# Shooting with the zebra pattern

You can set the camcorder to display a zebra pattern (diagonal stripes) in the portion of the picture on the screen with a subject whose brightness exceeds a certain level. You can check the picture level of a subject by displaying the zebra pattern. Use the zebra pattern as a guide for adjusting the exposure so that you can get the desired picture. The zebra pattern is not recorded in the tape or the "Memory Stick."

Set the ZEBRA selector to 70 or 100 while the POWER switch is set to CAMERA or MEMORY/NETWORK (DCR-TRV950 only).
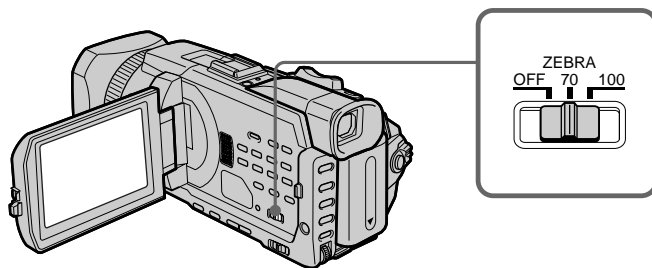
Setting	Meaning
70	The zebra pattern appears in the portion of the picture on the screen with a subject whose brightness is about 70 IRE.
100	The zebra pattern appears in the portion of the picture on the screen with a subject whose brightness exceeds more than 100 IRE.
OFF	The zebra pattern does not appear on the screen.

To erase the zebra pattern
Set the ZEBRA selector to OFF.

When the ZEBRA selector is set to 100
The portion of the picture where zebra pattern appears is an area of high brightness and overexposure.
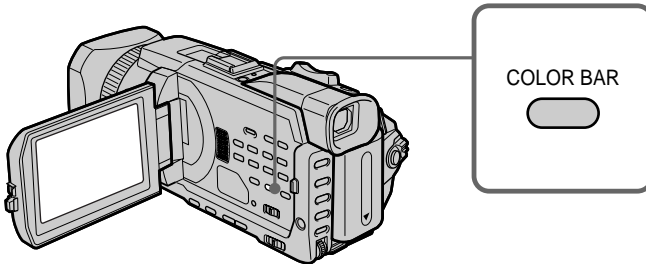
Using the color bar

If you press COLOR BAR, the color bar is displayed on the screen.
Use the color bar in the following cases:
– At the beginning of the recording, the recorded images may be unstable. To avoid this, record the color bar first and start recording the desired images when the captured images become clear.
– To adjust screen color.

Press COLOR BAR while the POWER switch is set to CAMERA.
If you press COLOR BAR again the color bar disappears.

COLOR BAR

When you adjust color on the screen
Connect your camcorder to the TV (p. 45) and adjust image color on the TV screen.

While the color bar is displayed
The following functions do not work. However, the settings before the color bar is displayed are retained.
– BACK LIGHT
– SPOT LIGHT
– Picture effect
– Digital effect
– PROGRAM AE
– Shutter speed adjustment
– White balance adjustment
– Exposure
– MEMORY MIX

While the color bar is displayed during Picture effect, Digital effect or MEMORY MIX
These effects cannot be added on the color bar.

While using the fader
The color bar cannot be displayed.

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Shooting with manual adjustment

AUTO LOCK selector
Set the selector as shown below to maintain or release the settings of the functions.
Manually adjusted functions are retained even if you set the AUTO LOCK selector to
AUTO LOCK. However, all functions will automatically return to the default settings
five minutes after removing the power supply.

AUTO LOCK [a]
Select this position to lock the PROGRAM AE, Shutter speed, White balance, Exposure
and Flexible spot meter functions in order to make these function automatically
adjusted. We recommend that you set the AUTO LOCK selector to AUTO LOCK if you
use the video flash light (optional).
AUTO LOCK release [b]
Select this position for setting the functions manually.
HOLD [c]
Select AUTO LOCK release [b], and set the functions manually. Select this position [c]
to maintain the settings.
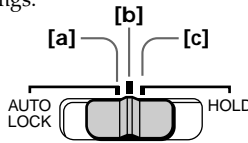
Using the PROGRAM AE

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

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 camera-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 recording distant subjects such as mountains, and
prevents your camcorder from focusing on glass or metal mesh in windows when you
are recording a subject behind glass or a screen.

