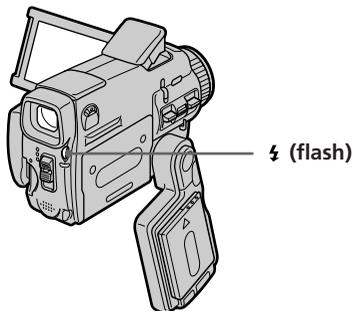


Recording still images in the CAMERA mode

Recording images with the flash

The flash pops up automatically. The default setting is auto (no indicator). To change the flash mode, press **⚡** (flash) repeatedly until the flash mode indicator appears on the screen.



Each press of **⚡** (flash) changes the indicator as follows:

- → **⚡** → ● → No indicator
- (with a lightning bolt) Auto red-eye reduction: The flash fires before recording to reduce red-eye.
- ⚡** Forced flash: The flash fires regardless of the surrounding brightness.
- (with a lightning bolt crossed out) No flash: The flash does not fire.

The flash is automatically adjusted to the appropriate brightness. You can also change FLASH LVL to the desired brightness in the menu settings (p. xx). Try recording various images to find the most appropriate setting for FLASH LVL.

Notes

- The recommended shooting distance using the built-in flash is 0.3 m to 2.5 m (31/32 feet to 8 1/3 feet).
- ● (auto red-eye reduction) may not produce the desired effect depending on individual differences, the distance to the subject, the subject not looking at the pre-recording flash or other conditions.
- A flash effect cannot be obtained easily when you use forced flash in a bright location.
- When you record images with the flash, sound may not be recorded clearly.
- When recording with the flash, it takes longer to prepare for image capture. This is because your camcorder starts to charge power for firing after the flash pops up. Darken the surroundings by covering the lens, and press PHOTO lightly so that your camcorder starts to charge power after the flash pops up.
- If it is not easy to focus on the subject automatically, for example, when recording in the dark, use the focal distance information (p. xx) for focusing manually.

When you record images with the flash

The allowed shooting distance is shorter than when you record on a “Memory Stick” in Memory Photo recording.

Recording still images in the CAMERA mode

When playing back the image recorded with the flash on another VCR

The image may flutter.

If you leave your camcorder for five or more minutes after disconnecting the power source

Your camcorder returns to the default setting (auto).

You cannot shoot images with the flash during the following operations:

- Super Nightshot
- Digital effect
- Fader
- Recording

The flash does not fire even if you select auto (no indicator) and  (auto red-eye reduction) during the following operations:

- Exposure
- NightShot
- Spotlight of PROGRAM AE
- Sunset & moon of PROGRAM AE
- Landscape of PROGRAM AE

Recording still images in the CAMERA mode

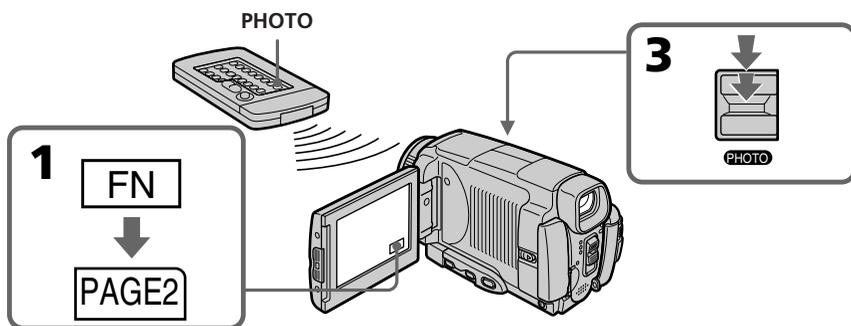
Self-timer recording

You can record still images with the self-timer. You can also use the Remote Commander for this operation.

Before operation

Insert a "Memory Stick" into your camcorder.

- (1) In the standby mode, press FN and select PAGE2.
- (2) Press SELFTIMER.
The  (self-timer) indicator appears on the screen.
- (3) Press PHOTO deeper.
The self-timer starts counting down from 10 with a beep. In the last two seconds of the countdown, the beep gets faster, then the recording starts automatically.



To cancel self-timer recording

Press SELFTIMER so that the  (self-timer) indicator disappears from the screen while your camcorder is in the standby mode. You cannot cancel the self-timer recording using the Remote Commander.

Note

The self-timer recording mode is automatically cancelled when:

- Self-timer recording is finished.
- The POWER switch is set to OFF (CHG) or VCR.

During recording to the tape

You cannot use self-timer recording.

Adjusting the white balance manually

You can manually adjust and set the white balance. This adjustment makes white subjects look white and allows more natural color balance. Normally white balance is automatically adjusted.

- (1) Set the POWER switch to CAMERA or MEMORY / NETWORK for DCR-IP55 (MEMORY for DCR-IP45).
- (2) Press FN to display PAGE1.
- (3) Press MENU, then select WHT BAL in  in the menu settings to select a desired white balance mode (p. xx).

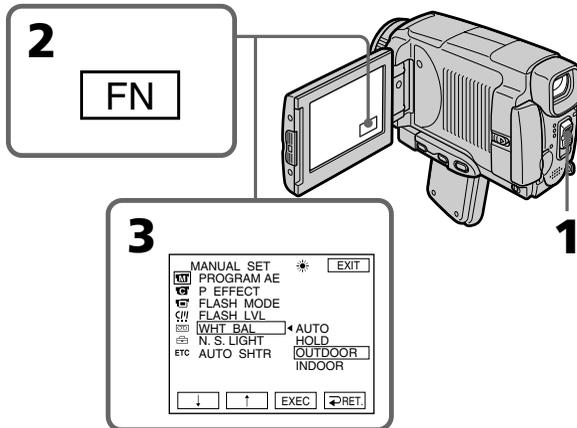
HOLD : Recording a single-colored subject or background

 **(OUTDOOR)** :

- Recording a sunset/sunrise, just after sunset, just before sunrise, neon signs, or fireworks
- Under a color matching fluorescent lamp

 **(INDOOR)** :

- When lighting conditions change quickly
- In too bright places such as photography studios
- Under sodium lamps or mercury lamps



To return to FN

Press EXIT.

To return to the automatic white balance mode

Set WHT BAL to AUTO in the menu settings.

Adjusting the white balance manually

If the picture is being taken in a studio lit by TV lighting

We recommend that you record in the  INDOOR.

When you record under fluorescent lighting

Select AUTO or HOLD.

Your camcorder may not adjust the white balance correctly in the  INDOOR mode.

In the AUTO mode

Point your camcorder at the white subject for about 10 seconds after setting the POWER switch to CAMERA to get better adjustment when:

- You detach the battery for replacement.
- You bring your camcorder from indoors to outdoors holding the exposure, or vice versa.

In the HOLD mode

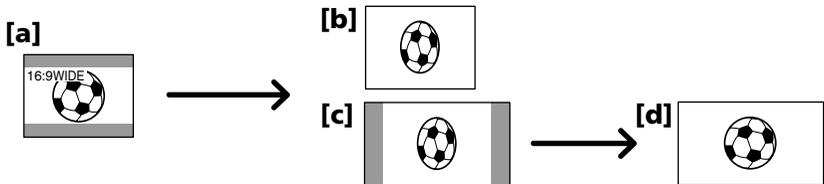
Set the white balance to AUTO and reset to HOLD after few seconds when:

- You change the PROGRAM AE mode.
- You bring your camcorder from indoors to outdoors, or vice versa.

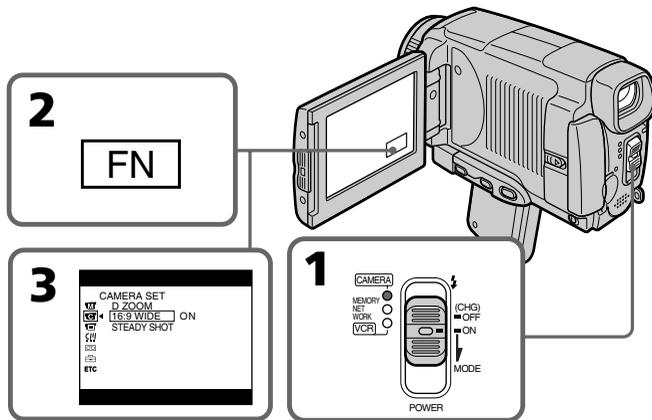
Using the wide mode

You can record a 16:9 wide picture to watch on the 16:9 wide-screen TV (16:9WIDE). If you connect a TV compatible with the ID-1/ID-2 system, the screen size is automatically selected.

Black bands appear on the screen during recording in 16:9WIDE mode **[a]**. The picture during playing back on a normal TV **[b]** or a wide -screen TV **[c]** are compressed in the widthwise direction. If you set the screen mode of the wide-screen TV to the full mode, you can watch pictures of normal images **[d]**.



- (1) Set the POWER switch to CAMERA.
- (2) Press FN to display PAGE1.
- (3) Press MENU, then set 16:9WIDE to ON in  in the menu settings (p. xx).



To return to FN

Press EXIT.

To cancel the wide mode

Set 16:9WIDE to OFF in the menu settings.

Using the wide mode

In the wide mode, you cannot select the following functions:

- Recording still images
- Old movie
- Bounce

During recording

You cannot select or cancel the wide mode. When you cancel the wide mode, set your camcorder to the recording standby mode and then set 16:9WIDE to OFF in the menu settings.

Connection for a TV

Pictures recorded in 16:9WIDE mode automatically appear on the TV screen at full size when:

- You connect your camcorder to a TV that is compatible with the video ID (ID-1/ID-2) system.
- You connect your camcorder to the S video jack on the TV.

ID-1 system

The ID-1 system sends aspect ratio (screen horizontal/vertical ratio) information (16:9, 4:3, or letter box) with video signals.

ID-2 system

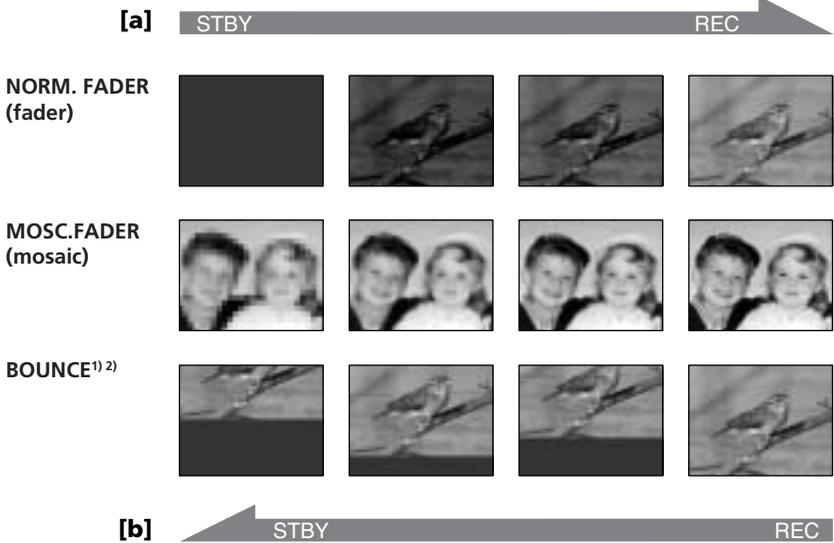
The ID-2 system sends a copyright protection signal with ID-1 signals inserted between video signals when you connect your camcorder to other equipment using an A/V connecting cable.

