET	

TIMER SET-CH3	
COPY FROM	CH1
COPY TO	CH1
ALL	0 3 6 9 12 15 18 21 24
SUN	- C - M - S - - - C - M - S - - - C - M - S - - -

- 4 Select COPY FROM using the control button (▲▼) and select CH1 using the control button (<>), press the ENTER button.

The CH1 recording schedule is copied to CH3.

- 5 Press the EXIT/STOP button once operations are complete.

Press the EXIT/STOP button repeatedly to return to the live screen.

Example 2 Copying the channel 1 schedule to channel 2 (COPY TO)

- 1 Set the channel 1 schedule and select COPY TO using the control button (▲▼), select CH2 using the control button (<>) and press the ENTER button.

The CH1 schedule is copied to CH2.

TIMER SET-CH1	
COPY FROM	CH1
COPY TO	CH2
ALL	0 3 6 9 12 15 18 21 24
SUN	C - M - S - - - C - M - S - - - C - M - S - - -
MON	- C - M - S - C - M - C - - - - S - C - - -
TUE	C - M - S - - - C - M - C - - - - S - C - - -
WED	- C - M - S - C - M - C - - - - S - C - - -
THU	C - M - S - - - C - M - C - - - - S - C - - -
FRI	- C - M - S - C - M - C - - - - S - C - - -
SAT	C - M - S - - - C - M - C - - - - S - C - - -

- 2 Press the EXIT/STOP button.

The RECORD screen is displayed again.

- 3 Select CHANNEL using the control button (▲▼) and select CH2 using the control button (<>).

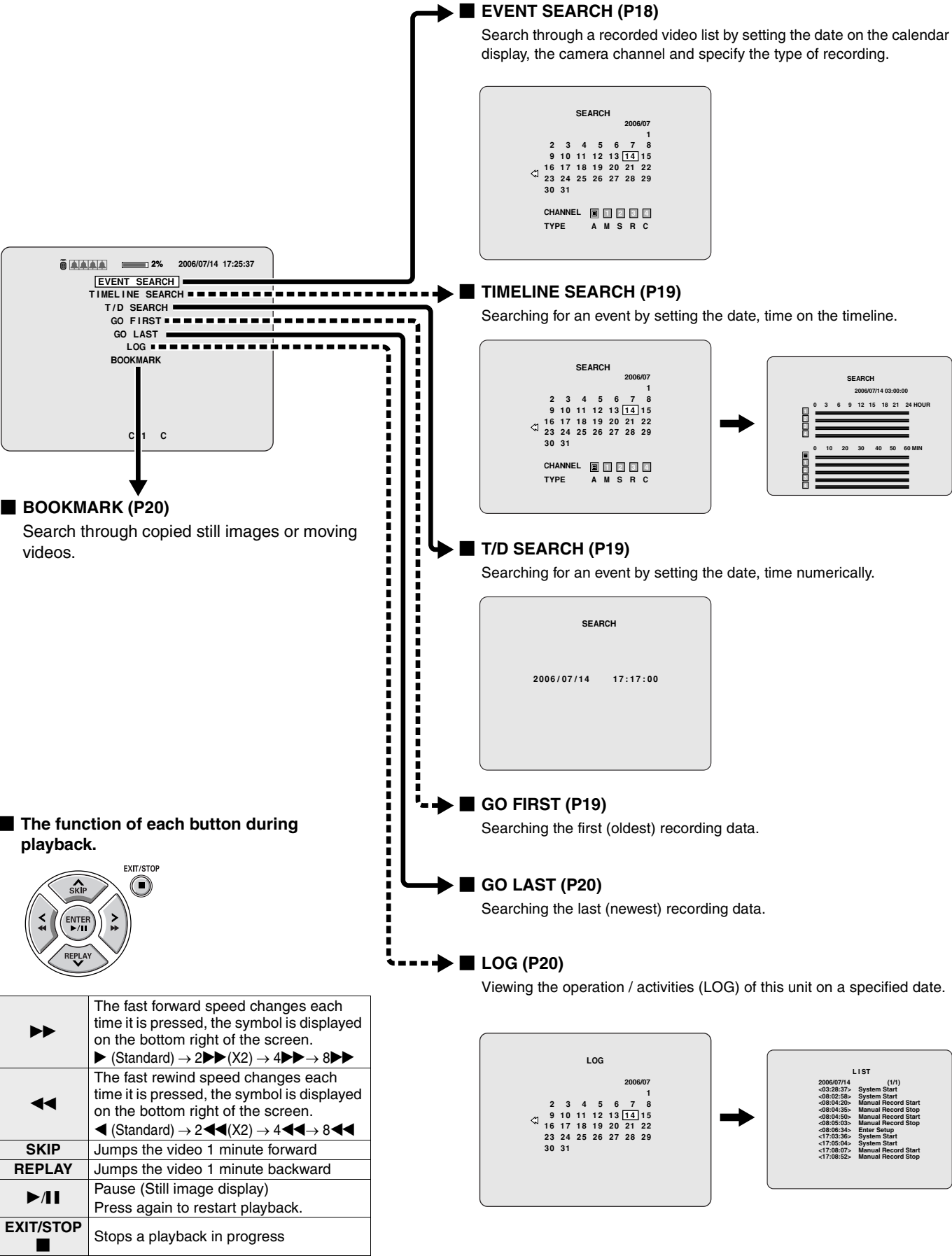
- 4 Select TIMER SET using the control button (▲▼) and press the ENTER button.

The "TIMER SET-CH2" screen is displayed. The CH1 schedule is copied to CH2.

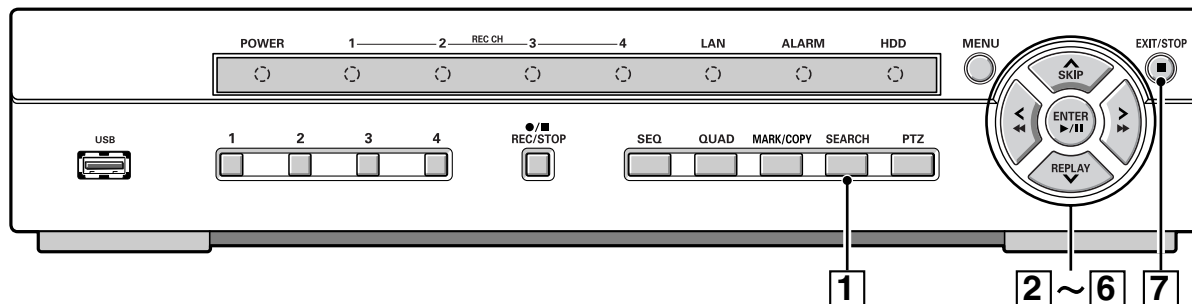
TIMER SET-CH2	
COPY FROM	CH1
COPY TO	CH1
ALL	0 3 6 9 12 15 18 21 24
SUN	C - M - S - - - C - M - S - - - C - M - S - - -
MON	- C - M - S - C - M - C - - - - S - C - - -
TUE	C - M - S - - - C - M - C - - - - S - C - - -
WED	- C - M - S - C - M - C - - - - S - C - - -
THU	C - M - S - - - C - M - C - - - - S - C - - -
FRI	- C - M - S - C - M - C - - - - S - C - - -
SAT	C - M - S - - - C - M - C - - - - S - C - - -

Playing back recorded videos

The following recorded videos searching methods are available.

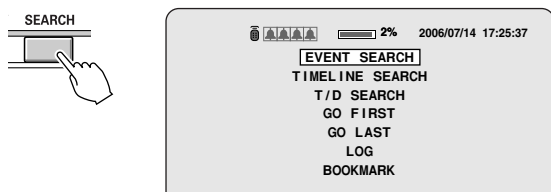


Playing back recorded videos



A EVENT SEARCH

- 1 Press the SEARCH button.**
The menu screen is displayed.



- 2 Select EVENT SEARCH using the control button (▲▼) and press the ENTER button.**
The SEARCH screen is displayed.

- 3 Select the date you want to search using the control button (▲▼<>) and press the ENTER button.**

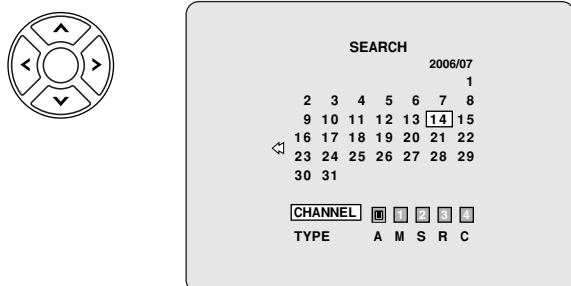
The cursor moves to CHANNEL.

If recordings are available, the date is displayed in red.

- ◀: Indicates that there are recordings in the previous month.
- ▶: Indicates that there are recordings in the next month.

Move the cursor to the day of the first recording in the month displayed by the calendar, pressing the ◀ button displays the previous month of the calendar.

Move the cursor to the day of the last recording in the month displayed by the calendar, pressing the ▶ button displays the next months of the calendar.



- 4 Select a channel with the control button (◀>) and press the ENTER button.**

The cursor moves to TYPE.

- To select all the channels, select [ALL].

- 5 Select the type of recording (Mode) to be searched using the control button (◀>) and press the ENTER button.**

A: All types (ALL)

M: Recording activated by motion detection (BY MOTION)

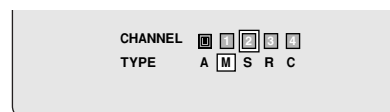
S: Recording activated by sensor detection (BY EXT. SENSOR)

R: Real time recording

C: Continuous recording (CONTINUOUS)

Example:

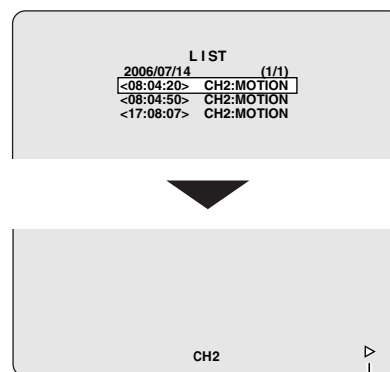
Searching recordings activated by the motion detection (M) of the channel 2 of the camera



The list screen is displayed.

- 6 Select the videos to be played back using the control button (▲▼), and press the ENTER button.**
Playback starts.

If the list continues on several pages, use the control button (◀>) to change pages.



Playback in progress display

- 7 Press the EXIT/STOP button once operations are complete.**

Press the EXIT/STOP button repeatedly to return to the live screen.

Playing back recorded videos

B TIMELINE SEARCH

1 Press the SEARCH button.

The search menu screen is displayed.

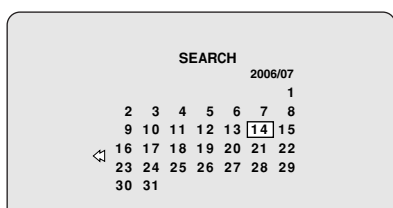
2 Select TIMELINE SEARCH using the control button (▲▼) and press the ENTER button.

The SEARCH screen is displayed.

If recordings are available, the date is displayed in red.

- ◀: Indicates that there are recordings in the previous month.
- ▶: Indicates that there are recordings in the next month.

Move the cursor to the day of the first recording in the month displayed by the calendar, pressing the < button displays the previous month of the calendar. Move the cursor to the day of the last recording in the month displayed by the calendar, pressing the > button displays the next months of the calendar.



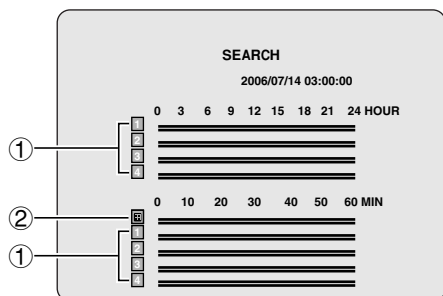
3 Select the date to be played back using the control button (▲▼<>) and press the ENTER button.

The timeline screen is displayed.

- The upper bar on the screen shows 24 hours and the lower bar 60 minutes. Time sections with a recording are represented by a red line.
- A yellow longitudinal line is displayed at the beginning of each icon to select playback. Move this longitudinal line to the right and select the recordings with the red line.

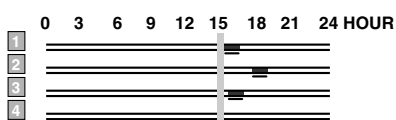
① Channel number

② All channel selected display: []



4 Move the yellow longitudinal line to the time sections to be played using the control button (<>) and press the ENTER button.

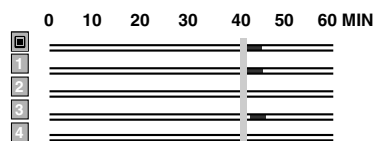
The yellow longitudinal line moves down to the next line.



If audio has been recorded a green line is displayed under the red line.

5 Move the yellow longitudinal line to the time sections to be played using the control button (<>) and press the ENTER button.

Playback starts.



- When all the channels have been selected, [] becomes red.
- Each channel can be selected using the control buttons.

6 Press the EXIT/STOP button once operations are complete.

Press the EXIT/STOP button repeatedly to return to the live screen.

C T/D SEARCH

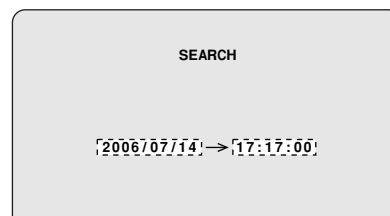
1 Press the SEARCH button.

The search menu screen is displayed.

2 Select T/D SEARCH using the control button (▲▼) and press the ENTER button.

The SEARCH screen is displayed.

3 Select the date and time to be played back using the control button (<>) and input a value using the control button (▲▼).



4 Press the ENTER button.

Playback starts.

- If no videos were recorded for the specified date, the video closest to the specified date are played back.

5 Press the EXIT/STOP button once operations are complete.

Press the EXIT/STOP button repeatedly to return to the live screen.

D GO FIRST

1 Press the SEARCH button.

The menu screen is displayed.

2 Select GO FIRST using the control button (▲▼) and press the ENTER button.

The first recording is played back.

3 Press the EXIT/STOP button once operations are complete.

Press the EXIT/STOP button repeatedly to return to the live screen.