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Shooting with manual adjustment

(1) Set the AUTO LOCK selector to the center (auto lock release) position while the POWER switch is set to CAMERA or MEMORY/NETWORK(DCR-TRV950 only). (p. 67)
(2) Press PROGRAM AE.
(3) Turn the SEL/PUSH EXEC dial to select the desired mode, then press the dial. The indicator changes as follows:

$$ \textbf{📹} \longleftrightarrow \textbf{🏌} \longleftrightarrow \textbf{✈} \longleftrightarrow \textbf{🍴} \longleftrightarrow \textbf{🏔} $$
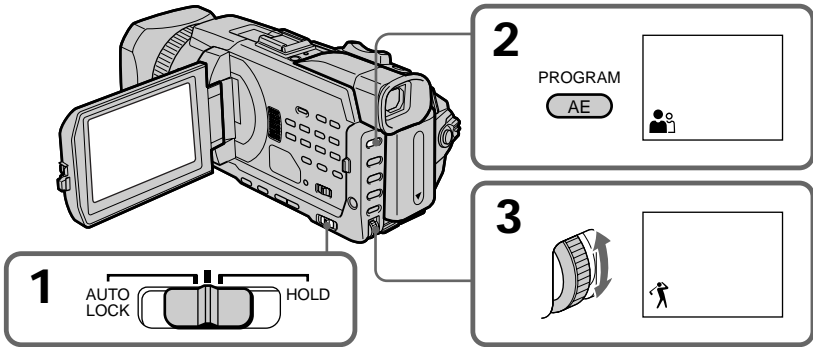
To cancel the PROGRAM AE
Set the AUTO LOCK selector to the AUTO LOCK or press PROGRAM AE.
The PROGRAM AE indicator disappears.

Shooting with manual adjustment

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:
  – 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 the PROGRAM AE:
  – BOUNCE
  – OLD MOVIE
  – Shutter speed adjustment
  – Spot focus
- When you set the POWER switch to MEMORY/NETWORK (DCR-TRV950 only), Sports lesson does not work. (The indicator flashes.)

The PROGRAM AE does not work
When you are recording images on a "Memory Stick" using the MEMORY MIX. (The indicator flashes.)

While WHT BAL is set to automatic adjustment
The white balance is adjusted even if the PROGRAM AE is selected.

You can adjust the following functions while using the PROGRAM AE
– Backlight
– Spot light
– Exposure
– Flexible Spot Meter

When recording under a discharge tube such as a fluorescent lamp, sodium lamp or mercury lamp
Flickering phenomenon which lights up or dims the screen, or the color change may occur in the following modes. If this happens, turn the PROGRAM AE off.
– Soft portrait
– Sports lesson

Adjusting the shutter speed

You can adjust the shutter speed manually to suit your preference and with its shutter speed fixed.

(1) Set the AUTO LOCK selector to the center (auto lock release) position while the POWER switch is set to CAMERA or MEMORY/NETWORK(DCR-TRV950 only). (p. 67)
(2) Press SHUTTER SPEED. The shutter speed indicator appears on the screen.
(3) Turn the SEL/PUSH EXEC dial to select the desired speed. The available shutter speed ranges from 1/4 to 1/10000. As you turn the dial, the shutter speed changes as follows:
[CAMERA] 1/4 ←→ 1/8 ←→ 1/15 ←→ 1/30 ←→ ... ←→ 1/4000 ←→ 1/6000 ←→ 1/10000
[MEMORY/NETWORK] 1/60 ←→ 1/90 ←→ 1/100 ←→ 1/125 ←→ 1/180 ←→ 1/250 ←→ 1/350 ←→ 1/500

The shutter speed increases when a smaller number is selected. The size of the picture displayed on the screen also increases. Conversely, the shutter speed is slower when a larger number is selected. The picture displayed on the screen will thus decrease in size.
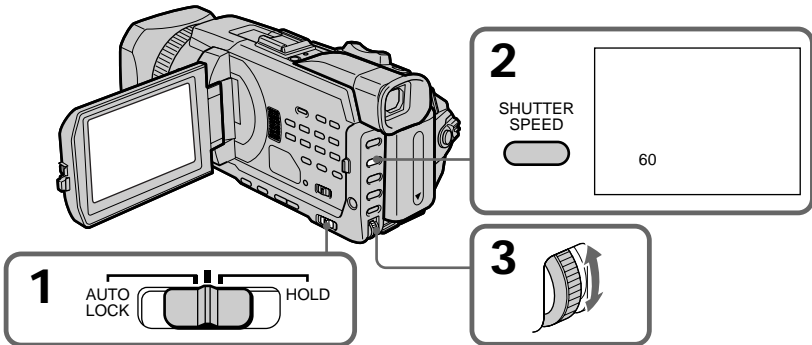
To return to automatic shutter speed mode
Set the AUTO LOCK selector to AUTO LOCK or press SHUTTER SPEED. The shutter speed indicator disappears.