S1 video signal

The signal for the auto selection of wide mode is added to the S video signal.

Using the fader function

You can fade in or out to give your recording a professional appearance.



MONOTONE

When fading in, the picture gradually changes from black-and-white to color.

When fading out the picture gradually changes from color to black-and-white.

¹⁾ You can use the bounce function when D ZOOM is set to OFF in the menu settings.

²⁾ Fade in only.

Using the fader function

(1) To fade in [a]

In the recording standby mode, press FN to display PAGE1.

To fade out [b]

In the recording mode, press FN to display PAGE1.

(2) Press FADER. The screen for selecting the fader mode appears.

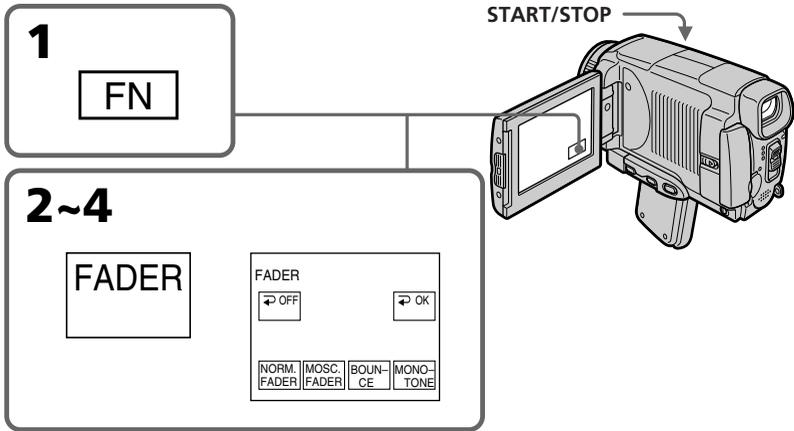
(3) Select a desired fader mode.

(4) Press \rightarrow OK to return to PAGE1, and press EXIT to return to FN.

The fader indicator you selected flashes.

(5) Press START/STOP. The fader indicator stops flashing, then lights up.

After the fade in/out is carried out, the fader indicator goes off and your camcorder automatically returns to the normal mode.



To cancel the fader function

Before pressing START/STOP, press \rightarrow OFF. When the PAGE2 screen appears, Press EXIT.

Using the fader function

Note

You cannot use the following functions while using the fader function. Also, you cannot use the fader function while using the following functions:

- Digital effect
- Super NightShot
- Color Slow Shutter
- Recording still images

While using the bounce function, you cannot use the following functions:

- Exposure
- Flexible Spot Meter
- Focus
- Zoom
- Picture effect

Note on the bounce function

You cannot select the bounce function in the following mode or functions:

- D ZOOM is activated in the menu settings
- Wide mode
- Picture effect
- PROGRAM AE

When the POWER switch is set to MEMORY/NETWORK for DCR-IP55 (MEMORY for DCR-IP45)

You cannot use the fader function.

Using special effects – Picture effect

You can digitally process images to obtain special effects like those in films or on the TV.

NEG. ART [a] : The color and brightness of the picture are reversed.

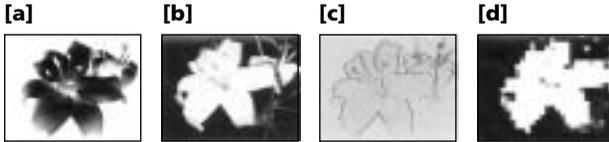
SEPIA : The picture is sepia.

B&W : The picture is monochrome (black-and-white).

SOLARIZE [b] : The light intensity is clearer, and the picture looks like an illustration.

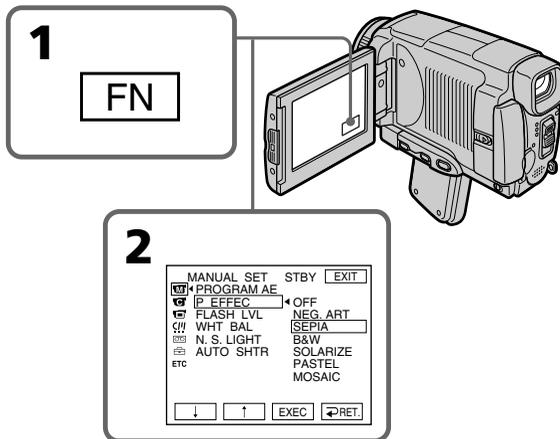
PASTEL [c] : The contrast of the picture is emphasized, and the picture looks like an animated cartoon.

MOSAIC [d] : The picture is mosaic.



(1) Set the POWER switch to CAMERA. Press FN to display PAGE1.

(2) Press MENU, then select P EFFECT in  in the menu settings to select a desired picture effect mode (p. xx).



To return to FN

Press EXIT.

To turn the picture effect function off

Select OFF in P EFFECT in the menu settings.

While using the picture effect function, you cannot use following functions:

- OLD MOVIE
- Bounce
- Recording still images

When you set the POWER switch to OFF (CHG)

The picture effect is automatically canceled.

Using special effects – Digital effect

You can add special effects to recorded pictures using the various digital functions. The sound is recorded normally.

STILL

You can record a still image so that it is superimposed on a moving picture.

FLASH (FLASH MOTION)

You can record still images successively at regular intervals.

LUMI. (LUMINANCEKEY)

You can swap the brighter area in a still image with a moving picture.

TRAIL

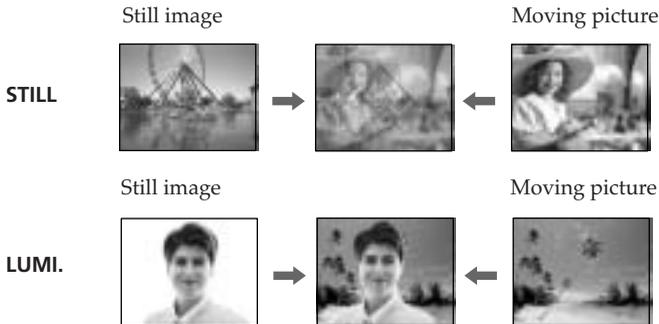
You can record a picture so that an incidental image like a trail is left.

SLOW SHTR (SLOW SHUTTER)

You can slow down the shutter speed. The slow shutter mode is good for recording dark pictures more brightly.

OLD MOVIE

You can add an old movie type atmosphere to pictures. Your camcorder automatically sets the wide mode to ON, the picture effect to SEPIA, and the appropriate shutter speed.



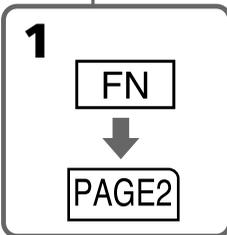
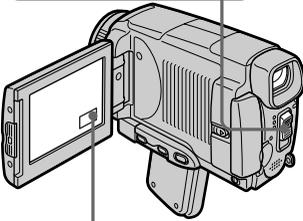
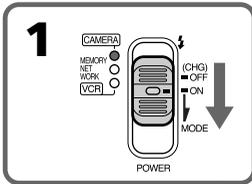
Using special effects – Digital effect

- (1) Set the POWER switch to CAMERA, then press FN to display PAGE2.
- (2) Press DIG EFFT. The screen to select a desired digital effect mode appears.
- (3) Press a desired digital effect mode. In the STILL and LUMI. modes, the still image is stored in memory.
- (4) Press -/+ to adjust the effect.

Items to adjust

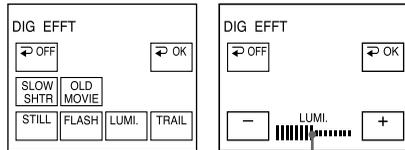
STILL	The rate of the still image you want to superimpose on the moving picture
FLASH	The interval of frame by frame playback
LUMI.	The color scheme of the area in the still image which is to be swapped with a moving picture
TRAIL	The vanishing time of the incidental image
SLOW SHTR	Shutter speed. The larger the shutter speed number, the slower the shutter speed.
OLD MOVIE	No adjustment necessary

- (5) Press ↩ OK. The display returns to PAGE2.



2~4

DIG
EFFT



The bar appears when setting following digital effect modes : STILL, FLASH, LUMI., TRAIL.

To return to FN

Press EXIT.

To cancel the digital effect

Press ↩ OFF. The display returns to PAGE2.

Using special effects – Digital effect

Notes

- The following functions do not work during digital effect:
 - Fader
 - Tape photo recording
 - Super NightShot
 - Color Slow Shutter
 - Recording still images
- The PROGRAM AE function does not work in the slow shutter mode.
- The following functions do not work in the OLD MOVIE mode:
 - Wide mode
 - Picture effect
 - PROGRAM AE

When you set the POWER switch to OFF (CHG)

The digital effect will be automatically canceled.

When recording in the slow shutter mode

Auto focus may not be effective. Focus manually using a tripod.

Shutter speed

Shutter speed number	Shutter speed
SLOW SHTR 1	1/30
SLOW SHTR 2	1/15
SLOW SHTR 3	1/8
SLOW SHTR 4	1/4

Using the PROGRAM AE

You can select PROGRAM AE (Auto Exposure) mode to suit your specific shooting requirements.

Spotlight

This mode prevents people's faces, for example, from appearing excessively white when shooting subjects lit by strong light in the theatre.

Soft portrait

This mode brings out the subject while creating a soft background for subjects such as people or flowers.

Sports lesson

This mode minimizes shake on fast-moving subjects such as in tennis or golf.

Beach & ski

This mode prevents people's faces from appearing dark in strong light or reflected light, such as at a beach in midsummer or on a ski slope.

Sunset & moon

This mode allows you to maintain atmosphere when you are recording sunsets, general night views, fireworks displays and neon signs.