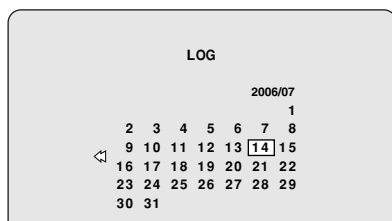
Playing back recorded videos

E GO LAST

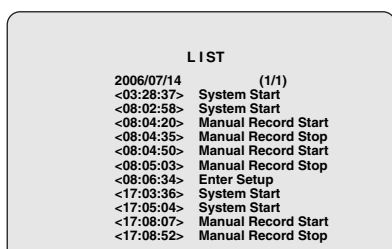
- 1 Press the SEARCH button.**
The menu screen is displayed.
- 2 Select GO LAST using the control button (▲▼) and press the ENTER button.**
The last recording is played back.
- 3 Press the EXIT/STOP button once operations are complete.**
Press the EXIT/STOP button repeatedly to return to the live screen.

F LOG

- 1 Press the SEARCH button.**
The menu screen is displayed.
 - 2 Select LOG using the control button (▲▼) and press the ENTER button.**
The LOG screen is displayed.
If recordings are available, the date is displayed in red.
- ◀: Indicates that there are recordings in the previous month.
 - ▶: Indicates that there are recordings in the next month.
- Move the cursor to the day of the first recording in the month displayed by the calendar, pressing the < button displays the previous month of the calendar. Move the cursor to the day of the last recording in the month displayed by the calendar, pressing the > button displays the next months of the calendar.



- 3 Select the date to be displayed using the control button (▲▼<>) and press the ENTER button.**
The LIST screen is displayed.
- If several lists are available, the previous or next LIST can be viewed using the control button (<>).

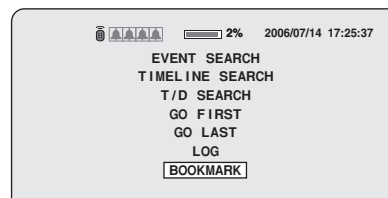


- 4 Press the EXIT/STOP button once operations are complete.**
Press the EXIT/STOP button repeatedly to return to the live screen.

G BOOKMARK

Perform the mark operation of the desired live video. The marked event and recording list can be displayed and played back.

- 1 Press the SEARCH button.**
The menu is displayed.



- 2 Select BOOKMARK using the control button (▲▼) and press the ENTER button.**

The BOOKMARK screen is displayed.

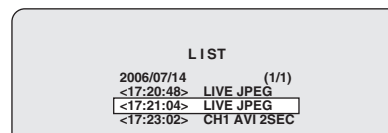
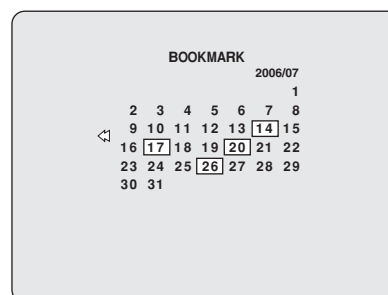
If recordings are available, the date is displayed in red.

- ◀: Indicates that there are recordings in the previous month.
- ▶: Indicates that there are recordings in the next month.

Move the cursor to the day of the first recording in the month displayed by the calendar, pressing the < button displays the previous month of the calendar. Move the cursor to the day of the last recording in the month displayed by the calendar, pressing the > button displays the next months of the calendar.

- 3 Select an event which date is displayed in red using the control button (▲▼<>) and press the ENTER button.**

LIST is displayed.



- 4 Select the date to be played back from the list using the control button (▲▼) and press the ENTER button.**

The still image is displayed.

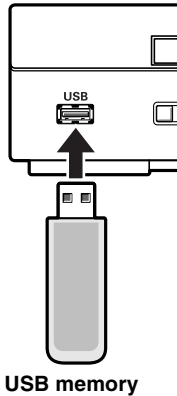
Copying the recorded videos to a USB device

Your choice of videos can be copied to a USB device. Selecting these videos is called marking. Still images of live videos and still and moving videos of playbacks in progress can be selected.

A Marking and copying live videos

1 Connect the USB memory to the USB terminal, copying operations become available.

- Connect the USB memory.

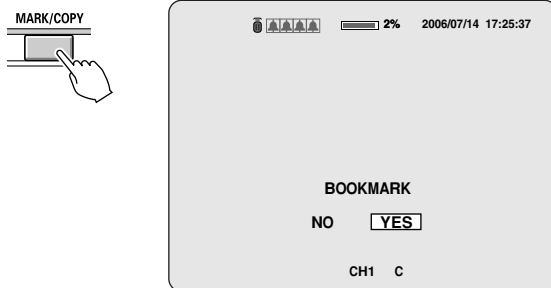


2 Press the MARK/COPY button at the scene to be copied while monitoring live videos.

The BOOKMARK screen is displayed.

3 Select YES using the control button (<>) and press the ENTER button.

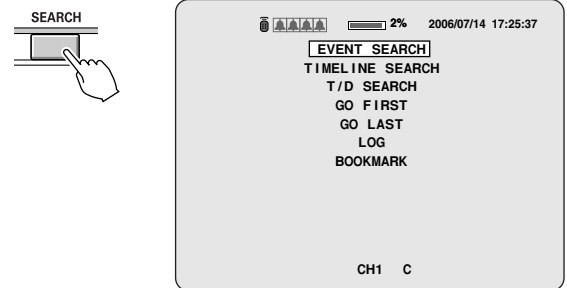
The video on channel 1 is marked as a still image. The message "BOOKMARK SUCCESS!" is displayed on the screen.



Once copying to the USB memory starts, the LAN is disconnected.

4 Press the SEARCH button.

The search menu screen of channel 1 is displayed.



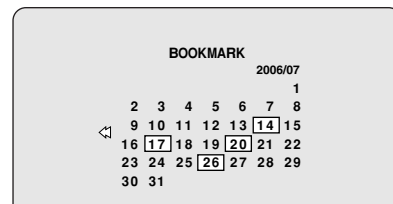
5 Select BOOKMARK using the control button (Δ V) and press the ENTER button.

The BOOKMARK screen is displayed.

If recordings are available, the date is displayed in red.

- ◀: Indicates that there are recordings in the previous month.
- ▶: Indicates that there are recordings in the next month.

Move the cursor to the day of the first recording in the month displayed by the calendar, pressing the < button displays the previous month of the calendar. Move the cursor to the day of the last recording in the month displayed by the calendar, pressing the > button displays the next months of the calendar.

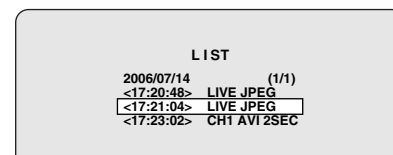


6 Select the marked date using the control button (Δ V <>) and press the ENTER button.

The LIST screen is displayed.

7 Select the videos to be copied to the USB device using the control button (Δ V) and press the ENTER button.

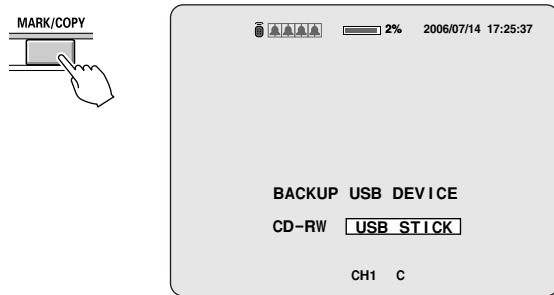
Still images are displayed.



Copying the recorded videos to a USB device

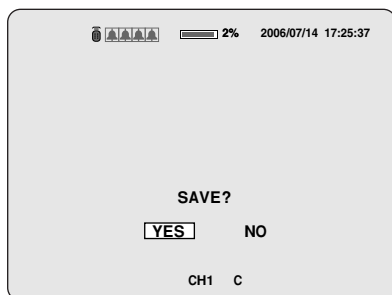
8 Press the MARK/COPY button.

The BACKUP USB DEVICE screen is displayed.



9 Select USB STICK (Example) to where the selected videos will be copied using the control button (<>) and press the ENTER button.

The confirmation screen is displayed.



10 Select YES using the control button (<>) and press the ENTER button.

- The message "SAVING" is displayed and the videos are saved on the USB memory. Once the saving operation is complete the message "SAVE SUCCESS" is displayed.
- If no USB memory is connected, the warning message "CHECK FAIL" is displayed.

11 Press the EXIT/STOP button once operations are complete.

Press the EXIT/STOP button repeatedly to return to the live screen.



Repeating marking operations will result in overwriting. Perform copy operations soon after marking the videos.

B Marking and copying playback videos

1 Connect the USB memory to the USB terminal, copying operations become available.

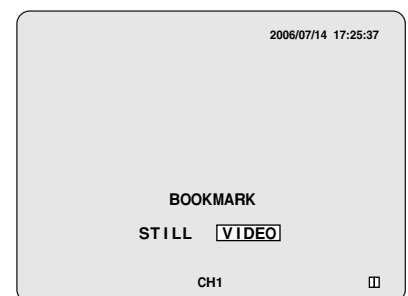
- Connect the USB memory.

2 Press the SEARCH button, the videos to be copied are played back from the LIST. (P18)



3 Press the MARK/COPY button when the videos to be copied are displayed.

The video pauses and the BOOKMARK screen is displayed.



4 Select VIDEO (Example) using the control buttons (<>) and press the ENTER button.

The DURATION screen is displayed.

If STILL was selected:

The videos are marked as still images and the message "STILL OK" is displayed.



5 Specify the duration to be recorded (Seconds) using the control button (▲▼<>) and press the ENTER button.

The videos are marked as moving videos and the message "VIDEO OK" is displayed.

6 For copy operations, perform the operations "4 Press the SEARCH button." of the "A Marking and copying live videos".

Memo: Videos are saved in the AVI format and can be played back using Windows Media Player™ or other AVI format compatible PC media player software. If the video cannot be played back with those software, install Codec (FFDShow) from the supplied CD-ROM.

Configuration and function of the Menu settings

■ LIVE settings (P25)

To perform adjustments related to live videos monitoring such as sequencing settings and each camera video adjustments.

LIVE	
OSD	ON
SEQUENCE	OFF
SEQ-DWELL TIME	2 SECONDS
EVENT BEEP	OFF
OSD CONTRAST	80
CHANNEL	CH1
DISPLAY	ON
SEQ LIST	ON
BRIGHTNESS	50
CONTRAST	50
HUE	0
SATURATION	50
VGA SCREEN MODE	FULL
ERROR ALARM	OFF

■ RECORD settings (P27)

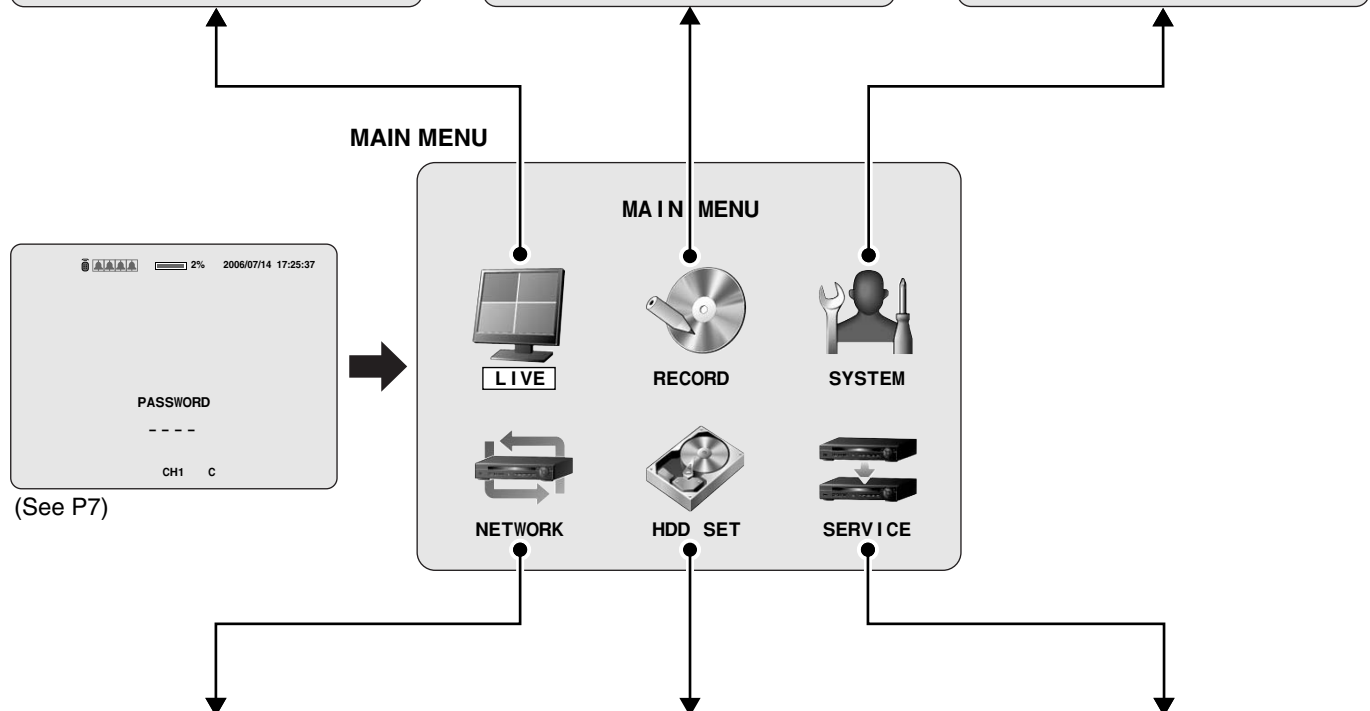
To perform adjustments related to recordings such as resolution, the recording mode for each channel, video quality, motion and alarm settings.

RECORD	
RESOLUTION	QUAD
CHANNEL	CH1
FRAME RATE	1 t/s
QUALITY	NORMAL
RECORDING	CONTINUOUS
MOTION ZONE	FULL ZONE
MOTION SENSITIVITY	7
SENSOR TYPE	---
PRE RECORD	ON
POST EVENT RECORD	5 SECONDS
ALARM	OFF
ALARM DURATION	5 SECONDS
AUDIO	OFF
TIMER SET	

■ SYSTEM settings (P29)

To perform settings carried out by the manager, such as setting initialization and password, date and time, language and PTZ camera settings.