Notes
•If you set the shutter speed value to 1/30 or smaller, You cannot use the flash and the digital effect.
•The Shutter speed cannot be adjusted while you are using the following functions.
  – PROGRAM AE
  – Exposure
  – Flexible spot meter

If you press PROGRAM AE
Shutter speed adjusted manually returns to the automatic shutter speed.

Shooting with manual adjustment

When shooting at slow shutter speed
At slow shutter speed, automatic focus may be lost. Use a tripod and adjust the focus manually.

When recording under a discharge tube such as a fluorescent lamp, sodium lamp or mercury lamp
Flickering phenomenon whilch lights up or dims the screen, or the color change may occur depending on the shutter speed.

When the POWER switch is set to MEMORY/NETWORK (DCR-TRV950 only)
Shutter speeds available in the MEMORY/NETWORK(DCR-TRV950 only) mode are different from those in the CAMERA mode.
 Even if you set the shutter speed faster than 1/500 or slower than 1/60 while the POWER switch is set to CAMERA, the shutter speed setting is automatically reset to 1/500 or 1/60 respectively if you set the POWER switch to MEMORY/NETWORK(DCR-TRV950 only).

Shooting with manual adjustment

Adjusting the white balance

White balance adjustment makes white subjects look white and allows more natural color balance for camera recording. You can obtain better results by adjusting the white balance manually when lighting conditions change quickly or when recording outdoors: e.g., neon signs, fireworks.

(1) Set the AUTO LOCK selector to the center (auto lock release) position while the POWER switch is set to CAMERA or MEMORY/NETWORK (DCR-TRV950 only). (p. 67)
(2) Press WHT BAL.
(3) Turn the SEL/PUSH EXEC dial to select the appropriate white balance mode under the following conditions. As you turn the dial, the display changes as follows:

🔄 (One-push white balance) ←→ ☀ (Outdoor) ←→ ☼ (Indoor)
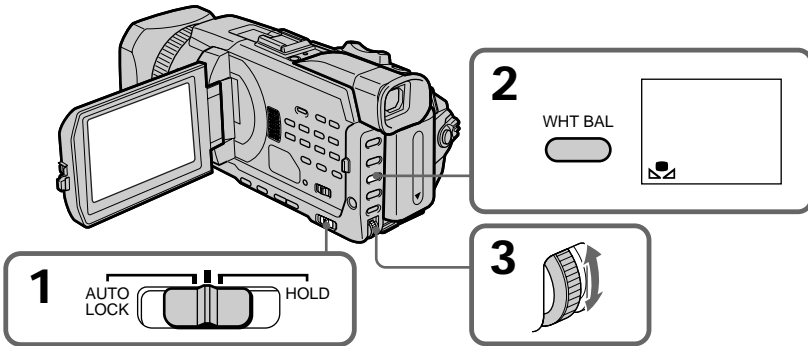
Indicator	Shooting conditions
🔄 (One-push white balance)	• Adjusting the white balance according to the light source. Follow the procedure described on the next page to adjust the setting again.
☀ (Outdoor)	• Recording a sunset/sunrise, just after sunset, just before sunrise, neon signs, or fireworks • Under a color matching fluorescent lamp
☼ (Indoor)	• Lighting condition changes quickly • Too bright a place such as a photography studio • Under sodium lamps or mercury lamps

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Shooting with manual adjustment

If you have selected ◤ in step 3

When you set the white balance to one-push white balance mode, the setting is locked and maintained even if lighting conditions change. You can achieve recording with natural colors without the image being affected by ambient light.

(1) Shoot a white object such as paper fully with ◤ displayed on the screen in the recording standby.
(2) Press the SEL/PUSH EXEC dial.
The ◤ indicator flashes quickly. When the white balance has been adjusted and stored in the memory, the indicator stops flashing. The setting will be maintained even after removing the power supply.

To return to automatic adjustment

Set the AUTO LOCK selector to AUTO LOCK or press WHT BAL. The white balance indicator disappears.

If the picture is being taken in a studio lit by TV lighting
We recommend that you record in the ☼ (indoor) mode.

When you record under fluorescent lamp
Use the automatic white balance mode or the ◤ (one-push white balance) mode. Your camcorder may not adjust the white balance correctly if you use the ☼ (indoor) mode.

Shooting when lighting conditions have changed
Readjust the white balance while the camcorder is in standby mode. White balance cannot be adjusted in the ◤ (One-push white balance) mode during recording.

If the ◤ indicator does not stop flashing after you press the SEL/PUSH EXEC dial
The white balance cannot be set. Use the automatic mode for recording.

