Dear Customer,
We would like to take this opportunity to thank you for purchasing this Panasonic Movie Camera. Please read these Operating Instructions carefully and keep them handy for future reference. Please note that the actual controls and components, menu items, etc. of your Movie Camera may look somewhat different from those shown in the illustrations in these Operating Instructions.

Information for Your Safety

As this equipment gets hot during use, operate it in well ventilated place; do not install this equipment in a confined space such as a bookcase or similar unit.

To reduce the risk of fire, electric shock or product damage, do not expose this equipment to rain, moisture, dripping or splashing and ensure that no objects filled with liquids, such as vases, shall be placed on the equipment.

AC Adaptor
- The rating plate is on the underside of the AC Adaptor.

Caution for AC mains lead
For your safety, please read the following text carefully.

This appliance is supplied with a moulded three-pin mains plug for your safety and convenience. A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced, please ensure that the replacement fuse has a rating of 5-amperes and it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ◈ or the BSI mark ♡ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover, the plug must not be used until a replacement cover is obtained. A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

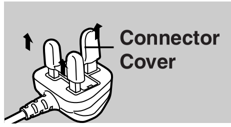
If a new plug is to be fitted, please observe the wiring code as shown below.
If in any doubt, please consult a qualified electrician.

■ IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral
Brown: Live
As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

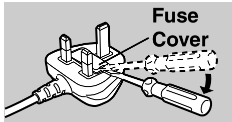
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

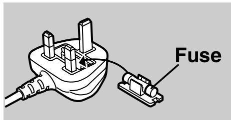
Under no circumstances should either of these wires be connected to the earth terminal of the three-pin plug, marked with the letter E or the Earth Symbol ⏚.

■ Before Use


Remove the Connector Cover as follows.

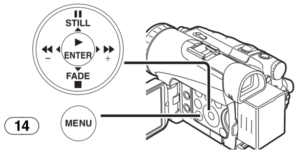
■ How to replace the Fuse


1)
Remove the Fuse Cover with a screwdriver.

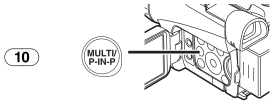


2)
Replace the fuse and attach the Fuse Cover.

1 Set [TAPE RECORDING MENU] >> [DIGITAL] >> [EFFECT1] >> [P-IN-P].



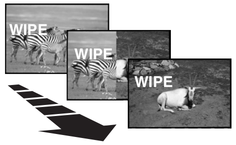
2 Aim the Movie Camera at the scene you want to capture and press the [P-IN-P] Button (10) to insert a small still picture.



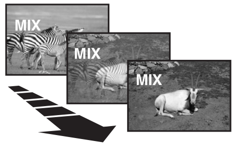
- A small still picture is displayed in a normal picture.
- If the [P-IN-P] Button is pressed again, the small still picture is cleared.

- For other notes concerning this item, see -60-.

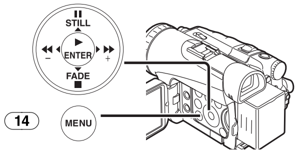
■ Wipe Mode and Mix Mode
Wipe Mode:
Like drawing a curtain, the still picture of the last recorded scene gradually changes to the moving image of a new scene.



Mix Mode:
While the moving image of a new scene fades in, the still image of the last recorded scene gradually fades out.

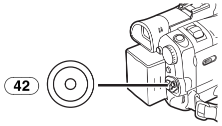


1 Set [TAPE RECORDING MENU] >> [DIGITAL] >> [EFFECT1] >> [WIPE] or [MIX].



- The [WIPE] or [MIX] Indication appears.

2 Press the Recording Start/Stop Button (42) to start recording.



3 Press the Recording Start/Stop Button (42) to pause the recording.
- The last scene is stored in memory. The [WIPE] or [MIX] Indication changes to [WIPE] or [MIX].

4 Press the Recording Start/Stop Button (42) to restart the recording.
- The last image of the previous scene gradually changes to the new scene.

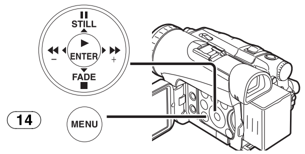
- For other notes concerning this item, see -60-.

Contents

Using the Built-in Video Flash

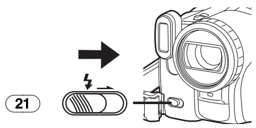
(NV-GS200 only)
The Built-in Video Flash enables you to record still pictures in a dark place. The Video Flash lights twice to detect the surrounding luminosity and to light properly.

1 Set [TAPE RECORDING MENU] or [CARD RECORDING MENU] >> [CAMERA] >> [FLASH] >> [ON] or [AUTO].



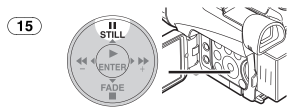
- If [AUTO] is selected, the Video Flash can be lighted if light is needed by sensing the surrounding luminosity.

2 Slide the [ϟ_] Lever (21).



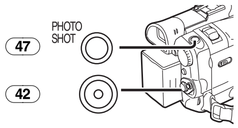
- The Video Flash pops up.

3 Press the [STILL] Button (15).



- Video Flash is lighted and the image becomes still.

4 Press the [PHOTO SHOT] Button (47) or Recording Start/Stop Button (42).



- Video Flash is not lighted when recording.

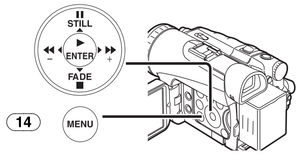
Adjusting Brightness of the Video Flash
Set [TAPE RECORDING MENU] or [CARD RECORDING MENU] >> [CAMERA] >> [FLASH LEVEL] >> a desired Flash Level.
- Normally, set it to [NORMAL]. (The [ϟ] Indication appears.)
- If the brightness is not enough in [NORMAL] setting, set it to [+] (the [ϟ+] Indication appears), if it is too much, set it to [−] (the [ϟ−] Indication appears).

- For other notes concerning this item, see -59-.

Red Eye Reduction Function

This function reduces a phenomenon which causes the subject's eyes to turn red when you record pictures with a flash such as built-in Video Flash or Video Flash VW-FLH3E (optional).
(Built-in Video Flash on NV-GS200 Model only)

1 Set [TAPE RECORDING MENU] or [CARD RECORDING MENU] >> [CAMERA] >> [RED EYE] >> [ON].



- The [◉] Indication appears.