SYSTEM	
DVR ID	DVR
DESCRIPTION	
LOAD DEFAULT	
ADMIN PASSWORD	
NETWORK PASSWORD	
DATE FORMAT	YYYY/MM/DD
CLOCK SET	
PTZ CONTROL	
LANGUAGE	ENGLISH
REMOTE CONTROLLER ID	0
D.S.T./SUMMER TIME	OFF



■ NETWORK settings (P33)

To perform remote operations by network and PC connection.

NETWORK	
PORT	5445
CLIENT ACCESS	ON
BANDWIDTH SAVING	ON
NETWORK TYPE	DHCP
DDNS	OFF
SEND E-MAIL	

■ HDD SET settings (P37)

Settings related to the hard disk such as overwriting settings and initialization.

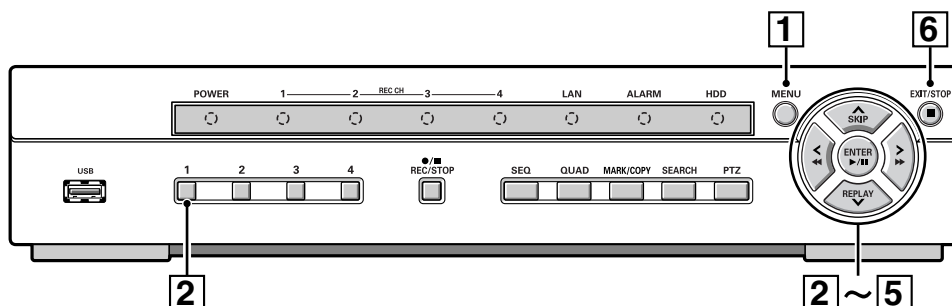
HDD SET	
OVERWRITE	ON
FORMAT	

■ SERVICE settings (P38)

To perform such operations as upgrades or saving the settings to the USB memory.

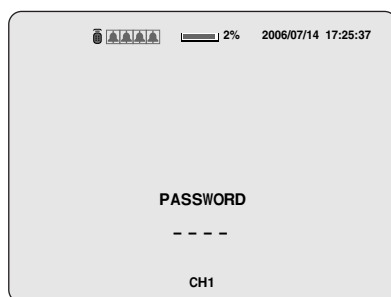
SERVICE	
USB UPGARDE	
SAVE SETUP TO A USB	
LOAD SETUP FROM A USB	

Configuration and function of the Menu settings

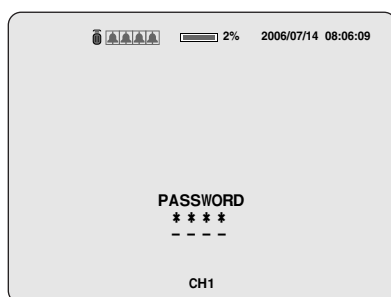
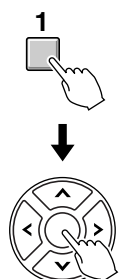


Basic operations of the MAIN MENU

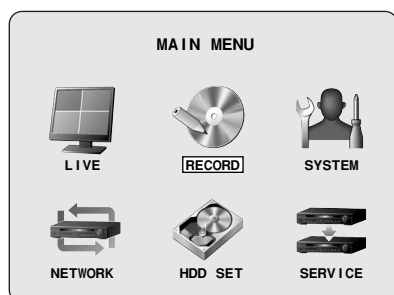
- 1 Press the MENU button.**
The PASSWORD input screen is displayed.



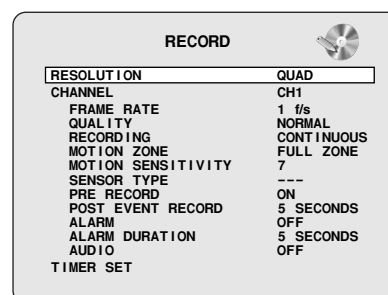
- 2 Press the button 1 four times to enter "1111" and press the ENTER button.**
The MAIN MENU screen is displayed.
 - "1111" is the factory default setting password. We recommend you change the password to avoid unauthorized use. (P30)



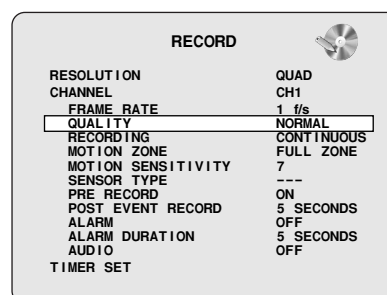
- 3 Select the menu using the control button (▲▼<>).**
Example: RECORD



- 4 Press the ENTER button.**
The RECORD menu is displayed.



- 5 Select an item using the control button (▲▼) and set the details using the control button (<>).**
If a different screen is available for the settings, select the item, press the ENTER button and set the settings.



- 6 Press the EXIT/STOP button once operations are complete.**
Press the EXIT/STOP button repeatedly to return to the live screen.

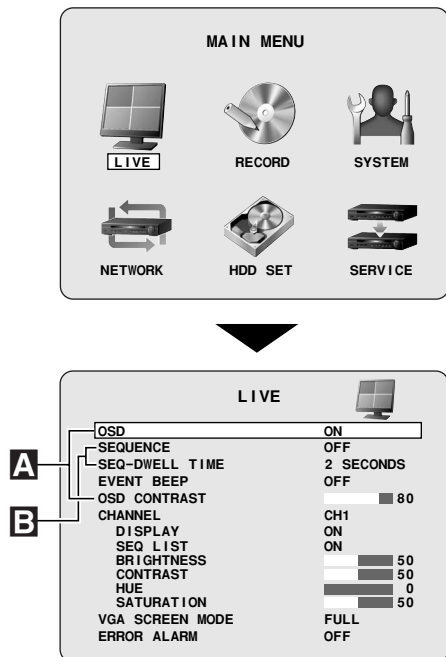
Memo: The contents of the settings are saved when leaving the menu setting screen.

Even if the power is turned off the settings content are retained.

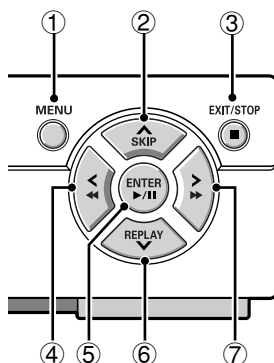
LIVE settings

Press the MENU button and enter the password. (P24)

The MAIN MENU is displayed, select "LIVE" using the control button (▲▼<>).



Function of the menu operation button



- ① **MENU:** Press to display the MAIN MENU.
- ② **▲:** Press to move the cursor upward.
- ③ **EXIT/STOP:** Press repeatedly once the menu operations are complete.
- ④ **◀:** Press to select a setting value.
- ⑤ **ENTER:** Press to enter the setting screen, select and confirm.
- ⑥ **▼:** Press to move the cursor down.
- ⑦ **▶:** Press to select a setting value.

A Setting the OSD and OSD CONTRAST

Displays information such as the date and camera channel and sets the character contrast on the screen.

- 1** Select OSD using the control button (▲▼) and select ON/OFF using the control button (<>).
ON: The date and time, as well as the channel, are displayed on the screen.
OFF: Characters and symbols are not displayed (Except for the recording symbol).
- 2** Select OSD CONTRAST using the control button (▲▼) and adjust the character contrast using the control button (<>).
 The display bar (20-100) changes and the contrast of the real time character display changes.

B Setting the SEQUENCE and SEQ-DWELL TIME

To set the sequence and the sequence interval of the screen.

- 1** Select SEQUENCE using the control button (▲▼) and select ON using the control button (<>).
ON: Sequencing is performed on a single-screen (When live).
OFF: Sequencing is not performed.
- 2** Select SEQ-DWELL TIME using the control button (▲▼) and select a sequence interval using the control button (<>).
Selections: 1, 2, 3 - 58, 59, 60 SECONDS

C Setting the EVENT BEEP

To set the alarm sound when motion is detected or the alarm is triggered.

- 1** Select EVENT BEEP using the control button (▲▼) and select ON/OFF using the control button (<>).
ON: The alarm sound is triggered when the alarm is triggered
OFF: The alarm sound is not triggered

LIVE settings

D Setting a CHANNEL

To set the video settings on each channel.

Select an item for each setting using the control button (**▲▼**) and select a setting value using the control button (**<>**).

● Setting a CHANNEL and the channel designation

- 1 Select CHANNEL using the control button (**▲▼**) and select a channel from the following channels using the control button (**<>**), press the ENTER button.

Selections: CH1/CH2/CH3/CH4

The CAMERA TITLE screen is displayed.

When not changing the designation of the channel, only select a channel.

- 2 Select the input position using the control button (**▲▼**) and select input characters using the control button (**<>**).

Character selection: letters, numbers, symbols
(Refer to specifications P55)



- 3 Press the EXIT/STOP button once operations are complete.

Changing the present CH1 display to HALL-1F (Example).

● Setting the DISPLAY

To select DISPLAY, and set the screen display.

ON: Displays live videos

OFF: Does not display live videos

● Setting the SEQ LIST

To select SEQ LIST and set the sequence.

ON: Performs sequencing

OFF: Does not perform sequencing

● Setting the BRIGHTNESS

To select BRIGHTNESS and adjust the brightness of the videos.

The display bar (0-100) changes and changes the brightness of the real time video.

● Setting the CONTRAST

To select CONTRAST and adjust optimally the dark parts and bright parts of the video.

The display bar (0-100) changes and changes the contrast of the real time video.

● HUE settings

To select HUE and adjust the hue of the video.

The display bar (0-100) changes and changes the hue of the real time video.

● Setting the SATURATION

To select SATURATION and adjust the saturation of the video.

The display bar (0-100) changes and changes the saturation of the real time video.

Press the EXIT/STOP button once operations are complete.

Press the EXIT/STOP button repeatedly to return to the live screen.

E Setting the VGA SCREEN MODE

To select the display mode of the screen when connecting a PC monitor with a VGA terminal.

Select VGA SCREEN MODE using the control button (▲▼) and select a setting using the control button (<>).

FULL: Displays the full-screen of the monitor

NORMAL: Opens and displays the monitor screen periphery

F Setting an ERROR ALARM

To set an alarm output on the screen.

OFF: Even if the live video is lost or if there is a hard disk error no alarm is output

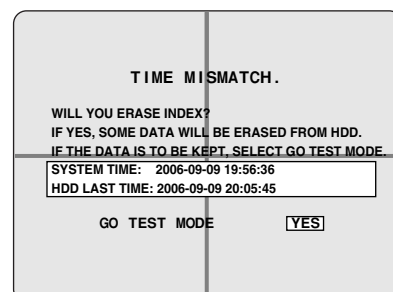
ALL: An alarm is output when both a live video loss and a hard disk error occur

HDD FULL: An alarm is output when a hard disk error occurs

VIDEO LOSS: An alarm is output when a live video loss occurs

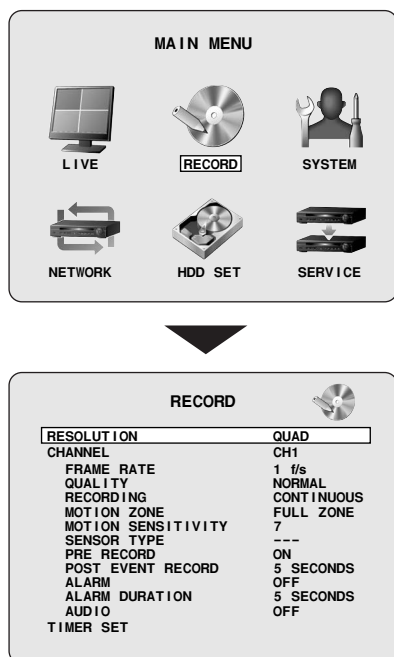


Regardless of the above settings, an alarm is output when a clock error TIME MISMATCH. is displayed.



RECORD settings

Press the MENU button and enter the password. (P24)
The MAIN MENU is displayed, select "RECORD" using the control button (▲▼<>).



A Setting the RESOLUTION

To set the resolution for the recordings.

Select **RESOLUTION** using the control button (▲▼) and select a setting using the control button (<>).

FULL: When recording single-screen

- **NTSC:** 720 × 480
- **PAL:** 720 × 576

QUAD: When recording quad-screen

- **NTSC:** 360 × 240
- **PAL:** 360 × 288

B Setting a CHANNEL

To set the recording settings of each channel.

Select an item for each setting using the control button (▲▼) and select a setting value using the control button (<>).

● Setting a CHANNEL

Select **CHANNEL** and select a channel.

CH1/CH2/CH3/CH4

● Setting the FRAME RATE (Unit: FPS)

Select **FRAME RATE** and select a value.

NTSC: OFF/1/2/ ... 29/30 (f/s)

PAL: OFF/1/2/ ... 24/25 (f/s)



The **FRAME RATE** setting represents the total frame rate of each channel. For example, if the frame rate is set to 25 (30) for channel 1 it cannot be set differently for other channels.

If **FULL** is selected under resolution setting:

NTSC: It is possible to select up to a total of 30 frames for all channels

PAL: It is possible to select up to a total of 25 frames for all channels

If **QUAD** is selected under resolution setting:

NTSC: It is possible to select up to a total of 120 frames for all channels

PAL: It is possible to select up to a total of 100 frames for all channels

● Setting the QUALITY

To select **QUALITY** and select the video quality.

Selections: NORMAL/FINE/BASIC

● Setting the RECORDING

To select **RECORDING** and select the recording mode.

CONTINUOUS (P13)

Recording is performed while this unit is turned on.

BY MOTION recording (P13)

Recording is performed as soon as the internal motion sensor of this unit reacts.

BY EXT. SENSOR (P14)

Recording is performed as soon as a sensor device connected to the external sensor (SENSOR) terminal device of this unit reacts.

BY SCHEDULE (P15)

Recording is performed daily during the set time slot set on the **SCHEDULE** screen in the recording settings.

RECORD settings

● Setting the MOTION ZONE (P13)

Select the zone where the motion sensor is active. It is necessary to set a detection frame when PARTIAL ZONE is selected.