In automatic white balance mode
Point your camcorder at a white subject for about 10 seconds after setting the POWER switch to CAMERA to get a better adjustment when:
– You detach the battery for replacement.
– You bring your camcorder outdoors from the interior of a house, or vice versa.

Advanced Recording Operations

Adjusting the exposure

You can manually adjust and set the exposure. Adjust the exposure manually in the following cases:
– When you need a fine adjustment for the backlit subjects.
– When shooting subjects and dark backgrounds.
– When recording dark pictures (e.g. night scenes) faithfully.

(1) Set the AUTO LOCK selector to the center (auto lock release) position while the POWER switch is set to CAMERA or MEMORY/NETWORK(DCR-TRV950 only). (p. 67)
(2) Press EXPOSURE. The exposure indicator appears.
(3) Turn the SEL/PUSH EXEC dial to adjust the brightness.
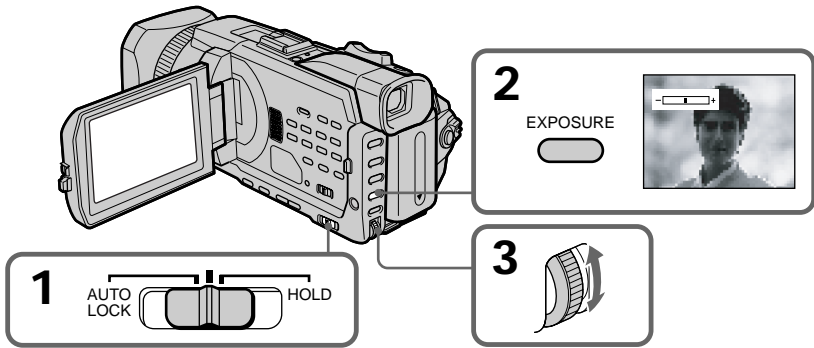
To return to automatic exposure
Set the AUTO LOCK selector to AUTO LOCK or press EXPOSURE. The exposure indicator disappears.

When you adjust the exposure manually, the following functions do not work:
– Backlight
– Spot light
– Shutter speed adjustment

If you press PROGRAM AE
Your camcorder also returns to automatic exposure.

Shooting with manual adjustment

Using the spot light-metering – 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 in the following cases:
– When adjusting the exposure manually to shoot the backlit subjects.
– 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 AUTO LOCK selector to the center (auto lock release) position while the POWER switch is set to CAMERA or MEMORY/NETWORK (DCR-TRV950 only). (p. 67)
(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 ⏎ OK to return to PAGE1.
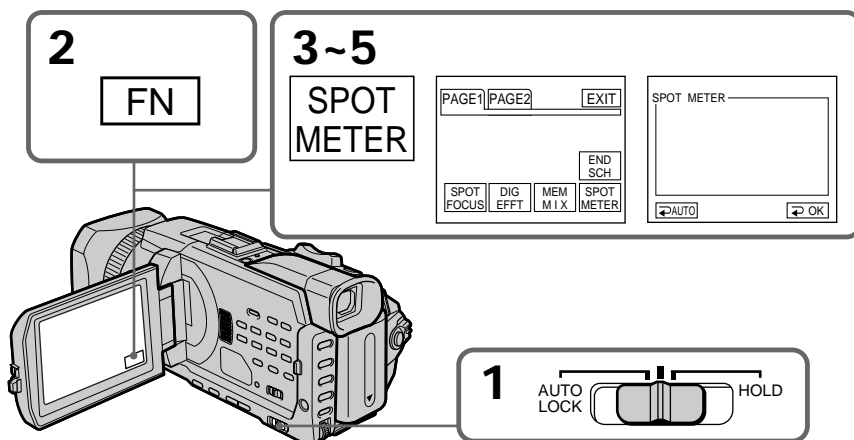
To return to FN
Press EXIT.

To return to automatic exposure
Set the AUTO LOCK selector to AUTO LOCK or press ⏎ AUTO to return to PAGE1.

The following functions do not work during Flexible Spot Meter
– Backlight
– Spot light
– Shutter speed adjustment

If you press PROGRAM AE
Your camcorder also returns to automatic exposure.

Focusing manually

You can gain better results by manually adjusting the focus in the following cases.
Normally, focus is automatically adjusted.
- The autofocus is not effective when shooting:
  - Subjects through glass coated with water droplets
  - Horizontal stripes
  - Subjects with little contrast with backgrounds such as walls and 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.
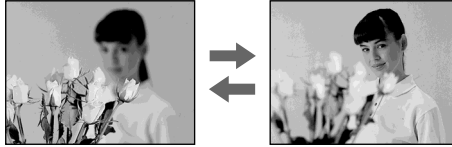
(1) Set FOCUS to MAN while the POWER switch is set to CAMERA or MEMORY/NETWORK (DCR-TRV950 only).
The ☞ indicator appears.
(2) Turn the focus ring to sharpen focus.