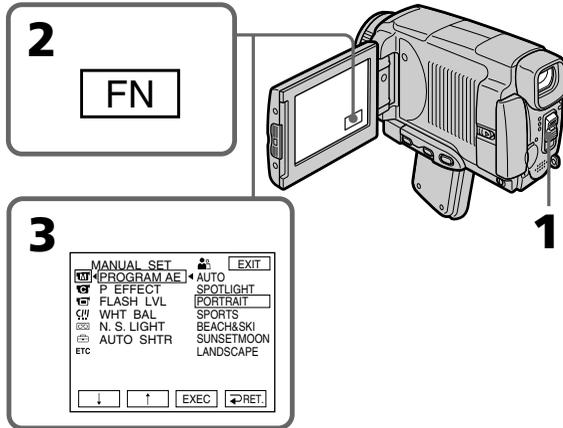
Landscape

This mode is for when you are record distant subjects such as mountains. Also it prevents your camcorder from focusing on glass or metal mesh in windows when you are recording a subject behind glass or a screen.



Using the PROGRAM AE

- (1) Set the POWER switch to CAMERA or MEMORY / NETWORK for DCR-IP55 (MEMORY for DCR-IP45).
- (2) Press FN to display PAGE1.
- (3) Press MENU, then select PROGRAM AE in  in the menu settings to select a desired mode (p. xx).



To return to FN

Press EXIT.

To turn the PROGRAM AE off

Select AUTO in PROGRAM AE in the menu settings.

Notes

- Because your camcorder is set to focus only on subjects in the middle to far distance, you cannot take close-ups in the following modes:
 - Spotlight
 - Sports lesson
 - Beach & ski
- Your camcorder is set to focus only on distant subjects in the following modes:
 - Sunset & moon
 - Landscape
- The following functions do not work in PROGRAM AE:
 - Color Slow Shutter
 - Slow shutter
 - Old movie
 - Bounce

Using the PROGRAM AE

- The PROGRAM AE does not work in the following cases (The indicator flashes):
 - To set the NIGHTSHOT to ON.
 - To record images on a “Memory Stick” using the MEMORY MIX.
- When you set the POWER switch to MEMORY / NETWORK for DCR-IP55 (MEMORY for DCR-IP45), sports lesson does not work. (The indicator flashes.)

While WHT BAL is set to AUTO in the menu settings

The white balance is adjusted even if the PROGRAM AE is selected.

You can adjust the following functions while using the PROGRAM AE:

- Exposure
- Flexible Spot Meter

If you record under a discharge tube such as a fluorescent lamp, sodium lamp or mercury lamp

Flickering or changes in color may occur in the following modes. If this happens, turn the PROGRAM AE off:

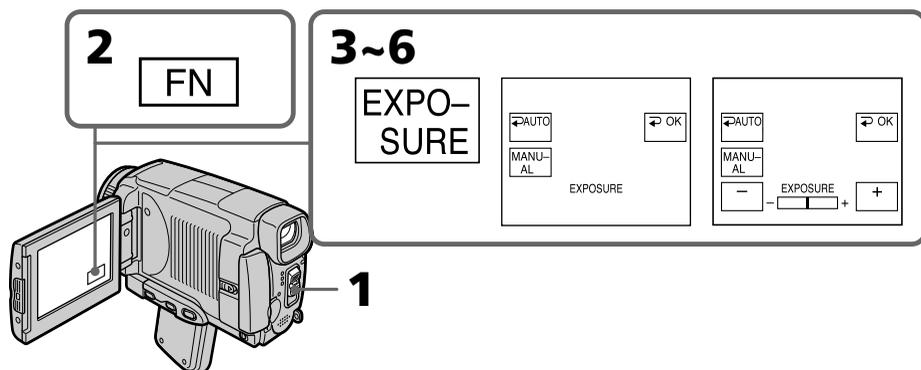
- Soft portrait
- Sports lesson

Adjusting the exposure manually

You can adjust and set the exposure. Normally the exposure is automatically adjusted. Adjust the exposure manually in the following cases:

- The subject is backlit
- To shoot a bright subject against a background
- To record dark pictures (e.g. night scenes) faithfully

- (1) Set the POWER switch to CAMERA or MEMORY / NETWORK for DCR-IP55 (MEMORY for DCR-IP45).
- (2) Press FN to display PAGE1.
- (3) Press EXPOSURE. The screen to adjust the exposure appears.
- (4) Press MANUAL.
- (5) Adjust the exposure using -/+.
 - : to dim
 - + : to brighten
- (6) Press \rightarrow OK. The display returns to PAGE1.



To return to FN

Press EXIT.

To return to the automatic exposure mode

Press \rightarrow AUTO. The display returns to PAGE1.

Note

When you adjust the exposure manually, the following functions do not work:

- Color Slow Shutter
- Backlight

Your camcorder automatically returns to the automatic exposure mode:

- If you change the PROGRAM AE mode.
- If you slide NIGHTSHOT to ON.

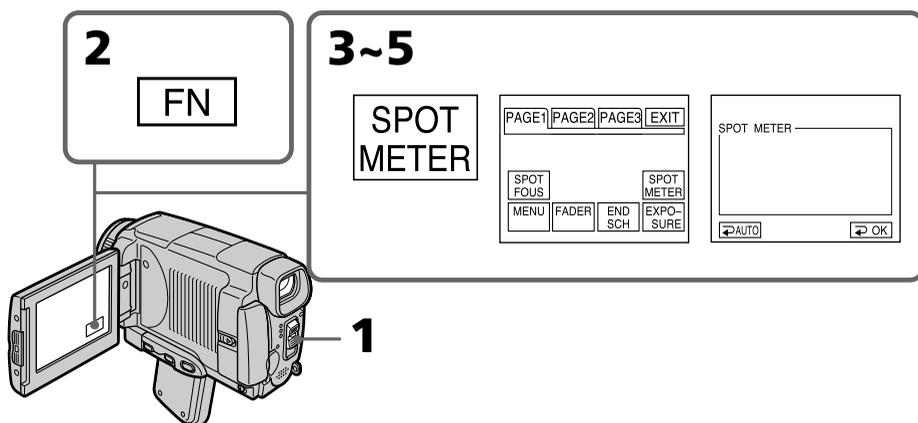
Using the spot light-metering mode

– Flexible Spot Meter

You can take a picture with the appropriate exposure automatically for just the point you want to focus on and with its exposure fixed. Use the Flexible Spot Meter mode in the following cases:

- The subject is backlit.
- When there is strong contrast between the subject and background such as with a subject that is on stage and lighted by a spotlight.

- (1) Set the POWER switch to CAMERA or MEMORY /NETWORK for DCR-IP55 (MEMORY for DCR-IP45).
- (2) Press FN to display PAGE1.
- (3) Press SPOT METER. The SPOT METER screen appears.
- (4) Press the desired area in the frame on the LCD screen.
The SPOT METER indicator flashes on the LCD screen. The exposure of the point you selected is adjusted.
- (5) Press \rightarrow OK. The display returns to PAGE1.



To return to FN

Press EXIT.

To return to the automatic exposure mode

Press \rightarrow AUTO. The display returns to PAGE1.

Note

The following functions do not work during the Flexible Spot Meter:

- Color Slow Shutter
- Backlight
- Exposure

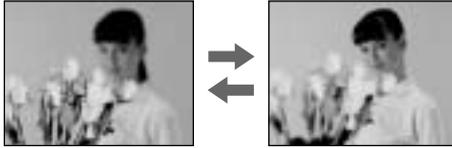
Your camcorder automatically returns from the Flexible Stop Meter to the automatic exposure:

- If you change the PROGRAM AE mode
- If you slide NIGHTSHOT to ON

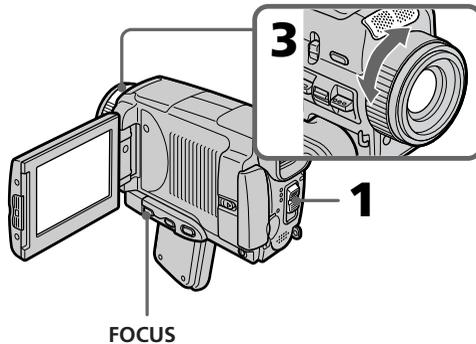
Focusing manually

You can gain better results by manually adjusting the focus in the following cases. Normally, focus is automatically adjusted.

- The autofocus mode is not effective when shooting:
 - subjects through glass coated with water droplets
 - horizontal stripes
 - subjects with little contrast with backgrounds such as walls or the sky
- When you want to change the focus from a subject in the foreground to a subject in the background
- Shooting a stationary subject when using a tripod



- (1) Set the POWER switch to CAMERA or MEMORY / NETWORK for DCR-IP55 (MEMORY for DCR-IP45).
- (2) Press FOCUS lightly. The  indicator appears.
- (3) Turn the focus ring to sharpen focus.



To return to the autofocus mode

Press FOCUS lightly to turn off ,  or  indicator.

To record distant subjects

When you press FOCUS down deeper, the lens focuses in and the  indicator appears. When you release FOCUS, your camcorder returns to the manual focus mode. Use this mode when your camcorder focuses on near objects even though you are trying to shoot a distant subject.

To focus precisely

It is easier to focus on the subject if you adjust the zoom to shoot at the “W” (wide-angle) position after focusing at the “T” (telephoto) position.

When you shoot close to the subject

Focus at the end of the “W” (wide-angle) position.

Focusing manually

 changes as follows:

-  when recording a distant subject
-  when the subject is too close to focus on

Focal distance information is displayed for about three seconds on the screen in the following cases:

- When switching the focus adjustment mode from autofocus to manual
- When turning the focus ring

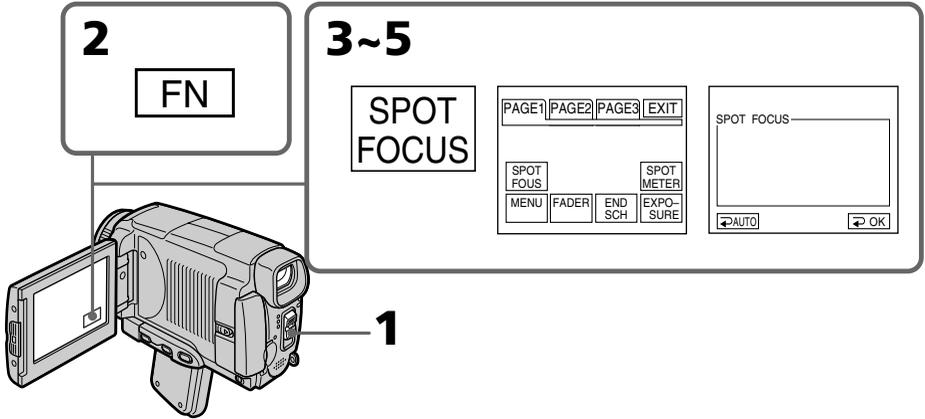
Focal distance information

- This information aids focusing if it is not easy to focus on the subject, for example, when recording in the dark. Use this information as a rough guide to get a sharp focus.
- You cannot get correct information if you have attached a conversion lens (optional) to your camcorder.