FULL ZONE:

The motion sensor is active on the whole screen.

PARTIAL ZONE:

The motion sensor is active in the set detection frame.

● Setting the MOTION SENSITIVITY

To select MOTION SENSITIVITY and select the level of detection sensitivity of the motion sensor.

Selections: 1/2/ ... 8/9 (Low sensitivity level)

● Setting the SENSOR TYPE

To select the detection mode when connecting an external sensor.

To select SENSOR TYPE and select the detection mode.

---: Not operational

N/O: Open type (normal open) when sensor is connected

N/C: Closed type (normal close) when sensor is connected

● Setting the PRE RECORD

To select PRE RECORD and select pre-recording.

ON: Starts recording approximately 5 seconds before the internal motion sensor or the external sensor detector is triggered. (Fixed to 1 ips)

OFF: No pre-recording

● Setting the POST EVENT RECORD

To select POST EVENT RECORD and select in how much time, after the sensor detection, the recording will start.

Selections: 2/3/4 ... 30 SECONDS

● Setting the ALARM

To select ALARM and select the output mode when an alarm is triggered.

ON: Outputs a signal to an external alarm device when an internal motion sensor or an external sensor detects.

OFF: Does not output a signal to an external alarm device.

● Setting the ALARM DURATION

To select ALARM DURATION and select the length of the alarm signal output.

Selections: 1/2/3 ... 58/59/60 SECONDS

● Setting the AUDIO

To select AUDIO and set the audio sound recording.

ON: Records the audio of live videos

To listen to audio sound connect an external microphone or speaker.

OFF: Does not record the audio of live videos.

C

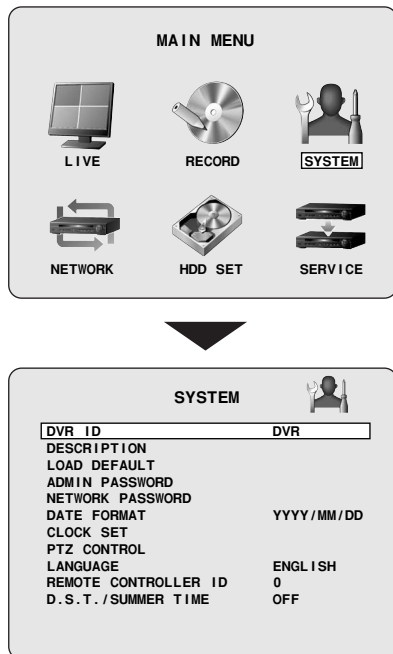
Setting the TIMER SET

To perform BY SCHEDULE settings.

The recording schedule of each channel can be set using settings by the hour. (P15)

SYSTEM settings

Press the MENU button and enter the password. (P24)
The MAIN MENU is displayed, select "SYSTEM" using the control button (▲▼<>).

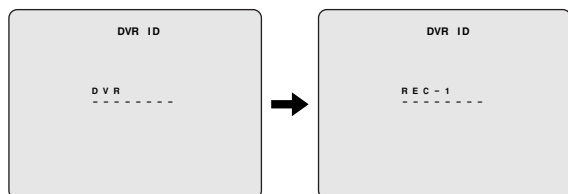


A Setting the DVR ID

Allows the individual designation of each unit when multiple units are connected.

- 1 Select DVR ID using the control button (▲▼) and press the ENTER button.

The DVR ID screen is displayed.



- 2 Input the unit designation (Example: REC-1) by pressing the control buttons (▲▼<>) repeatedly and press the ENTER button.

The changed unit designation is displayed in DVR ID on the SYSTEM screen.

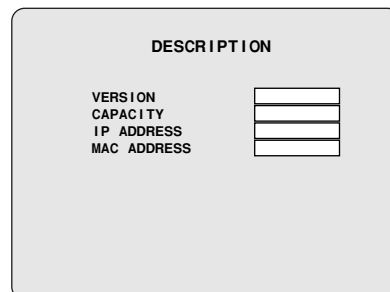
Furthermore, the unit designation is entered in the sent mail when using SEND E-MAIL in NETWORK settings (P35).

B DESCRIPTION confirmation

To confirm information such as the version information of the unit.

Select DESCRIPTION using the control button (▲▼) and press the ENTER button.

The DESCRIPTION screen is displayed.

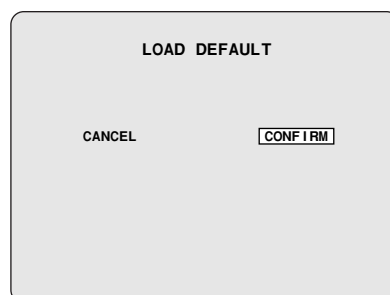


C Setting the LOAD DEFAULT

To return to the factory default settings of the unit.

- 1 Select LOAD DEFAULT using the control button (▲▼) and press the ENTER button.
The LOAD DEFAULT screen is displayed.
- 2 Select CONFIRM using the control button (<>) and press the ENTER button.

The screen switches to the "INITIALIZING..." screen.
The live video is displayed on the monitor.



SYSTEM settings

D Setting an ADMIN PASSWORD

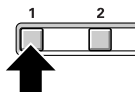
To set a password to enter the menu settings screen of this unit. The initial value is "1111".

- 1 Select ADMIN PASSWORD using the control button (▲▼) and press the ENTER button.

The **Current** password input screen is displayed.

- 2 Input the current password (1111) using the camera selection button (1) and press the ENTER button.

The **New** password input screen is displayed.



ADMIN PASSWORD

Current: * * * *

- - - -

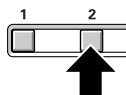


If the password is input incorrectly the following message is displayed, input the password correctly once again.

"INVALID CURRENT PASSWORD"

- 3 Input the new password (Example 2222) using the camera selection button (2) and press the ENTER button.

The **Confirm** password input screen is displayed.



ADMIN PASSWORD

New: * * * *

- - - -

- 4 To confirm, input the new password once again and press the ENTER button.

The message "PASSWORD CHANGED!!" is displayed so press the ENTER button.

If the password is incorrect the message "INVALID" is displayed. Input the correct password again.

Settings for no password

It is possible to enter the menu settings screen without inputting a password.

- 1 Select ADMIN PASSWORD using the control button (▲▼) and press the ENTER button.

The **Current** password input screen is displayed.

- 2 Enter the current password using the camera selection button (1/2/3/4) and press the ENTER button.

The **New** password input screen is displayed.

ADMIN PASSWORD

Current: * * * *

- - - -



ADMIN PASSWORD

New: - - - -

- 3 Press the ENTER button without inputting anything.

The **Confirm** password input screen is displayed.

ADMIN PASSWORD

Confirm: - - - -

- 4 Press the ENTER button without inputting anything.

The message "PASSWORD CHANGED!!" is displayed so press the ENTER button.

To go to the live screen, press the EXIT/STOP button.

SYSTEM settings

■ Restoring the password input

1 Press the MENU button, select SYSTEM and press the ENTER button.

2 Select ADMIN PASSWORD using the control button (▲▼) and press the ENTER button.

The **Current** password input screen is displayed.

ADMIN PASSWORD

Current: - - - -

3 Press the ENTER button without inputting anything.

The **New** password input screen is displayed.

4 Input the new password using the camera selection buttons and press the ENTER button.

The **Confirm** password input screen is displayed.

ADMIN PASSWORD

New: * * * *



ADMIN PASSWORD

Confirm: * * * *

5 Enter the same password as in New using the camera selection button (1/2/3/4) and press the ENTER button.

The message "**PASSWORD CHANGED!!**" is displayed so press the ENTER button.

To go to the live screen, press the EXIT/STOP button.

E Setting a NETWORK PASSWORD

A password can be set to limit the access to the network for network users. The initial value is "1111".

1 Select NETWORK PASSWORD using the control button (▲▼) and press the ENTER button.

The **Current** screen is displayed.

2 The following setting method is identical to the one described in "Setting an ADMIN PASSWORD".

NETWORK PASSWORD

Current: * * * *

F Setting the DATE FORMAT

Refer to "Setting the clock (CLOCK SET)". (P7)

G Setting the CLOCK SET

Refer to "Setting the clock (CLOCK SET)". (P7)

H Setting the PTZ CONTROL

Refer to "Operating the PTZ camera". (P11)

I Setting the LANGUAGE

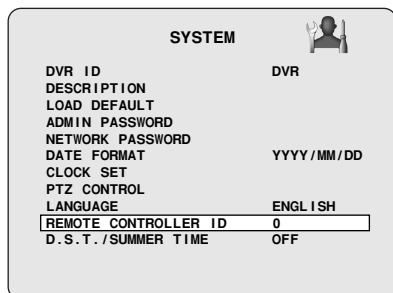
Refer to "Setting the language (LANGUAGE)". (P9)

SYSTEM settings

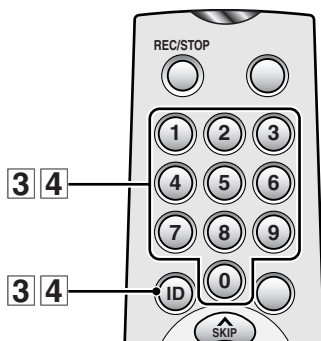
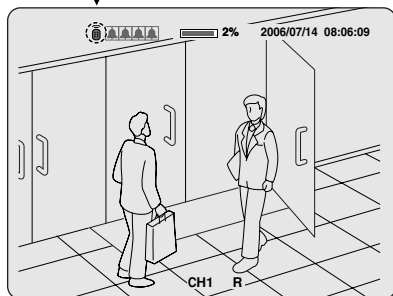
J Setting a REMOTE CONTROLLER ID

Allows to set an ID number on the supplied remote control and use it as an exclusive remote control when multiple units are connected.

The initial value is set to "0" and the remote control display is displayed on the monitor, remote operations are always available.



Remote control display

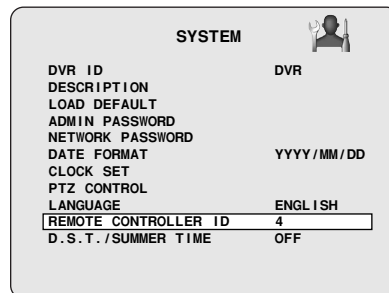


Operating this unit via the remote controller ID (Example: 4)

- 1 Select REMOTE CONTROLLER ID using the control button (▲▼) and select the ID number (Example: 4) using the control button (<>).

Selection: 1/2/ ... 8/9

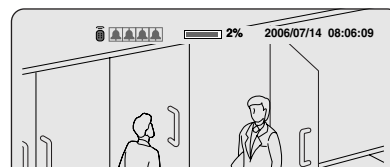
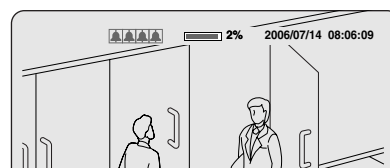
- 2 Press the EXIT/STOP button repeatedly to return to the live screen.



- 3 Press the ID button of the remote control and press a numeric button except 4.

The remote control display of the live screen disappears, it is no longer possible to access the numeric buttons.

- 4 Press the ID button of the remote control and press 4 of the numeric button.



The remote control display reappears, the ID number 4 set in the SYSTEM settings allows the operation of this unit.

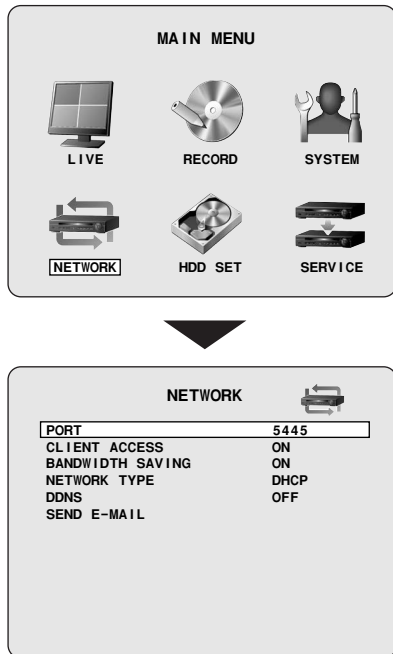


To return to the initial value (0), press the ID button and press "0". The unit can be operated regardless of the ID number set in the SYSTEM settings.

NETWORK settings

Press the MENU button and input the password. (P24)

The MAIN MENU is displayed, select "NETWORK" using the control button (▲▼<>).



A Setting the PORT

When connecting this unit to a multiple unit network, set an individual port number.

- 1 Select PORT using the control button (▲▼) and press the ENTER button.

The SET PORT screen is displayed. The initial value is 5445.



- 2 Select a value using the control button (▲▼), and select a port number by repeating the operation using the control button (<>).

- 3 Press the EXIT/STOP button once operations are complete.

B Setting a CLIENT ACCESS

To give access permission through an external PC.

Select CLIENT ACCESS using the control button (▲▼), and set "ON" using the control button (<>).

ON: Accessing the unit via a PC using the supplied exclusive software

OFF: Does not allow access

C Setting the BANDWIDTH SAVING

Set if the network bandwidth is not large enough when monitoring live videos.

Select BANDWIDTH SAVING using the control button (▲▼), and set the settings using the control button (<>).

ON: Live videos advance frame by frame

OFF: Does not limit the network bandwidth

NETWORK settings

D Setting the NETWORK TYPE

Select NETWORK TYPE to be connected, and set each setting. Consult the network manager for all necessary information.

1 Select NETWORK TYPE using the control button (▲▼).

2 Select a type using the control button (▲▼).

- ADSL
- LAN

■ If selecting DHCP

Information, such as the IP address, is automatically distributed and does not therefore need to be set.

■ If selecting ADSL

① Select ID using the control button (▲▼) and press the ENTER button.

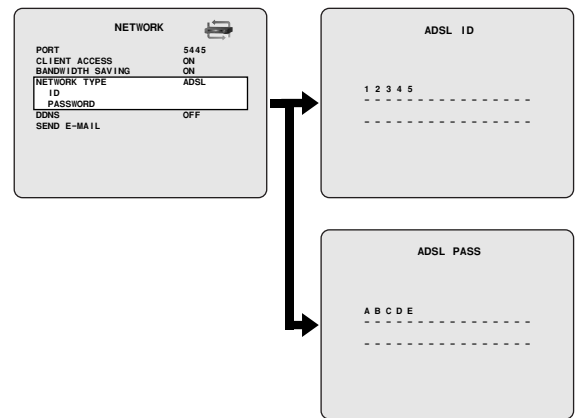
The ADSL ID input screen is displayed.