Focus ring
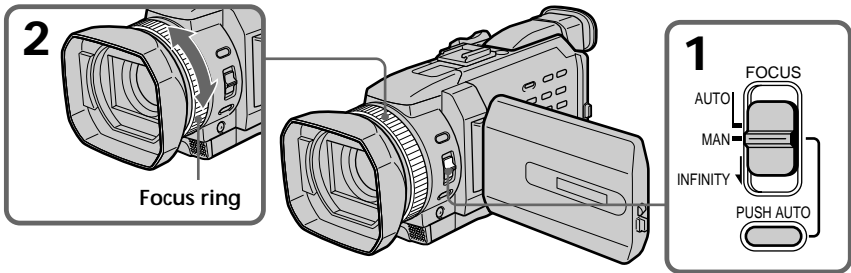
To return to the autofocus
Set FOCUS to AUTO.

To record distant subjects
When you set FOCUS to INFINITY, the focus changes to a setting appropriate for an object in the far distance, and the ▲ indicator appears. When you release FOCUS, your camcorder returns to the manual focus. Use this mode when your camcorder focuses on near objects even though you are trying to shoot a distant object.

To shoot with auto focusing momentarily
Press PUSH AUTO.
The auto focus functions while you are pressing PUSH AUTO.
Use this button to focus on one subject and then another with smooth focusing.
When you release PUSH AUTO, manual focusing resumes.

Focusing manually

To focus precisely
It is easier to focus on subjects if you adjust the zoom to shoot at the "W" (wide-angle) after focusing at the "T" (telephoto) position.

When you shoot close to the subject
Focus at the end of the "W" (wide-angle) position.

🖎 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 – 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 FOCUS to MAN while the POWER switch is set to CAMERA or MEMORY/NETWORK (DCR-TRV950 only).
(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 SPOT FOCUS indicator flashes on the LCD screen. The spot focus of the point you selected is adjusted.
(5) Press ⇌ OK to return to PAGE1.
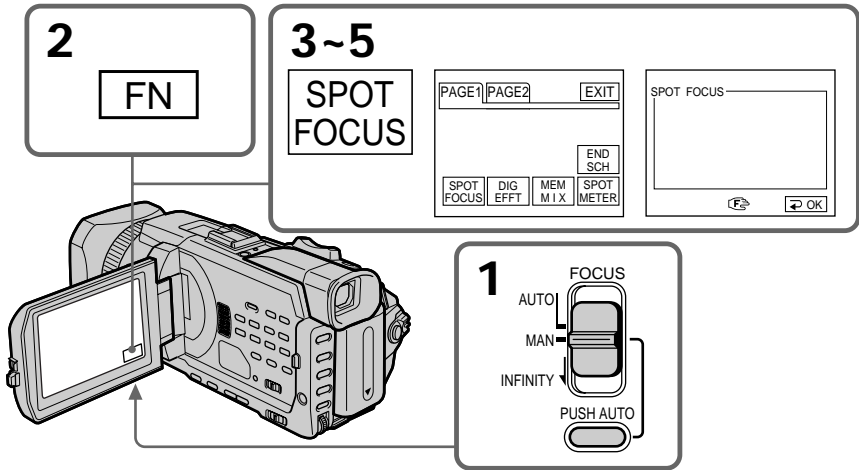
To return to FN
Press EXIT.

To return to the autofocus
Set FOCUS to AUTO.

When Using PROGRAM AE
Spot focus do not work.

Focal distance information
It is not displayed on the screen.

Adjusting recording level manually – Sound recording level

You can adjust the recording sound level. Use headphones to monitor the sound when you adjust it.

(1) Set MIC LEVEL in ▣ to MANUAL in the menu setting while the POWER switch is set to CAMERA or VCR. (p. 214)
(2) Press MENU to erase the menu display.
(3) Press AUDIO LEVEL to display the recording level adjustment display in standby mode.
(4) Turn the SEL/PUSH EXEC dial to adjust the recording level.