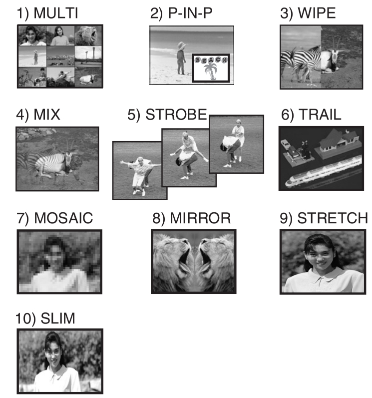
To Cancel the Red Eye Reduction Function
Set [TAPE RECORDING MENU] or [CARD RECORDING MENU] >> [CAMERA] >> [RED EYE] >> [OFF].

- For other notes concerning this item, see -60-.

Digital Effect Functions

This Movie Camera is equipped with Digital Effect Functions that add special effects to the scene.

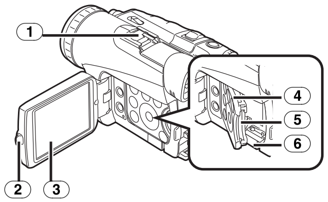
Digital Effects 1 [EFFECT1]



1) Multi Mode [MULTI]
2) Picture-In-Picture Mode [P-IN-P]
3) Wipe Mode [WIPE]
4) Mix Mode [MIX]

Controls and Components

■ Movie Camera

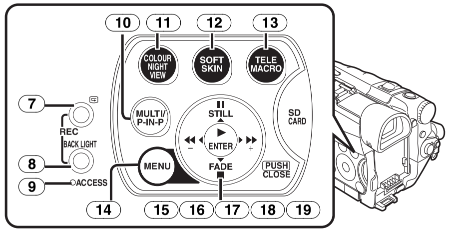


(1) **Smart Accessory Shoe**
- The Video DC Light (VW-LDH3E; optional), Video Flash (VW-FLH3E; optional) or the Stereo Zoom Microphone (VW-VMH3E; optional), etc. can be attached here. Power is supplied directly from the Movie Camera when using an accessory supported by the Smart Accessory Shoe.
- Do not touch the connector part of the Smart Accessory Shoe.

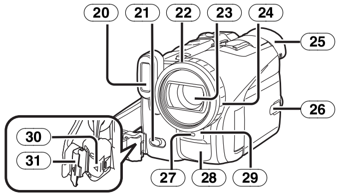
(2) **LCD Monitor Open Button [PUSH OPEN]** *-14-*
(3) **LCD Monitor** *-14-*, *-66-*

> Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the LCD Monitor screen. However, this is not a malfunction and does not affect the recorded picture.

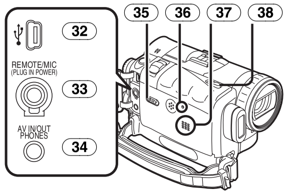
(4) **Card Slot Cover** *-13-*
(5) **Card Slot** *-13-*
(6) **Card Slot Cover Open Lever [OPEN]** *-13-*



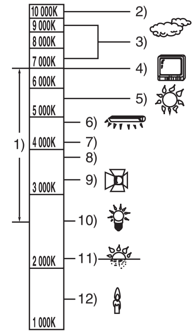
(7) **Recording Check Button [ ]** *-21-*
Recording Button [REC] *-48-*
(8) **Backlight Button [BACK LIGHT]** *-27-*, *-48-*
(9) **Card Access Lamp [ACCESS]** *-13-*
(10) **Multi Button [MULTI]** *-34-*, *-40-*
Picture-in-Picture Button [P-IN-P] *-35-*
(11) **Colour Night View Button [COLOUR NIGHT VIEW]** *-28-*
(12) **Soft Skin Button [SOFT SKIN]** *-28-*
(13) **Tele Macro Button [TELE MACRO]** *-26-*
(14) **Menu Button [MENU]** *-15-*
(15) **Pause Button [❚❚]** *-39-*
Still Button [STILL] *-22-*
(16) **Fast Forward/Cue Button [▶▶]** *-36-*, *-39-*
(17) **Play Button [▶]** *-36-*, *-39-*
Enter Button [ENTER] *-16-*
(18) **Stop Button [■]** *-36-*, *-39-*
Fade Button [FADE] *-27-*
(19) **Rewind/Review Button [◀◀]** *-36-*, *-39-*



(20) **Built-in Video Flash (NV-GS200 only)** *-33-*
(21) **Flash Open Lever [ϟ⎯] (NV-GS200 only)** *-33-*
(22) **Lens Hood** *-66-*
(23) **Lens (LEICA DICOMAR)**
(24) **Focus Ring (NV-GS200 only)** *-32-*
(25) **Eyecup**
(26) **Power LCD Button [POWER LCD]** *-15-*
Power LCD Lamp *-15-*
(27) **Recording Lamp** *-21-*
(28) **Microphone (built-in, stereo)** *-26-*, *-28-*
(29) **White Balance Sensor** *-30-*
Remote Control Sensor *-9-*
(30) **Lock Button** *-12-*
(31) **Lock Cover** *-12-*



(32) **USB Socket [ψ]** *-51-*
(33) **Socket for Free Style Remote Controller with Mic [REMOTE]** *-22-*
Microphone Socket [MIC]
- When connecting an external microphone or audio equipment to this socket, the built-in microphone does not operate.



Outside of the effective range of Automatic White Balance Adjustment, the image will become reddish or bluish. Even within the effective range of Automatic White Balance Adjustment, the Automatic White Balance Adjustment may not function properly if there is more than one light source. In this case, adjust the White Balance.

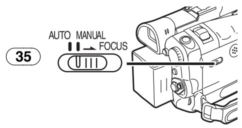
1) The effective range of Automatic White Balance Adjustment on this Movie Camera
2) Blue sky
3) Cloudy sky (rain)
4) TV screen
5) Sunlight
6) White fluorescent lamp
7) 2 hours after sunrise or before sunset
8) 1 hour after sunrise or before sunset
9) Halogen light bulb
10) Incandescent light bulb
11) Sunrise or sunset
12) Candlelight

- For other notes concerning this item, see *-59-*.

Manual Shutter Speed Adjustment

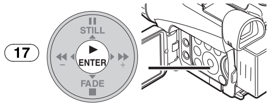
Useful for recording fast-moving subjects.