② Change the ID number using the control button (▲▼), move the cursor to the right using the control button (<>) and repeat the operation, and then press the ENTER button.

The screen returns to the NETWORK screen.

③ Select PASSWORD using the control button (▲▼) and press the ENTER button.

The ADSL PASS input screen is displayed.



④ Display "A: Ex" using the control button (▲▼), move to the right using the control button (<>) and repeat the operation, and then press the ENTER button

The screen returns to the NETWORK screen.

⑤ Press the EXIT/STOP button.

The APPLY NETWORK ADDRESS screen is displayed.

⑥ Select "CONFIRM" using the control button (<>) and press the ENTER button.

Once the settings are complete, restart the unit. The screen switches to live video.

```
graph TD
    subgraph APPLY_NETWORK_ADDRESS [APPLY NETWORK ADDRESS]
        CANCEL[CANCEL]
        CONFIRM[CONFIRM]
    end
```

NETWORK settings

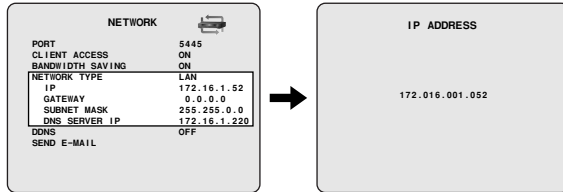
■ If selecting LAN

- ① Select IP using the control button (▲▼) and press the ENTER button.

The IP ADDRESS input screen is displayed.

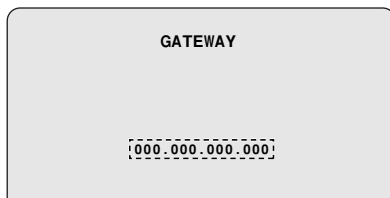
- ② Change the IP number using the control button (▲▼), move the cursor to the right using the control button (<>) and repeat the operation, and then press the ENTER button.

The screen returns to the NETWORK screen.

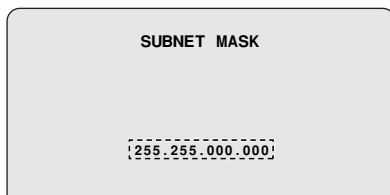


- ③ Repeat ② and change the following as necessary.

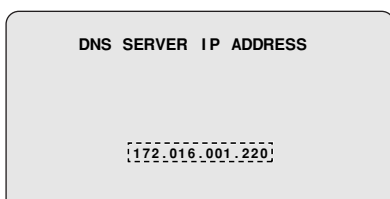
- GATEWAY



- SUBNET MASK



- DNS SERVER IP ADDRESS



- ④ Press the EXIT/STOP button.

The APPLY NETWORK ADDRESS screen is displayed.

- ⑤ Select "CONFIRM" using the control button (<>) and press the ENTER button.

Once the settings are complete, restart the unit. The screen switches to live video.

E Setting the SEND E-MAIL

An E-mail can be sent to a specified IP address.

- 1 Select SEND E-MAIL using the control button (▲▼) and press the ENTER button.

The SEND E-MAIL screen is displayed.



- 2 Select the following item using the control button (▲▼) and select the setting using the control button (<>).

- IP NOTIFICATION (When DHCP):

ON: An E-mail is sent when the IP address of this unit is changed

OFF: Does not send an E-mail

- EVENT ALARM:

ON: Sends the information of the channel that triggered the alarm when an alarm event is triggered

OFF: Does not send the channel information

- 3 Select the following item using the control button (▲▼) and set the information, such as the E-mail address, using the control button (<>).

Re-pressing the ENTER button returns the screen to the SEND E-MAIL screen.

- MAIL ADDRESS

To set the mail address.

Example:



NETWORK settings

- **MAIL SAVER NAME**

To set the name of the server for the mail.

Example:

MAIL SERVER NAME

mailserver12

ID: To set information for the Internet user, such as the connection ID.

PASSWORD: To set passwords for the Internet user, such as the connection password.

Example:

MAIL SERVER ID

23456

MAIL SERVER PASSWORD

20060915

- **RETURN MAIL ADDRESS**

To set a backup mail address if the primary email fails.

Example:

RETURN MAIL ADDRESS

111@ABC.com

1 Press the ENTER button.

The screen returns to the SEND E-MAIL screen.

2 Press the EXIT/STOP button twice.

The screen returns to the NETWORK screen and the APPLY NETWORK ADDRESS screen is displayed.

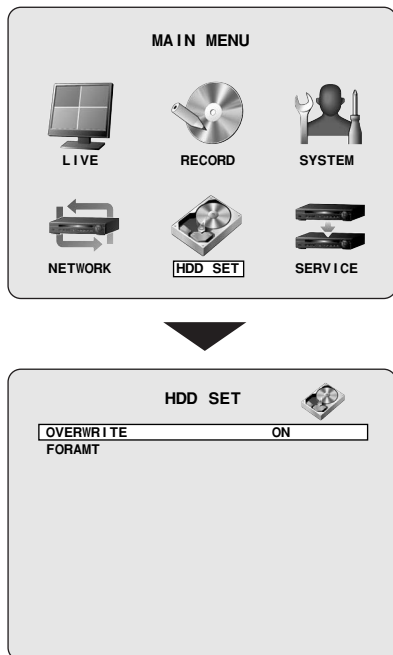
3 To register, select "CONFIRM" using the control button (<>) and press the ENTER button.

Once the settings are complete, restart the unit. The screen switches to live video.

HDD SET settings

Press the MENU button and input the password. (P24)

The MAIN MENU is displayed, select "HDD SET" using the control button (**▲▼<>**).



A Setting the OVERWRITE

Allows continuing recording and overwriting old videos once the hard disk capacity is full.



When OVERWRITE is set to ON, save required videos to an external memory device.

Select OVERWRITE using the control button (**▲▼**) and select a setting using the control button (**<>**).

ON: When the capacity becomes full, former data is overwritten and the recording continues

OFF: When the capacity becomes full the recording stops

B FORMAT settings

Initializes the internal hard disk.



All the videos are lost. Before formatting, save required videos to an external memory device. (P38)

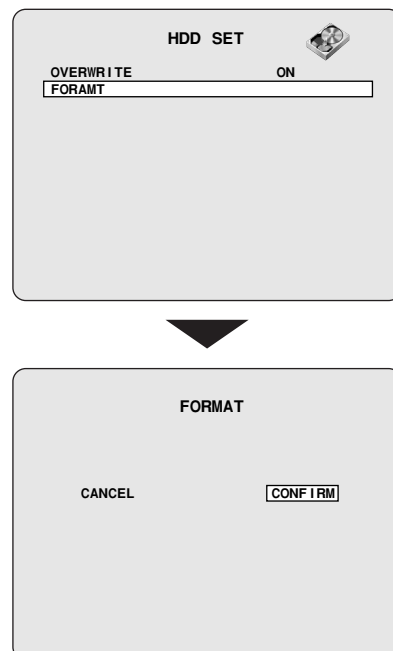
1 Select FORMAT using the control button (**▲▼**) and press the ENTER button.

The FORMAT screen is displayed.

2 Select CONFIRM using the control button (**<>**) and press the ENTER button.

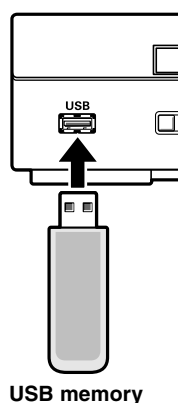
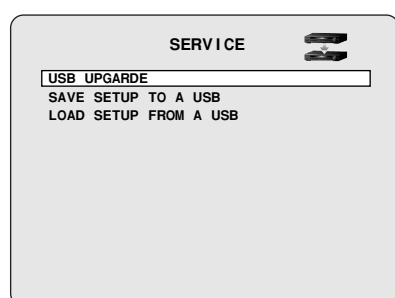
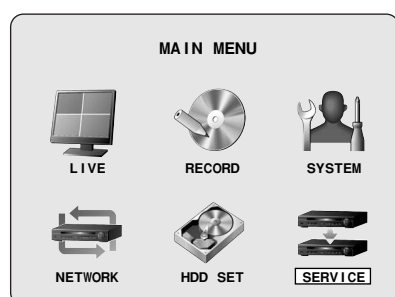
The message "FORMATTING" is displayed and formatting starts.

Once formatting is complete, the unit restarts and returns to live videos.



SERVICE settings

Press the MENU button and input the password. (P24)
The MAIN MENU is displayed, select "SERVICE" using the control button (▲▼<>).



A Setting the USB UPGRADE

Under service mode.

B Setting the SAVE SETUP TO A USB

Saving the menu settings of this unit to a device, such as a USB memory.

- 1 Connect the USB memory to the USB terminal
- 2 Select SAVE SETUP TO A USB using the control button (▲▼) and press the ENTER button.
The confirmation screen is displayed.
- 3 Select CONFIRM using the control button (<>) and press the ENTER button.
The message "SAVING" is displayed and saving starts. Once saving is complete the SERVICE screen is displayed.

C Setting the LOAD SETUP FROM A USB

Allows to call up the settings of this unit saved on a device, such as a USB memory onto this unit or onto a device of identical model.

- 1 Connecting the USB memory containing the menu settings to the USB terminal.
- 2 Select LOAD SETUP FROM A USB using the control button (▲▼) and press the ENTER button.
The confirmation screen is displayed.
- 3 Select CONFIRM using the control button (<>) and press the ENTER button.
The message "LOADING" is displayed and loading starts. Once saving is complete, the unit restarts and returns to live videos.

Operations using the Network

This unit can be operated from a PC screen by using the supplied network operation software "**Sanyo DVR Utility 2004**". Prior to performing network operations make the following preparations.

Connection and settings

- **Network connection:**
Connect this unit and the PC using a LAN or Internet connection. (P5)
- **Network settings:**
Set the network connection settings on the NETWORK screen of this unit. (P33)

Operating environment

- **CPU:** Intel Pentium4 1.2 GHz or higher
- **Memory:** Minimum 256 MB
(512 MB or higher recommended)
- **VGA:** 16 MB (64 MB recommended)
- **Resolution:** 1024 × 768
- **Disk capacity:** 10 MB
- **Operating System:**
Windows 2000 Professional SP4/
XP Professional SP2/XP Home
Direct X: Direct X 8.1 or above

Installing "Sanyo DVR Utility 2004"

Install using the interactive screen.

- 1** Insert the supplied CD-ROM in the CD drive and double-click "**Sanyo Client.exe**".

The installer runs.

- 2** Confirm the installation destination folder on the "**Choose Destination Location**" screen and click **[Next]**.

To change the installation destination folder, click **[Browse]** and select a folder.



Operations using the Network

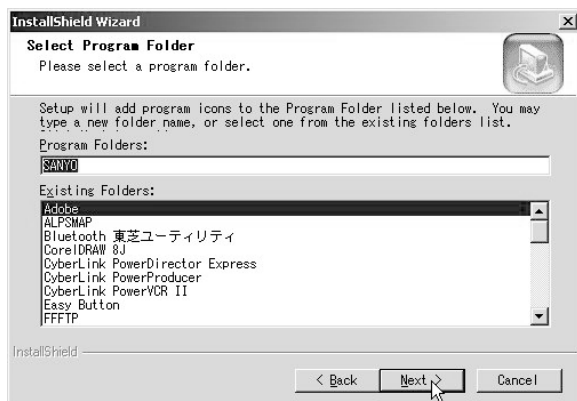
3 Select the setup type on the [Setup Type] screen and click [Next].



- In general, select "**Typical**". Depending on the performance of the PC the program may not operate. In that case, re-install "**Light**".

4 Confirm the program folder in the "Select Program Folder" screen and click [Next].

To install to a different program folder, input the folder name in the box directly or select a folder from the [Existing Folders] list.



5 The software starts installing.

The progress of the installation is displayed on the "**Setup Status**" screen.

6 Installation is complete.

Once the installation is complete, the "**DVR Utility 2004**" shortcut icon is displayed on the desktop.



Double-click this icon to start the software.

To uninstall the software

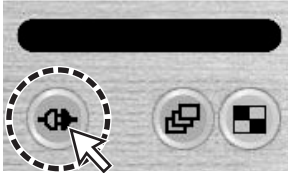
Specify "**SANYO DVR Utility 2004**" in the control panel [Add or Remove Programs] and uninstall.

Connecting to this unit

To start this software, double-click the desktop shortcut icon (), the main screen is displayed. When connecting a camera to this unit following the procedure below, the camera live video is displayed.

■ Connecting for the first time

1 Click the connect button on the operation panel.



The connection dialog [Connect] is displayed.

2 Input information such as the address information and settings required for the connection.

Connect

Connect to remote system.

Site Name :

IP Address :

Port No. : 5445

Protocol : TCP

Password : ****

OK Cancel

- **Site Name:**
Set up an administrative designation for this unit. If no designation is input it is substituted by the IP address.
- **IP Address/Port No.:**
Input the IP address and PORT number set on the NETWORK screen of this unit.
- **Protocol:**
Select the protocol (TCP/UDP).
- **Password:**
Input the network password set on the SYSTEM screen of this unit.



This unit cannot be connected to the network if the [CLIENT ACCESS] on the NETWORK screen is not set to "ON". (P33)

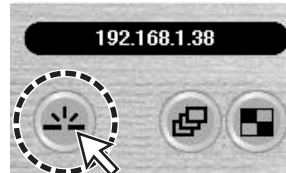
3 Click [OK] on the dialog [Connect].

The camera connects to this unit and the live video of the camera is displayed on the main screen.

■ Disconnecting

Once connected, the **connect** button on the operation panel changes to the **disconnect** button.

Clicking this button disconnects the connection with this unit and the displayed video disappears.