Using the spot focus mode – Spot Focus

You can take a picture with the appropriate focus automatically for just the point you want to focus on and with its focus fixed.

- (1) Set the Power switch to CAMERA or MEMORY / NETWORK for DCR-IP55 (MEMORY for DCR-IP45).
- (2) Press FN to display PAGE1.
- (3) Press SPOT FOCUS. The SPOT FOCUS screen appears.
- (4) Press the desired area in the frame on the LCD screen.
The  indicator flashes on the LCD screen. The focus of the point you selected is adjusted.
- (5) Press  OK to return to PAGE1.



To return to FN

Press EXIT.

To return to the autofocus mode

Press  AUTO in step 3. The display returns to PAGE1.

Note

When adjusting Spot Focus, the following modes do not work:

- Exposure
- Fader
- Backlight
- PROGRAM AE
- The focal distance information is not displayed.

Using the viewfinder

Turn the LCD panel over and move it back to your camcorder body with the LCD screen facing out. You can operate with the touch panel using the viewfinder.

Use the viewfinder in the following case:

When operating camera brightness and the fader (only in CAMERA mode) on the touch panel using the viewfinder

- (1) Set the POWER switch to CAMERA or MEMORY / NETWORK for DCR-IP55 (MEMORY for DCR-IP45).
- (2) Turn the LCD panel over and move it back to your camcorder body with the LCD screen facing out.
- (3) Press OFF. The message PANEL OFF appears on the screen.
- (4) Press OK. The LCD screen is turned off.
- (5) Press the LCD screen through the viewfinder. EXPOSURE, OK, ON and FADER (only in CAMERA mode) appear.
- (6) Select the desired item, then press OK.

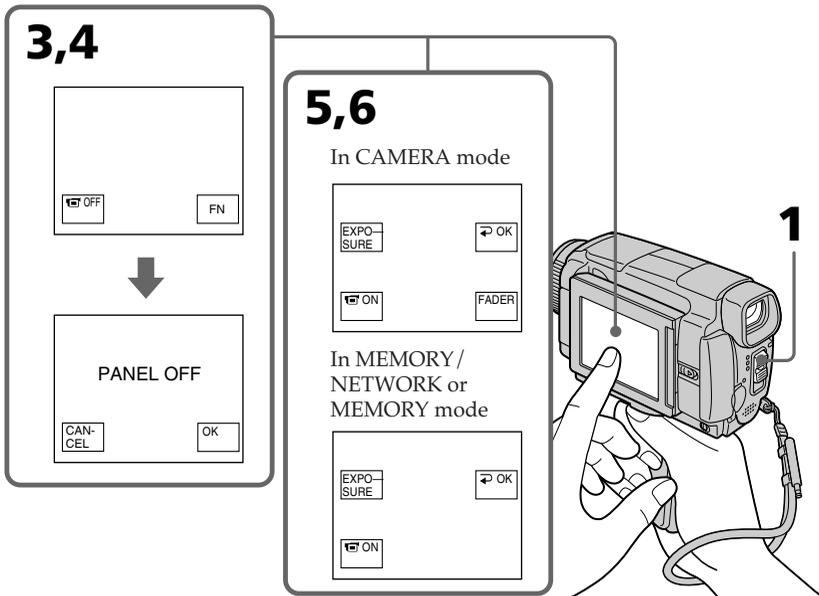
EXPOSURE: adjust the exposure by pressing -/+.

FADER: press FADER until the desired fader mode is displayed (p. xxs).

The indicator changes as follows:

FADER → M. FADER → BOUNCE → MONOTONE → (no indicator)

ON: The LCD screen lights up in the Mirror Mode.



To make the buttons on the LCD screen disappear

Press OK.

Using the viewfinder

Notes

- Do not touch the LCD screen with wet hands.
- Do not press the LCD screen with sharp objects other than the stylus supplied. (DCR-IP55 only).
- In VCR or memory playback mode, you cannot operate with the touch panel using the viewfinder.

To operate the items that are not displayed

Set the LCD screen back to the previous position. Operate the items using the LCD screen.

FN and OFF in the viewfinder

These buttons appear mirror-reversed.

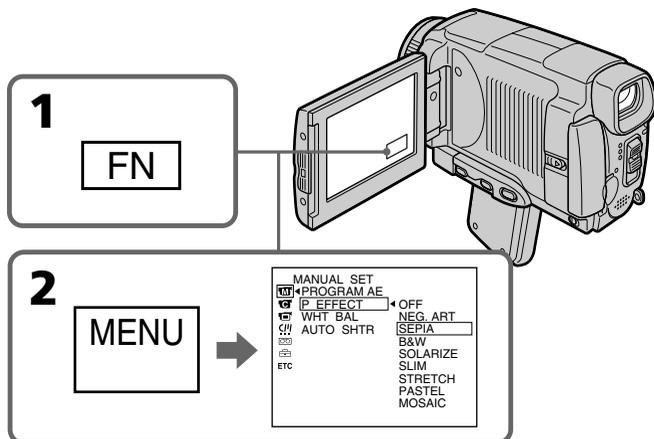
Available recording time

See the table on page xx for details of the recording time using the viewfinder.

Playing back a tape with picture effects

During playback, you can process a scene using the picture effect functions: NEG.ART, SEPIA, B&W and SOLARIZE.

- (1) In the playback or playback pause mode, press FN to display PAGE1.
- (2) Press MENU, then select P EFFECT in  in the menu settings to select a desired picture effect mode (p. XXX).
See page XX for details of each picture effect function.



To return to FN

Press EXIT.

To cancel the picture effect function

Set P EFFECT to OFF in the menu settings.

Notes

- You cannot process externally input scenes using the picture effect function.
- You cannot record images on a tape on your camcorder while you are processing the image using the picture effect function. However, you can record images on a "Memory Stick" (p. xxx, xx), or on a VCR using your camcorder as a player.

Pictures processed by the picture effect function

Pictures processed by the picture effect function are not output through the i.LINK (MICROMV) jack.

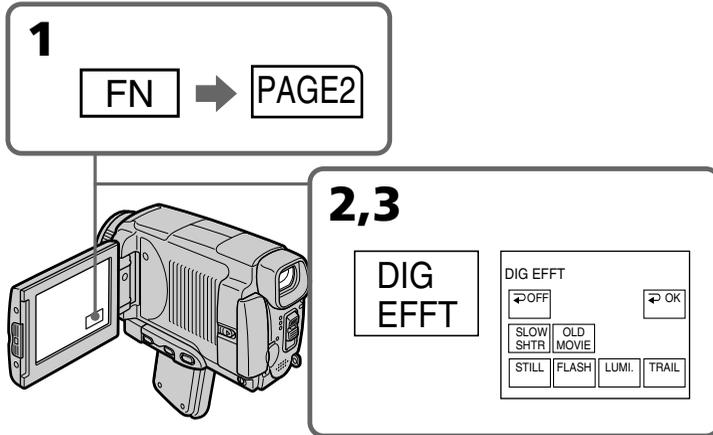
When you set the POWER switch to OFF (CHG) or stop playing back

The picture effect function is automatically canceled.

Playing back a tape with digital effects

During playback, you can process a scene using the digital effect functions: STILL, FLASH, LUMI. and TRAIL.

- (1) In the playback or playback pause mode, press FN and select PAGE2.
- (2) Press DIG EFFT. The screen to select a desired digital effect mode appears.
- (3) Select a desired digital effect mode. In the STILL or LUMI. mode, the picture that you select the mode is stored in memory as a still image.
- (4) Press -/+ to adjust the effect. See page xx for details.
- (5) Press ↵ OK. The display returns to PAGE2.



To return to FN

Press EXIT.

To cancel the digital effect function

Press ↵ OFF in step 3. The display returns to PAGE2.

Notes

- You cannot process externally input scenes using the digital effect function.
- You cannot record images on a tape on your camcorder while you are processing the image using the digital effect function. However, you can record images on a "Memory Stick" (p. xx, xx), or on a VCR using your camcorder as a player.

Pictures processed by the digital effect function

Pictures processed by the digital effect function are not output through the i.LINK (MICROMV) jack.

When you set the POWER switch to OFF (CHG) or stop playing back

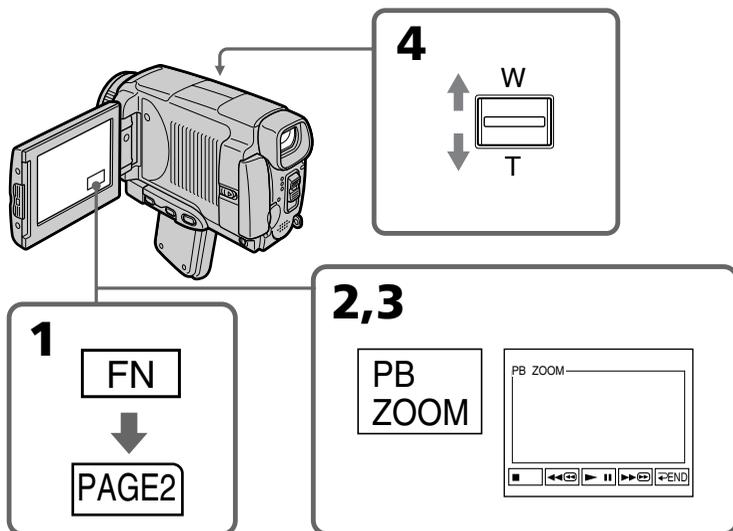
The digital effect function is automatically canceled.

Enlarging images recorded on tapes

- Tape PB ZOOM

You can enlarge playback images recorded on tapes. Besides the operation described here, your camcorder can enlarge still images recorded on "Memory Stick"s (p. xx).

- (1) In the playback or playback pause mode, press FN and select PAGE2.
- (2) Press PB ZOOM. The PB ZOOM screen appears.
- (3) Press the area you want to enlarge in the frame on the PB ZOOM screen.
The area you pressed moves to the center of the screen, and the playback image is enlarged to twice the size. If you press the other area again, the area moves to the center of the screen.
- (4) Adjust the zoom ratio by the zoom lever.
You can select the image from 1.1 times up to five times its size.
W: Decrease the zoom ratio.
T: Increase the zoom ratio.



To cancel the PB ZOOM function

Press \rightarrow END.