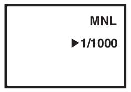
1 Set the [AUTO/MANUAL/FOCUS] Switch (35) to [MANUAL].



- The [MNL] Indication appears.

2 Press the [ENTER] Button (17) until the Shutter Speed Indication appears.





3 Press the [▶▶] Button (16) or [◀◀] Button (19) to adjust the shutter speed.

Range of Shutter Speed Adjustment
1/50–1/8000 s in Tape Recording Mode
1/4–1/500 s in Card Recording Mode (NV-GS200)
1/25–1/500 s in Card Recording Mode (NV-GS120)
The standard shutter speed is 1/50 s.
Selecting a speed closer to [1/8000] causes the shutter speed to be faster.

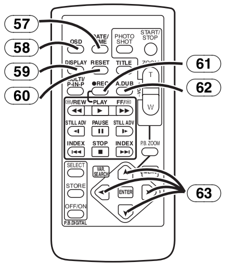
To Resume Automatic Adjustment
Set the [AUTO/MANUAL/FOCUS] Switch to [AUTO].

■ About the Card Slow Shutter (NV-GS200 only)

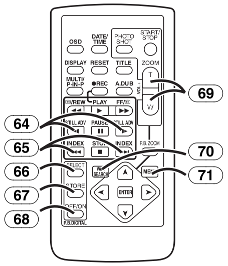
When you adjust the shutter speed to 1/4, 1/6 or 1/12 in Card Recording Mode, the Card Slow Shutter Mode is activated.
- The Slow Shutter Mode is cancelled and the shutter speed is set to 1/25, when the [OFF/ON] Switch or the Mode Dial is operated.
- In the Slow Shutter Mode:
  - the White Balance cannot be changed.
  - the Movie Camera focuses on the subject manually.
- When you set the [AUTO/MANUAL/FOCUS] Switch to [FOCUS], the shutter speed is automatically set to 1/50 and then turned to the previous shutter speed. [MF] blinks while the subject is focused.

- For other notes concerning this item, see *-59-*.

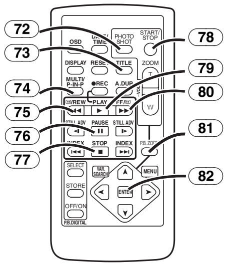
■ Remote Controller
Using the wireless Remote Controller that is supplied with the Movie Camera, most of the Movie Camera functions can be operated from a distance.



57 **Date/Time Button [DATE/TIME]** *-54-*
58 **Indication Output Button [OSD]** *-45-*
59 **Display Button [DISPLAY]** *-54-*
60 **Reset Button [RESET]** *-69-*
61 **Recording Button [●REC]** *-48-*
62 **Audio Dubbing Button [A.DUB]** *-47-*
63 **Direction Buttons for Playback Zoom Function [▲, ◄, ►, ▼]** *-39-*

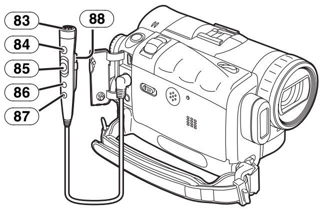


64 **Slow Motion/Still Advance Buttons [◄I, I►] (◄I: reverse, I►: forward)** *-37-*
65 **Index Search Buttons [I◄◄, ►►I] (I◄◄: reverse, ►►I: forward)** *-38-*
66 **Selection Button [SELECT]** *-39-*
67 **Store Button [STORE]** *-39-*
68 **Off/On Button [OFF/ON]** *-39-*
69 **Zoom/Volume Button [ZOOM/VOL]** *-25-, -36-, -38-*
70 **Variable Speed Search Button [VAR. SEARCH]** *-37-*
71 **Menu Button [MENU]** *-15-*



72 **Photoshot Button [PHOTO SHOT]** *-22-, -46-*
73 **Title Button [TITLE]** *-42-*
74 **Multi-Picture/Picture-in-Picture Button [MULTI/P-IN-P]** *-34-, -40-*
75 **Rewind/Review Button [◄◄]** *-36-, -39-*
76 **Pause Button [❚❚]** *-37-, -39-*
77 **Stop Button [■]** *-36-, -39-*
78 **Recording Start/Stop Button [START/STOP]** *-21-, -24-*
79 **Play Button [►]** *-36-, -39-*
80 **Fast-forward/Cue Button [►►]** *-36-, -39-*
81 **Playback Zoom Button [P.B. ZOOM]** *-38-*
82 **Enter Button [ENTER]** *-16-*

■ Free Style Remote Controller with Mic
This controller allows the scene to be shot from various angles, high to low, and is also convenient when the Tripod is used. When the controller is not in use, attach the clip to the Grip Belt for convenience.
This controller allows the Movie Camera to be for left-handed users.



83 **Microphone [MIC]** *-22-*
84 **Recording Start/Stop Button [REC]**
85 **Zoom Lever [W/T]**
- Zoom speed changes in 2 stages.

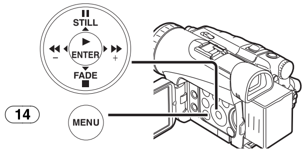
86 **Photoshot Button [PHOTO SHOT]**
87 **Microphone Switch Button [TALK]** *-22-*
- When the Free Style Remote Controller with Mic is connected to [REMOTE] Socket and the [TALK] Button is pressed, the narration microphone is activated and the built-in microphone on the Movie Camera is deactivated.

To Cancel the Wind Noise Reduction Function
Set [TAPE RECORDING MENU] or [CARD RECORDING MENU] >> [RECORDING] >> [WIND CUT] >> [OFF].

- For other notes concerning this item, see *-58-*.

Cinema Function
This function is for recording in a cinema-like screen.

1 Set [TAPE RECORDING MENU] >> [RECORDING] >> [CINEMA] >> [ON].



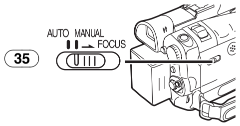
- Black bars appear at the top and bottom of the screen.

To Cancel the Cinema Mode
Set [TAPE RECORDING MENU] >> [RECORDING] >> [CINEMA] >> [OFF].

- For other notes concerning this item, see *-58-*.