■ When there are several connections

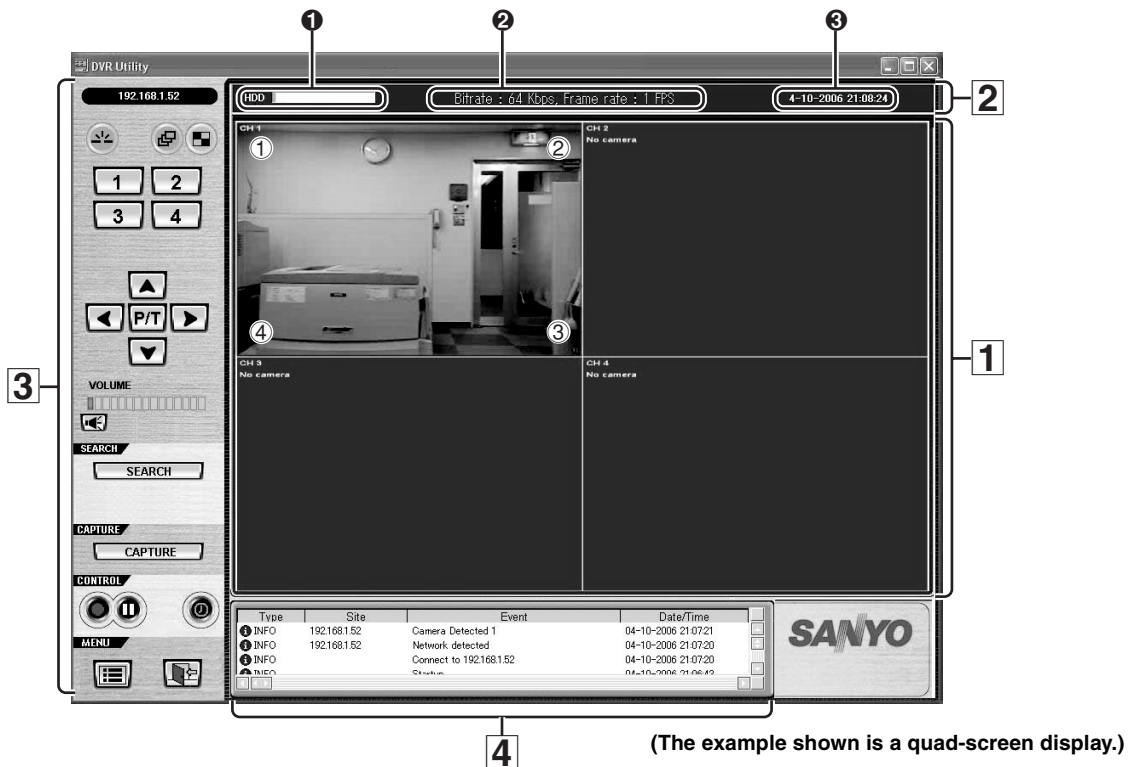
This unit can retain and display, in the dialog [Connect], the connection information for up to a maximum of 16 connections.

Select 1 unit in the pull down menu of the [Site Name] of the dialog and click [OK] to connect.

Memo: To change the connection destination, disconnect the present connection and perform the connection operations once again.

Main screen structure and function of each part

When connected to this unit, the live video of the camera is displayed on the main screen.



1 Video display area

Displays live video or playback video.

<Screen display method>

Can be switched using the operation button on the screen. (P43)

- Single-screen
- Quad-screen
- Sequence (camera switch) display
- Full-screen display

<Camera information>

The following camera information is displayed on each camera video.

① (Top left):

- **Camera channel (CH 1-4)**
- **Camera designation**
Set in the **camera designation settings (site)** screen in the set up menu. (P51)
(When no camera is connected to the channel, the message "No Camera" is displayed.)

② (Top right):

- M:** BY MOTION recording in progress (P13)
- S:** BY EXT. SENSOR recording in progress (P14)

③ (Bottom right):

- R:** Recording, such as real time recording, in progress. (P12)

④ (Bottom left):

- A:** Alarm output in progress (P43)

2 Information display area

The following information is displayed.

① Shows the used capacity of the hard disk of this unit

② Communication bit rate and frame rate

To display, set in the set up menu in the general setting screen. (P50)

③ Date and time information

For live video: Current date and time

For playback video: Recorded date and time

3 Operation panel (P43)

The view operation buttons are arranged on the panel.

4 Log window

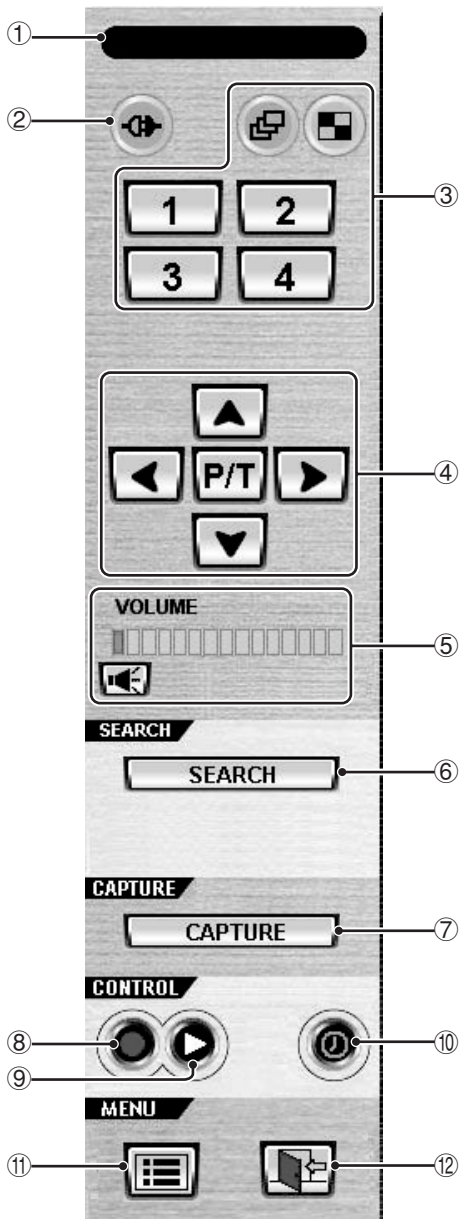
The operation history is displayed as a list.

Displayed items: Type, Site, Event, Date/Time

Memo: Click [SEARCH] on the operation panel to switch the screen to search mode. One part of the operation panel display and one part of the log window display change. (P47)

Main screen structure and function of each part

Function of the operation panel



SW : The display of the icon changes according to the selection made.

① Address information of this unit

② Connect/Disconnect button

SW : Displays the [Connect] dialog for connection (P41)
SW : Disconnects the connection

③ Screen display switch button (P44)

: To sequence (camera switch) display
 : Switching to quad-screen display
1 **4** : Selecting a channel and switching to single-screen display

④ Camera controller (Only for PTZ camera)

When clicking the controller button (**P/T** / **Z/F**), the controller display changes. (P46)

SW : For Pan/Tilt operations
SW : For Zoom/Focus operations

⑤ Audio controller

Adjusts the audio output of live video and playback video.

SW : The audio is not output
SW : The audio is output
VOLUME : Adjusts the output volume

⑥ [SEARCH] button

Switches the main screen to search mode (P47)

⑦ [CAPTURE] button

Saving images (P46)

⑧ Recording button (P45)

SW : Sets recording function to ON
SW : Sets recording function to OFF

⑨ Still button (P45)

SW : Freezes the live video
SW : Unfreezes the live video

⑩ Alarm output switch button

: Switches the alarm output on the back panel to ON/OFF (A red light blinks when an alarm output is in progress)

⑪ Menu button

: Displays the set up menu screen (P50)

⑫ Exit button

: Exits the software and closes the screen

Main screen basic operations

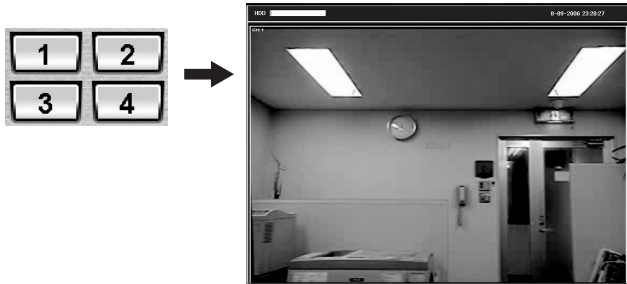
A Switching the display mode of the screen

Allows you to select the display mode for live and playback video.

■ Switching from quad-screen to single-screen

Click the channel selection button on the operation panel or select one screen and double-click.

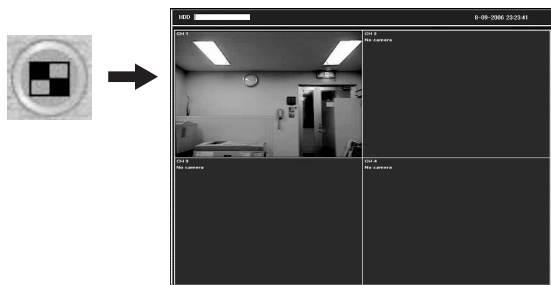
The video of the specified camera is displayed in single-screen.



■ Switching from single-screen to quad-screen

Click the quad-screen button on the operation panel or double-click the screen.

The videos of the four connected cameras are simultaneously displayed in quad-screen.



Memo: In case of the quad-screen display, when selecting one camera video a red frame indicating which camera has been selected is displayed.

It is necessary to select a camera to perform the following operation in quad-screen.

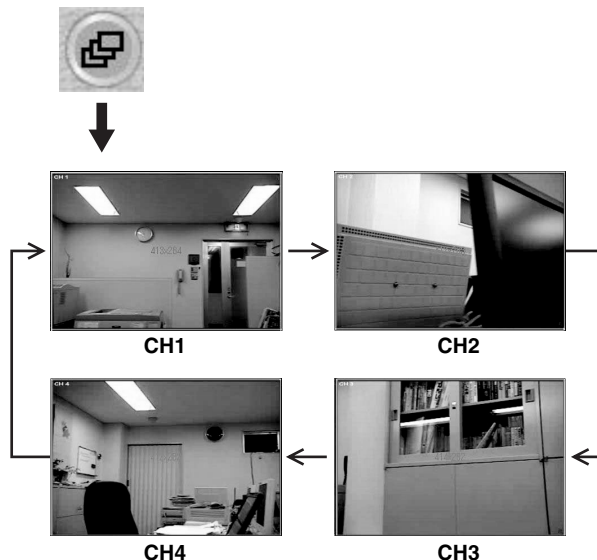
- Saving images (P46)
- PTZ camera operations (P46)
- Switching the audio output (P43)

■ To sequence (camera switch) display

Click the sequence button on the operation panel while in single-screen display.

The video of the four cameras connected to this unit is displayed continuously in the order of the channel numbers.

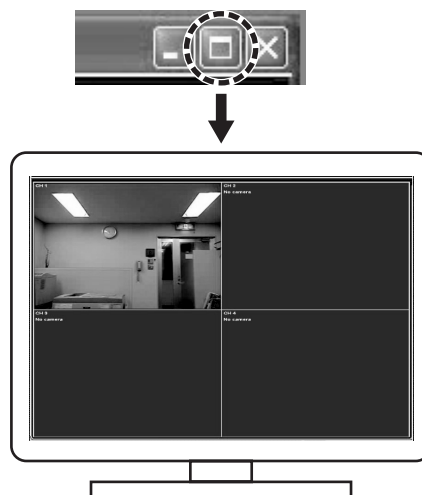
When the button is re-clicked, sequence display stops and display returns to normal single-screen display.



■ To full-screen display

Click the maximize button on the extreme right of the title bar.

Displays, such as the operation panel displays, are hidden and only the video area is maximized and displayed.



Press the [Esc] button to return from the full-screen to the standard screen.



The operation panel is not displayed while in full-screen. Therefore, no operation can be performed except for switching display (single-screen ↔ quad-screen) by double-clicking the screen.

Main screen basic operations

B Recording live video

■ Recording method

The present software allows two modes of recording live video from a camera. Automatic recording setting is also available.

<Recording mode>

• Always:

Recording is performed when the recording button on the operation panel is set to ON.

• Event:

When the recording button on the operation panel is set to ON, recording is on standby and recording is performed when specified events occur.

<Automatic recording>

When set to automatic recording, the recording button on the operation panel is always locked to ON while the unit is connected to the network. Recording is performed automatically in the selected mode even without operating the recording button on the operation panel.

Memo:

- Set the automatic recording or select a recording mode on the recording settings screen in the set up menu. (P52)
- Network operation video recordings are all saved on the PC hard disk. Set the save conditions in the disk settings screen in the set up menu. (P53)

■ Switching recording functions

Switch the recording functions to ON/OFF using the recording button on the operation panel. (When recording is set to automatic recording, it is always locked to ON.)

1 Clicking the recording button on the operation panel.

The recording function changes to ON and the button display switches to stop.



Setting the recording function to ON allows recording according to the recording mode.

• In Always mode:

Starts the recording

• In Event mode:

Recording is on standby, recording starts when a specified event occurs

2 To stop the recording function

Click the recording button (Stop) on the operation panel.



- **In Always mode:** Stops recording
- **In Event mode:** Cancels recording standby

C Freezing the live video

Stops the live video and allows the user to view the live video as a still image.

1 Click the still button on the operation panel.

The live video changes to still video, the still button display switches to the unfreeze button.



2 To unfreeze the image

Click the unfreeze button on the operation panel.



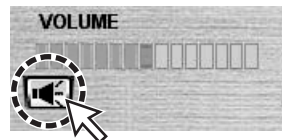
The live video returns to moving video.

D The audio is output

Audio output is available for live and playback video.

1 Click the audio button on the operation panel.

The audio is output and the button switches to no output.



Adjust the output volume by dragging and dropping [VOLUME].

2 To stop the audio output

Click the audio button on the operation panel.

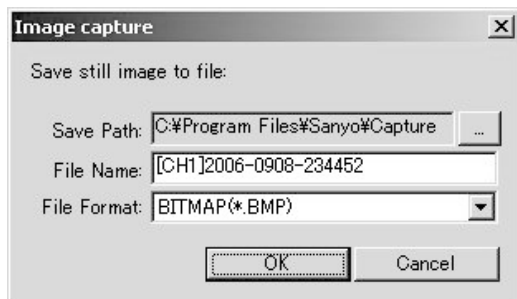


Main screen basic operations

E Saving images

Allows the user to save live video or playback video displayed on the screen on the PC, as still images.