2 MENU

1
```
   TAPE SET
   REC MODE
   AUDIO MODE
   REMAIN
   MIC LEVEL    ◄AUTO
   ◄RETURN       MANUAL
   ETC
   ⤶

   [MENU] : END
```
⇨
```
   TAPE SET
   REC MODE
   AUDIO MODE
   REMAIN
   MIC LEVEL     MANUAL
   ◄RETURN
   ETC
   ⤶

   [MENU] : END
```

3
AUDIO LEVEL **[a]**

[b][c]
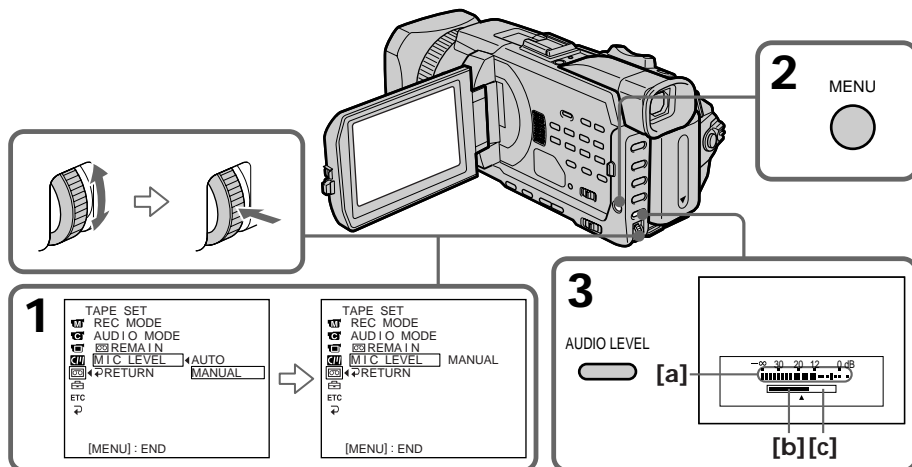
[a] Recording level meter
[b] Decreases the recording level
[c] Increases the recording level

To clear the recording level adjustment display
Press AUDIO LEVEL.

To return to automatic recording sound level
Set MIC LEVEL to AUTO in the menu setting.

Notes on the manual adjustment
•The recording level setting is retained for about five minutes even after removing the power supply.
•The recording level indicator appears at the lower-right on the screen.

The sound input through the AUDIO/VIDEO jack or the ᵢ DV Interface
You cannot adjust the recording level.

When MIC LEVEL is set to AUTO
You cannot adjust the recording level, however, the recording level adjustment display is displayed.

Interval recording

You can make a time-lapse recording by setting the camcorder to automatically record and standby sequentially. You can achieve an excellent recording for flowering, gradual appearances, etc., with this function.

Example
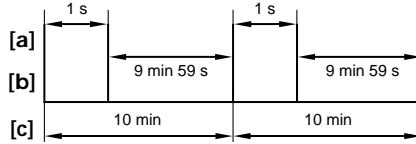
[a] REC TIME
[b] Waiting time
[c] INTERVAL

(1) In the standby, set INT. REC in ⬛ to SET in the menu setting. (p. 209)
(2) Turn the SEL/PUSH EXEC dial to set INTERVAL and REC TIME.
  ① Turn the SEL/PUSH EXEC dial to select INTERVAL, then press the dial.
  ② Turn the SEL/PUSH EXEC dial to select the desired interval time, then press the dial.
    The time: 30SEC ←→ 1MIN ←→ 5MIN ←→ 10MIN
  ③ Turn the SEL/PUSH EXEC dial to select REC TIME, then press the dial.
  ④ Turn the SEL/PUSH EXEC dial to select the desired recording time, then press the dial.
    The time: 0.5SEC ←→ 1SEC ←→ 1.5SEC ←→ 2SEC
  ⑤ Turn the SEL/PUSH EXEC dial to select ⇄ RETURN, then press the dial.
(3) Turn the SEL/PUSH EXEC dial to select ON, then press the dial.

Advanced Recording Operations

Interval recording

(4) Press MENU to erase the menu display. The INTERVAL indicator flashes.
(5) Press START/STOP to start interval recording. The INTERVAL indicator
lights up.

To cancel the interval recording
Perform either of the following:
– Set INT. REC to OFF in the menu settings.
– Set the POWER switch to other than CAMERA.

To perform normal recording during the interval recording
Press START/STOP.
The interval indicator flashes. During the waiting time you can perform normal
recording only once.
To stop normal recording, press START/STOP again. Step4 is displayed on the screen.

On recording time
There may be a discrepancy in the recording time of up to +/– six frames from the
selected time.

When pressing START/STOP during recording time
Interval recording stops. To restart it, press START/STOP again.

Frame by frame recording
– Frame recording

You can make a recording with a stop-motion animated effect using frame recording. To create this effect, alternately move the subject a little and make a frame recording. We recommend that you use a tripod, and operate your camcorder using the Remote Commander after step 3.