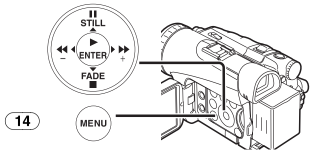
Recording in Special Situations
(Programme AE)
You can select optimal automatic exposure under specific recording situations.

1 Set the [AUTO/MANUAL/FOCUS] Switch 35 to [MANUAL].

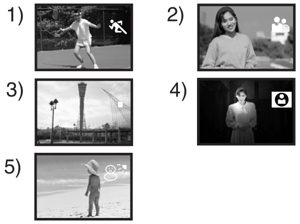


- The [MNL] Indication appears.

2 Set [TAPE RECORDING MENU] or [CARD RECORDING MENU] >> [CAMERA] >> [PROG.AE] >> a desired mode ([🏃], [👥], [🕯], [🔦] or [🏖]).



- The Indication of the selected Mode appears.



1) **[🏃] Sports Mode**
- For recording scenes involving quick movements, such as sports scenes.

2) **[👥] Portrait Mode**
- For bringing up people clearly from the background.

3) **[🕯] Low Light Mode**
- For recording a dark scene brighter.

4) **[🔦] Spotlight Mode**
- For recording a subject under a spotlight in a party, theatre, etc.

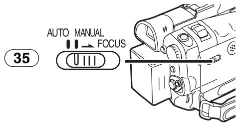
5) **[🏖] Surf & Snow Mode**
- For recording in a glaring surrounding, such as ski slopes, beaches, etc.

To Cancel the Programme AE Function
Set the [PROG.AE] on the [CAMERA] Sub-menu to [OFF]. Or, set the [AUTO/MANUAL/FOCUS] Switch to [AUTO].

- For other notes concerning this item, see *-58-*.

Recording in Natural Colours
(White Balance)
Depending on the scene or light condition, the Automatic White Balance Adjustment Mode may not be able to bring out natural colours. In this case, the white balance can be adjusted manually.
When the Movie Camera is turned on with the Lens Cap on, the Automatic White Balance Adjustment may not function properly. Please turn on the Movie Camera after removing the Lens Cap.

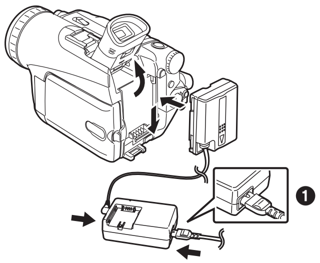
1 Set the [AUTO/MANUAL/FOCUS] Switch 35 to [MANUAL].



- The [MNL] Indication appears.

Power Supply

■ Using the AC Adaptor

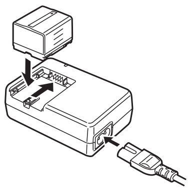


1 **Connect the DC Input Lead to the Movie Camera.**
2 **Connect the DC Input Lead to the AC Adaptor.**
3 **Connect the AC Mains Lead to the AC Adaptor and the AC mains socket.**
- The AC Mains Lead's outlet plug does not fit entirely into the AC Adaptor socket. A gap will remain as shown ❶.
- **Before connecting or disconnecting the power supply, set the [OFF/ON] Switch on the Movie Camera to [OFF] and make sure that Power Lamp is not lit.**

■ Using the Battery

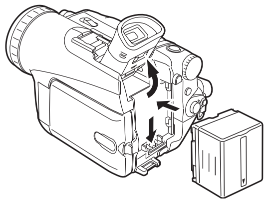
Before use, fully charge the Battery.
- We recommend using Panasonic's Battery.
- We cannot guarantee the quality of this Movie Camera when batteries of other companies are used.

1 **Attach the Battery to the AC Adaptor and charge it.**



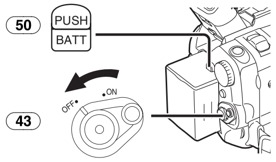
- Since the Battery will not be charged when the DC Input Lead is connected to the AC Adaptor, disconnect it from the AC Adaptor.
- The [CHARGE] Lamp lights up, and charging starts.
- When the [CHARGE] Lamp goes off, charging is completed.
- When charging the overdischarged battery, the [CHARGE] Lamp blinks at first, but the battery is charged normally. When the temperature of the battery is too high or low, the [CHARGE] Lamp blinks and the charging time becomes longer than usual.

2 **Attach the charged Battery to the Movie Camera.**



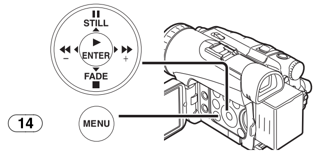
Disconnecting the Power Source

Set the [OFF/ON] Switch (43) to [OFF] and, while pressing the [PUSH BATT] Button (50), slide the Battery or DC Input Lead upward to disconnect it.



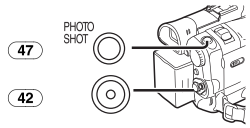
- For other notes concerning this item, see -56-.

1 **Set [TAPE RECORDING MENU] >> [CAMERA] >> [SIS] >> [ON].**



- The [ ] Indication appears.

2 **Press the Recording Start/Stop Button (42) or [PHOTO SHOT] Button (47) to start recording.**



To Cancel Image Stabilizer Function

Set [TAPE RECORDING MENU] >> [CAMERA] >> [SIS] >> [OFF].

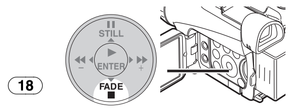
- For other notes concerning this item, see -58-.

Fade In/Out Functions

Fade In

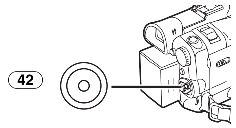
Fade In brings out images and sounds gradually from a black screen at the beginning of a scene.

1 **Keep pressing the [FADE] Button (18) during the Recording Pause Mode.**



- The image fades out gradually.

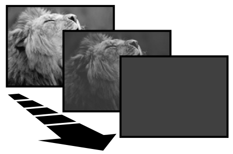
2 **When the image is completely gone, press the Recording Start/Stop Button (42) to start recording.**



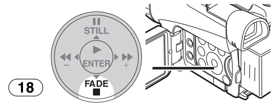
3 **Release the [FADE] Button (18) about 3 seconds after starting recording.**
- The image reappears gradually.

Fade Out

Fade Out causes images and sounds to disappear gradually, leaving a black screen at the end of a scene.