- 1 Selecting the camera video to be saved.**
When in quad-screen display, select 1 camera video and click (a red frame surrounds the selected camera) or double-click to switch to single-screen display.
- 2 Click [CAPTURE] on the operation panel.**
The [Image capture] dialog is displayed.
- 3 Set the saving conditions using the dialog.**



- ① Save Path:**
The path set in the general settings screen in the set up menu is displayed. (P50)
- ② File Name:**
Change the path and input a new path in the box.
- ③ File Format:**
JPEG or BITMAP can be selected.

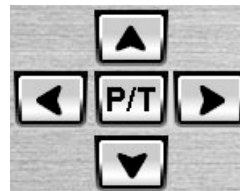
- 4 Click [OK] in the [Image capture] dialog.**
One screen image is saved when [CAPTURE] is clicked.

F Operating the PTZ camera

When the PTZ camera is connected to this unit, it can be remotely operated from the PC.

- 1 Sets the menu using this unit.**
Set the PTZ CONTROL settings on the SYSTEM screen of the menu settings of this unit. (P11)
- 2 Displays the live video and specifies the camera to be operated.**
When in quad-screen display, select 1 camera video and click (a red frame surrounds the selected camera) or double-click to switch to single-screen display.
- 3 Operates the camera using the camera controller on the operation panel.**
Clicking the controller button (**P/T** / **Z/F**) switches the controller display.

■ For Pan/Tilt operations



- ▲ ▼** : Adjusts the tilt
◀ ▶ : Adjusts the pan
P/T : Switches the controller button to Zoom/Focus operations

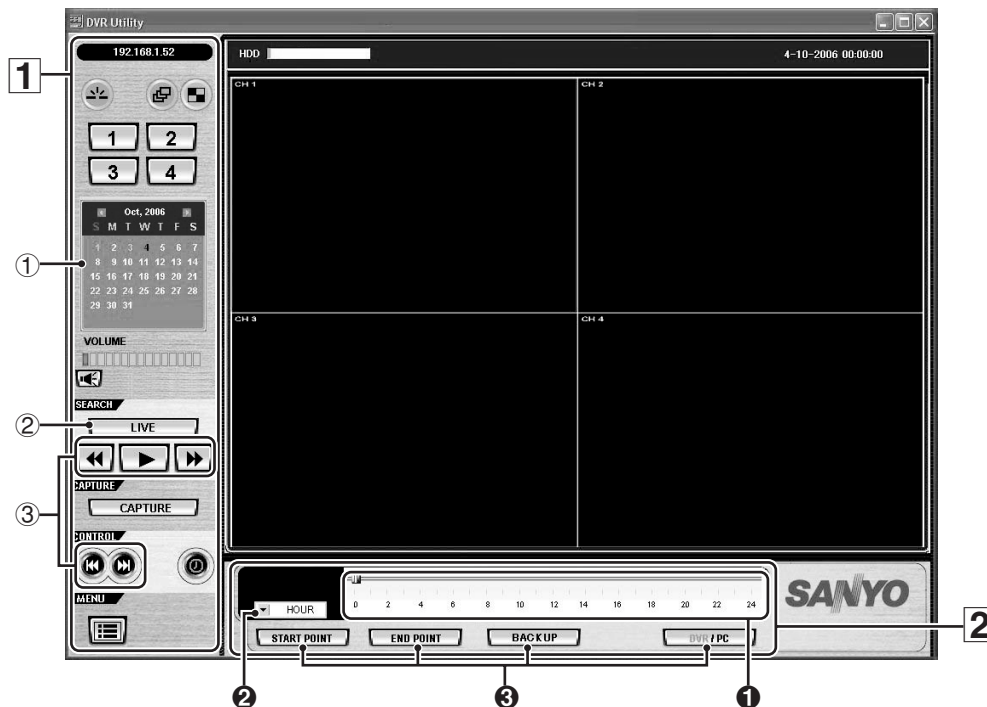
■ For Zoom/Focus operations



- T W** : Adjusts the zoom
N F : Adjusts the focus
Z/F : Switches the controller button to Pan/Tilt operations

Search mode operations

When clicking [SEARCH] on the operation panel, the screen display switches to search mode. When in search mode, the display of one part on the operation panel as well as one part of the log window changes. Search and backup operations of video recorded on this unit or on the PC become available.



1 Function of the operation panel

When in search mode, the following operation button is displayed.

① Calendar

To specify the date and time of the video to be searched.

② [LIVE] button

To cancel the search mode and return to the live video.

③ Playback operation button

Plays back the searched video.



Fast rewinds

Fast rewind/fast forward speed switches from the button is clicked.



Plays back



Pauses and displays a still image



Fast forwards



Moves the paused video to the previous frame
Or when in playback, rewinds the video by one minute



Advances the paused video to the next frame
Or when in playback, forwards the video by one minute

2 Functions of the time scale

The scale and backup operation button for the video search are displayed in place of the log window.

① Time scale

Moves the slide knob on the scale as the video is played back.

The playback point moves as the slide knob is dragged and dropped to the left or to the right or when clicking on the scale.

② Display unit

Switches the mark unit of the scale.

- **HOUR:** One hour X 24 marks
- **MINUTE:** 5 minutes X 12 marks

③ Backup operation button

- **START POINT:**
Sets the start point of the video range to be backed up.
- **END POINT:**
Sets the end point of the video range to be backed up.
- **BACK UP:**
Executes the backup.
- **DVR/PC:**
Switches the recorded video search destination (this unit/PC).

Search mode operations

A Searching and playing recorded video

Video recorded on this unit or on a PC can be searched and played using the date and time.

1 Select the search destination (DVR/PC)

Select whether to search the video recorded on the DVR (this unit) or the video recorded on the PC.

The search destination can be switched interchangeably by clicking [DVR/PC] on the time scale panel.



The search destination can be confirmed by looking at the button display.

- **DVR:**
Searches the video recorded on the DVR (this unit)
- **PC:**
Searches the video recorded on the PC

2 Click and specify the recorded date of the video to be searched on the calendar.

If a recorded video is available on the selected date, the date is displayed in red.



Clicking ◀/▶, switches the calendar display to the previous/next month.

3 Confirms the time slot with recorded video using the time scale.

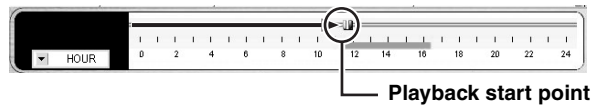
A green line is displayed above the scale if a recorded video is available.



Memo: Switching the display unit of the scale from [HOUR] to [MINUTE] allows the user to further narrow down the time slot with recorded video.

4 Specify the playback start point.

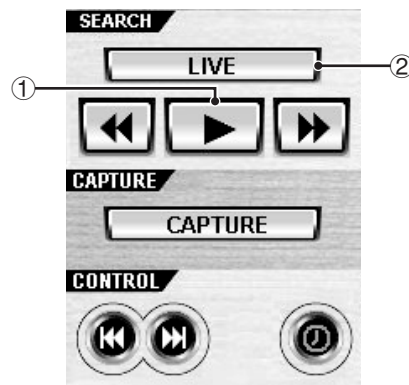
Drag and drop the slide knob of the time scale and move it to the playback start point.



5 Click the playback button (①).

The video starts playing.

During the playback, the playback operation buttons allow such operations as fast forward, pause, and advance to the next frame. (P47)



Memo:

- If no recorded video is available at the specified playback start point, the unit jumps to the next available recorded video and starts playing.
- As in the case of live video, the screen display mode can be switched using the operation panel buttons. (P44)

6 To stop playback and return to live video

Click [LIVE] (②) on the operation panel.

Switches to the live video and returns the displays, such as the operation panel display, to standard mode.

Search mode operations

B Backing up DVR recorded video

DVR (this unit) recorded video can be backed up on the hard disk of a PC in AVI format.

Search the recorded video by following the procedure below, specify the video range to be backed up and execute a back up.

Refer to steps 1-3 of "Searching and playing recorded video (P48)".

1 Specify the search destination (DVR/PC).

Set to "DVR".

2 Click the calendar and specify the date of the video to be searched.

3 Confirms the time slot with recorded video using the time scale.

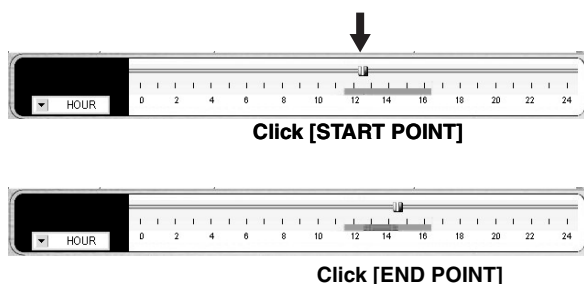
4 Specify the backup start point.

Move the slide knob of the time scale to the start point and click [START POINT].

5 Specify the backup end point.

Move the slide knob of the time scale to the end point and click [END POINT].

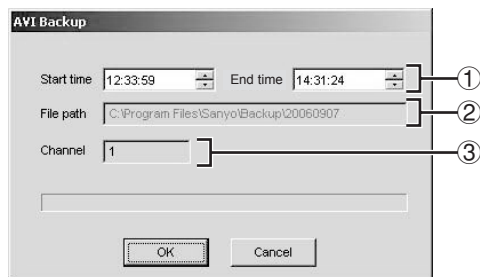
A dark green line is displayed on the specified video range.



Memo: To undo the specified video range, re-click [START POINT].

6 Click [BACKUP].

Confirm the backup content of the backup using the [AVI Backup] dialog.



① Start time/End time:

Can be modified using the spin buttons.

② File Path:

The path set in the general settings screen in the set up menu is displayed. (P50)

③ Channel:

The channels numbers with recorded video are displayed.

7 Click [OK].

The specified recorded video range is backed up on the PC. The backup progress is displayed in the progress gauge of the dialog.

Memo: • Destination folder name

Input the date information of the first image of the video.

• Saved file name


(Camera channel number) + time information of the first image

Example:

[CH1] 08_30_08 = Recorded video from camera 1 at 08h30m08s

- Video is backed up in the AVI format and can be played using video playback software compatible with the AVI format such as Windows Media Player. If the video cannot be played with a standard AVI software, install Codec (FFDShow) from the supplied CD-ROM.

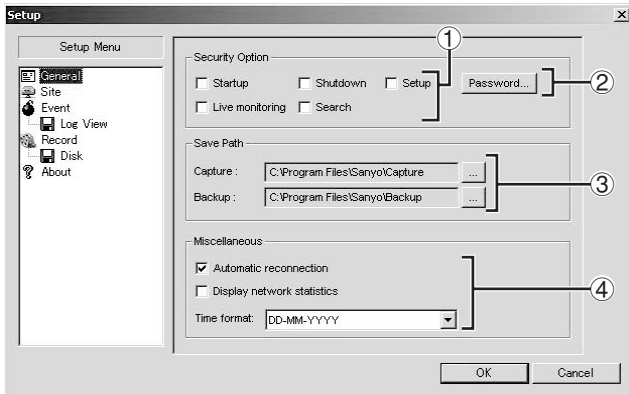
Setup menu settings

To display the "Setup" screen, click the menu button () on the operation panel. Set the settings concerning the operation conditions of the DVR (this unit) during connection and the network operations on this screen.

Clicking menu in the [Setup Menu] window on the left of the screen displays the specified menu screen.

A General settings (General)

Sets functions such as security functions, video data destination folder and starting automatic connection functions.



① Security Option

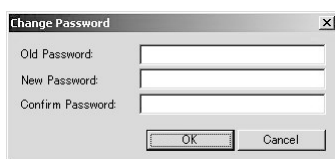
When a check is input in the checkbox, a password is necessary to perform each operation.

- **Startup:**
Starts the present software
- **Shutdown:**
Exits the present software
- **Setup:**
Displays the "Setup" screen
- **Live monitoring:**
Displays the live video
(Operation of the [LIVE] button on the operation panel)
- **Search:**
Switches the main screen to search mode
(Operation of the [SEARCH] button on the operation panel)

② Password

Clicking the button allows the user to set a [Security Option] password.

- **Old Password:**
Input the current password.
- **New Password:**
Input the new password.
- **Confirm Password:**
Re-input the new password to confirm the password.
Click [OK] after inputting the password.



③ Save Path

Set the destination folder for still video (Capture) and backup video (Backup).

④ Miscellaneous

- **Automatic reconnection:**
If the checkbox is checked, reconnection operations are performed automatically, after an interval of approximately 10 seconds, when the network is temporarily disconnected (NETWORK LOSS).
- **Display network statistics:**
If the checkbox is checked, the communication bit rate and frame rate of the network is displayed in the information display part of the main screen.
- **Time format:**
Allows the selection of the date and time information display pattern.

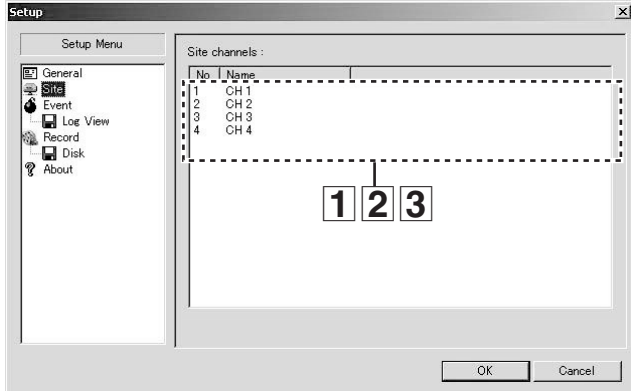
Click [OK] once the above settings are complete.
The content of the settings are confirmed and saved.

Setup menu settings

B Camera designation settings (Site)

Sets the administrative designation of each camera connected to this unit.

The set designation is displayed on, for example, the camera video.