Notes

- You cannot process externally input scenes using the PB ZOOM function with your camcorder.
- You cannot record images on a tape on your camcorder while you are processing the image using the tape PB ZOOM function. However, you can record images on a "Memory Stick" (p. xx, xxx), or on a VCR using your camcorder as a player.
- You cannot record moving pictures on a "Memory Stick" on your camcorder while you are processing the picture using the tape PB ZOOM function.

Enlarging images recorded on tapes – PB ZOOM

The PB ZOOM function is automatically canceled when you operate the following functions:

- Set the POWER switch to OFF (CHG)
- Stop playing back
- Insert a “Memory Stick.”

Images in the PB ZOOM

Images in the PB ZOOM mode are not output through the i.LINK (MICROMV) jack.

In the PB ZOOM mode

If you press DISPLAY/ TOUCH PANEL button, the frame on the PB ZOOM screen disappears. You cannot move the part you pressed to the center of the screen.

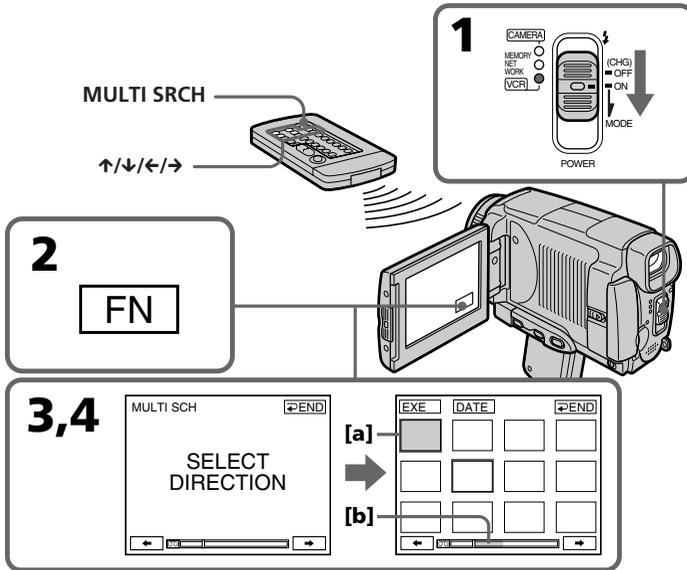
Edge of the enlarged image

The edge of the enlarged image cannot be displayed at the center of the screen.

Searching for a scene – Multi-picture search

Using the multi-picture search function, you can display thumbnails of all the beginning scenes of moving pictures and still images recorded in the tape onto the index screen. The recording date and title of each image or scene are also indicated. When you select the thumbnail you want to play back, the camcorder starts searching for the image or scene and plays it back automatically. You can also control this function using the Remote Commander.

- (1) Set the POWER switch to VCR.
- (2) Press FN to display PAGE1.
- (3) Press MULTI SRCH. The MULTI SCH screen appears.
- (4) Press \leftarrow/\rightarrow to select the direction to scan. The camcorder starts scanning in the selected direction. When you select \rightarrow , the thumbnails are displayed from the upper-left window, and when you select \leftarrow , they are displayed from the lower-right window. After the scanning is completed, the upper-left window turns black and the thumbnails will be displayed on the index screen.



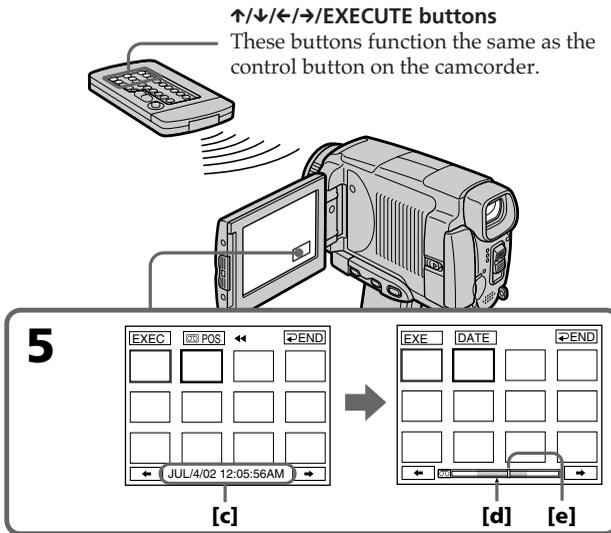
- [a] The picture being fast-forwarded or rewind
[b] The blue portion indicates the range of the scan currently being made to display thumbnails

Searching for a scene – Multi-picture search

- (5) Select the thumbnail you want to play back, then press EXEC. The camcorder starts searching for the image or scene and plays it back automatically. The blue portion of the bar indicates the scanning range and the white portion of the bar indicates the recorded portion.

When you want to change the thumbnail

Press \rightarrow RETURN, and select the thumbnail you want to play back again, then press \rightarrow OK.



[c] The title/date (The title turns to the date indication after five seconds.)

[d] The actual point you are trying to search for (yellow ▲ mark)

[e] The present point on the tape (yellow bar)

To return to the MULTI SCH screen from playback

Press \rightarrow RETURN.

To stop searching

Press STOP on the Remote Commander.

To end the multi-picture search function

Press \rightarrow END.

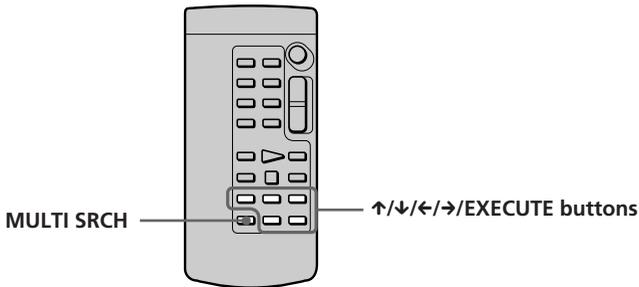
To end the multi-picture search function from the playback screen

Press EXIT.

Searching for a scene – Multi-picture search

When controlling the camcorder with the Remote Commander

You can use the MULTI SRCH and $\uparrow/\downarrow/\leftarrow/\rightarrow$ /EXECUTE buttons.



If the tape has a blank portion in the beginning of the tape or between recorded portions

The multi-picture search function may not work correctly.

The number of thumbnails stored in one cassette

About 400 thumbnails can be stored.

The number of thumbnails that can be displayed for in one scanning

A maximum of 11 thumbnails can be displayed for in one scanning.

When you press MULTI SRCH on the Remote Commander

The MULTI SCH screen appears.

During searching

The other functions of this camcorder do not work.

The thumbnail images displayed on the MULTI SCH screen

You cannot modify these thumbnail images.

When you use the multi-picture search function with the digital effect activated

The digital effect will be canceled.

Some of the 11 thumbnails may not be displayed in the following cases:

- These are fewer than 11 recorded images and scenes on the searched portion of the tape.
- When scanning a tape recorded over previous recordings.
- When you have erased all the Micro Cassette Memory of the tape (p. xx).

Searching for a scene – Multi-picture search

To select the thumbnail with the Remote Commander

Press **↑/↓/←/→** on the Remote Commander.

When you press Title/Date or TapeBar

You can switch to the title/date display or the tape bar display that shows the present point on the tape.

While the camcorder is searching for the image or scene, the taper display appears even if you select Title/Date.

Notes

- Thumbnails may not be displayed depending on the condition of the tape. This is not a malfunction.
- Noise may appear on the thumbnails. However, this has no effect on the recorded images.

When you select **←** or **→** during scanning

The next 11 thumbnails will be scanned.

Even if the first thumbnail is not displayed before the scanning is completed

You can play back the image or scene.

Searching the boundaries of recorded tape by title

- Title search

You can search for the boundaries of a recorded tape by selecting the title. Use the Remote Commander for this operation.

- (1) Set the POWER switch to VCR.
- (2) Press SEARCH MODE on the Remote Commander repeatedly, until the TITLE SEARCH indicator appears.

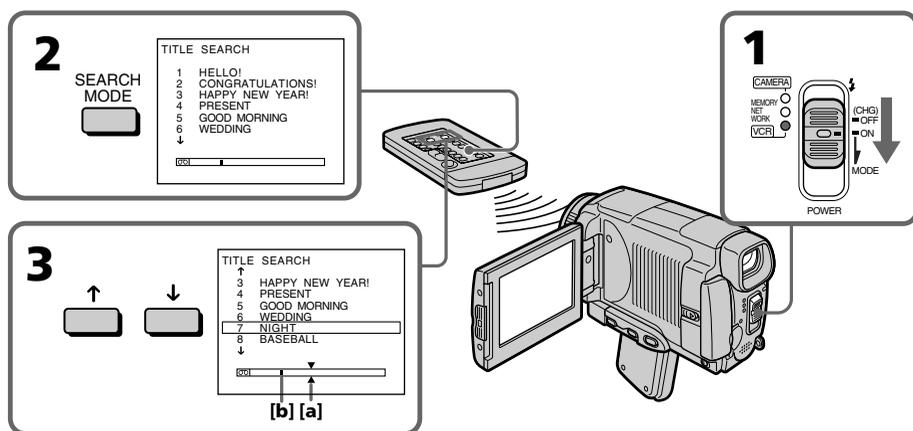
The indicator changes as follows:

TITLE SEARCH → DATE SEARCH → (no indicator)



- (3) Press \uparrow or \downarrow on the Remote Commander to select the title for playback, then press EXECUTE on the Remote Commander.

Even if you do not press EXECUTE, playback starts automatically in two seconds after you press \uparrow or \downarrow .



[a] Actual point you are trying to search for

[b] Present point on the tape

To stop searching

Press STOP on the Remote Commander.

If a tape has a blank portion in the beginning of the tape or between recorded sections

The title search function may not work correctly.

To superimpose a title

See page xxx.

Searching a recording by date – Date search

Your camcorder automatically searches for the point where the recording date changes and starts playback from that point by selecting the recording date. **(Date search)**. Use this function to check where recording dates change or to edit the tape at each recording date.

Searching for the date by using cassette memory

- (1) Set the POWER switch to VCR.
- (2) Press SEARCH MODE on the Remote Commander repeatedly, until the DATE SEARCH indicator appears.