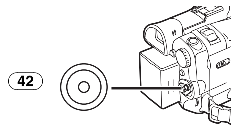


1 **Keep pressing the [FADE] Button (18) while recording.**



- The image fades out gradually.

2 **When the image is completely gone, press the Recording Start/Stop Button (42) to stop recording.**



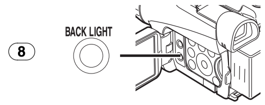
3 **Release the [FADE] Button (18).**

- The still picture cannot fade in or fade out.

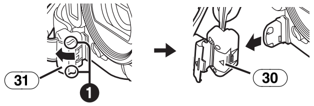
Backlight Compensation Function

This prevents the subject from being recorded too darkly when backlit. (Backlight is the light that shines from behind the subject being recorded.)

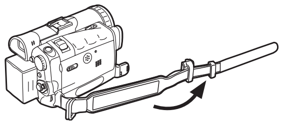
1 **Press the [BACK LIGHT] Button (8).**



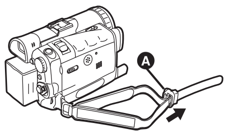
1 Open the Lock Cover (31) by holding the tabs on both sides ❶, press the Lock Button (30) and detach the Grip Belt.



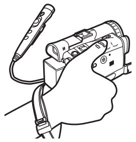
2 Detach the end of the Grip Belt.



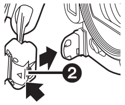
3 Slide Ⓐ to the direction of the arrow and reattach the Grip Belt.



4 Attach the Grip Belt around your wrist.



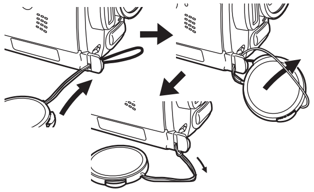
- When returning the Grip Belt to the Grip Belt Attachment, press the Lock Cover ❷ to ensure that it is securely locked.



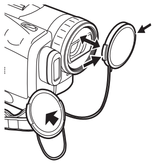
Attaching the Lens Cap

To protect the Lens surface, attach the Lens Cap.

1 Pass the end of the Lens Cap Cord through the hole in the Grip Belt Attachment part and the Lens Cap through the Lens Cap Cord.



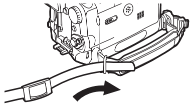
- The removed Lens Cap can be hooked onto the Grip Belt. (It is not possible when using as a hand strap.)
- When you are not recording, be sure to cover the Lens with the Lens Cap for protection.



Attaching the Shoulder Strap

We recommend that you attach the Shoulder Strap before going out of doors to record so as to avoid dropping the Movie Camera.

1 Pull the end of the Shoulder Strap through the Shoulder Strap Holder (52) on the Movie Camera.



2 Fold the end of the Shoulder Strap, run it through the Shoulder Strap Length Adjuster, and pull it.
- Pull it out more than 2 cm ❶ from the Shoulder Strap Length Adjuster so that it cannot slip off.

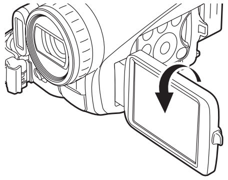
Maximum recording time on the supplied Card (8 MB)

[SUPERFINE]: approximately 1 minute
[FINE]: approximately 2 minutes
[NORMAL]: approximately 3 minutes
[ECONOMY]: approximately 8 minutes
- These figures vary depending on the scene.

- For other notes concerning this item, see *-57-*.

■ Recording Yourself

By opening the LCD Monitor and rotating it frontward (to the lens side), you can let the subject in front of the Movie Camera monitor the shot while recording is in progress.

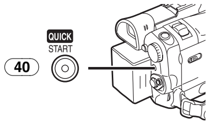


- When the LCD Monitor is opened, the Viewfinder is disabled automatically. However, when the LCD Monitor is rotated frontward, the image is also shown in the Viewfinder.
- If you prefer to have the image on the LCD Monitor to look like an image in a mirror, set [SELF REC] on the [LCD/EVF] Sub-Menu to [MIRROR]. Images are recorded normally and no left and right reversal occurs.

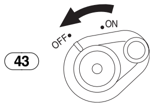
Quick Start

By pressing the [QUICK START] Button (40), and the Movie Camera will be ready for recording in approximately 1.7 seconds after the Movie Camera is turned on.

1 Press the [QUICK START] Button (40).
- The Quick Start Recording Lamp lights up.



2 Set the [OFF/ON] Switch (43) to [OFF].
- The Quick Start Recording Lamp remains lit.



3 Set the [OFF/ON] Switch (43) to [ON].
- The Movie Camera will be ready for recording in approximately 1.7 seconds.

To Cancel the Quick Start

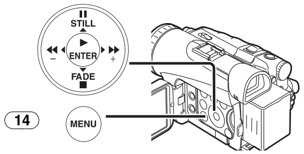
Keep the [QUICK START] Button pressed for approximately 2 seconds and make sure the Quick Start Recording Lamp is not lit.

- For other notes concerning this item, see *-57-*.

Self-timer Recording

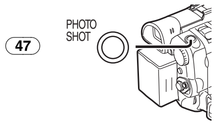
When you set the self-timer, the recording starts automatically after 10 seconds on the Card.

1 Set [TAPE RECORDING MENU] or [CARD RECORDING MENU] >> [CAMERA] >> [SELF TIMER] >> [ON].



- The [ ] Indication appears.

2 Press the [PHOTO SHOT] Button (47).



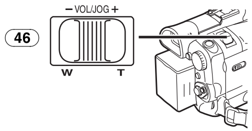
- The Recording Lamp (27) and the [ ] Indication flash and the recording starts after 10 seconds.
- To cancel the Self-timer Recording while the [ ] indicaton is blinking, press the [MENU] Button.
- You can also use the Continuous Photoshot. (*-24-*)

- For other notes concerning this item, see *-57-*.

Zoom In/Out Functions

It gives special effects to the picture by recording objects close by or with wide-angle shot.

1 For wide-angle shots (zoom out):
Push the [W/T] Lever (46) towards [W].
For close-ups (zoom in):
Push the [W/T] Lever towards [T].



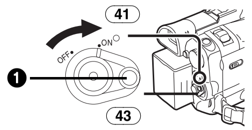
Turning on the Movie Camera

When the Movie Camera is turned on with the Lens Cap on, the Automatic White Balance Adjustment may not function properly. Please turn on the Movie Camera after removing the Lens Cap.