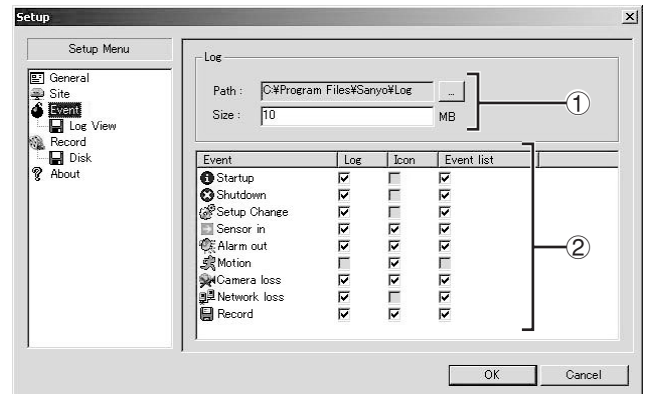


- 1 Select the channel designation to be set and click.**
The selected line is highlighted in blue.
- 2 Re-click the selected channel designation.**
It switches to the input box.
- 3 Input the camera designation.**

Click [OK] once the above settings are complete.
The content of the settings are confirmed and saved.

C Event settings (Event)

Sets the event management method.



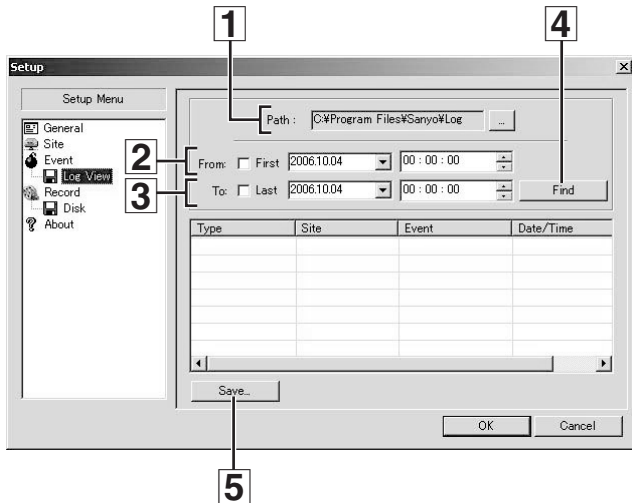
- ① Log**
Sets the destination folder and the allowable size of the event log.
- ② Event**
Set the saving and display conditions for each event using the checkbox.
 - **Log:**
Whether it saves it as an event log or not
 - **Icon:**
Whether it displays an icon on the camera video or not
 - **Event list:**
Whether it displays the event on the log window of the main screen or not

Click [OK] once the above settings are complete.
The content of the settings are confirmed and saved.

Setup menu settings

D Event log search, view, save (Log View)

Event information can be searched and events can be saved to a PC.

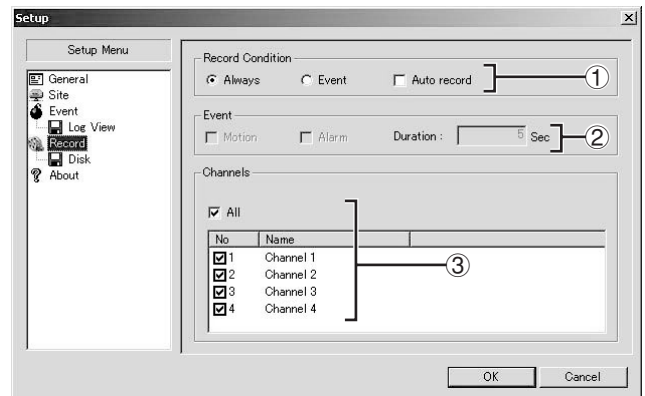


- 1 Specify the folder to be searched using [Path].**
- 2 Set the start point of the search range in [From].**
If the checkbox [First] is checked, it is automatically set to the first date and time in the folder.
- 3 Set the end point of the search range in [To].**
If the checkbox [Last] is checked, it is automatically set to the newest date and time in the folder.
- 4 Click [Find].**
The event information of the specified range is displayed as a list in the log list.
- 5 To save the displayed log list as text, click [Save].**
To change the destination folder displayed in [Path], click [Browse] and select a new destination folder.

Once the above operations are complete, click [OK] and close the screen.

E Record settings (Record)

Sets the recording conditions while in network operations. Recorded video is saved on the hard disk of the PC.



① Record Condition

<Recording mode>

Select a recording mode using the radio button.

- **Always:**
Recording is performed when the recording button on the operation panel is set to ON
- **Event:**
When the recording button on the operation panel is set to ON, recording is on standby and recording is performed when specified events occur.

<Automatic recording settings (Auto Record)>

If the checkbox is checked, the recording button on the operation panel is always fixed to ON and video is automatically recorded in the selected recording mode when the unit is connected to the network.



[Auto Record] settings become valid as soon as the unit has been disconnected and reconnected.

② Event

If [Record Condition] is set to "Event", set the following conditions.

<Event types>

- **Motion:**
When this unit performs a BY MOTION recording the event is also recorded on the PC.
- **Alarm:**
When an alarm signal is input into the external sensor terminal situated on the back panel of this unit, the event is recorded on the PC.

<Recording duration>

- **Duration (Unit: seconds)**

③ Channel

Specify the camera to be recorded using the checkbox.

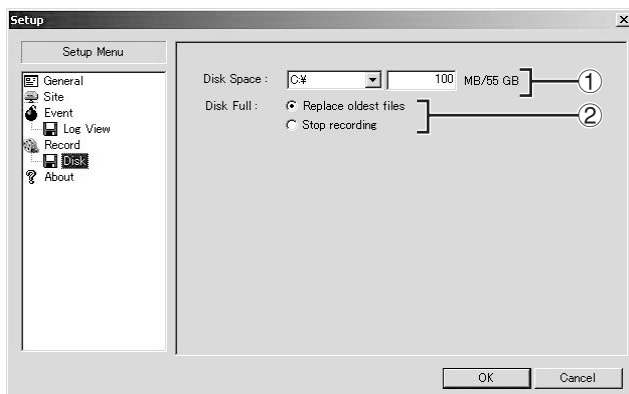
Memo: Using [All] of the checkbox, the user can check or uncheck all the cameras.

Click [OK] once the above settings are complete.
The content of the settings are confirmed and saved.

Setup menu settings

F Disk settings (Disk)

Set the capacity and the drive of the PC where the recorded video is saved.



① Disk Space

Select the drive used for saving and input the allowable capacity (MB).

② Disk Full

Select the option once the capacity is exceeded using the radio button.

- **Replace oldest files:**

Continues to record and overwrites the previously recorded video starting with the oldest

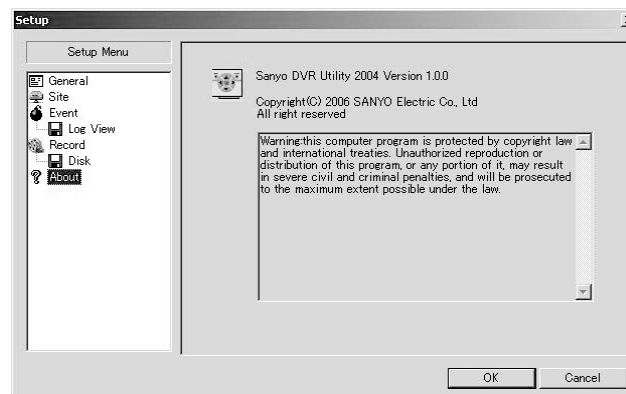
- **Stop recording:** Stops the recording

Click [OK] once the above settings are complete.

The content of the settings are confirmed and saved.

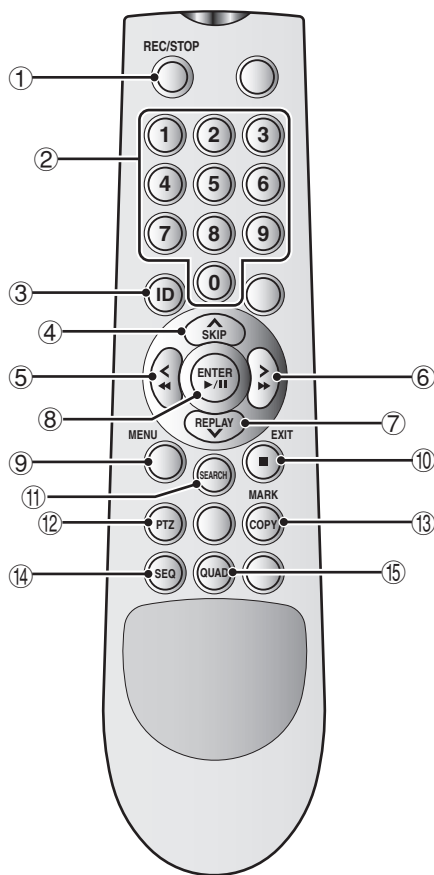
G Version information (About)

The version information of the currently used software can be confirmed.



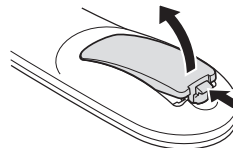
Part names of the remote control

Batteries for the remote control are not supplied. Use two AAA batteries.

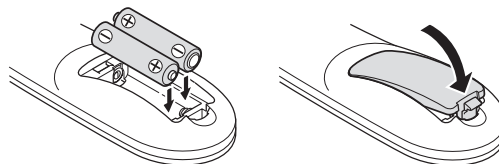


■ Inserting batteries in the remote control.

1 Take the battery cover off.

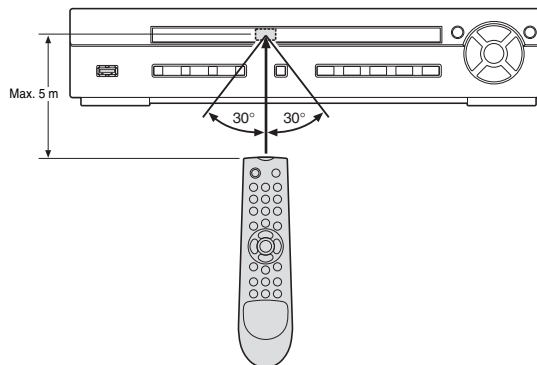


2 Place the batteries and fit the cover.



Note: Make sure the batteries are correctly oriented.

■ Operation range



① REC/STOP button

Stops and starts recording of live videos displayed on the monitor.

② Numeric buttons

Used to input passwords, camera number and ID number.

③ ID button

If a remote control ID number was set, press before inputting it. (P32)

④ ▲ • SKIP button

During settings: Moves the cursor upward.

During playback: Skips the video 1 minute forward.

⑤ ◀ • ◀◀ button

During settings: Moves the cursor to the left.

During playback: Fast rewinds.

⑥ ▶ • ▶▶ button

During settings: Moves the cursor to the right.

During playback: Fast forwards.

⑦ REPLAY • ▼ button

During settings: Moves the cursor downward.

During playback: Skips the video 1 minute backward.

⑧ ENTER • ►/|| button

During settings: Confirms the selected item.

During search: Plays back the selected video.

During playback: Displays a still video.

⑨ MENU button

Displays the setting menu screen.

⑩ EXIT button (■)

To exit the settings mode and the menu screen.

⑪ SEARCH button

Activates the recorded videos search mode.

⑫ PTZ button

Activates the operation mode that operates the Pan/Tilt/Zoom/Focus of the dome camera connected to the RS422/485 terminal.

⑬ MARK • COPY button

Activates the video saving mode.

⑭ SEQ button

Sequences the videos of the connected cameras.

⑮ QUAD button

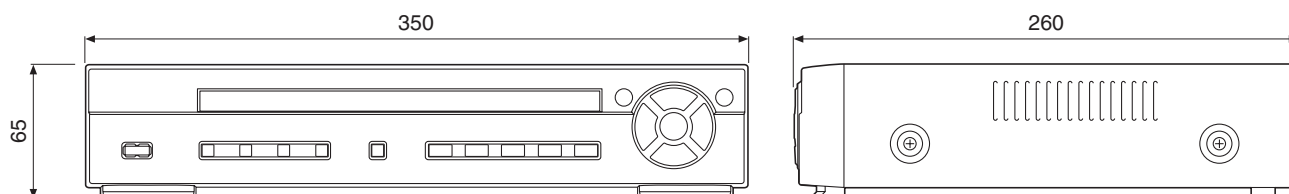
Displays the quad-screen.

Specifications

Signal method		Conforms to the NTSC/PAL (Initial values) system • NTSC: 30 ips (Single-screen), 120 ips (Quad-screen) • PAL: 25 ips (Single-screen), 100 ips (Quad-screen)
Compression method		Video: MPEG4, Audio: G.711
Number of pixels		NTSC: 720×480, PAL: 720×576
Live display	Speed	NTSC: 30 ips/120 ips PAL: 25 ips/100 ips
	Resolution	NTSC: 720×480 (Single-screen), 320×240 (Quad-screen) PAL: 720×576 (Single-screen), 360×288 (Quad-screen)
	Split-screen	Single-screen/Quad-screen
Recording	Recording speed	NTSC: Max 120 ips, PAL: Max 100 ips
	Resolution	NTSC: 720×480 (Single-screen), 320×240 (Quad-screen) PAL: 720×576 (Single-screen), 360×288 (Quad-screen)
	Recording method	General recording/Schedule recording/Event recording/ External alarm recording
Hard disk		None mounted (540 GB Max with a 3.5 inch disk)
Video input terminal		1.0 V(p-p), 75 Ω BNC ×4
Video output terminal		Selection possible BNC (Initial value) ×1 / VGA ×1
Audio input terminal		RCA ×4
Audio output terminal		RCA ×1
Alarm input/output terminal		Input: 4 connectors (NO or NC available), relay output: 1 connector
Network terminal		Interface: RJ-45 (10Base-T/100Base-TX) Protocol: TCP/IP, DHCP Software: DVR Utility 2004
Interface		RS422/RS485 4-pin connector
Front USB terminal		1 USB, backup (USB Memory)
Remote control		IR remote control can control up to 9 units
Power supply voltage		DC 12 V
Power consumption		Approximately 25 W
Allowable operation temperature		During operation: 5°C - 40°C, During storage: -10°C - +50°C
Allowable operation humidity		0 - 90 %
Dimensions		350 (W) × 65 (H) × 260 (D) mm
Weight		3.2 kg

Please note that specifications and unit exterior design are subject to change without notification.

■ Dimensions (unit: mm)



■ DVR ID input display list

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
U	V	W	X	Y	Z	[\]	^	_	'	a	b	c	d	e	f	g	h
i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	{	
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