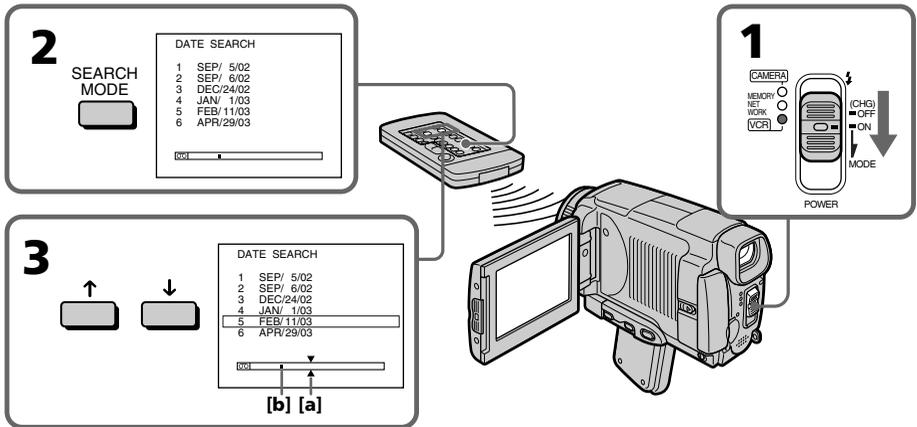
The indicator changes as follows:

TITLE SEARCH → DATE SEARCH → (no indicator)



- (3) Press \uparrow or \downarrow on the Remote Commander to select the date for playback, then press EXECUTE on the Remote Commander.

Even if you do not press EXECUTE, playback starts automatically in two seconds after you press \uparrow or \downarrow .



[a] Actual point you are trying to search for

[b] Present point on the tape

To stop searching

Press STOP on the Remote Commander.

Note

If one day's recording is less than two minutes, your camcorder may not accurately find the point where the recording date changes.

If a tape has a blank in the beginning of the tape or portion between recorded sections

The date search function may not work correctly.

Micro Cassette memory

The tape cassette memory can hold 20 recording date data.

Dubbing a tape

Using the A/V connecting cable

You can dub or edit on the VCR connected to your camcorder using your camcorder as a player. Connect your camcorder to the VCR using the A/V connecting cable supplied with your camcorder. The supplied A/V connecting cable is equipped with an S video plug and a video plug. Use either the S video plug or the video plug depending on the recorder. Do not connect both of the plugs to the recorder.

Before operation

- Set DISPLAY to LCD in the menu settings. (The default setting is LCD.)
- Press the following buttons to make the indicator disappear so that they will not be superimposed on the edited tape:

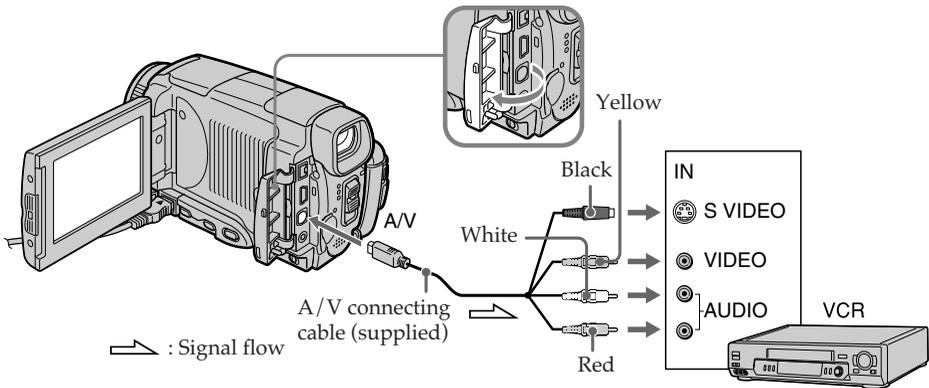
On your camcorder:

DISPLAY/TOUCHPANEL

On the Remote Commander:

DISPLAY, DATA CODE, SEARCH MODE

- (1) Insert a blank tape (or a tape you want to record over) into the VCR, and insert the recorded tape into your camcorder.
- (2) Prepare the VCR for recording, then set the input selector to LINE. Refer to the operating instructions of the VCR.
- (3) Set the POWER switch to VCR.
- (4) Play back the recorded tape on your camcorder.
- (5) Start recording on the VCR.
Refer to the operating instructions of your VCR.



When you have finished dubbing a tape

Stop recording on the VCR, and stop playback on your camcorder.

Dubbing a tape

You can edit on VCRs that support the following systems

8 8 mm, **Hi8** Hi8, **D** Digital8, **VHS** VHS, **S-VHS** S-VHS, **VHS-C** VHS-C, **S-VHS-C** S-VHS-C, **B** Betamax, **ED Beta** ED Batamax, **mini DV** mini DV, **DV** DV or **MICROMV** MICRO MV

If your VCR is a monaural type

Connect the yellow plug of the A/V connecting cable to the video input jack on the VCR and the white or red plug to the audio input jack on the VCR or TV. When the white plug is connected, the left channel audio is output, and when the red plug is connected, the right channel audio is output.

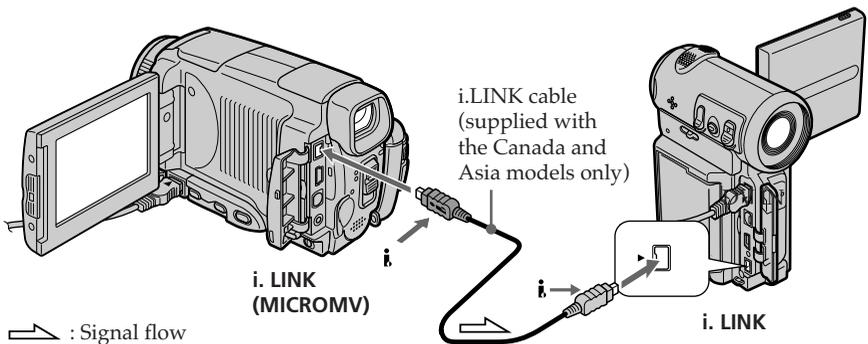
If your VCR has an S video jack

Connect using the S video plug to faithfully obtain original pictures. With this connection, you do not need to connect the yellow (video) plug of the A/V connecting cable. Connect the S video plug to the S video jack of the VCR. This connection produces higher quality MICROMV format pictures.

- Using the i.LINK cable

Simply connect the i.LINK cable (supplied with the Canada and Asia models only) to the **i** i.LINK (MICROMV) jack of your camcorder and to the i.LINK (MICROMV) jack of the MICROMV product. With digital-to-digital connection, video and audio signals are transmitted in digital form for high-quality editing. (You cannot connect the camcorder to a DV product.) You cannot dub the titles, displayed indicators, the contents of Micro Cassette Memory, or letters on the "Memory Stick" index screen.

- (1) Insert a blank tape (or a tape you want to record over) into the VCR, and insert the recorded tape into your camcorder.
- (2) Prepare the VCR for recording, then set the input selector to LINE. Refer to the operating instructions of the VCR.
- (3) Set the POWER switch to VCR.
- (4) Play back the recorded tape on your camcorder.
- (5) Start recording on the VCR. Refer to the operating instructions of the VCR.



When you have finished dubbing a tape

Stop recording on the VCR, and stop playback on your camcorder.

Dubbing a tape

You can connect one VCR only using the i.LINK cable

See page xx for more information about i.LINK.

Pictures processed by the picture effect, the digital effect or PB ZOOM function

Pictures processed by the picture effect, the digital effect or PB ZOOM function are not output through the i. LINK (MICROMV) jack.

The following functions do not work during digital editing:

- Picture effect
- Digital effect
- PB ZOOM

If you record a paused playback picture with the i. LINK (MICROMV)

The recorded picture becomes rough. And when you play back the picture using other video equipment, the picture may jitter.

Recording video or TV programmes

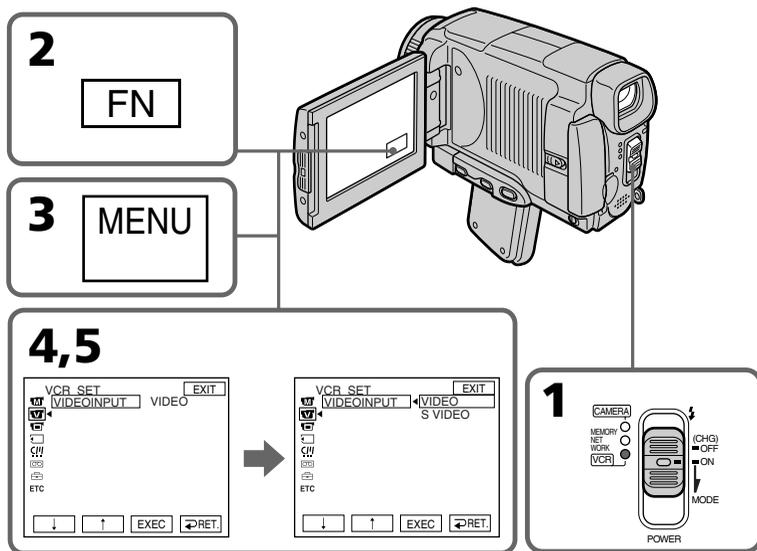
When using the A/V connecting cable

You can record a tape from another VCR or a TV programme from a TV that has video/audio outputs. Use your camcorder as a recorder.

1 Switching the video input jack of the A/V connecting cable

The supplied A/V connecting cable is equipped with an S video plug and a video plug. You have to select one of the jacks in the menu settings. The default setting is VIDEO. If the setup is not necessary, go to "2 Making a recording" on page xx.

- (1) Set the POWER switch to VCR.
- (2) Press FN to display PAGE1.
- (3) Press MENU.
- (4) Press VIDEOINPUT in  in the menu settings.
- (5) Select VIDEO or S VIDEO.



To return to FN

Press EXIT.

Recording video or TV programmes

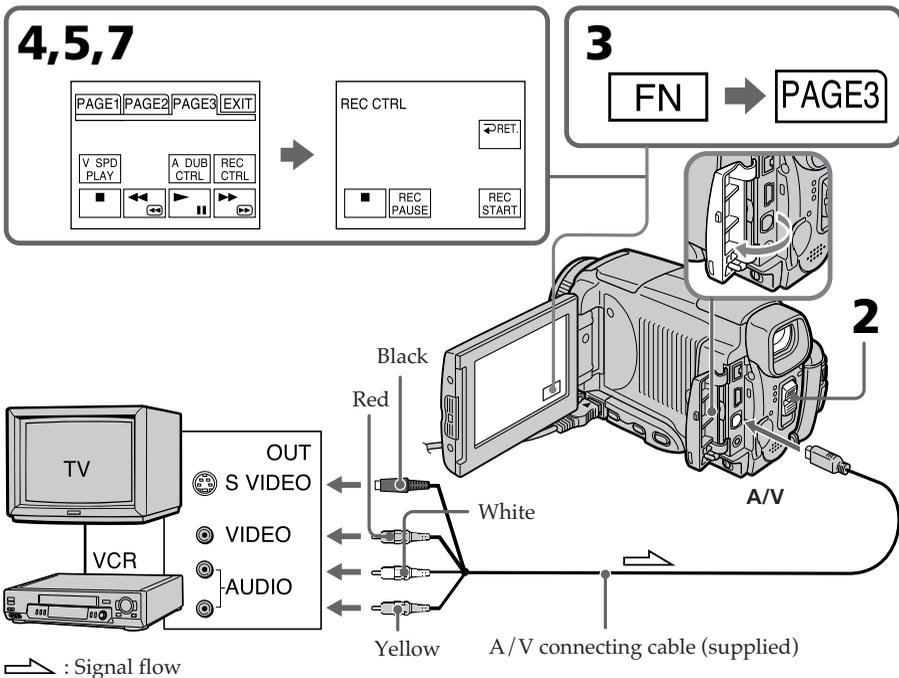
2 Making a recording

Before operation

Set DISPLAY to LCD in ETC in the menu settings. (The default setting is LCD.)