How to Turn on the Power

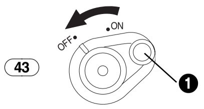
1 Set the [OFF/ON] Switch (43) to [ON] while pressing the button ❶.

- The Power Lamp (41) lights up.



How to Turn off the Power

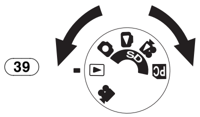
1 Set the [OFF/ON] Switch (43) to [OFF] while pressing the button ❶.



Selecting Modes

You can choose a desired mode by rotating the Mode Dial.

1 Rotate the Mode Dial (39).



: Tape Recording Mode
Use this mode when recording pictures on a tape. Also, you can record still pictures on the card simultaneously during recording on a tape.

: Tape Playback Mode
Use this mode when playing back the recorded scene on a tape.

: Card Recording Mode
Use this mode when recording still picture or moving picture on a card. (moving picture on NV-GS200 Model only)

: Picture Playback Mode
Use this mode when playing back the recorded still picture on a card.

: MPEG4 Playback Mode (NV-GS200 only)
Use this mode when playing back the recorded moving picture on a card.

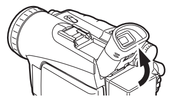
PC : PC Mode
Use this mode when you want to connect the Movie Camera to your Personal Computer.

Using the Viewfinder/LCD Monitor

Using the Viewfinder

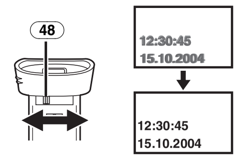
Before using the Viewfinder, adjust the field of view so that the displays inside the Viewfinder become clear and easy to read.

1 Tilt up the Viewfinder.



- The Viewfinder can also be pulled out for use.
- Do not pull on the Eyecup to extend the Viewfinder.

2 Adjust by sliding the Eyepiece Corrector Knob (48).



To Use the Viewfinder at the Same Time as the LCD Monitor

Set [LCD/EVF] >> [EVF ON/AUTO] >> [ON].

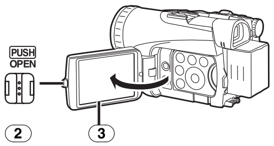
- The Viewfinder does not turn off even if the LCD Monitor is opened.
- When you turn the Movie Camera off, this setting is cancelled.

Using the LCD Monitor

With the LCD Monitor open, you can also record the picture while watching it.

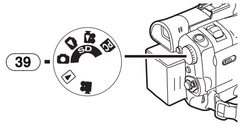
1 Press the [PUSH OPEN] Button (2) and pull the LCD Monitor (3) out in the direction of the arrow.

- The Viewfinder is deactivated.
- The LCD Monitor can be opened a maximum of 120°. If you open the LCD monitor by 120°, it becomes convenient to operate menus or to play back pictures.

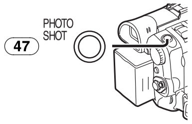


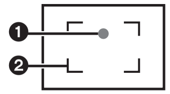
When recording in Card Recording Mode: (NV-GS200)

1 Set the Mode Dial (39) to Card Recording Mode.



2 Press the [PHOTO SHOT] Button (47) halfway.





- The aperture value and gain are fixed and the Movie Camera automatically focuses on the subject.

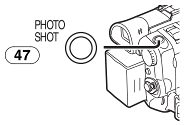
❶ Shutter Chance Mark
❷ Focus Area

Shutter Chance Mark

Light (green):	The subject is adequately focused. (The focus is stable and you can record pictures more clearly.)
Light (white):	The subject is almost focused.
Blink (white):	The Movie Camera is focusing on the subject.
No Mark:	The Movie Camera cannot focus on the subject.

- The [PHOTO SHOT] Button on the Free Style Remote Controller with Mic cannot be pressed halfway.

3 Press the [PHOTO SHOT] Button (47) fully.

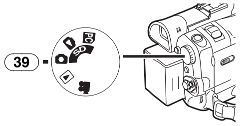


- The [PICTURE] Indication lights up in red.

- The Shutter Chance Mark appears even when the [PHOTO SHOT] Button is not pressed. Check it for your reference.
- Even if the [PHOTO SHOT] Button is pressed halfway, the Shutter Chance Mark does not appear in Manual Focus Mode.

(NV-GS120)

1 Set the Mode Dial (39) to Card Recording Mode.



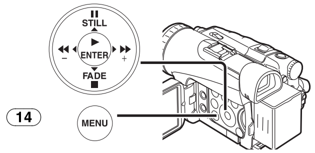
2 Press the [PHOTO SHOT] Button (47).

- The [PICTURE] Indication lights up in red.

Selecting the Size of Photoshot Images

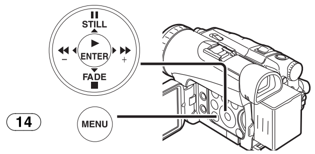
2 sizes are available for Photoshot.

1 Set [CARD RECORDING MENU] >> [CARD] >> [PICTURE SIZE] >> [1760×1320] (NV-GS200)/[1520×1152] (NV-GS120) or [640×480].



Selecting the Quality of Photoshot Images

1 Set [TAPE RECORDING MENU], [TAPE PLAYBACK MENU] or [CARD RECORDING MENU] >> [CARD] >> [PICT QUALITY] >> a desired image quality.



Maximum number of images recordable on the supplied Card (8 MB)

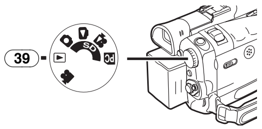
When the picture size is 1760×1320 (NV-GS200):

[FINE] (high image quality):
approximately 3 pictures
[NORMAL] (normal image quality):
approximately 6 pictures
[ECONOMY] (low image quality):
approximately 9 pictures

When the picture size is 1520×1152 (NV-GS120):

[FINE] (high image quality):
approximately 5 pictures
[NORMAL] (normal image quality):
approximately 9 pictures
[ECONOMY] (low image quality):
approximately 12 pictures

- The Menu corresponding to the Mode selected by using the Mode Dial (39) is displayed.



2 Press the [❚❚/■] Button to select a desired Sub-Menu.
- Press the [❚❚/■] Button to display the highlighted item.

3 Press the [▶▶] Button to display the selected Sub-Menu.
4 Press the [❚❚/■] Button to select the item.
5 Press the [▶▶] Button to display the selected item.
6 Press the [❚❚/■] Button to select the desired mode and press [ENTER] Button to determine the setting.