(1) In the standby, set FRAME REC in ▣ to ON in the menu setting. (p.209)
(2) Press MENU to erase the menu display.
The FRAME REC indicator lights up.
(3) Press START/STOP to start frame recording. Your camcorder makes a recording for about six frames, and returns to recording standby.
(4) Move the subject, and repeat step 3.
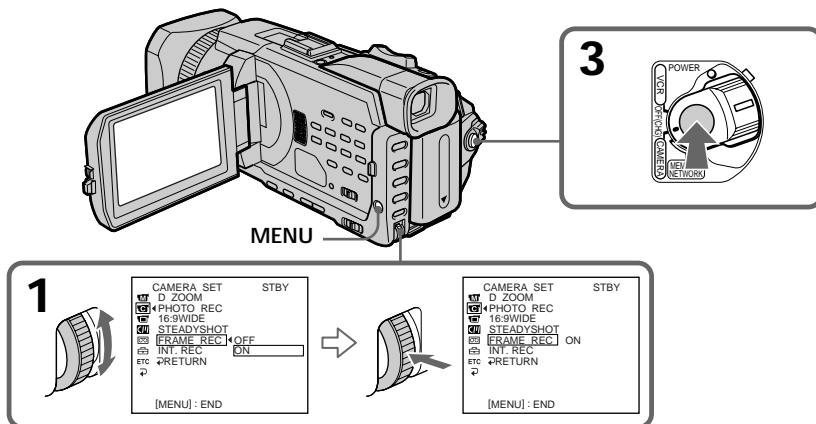
To cancel the frame recording

Perform either of the following:
– Set FRAME REC to OFF in the menu settings.
– Set the POWER switch to other than CAMERA.

Note
The remaining tape time is not indicated correctly if you use this function continuously.

When using the frame recording
The last recorded frame is longer than other frames.

Playing back tapes with picture effect

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

(1) In the playback or playback pause, press MENU, then select P EFFECT in [MENU symbol]
with the SEL/PUSH EXEC dial, then press the dial (p. 208).
(2) Turn the SEL/PUSH EXEC dial to select the desired mode, then press the dial.
For details of each picture effect, see page 58.

MENU

1

```
MANUAL SET
P EFFECT    OFF
RETURN      NEG. ART
            SEPIA
            B&W
            SOLARIZE
ETC

[MENU] : END
```
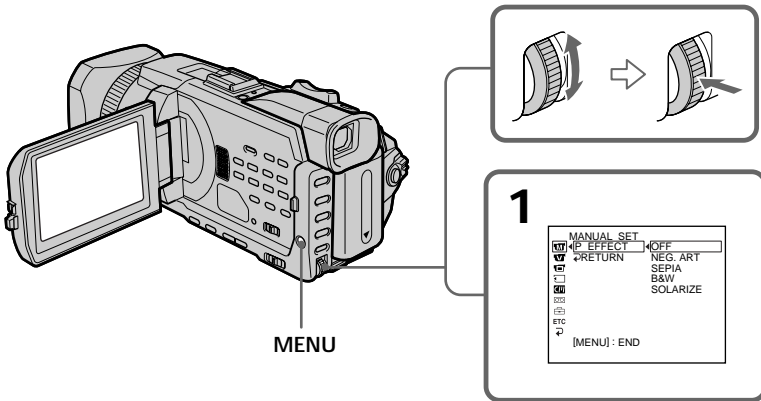
To cancel the picture effect
Set P EFFECT to OFF in the menu settings.

Notes
• You cannot process externally input scenes using picture effect.
• You cannot record images on a tape on your camcorder when you have processed the
image using the picture effect. However, you can record images on a "Memory Stick"
(p. 144, 156), or on a VCR using your camcorder as a player.

Pictures processed by picture effect
Pictures processed by picture effect are not output through the [i] DV Interface.

When you set the POWER switch to OFF (CHG) or stop playing back
Picture effect is automatically canceled.

Playing back tapes with digital effect

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

(1) In the playback or playback pause, press FN and select PAGE2.
(2) Press DIG EFFT. The screen to select a desired digital effect appears.
(3) Press a desired mode. In the STILL or LUMI., the picture where you select the mode is stored in memory as a still image.
(4) Press –/+ to adjust the effect. Refer to page 60 for details.
(5) Press ⤸ OK to return to PAGE2.