- (1) Insert a blank tape (or a tape you want to record over) into your camcorder. If you are recording a tape from the VCR, insert a recorded tape into the VCR.
- (2) Set the POWER switch to VCR.
- (3) Press FN and select PAGE3.
- (4) Press REC CTRL.
- (5) Press REC PAUSE.
- (6) Press ► on the VCR to start playback if you record a tape from VCR. Select a TV programme if you record from TV. The picture from TV or VCR appears on the screen.
- (7) Press REC START at the scene where you want to start recording from.

Editing



When you have finished dubbing a tape

Stop recording on your camcorder and stop playback on VCR or TV.

If your VCR is a monaural type

Connect the yellow plug of the A/V connecting cable to the video output jack and the white or the red plug to the audio output jack on the VCR or the TV. When the white plug is connected, the left channel audio is output, and when the red plug is connected, the right channel audio is output.

Recording video or TV programmes

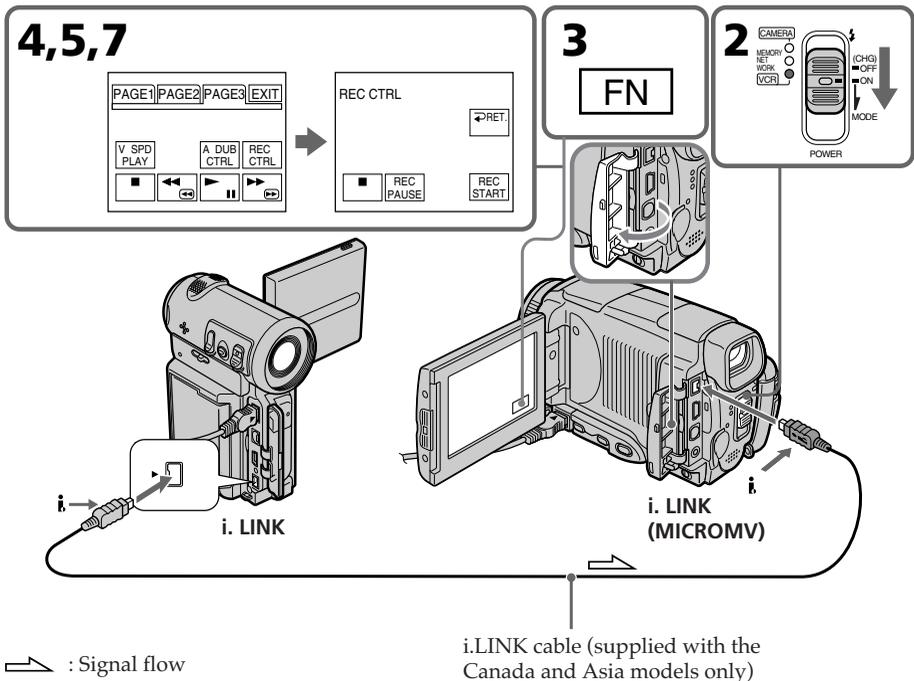
If your TV or VCR has an S video jack

Connect using the S video plug to faithfully obtain original pictures. With this connection, you do not need to connect the yellow (video) plug of the A/V connecting cable. Connect the S video plug to the S video jack of the VCR. This connection produces higher quality MICROMV format pictures.

When using the i.LINK cable

Simply connect the i.LINK cable (supplied with the Canada and Asia models only) to the i.LINK (MICROMV) jack of your camcorder and to the i.LINK (MICROMV) jack of the MICROMV product. With digital-to-digital connection, video and audio signals are transmitted in digital form for high-quality editing. (You cannot connect the camcorder to a DV product.)

- (1) Insert a blank tape (or a tape you want to record over) into your camcorder, and insert the recorded tape into VCR.
- (2) Set the POWER switch to VCR.
- (3) Press FN and select PAGE3.
- (4) Press REC CTRL.
- (5) Press REC PAUSE.
- (6) Press ► on the VCR to start playback. The picture from the DV products appears on the screen of your camcorder.
- (7) Press REC START at the scene where you want to start recording.



Recording video or TV programmes

When you have finished dubbing a tape

Press  on the LCD screen or the Stop button on the Remote Commander to stop recording on your camcorder and stop playback on VCR or TV.

Notes

- When an incompatible picture (such as one recorded with the DV format) is input, the message “INPUT ERROR” appears.
- First, start playback or turn to the playback pause mode before the camcorder starts recording or turns to the recording pause mode. If no signal is input into the camcorder, the message “NO INPUT” appears and the camcorder cannot start recording.

You can connect one VCR only using the i.LINK cable.

When you dub a picture in digital form

The color of the display may be uneven. However, this does not affect the dubbed picture.

If you record a playback pause picture with the i.LINK (MICROMV) jack

The recorded picture becomes rough. And when you play back the picture using your camcorder, the picture may jitter.

Before recording

Make sure if the MPEG IN indicator appears on the screen. The MPEG IN indicator may appear on both equipment.

Superimposing a title

You can superimpose a title for five seconds from the recording start point. When you play back the tape, the title is displayed for about five seconds from the point where you superimposed it.

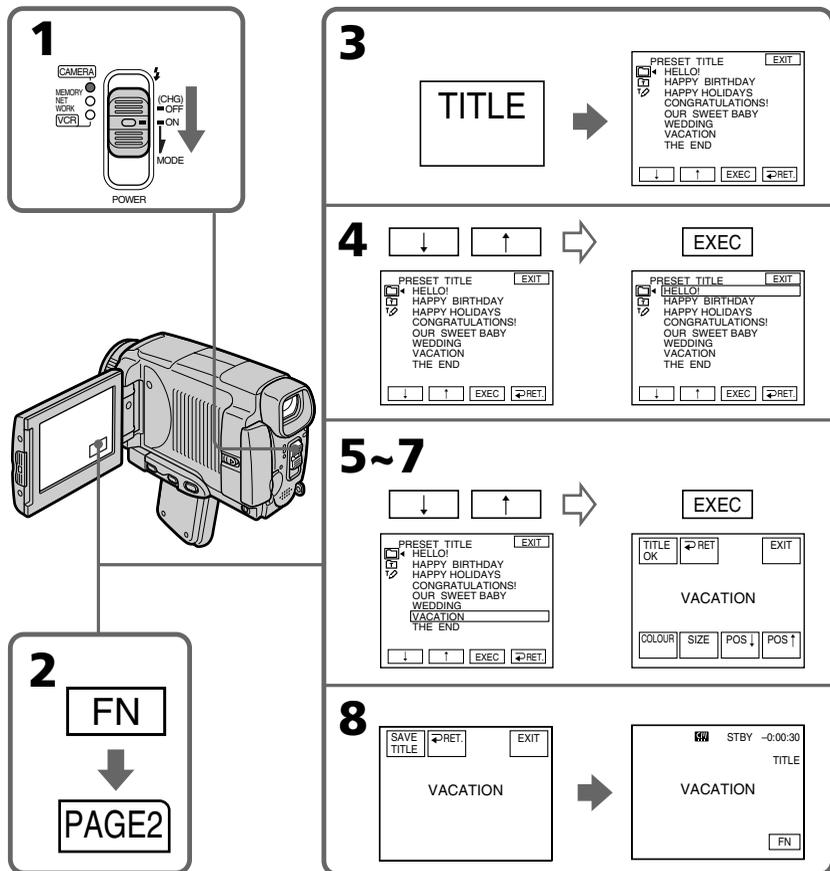
You can select one of eight preset titles and two custom titles (p. xx). You can also select the color, size and position of titles.



Superimposing a title on starting a recording

- (1) Set the POWER switch to CAMERA.
- (2) Press FN and select PAGE2.
- (3) Press TITLE. The screen to select a title appears.
- (4) Select  with ↓/↑, and then press EXEC.
- (5) Press ↓/↑ to select a desired title, and then press EXEC. The title is displayed on the LCD screen.
- (6) If necessary, change the color, size, or position by pressing COLOR, SIZE, POS ↓ or POS ↑.
- (7) Press TITLE OK. The screen to save a title appears on the LCD screen.
- (8) Press SAVE TITLE.
The "TITLE" indicator appears. And when you press START/STOP to start recording, "TITLE SAVE" appears on the screen for about five seconds and the title is set.

Superimposing a title



If you set the write-protect tab to lock

You cannot superimpose or erase the title. Slide the write-protect tab to release the write protection.

To use the custom title

If you want to use the custom title, select  in step 4.

On a blank portion of the tape

You cannot superimpose a title on the tape.

If the tape has a blank portion in the middle of the recorded parts

The title may not be displayed correctly.

Superimposing a title

The titles superimposed with your camcorder

- They are displayed only by the MICROMV format video equipment with index titler function.
- The point you superimposed the title may be detected as an index signal when searching a recording with other video equipment.

Not to display title during playback

Set TITLE DSPL to OFF in the menu settings (p. xx).

Title setting

- The title color changes as follows:
WHITE → YELLOW → VIOLET → RED
 ↑ ↓
 BLUE ← GREEN ← CYAN
- The title size changes as follows:
SMALL ↔ LARGE
You cannot input 13 characters or more in LARGE size. If you input more than 12 characters, the title size returns to SMALL even if you select LARGE.
- If you select the title size "SMALL", you have nine choices for the title position. If you select the title size "LARGE", you have eight choices for the title position.

The number of titles recordable on one cassette

You can record up to 20 titles when each title consists of 12 characters.