- While a Menu is displayed, you cannot record or play back. Menus can be displayed during playback but not during recording. The above operations can be done using the [MENU] Button, [▲, ◀, ▶, ▼] Buttons and [ENTER] Button on the Remote Controller. (-8-)

To Return the Previous Screen
Press the [◀◀] Button.

To Exit the Menu Screen
Press the [MENU] Button again.

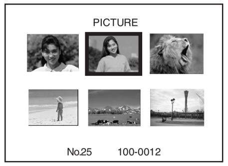
About the Menu Mode Setting
The setting selected on the Menu will be retained even when the Movie Camera is turned off. However, if the Battery or AC Adaptor is disconnected before turning off the Movie Camera, the selected setup may not be retained. (The setups of [EFFECT2] (-34-) are not retained.)

- Menu operation flow is shown in this text by >>.

■ File Selection in the Picture/MPEG4 Playback Mode (MPEG4 Playback Mode on NV-GS200 Model only)

A File Selection Operation may be necessary during Menu Operations. In this case, carry out the following procedure.

1 Press the [❚❚/■/◀◀/▶▶] Button and select a file.
- The selected file is marked by a frame.

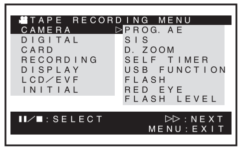


2 Press the [ENTER] Button (17) to confirm the selection of the file.
- After the above File Selection Procedure, carry out the various Menu Operations. (The above procedure will not be repeated in the following instructions.)

List of Menus

The figures of the Menus are for explanation purposes only, and they are different from the actual Menus.

■ [TAPE RECORDING MENU]
Tape Recording Mode



1) [CAMERA]
Camera Setup Sub-Menu
[PROG.AE]
Auto Exposure Mode *-29-*
[SIS]
Image Stabilizer *-27-*
[D.ZOOM]
Digital Zoom *-26-*
[SELF TIMER]
Self-timer Recording *-25-*
[USB FUNCTION]
USB Functions Mode *-51-*
[FLASH] (NV-GS200 only)
Flash *-33-*
[RED EYE]
Red Eye Reduction *-33-*
[FLASH LEVEL] (NV-GS200 only)
Flash Level *-33-*
- If you press [◀◀] Button, the menu changes back to the previous screen.

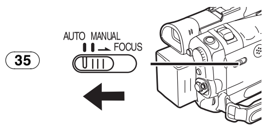
2) [DIGITAL]
Digital Setup Sub-Menu
[EFFECT1]
Digital Effects 1 *-33-*
[EFFECT2]
Digital Effects 2 *-34-*
[MULTI MODE]
Multi-Picture Mode *-34-*
[TITLE IN]
Adding a Title *-41-*

3) [CARD]
Card Setup Sub-Menu
[PICT QUALITY]
Picture Quality *-23-*
[CREATE TITLE]
Title Creation *-41-*

Recording Mode

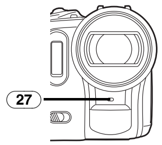
About Recording

When recording pictures on a tape, set the Mode Dial to Tape Recording Mode [🎥].
When recording still pictures or moving pictures on a card, set the Mode Dial to Card Recording Mode [📷]. (moving pictures on NV-GS200 Model only)
When recording with the [AUTO/MANUAL/FOCUS] Switch (35) set to [AUTO], the Movie Camera automatically adjusts the focus and white balance. In some cases, they cannot be adjusted automatically and need to be adjusted manually. (*-30-*, *-31-*, *-32-*)



- **Before turning on the power, remove the Lens Cap. If the Lens Cap is still attached when the power is turned on, Automatic White Balance Adjustment (*-30-*) may not function correctly.**
- When the Recording Pause Mode continues for more than 6 minutes, the power is turned off automatically for tape protection and power conservation. (If the AC Adaptor is used, the power is turned off only when the tape is inserted in Tape Recording Mode.) When the tape is inserted in Tape Recording Mode and if the Recording Pause Mode continues for more than 6 minutes, the power is turned off automatically.
  To resume recording from this condition, turn off, then turn on the power again.

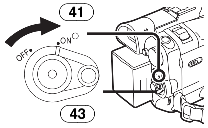
■ Recording Lamp
The Recording Lamp (27) lights up during recording and alerts those being recorded that recording is in progress.



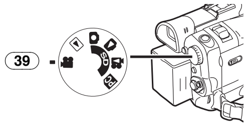
- The Recording Lamp does not light up if the [REC LAMP] on the [INITIAL] Sub-Menu is set to [OFF].

Recording on a Tape

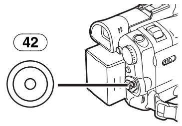
1 Set the [OFF/ON] Switch (43) to [ON].
- The Power Lamp (41) lights up.



2 Set the Mode Dial (39) to Tape Recording Mode.



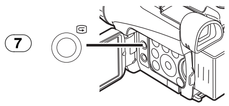
3 Press the Recording Start/Stop Button (42).
- Recording starts.
- After the [RECORD] is displayed, it changes to [REC].



4 Press the Recording Start/Stop Button (42) again to pause the recording.
- The [PAUSE] Indication is displayed.

- Even if the Mode Dial is set to Tape Recording Mode and the recording to a tape is in progress, you can also record a still picture on a card by pressing the [PHOTO SHOT] Button.

■ To Check the Recording
By pressing the [⟲] Button (7) briefly in the Recording Pause Mode, you can play back the last few seconds of the recorded scene.



- The [CHK] Indication is displayed. After checking, the Movie Camera resumes the Recording Pause Mode.

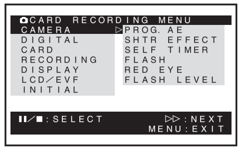
- For other notes concerning this item, see *-56-*.