When 20 titles are already superimposed

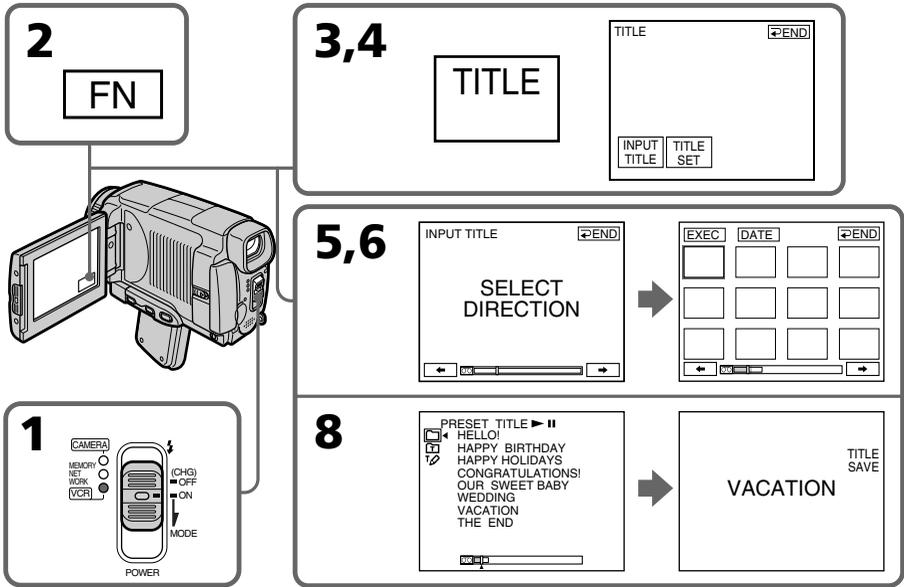
The message "TITLE FULL" appears. Erase unnecessary titles.

Superimposing a title on a recorded tape

You can superimpose a title for five seconds from the recording start point.

- (1) Set the POWER switch to VCR.
- (2) Press FN to display PAGE1.
- (3) Press TITLE. The TITLE screen appears.
- (4) Press INPUT TITLE. The INPUT TITLE screen appears.
- (5) Press ←/→ to select the direction to scan. The camcorder starts scanning in the selected direction. When you select →, the thumbnails are displayed from the upper-left window, and when you select ←, they are displayed from the lower-right window. After the scanning is completed, the thumbnails are displayed on the index screen.
- (6) Select the thumbnail on which you want to superimpose a title, then press EXEC. The title menu appears.
- (7) Perform step 4 to 7 in "Superimposing a title on starting a recording" on page XX.
- (8) Press SAVE TITLE.
"TITLE SAVE" appears on the screen for about five seconds and the title is set.

Superimposing a title



To use a custom title

If you want to use a custom title, select  in step 6 (p. XX).

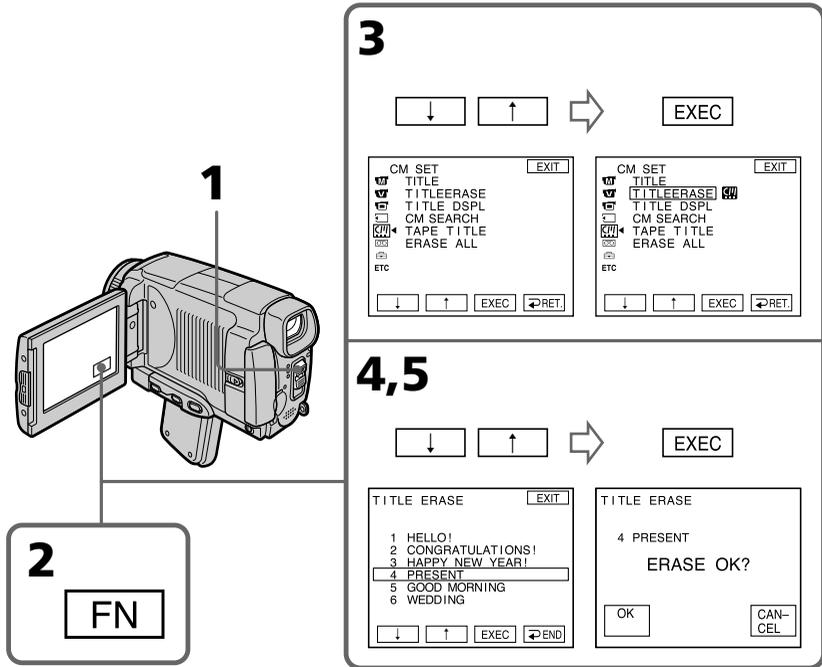
Notes

- Thumbnails may not be displayed depending on the condition of the tape. This is not a malfunction.
- Noise may appear on the thumbnails. However, this has no effect on the recorded images.
- You cannot execute TITLE SAVE until the playback picture is displayed in step 8.

Superimposing a title

Erasing a title

- (1) Set the POWER switch to CAMERA or VCR.
- (2) Press FN to display PAGE1.
- (3) Press MENU, then select TITLEERASE in  in the menu setting, then press EXEC.
- (4) Select the title you want to erase with ↓/↑, and then press EXEC.
“ERASE OK?” appears.
- (5) Make sure the title is the one you want to erase, and press OK.



To return to FN

Press EXIT.

To cancel erasing

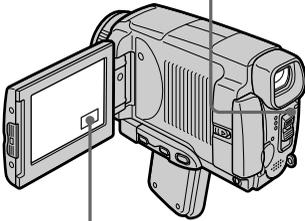
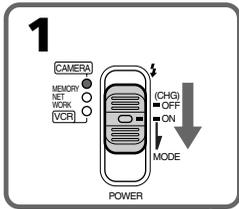
Press CANCEL after “ERASE OK?” appears in step 4.

Making your own titles

You can make up to two titles and store them in the memory of your camcorder. Each title can have up to 20 characters.

Making a title in the CAMERA mode

- (1) Set the POWER switch to CAMERA.
- (2) Press FN to display PAGE1.
- (3) Press TITLE. The TITLE screen appears.
- (4) Select [T2] with ↓/↑, and press EXEC.
- (5) Select CUSTOM1 SET or CUSTOM2 SET with ↓/↑, and press EXEC.
- (6) Select the desired character. Repeat pressing a key to select the desired character on the key.
- (7) Press → to move the cursor for the next character. Repeat the same procedure as step 6 and 7 to complete your title.
- (8) Press SET. The title is stored in memory.



3

PAGE1 PAGE2 PAGE3 EXIT	→	TITLE SET EXIT CUSTOM1 SET CUSTOM2 SET
SELF TITLE DIG MEM TIMER EFFT MIX		↓ ↑ EXEC RET

4

↓ ↑	→	EXEC
TITLE SET EXIT CUSTOM1 SET CUSTOM2 SET T2*		↓ ↑ EXEC RET

5

↓ ↑	→	EXEC
TITLE SET EXIT CUSTOM1 SET CUSTOM2 SET T2*		↓ ↑ EXEC RET

6~8

TITLE SET EXIT [PAR] &? ABC DEF ← → GHI JKL MNO 123 678 45 90 PQR S TUV WXY /./ SET	→	SET
TITLE SET EXIT [PARTY] &? ABC DEF ← → GHI JKL MNO 123 678 45 90 PQR S TUV WXY /./ SET		

Making your own titles

To return to FN

Press EXIT.

To change a title you have stored

In step 5, select CUSTOM1 SET or CUSTOM2 SET, depending on which title you want to change, then press EXEC and enter the new title as desired.

If you take five minutes or longer to enter characters in the standby mode while a cassette is in your camcorder

The power automatically goes off. The characters you have entered remain stored in memory. Set the POWER switch to OFF (CHG) once and then to CAMERA again, then complete your title.

We recommend setting the POWER switch to VCR or removing the cassette so that your camcorder does not automatically turn off while you are entering title characters.

To erase the character

Press ←. The last character is erased.

To enter a space

Press →.

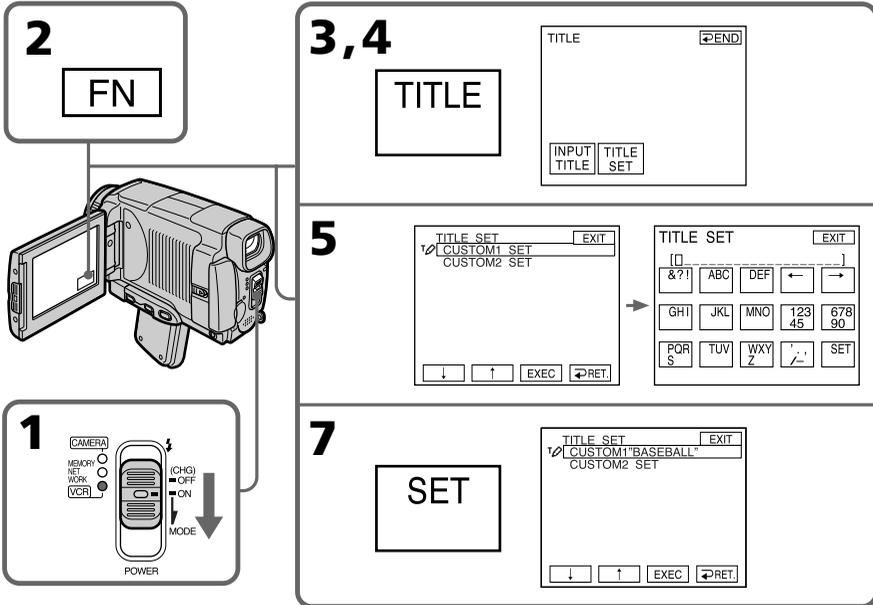
To enter the character on the same button in succession

Press → to move the cursor to the next position, and enter the character.

Making your own titles

Making a title in the VCR mode

- (1) Set the POWER switch to VCR.
- (2) Press FN to display PAGE1.
- (3) Press TITLE. The TITLE screen appears.
- (4) Press TITLE SET. The TITLE SET screen appears.
- (5) Select CUSTOM1 SET or CUSTOM2 SET with ↑/↓, and press EXEC.
- (6) Perform step 6 to 7 in “Making a title in the CAMERA mode” on page XX.
- (7) Press SET. The title is stored in memory.

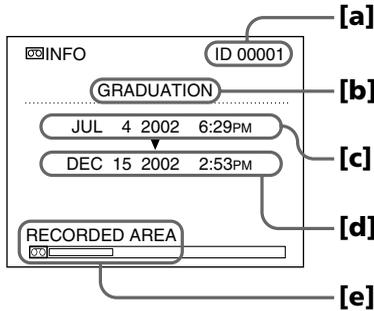


To return to FN
Press EXIT.

The Micro Cassette Memory

The MICROMV cassette automatically records the recording settings and date. You can also label a cassette. When you insert the labeled cassette and set the POWER switch to VCR, the label is displayed for about five seconds.

The cassette information



- [a]** The unique number of each cassette. The camcorder automatically assigns this number.
- [b]** The cassette title set by the TAPE TITLE item in the menu settings (Cassette label).
- [c]** The first-recorded date in this cassette.
- [d]** The last-recorded date in this cassette.
- [e]** The recorded area is indicated by the white bar.