5) [RECORDING]
Recording Setup Sub-Menu
[REC SPEED]
Recording Speed Mode *-20-*
[AUDIO REC]
Audio Recording Mode *-20-*
6) [DISPLAY]
Display Setup Sub-Menu
[DISPLAY]
Display Mode *-54-*
[DATE/TIME]
Date and Time Indication *-54-*
[C.DISPLAY]
Counter Display Mode *-54-*
[C.RESET]
Counter Reset *-69-*
[REC DATA]
Camera Data
- If you set [REC DATA] to [ON], the settings (shutter speed, iris and white balance settings (*-29-*), etc.) used during the recordings are displayed during playback. [---] appears on the display when there is no data or during Slow Motion Playback, Still Advance Playback or Variable Speed Search.
- The settings information may not be displayed properly if the camera data of this Movie Camera are played back on other equipment.
- The camera data will not be recorded in the following cases:
  - When the data are recorded from a card to a tape.
  - When recording proceeds with no input signals supplied.
  - When recording involves the use of the S-Video or AV Input Socket. (NV-GS200 only)
  - When pictures with no camera data are recorded using the DV Terminal.
  - When displaying a list of titles.

7) [LCD/EVF]
Adjusting Brightness and Colour Level
[LCD AI] (NV-GS200 only)
Intelligent LCD Monitor *-15-*
[LCD/EVF SET]
LCD and Viewfinder Adjustment *-15-*
[EVF ON/AUTO]
Using the Viewfinder *-14-*
8) [INITIAL]
Initial Setup Sub-Menu
[BLANK SEARCH]
Blank Search *-22-*
[AV JACK] (NV-GS120 only)
AV Socket *-68-*
[REMOTE]
Remote Controller Mode *-9-*

[BEEP SOUND]
Beep Sound *-56-*

[CARD RECORDING MENU]
Card Recording Mode



1) [CAMERA]
Camera Setup Sub-Menu
[PROG.AE]
Auto Exposure Mode *-29-*
[SHTR EFFECT]
Shutter Effect
- You can add a sound like releasing the shutter.

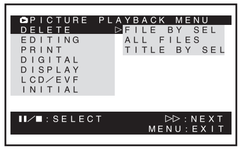
[SELF TIMER]
Self-timer Recording *-25-*
[FLASH] (NV-GS200 only)
Flash *-33-*
[RED EYE]
Red Eye Reduction *-33-*
[FLASH LEVEL] (NV-GS200 only)
Flash Level *-33-*
2) [DIGITAL]
Digital Setup Sub-Menu
[TITLE IN]
Adding a Title *-41-*
3) [CARD]
Card Setup Sub-Menu
[PICTURE SIZE]
Picture Size *-23-*
[PICT QUALITY]
Picture Quality *-23-*
[MPEG4 MODE] (NV-GS200 only)
MPEG4 Picture Quality *-24-*
[CREATE TITLE]
Title Creation *-41-*
[BURST MODE]
Continuous Photoshot *-24-*
4) [RECORDING]
Recording Setup Sub-Menu
[WIND CUT]
Wind Noise Reduction *-28-*
[H.SHOE MIC]
Hot Shoe Microphone
- This function reduces the low sound to avoid a wind noise when using the Stereo Zoom Microphone (VW-VMH3E; optional).

5) [DISPLAY]
Display Setup Sub-Menu
[DISPLAY]
Display Mode *-54-*
[DATE/TIME]
Date and Time Indication *-54-*

6) [LCD/EVF]
Adjusting Brightness and Colour Level
- All of the items on the [LCD/EVF] Sub-Menu are the same as those on the [LCD/EVF] Sub-Menu of the [TAPE RECORDING MENU].

7) [INITIAL]
Initial Setup Sub-Menu
[AV JACK]
AV Socket *-68-*
[REMOTE]
Remote Controller Mode *-9-*
[REC LAMP]
Recording Lamp *-21-*
[BEEP SOUND]
Beep Sound *-56-*
[CLOCK SET]
Date and Time Setting *-20-*
[INITIAL SET]
Initial Setting Mode *-54-*

[PICTURE PLAYBACK MENU]
Picture Playback Mode



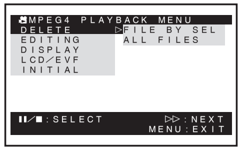
1) [DELETE]
Deleting a File Sub-Menu
[FILE BY SEL]
Selecting and Deleting a File *-43-*
[ALL FILES]
Deleting All Files *-43-*
[TITLE BY SEL]
Selecting and Deleting a Title *-43-*
2) [EDITING]
Editing a File Sub-Menu
[FILE LOCK]
Setting the Lock *-43-*
[DPOF SET]
Setting DPOF *-42-*
[CARD FORMAT]
Formatting a Card *-43-*
3) [PRINT]
Printing Setting Sub-Menu
[THIS PICTURE]
Printing Only the Displayed Picture *-50-*
[DATE]
Printing with Recording Date *-50-*
4) [DIGITAL]
Playback Digital Setup Sub-Menu
[TITLE IN]
Adding a Title *-41-*

5) [DISPLAY]
Display Setup Sub-Menu
- All of the items on the [DISPLAY] Sub-Menu are the same as those on the [DISPLAY] Sub-Menu of the [TAPE RECORDING MENU].

6) [LCD/EVF]
Adjusting Brightness and Colour Level
- All of the items on the [LCD/EVF] Sub-Menu are the same as those on the [LCD/EVF] Sub-Menu of the [TAPE PLAYBACK MENU].

7) [INITIAL]
Initial Setup Sub-Menu
[AV JACK]
AV Socket *-68-*
[REMOTE]
Remote Controller Mode *-9-*

[MPEG4 PLAYBACK MENU] (NV-GS200 only)
MPEG4 Playback Mode



1) [DELETE]
Deleting a File Sub-Menu
[FILE BY SEL]
Selecting and Deleting a File *-43-*
[ALL FILES]
Deleting All Files *-43-*
2) [EDITING]
Editing a File Sub-Menu
[FILE LOCK]
Setting the Lock *-43-*
[CARD FORMAT]
Formatting a Card *-43-*
3) [DISPLAY]
Display Setup Sub-Menu
[SCREEN]
Screen Setting *-44-*
[DISPLAY]
Display Mode *-54-*
[DATE/TIME]
Date and Time Indication *-54-*
4) [LCD/EVF]
Adjusting Brightness and Colour Level
- All of the items on the [LCD/EVF] Sub-Menu are the same as those on the [LCD/EVF] Sub-Menu of the [TAPE PLAYBACK MENU].

5) [INITIAL]
Initial Setup Sub-Menu
- All of the items on the [INITIAL] Sub-Menu are the same as those on the [INITIAL] Sub-Menu of the [PICTURE PLAYBACK MENU].