1

FN

2,3

DIG
EFFT

DIG EFFT
⤸OFF   ⤸ OK
STILL	FLASH	LUMI.	TRAIL
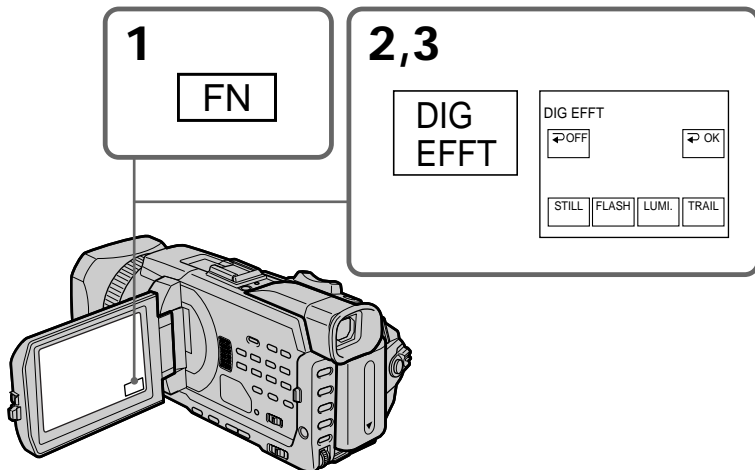
To return to FN
Press EXIT.

To cancel the digital effect
Press ⤸ OFF to return to PAGE2.

Notes
• You cannot process externally input scenes using digital effect.
• You cannot record images on a tape on your camcorder when you have processed the image using digital effect. However, you can record images on a "Memory Stick" (p. 144, 156), or on a VCR using your camcorder as a player.

Pictures processed by digital effect
Pictures processed by digital effect are not output through the ⓘ DV Interface.

When you set the POWER switch to OFF (CHG) or stop playing back
Digital effect 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 the "Memory Stick" (p. 173).

(1) In the playback or playback pause, 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 approximately at 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 power zoom lever.
You can enlarge the image from approximately 1.1 times up to five times its size.
   W: Decreases the zoom ratio.
   T: Increases the zoom ratio.
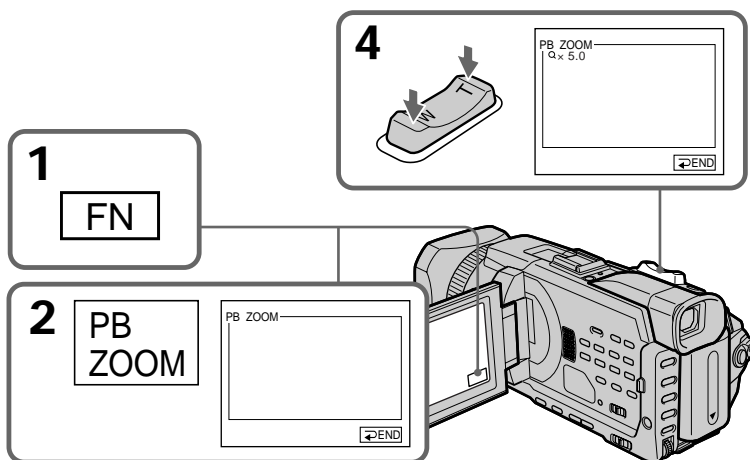
To cancel the PB ZOOM
Press ⏎ END.

Enlarging images recorded on tapes – Tape PB ZOOM

Notes
- You cannot process externally input scenes using the PB ZOOM.
- You cannot record images on a tape on your camcorder when you have processed the image using the tape PB ZOOM. However, you can record images on a VCR using your camcorder as a player.
- You cannot record moving pictures on a "Memory Stick" on your camcorder when you have processed the picture using the tape PB ZOOM.

The PB ZOOM is automatically canceled when you activate the following:
– Set the POWER switch to OFF (CHG).
– Stop playback.
– Press MENU.
– Insert a "Memory Stick".

Pictures in the PB ZOOM
Pictures in the PB ZOOM are not output through the **ᵢ** DV Interface and the ψ (USB) jack.

In the PB ZOOM
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.

Quickly locating a scene
– ZERO SET MEMORY

Your camcorder goes forward or backward to automatically stop at a desired scene having a tape counter value of "0:00:00". Use the Remote Commander for this operation.

(1) In the playback, press DISPLAY when the tape counter does not appear.
(2) Press ZERO SET MEMORY at the point you want to locate later. The tape counter shows "0:00:00" and then starts counting. The ZERO SET MEMORY indicator flashes.
(3) Press ■ when you want to stop playback.
(4) Press ◀◀ to rewind the tape to the tape counter's zero point. The tape stops automatically when the tape counter reaches approximately zero. The ZERO SET MEMORY indicator disappears, and the time code appears.
(5) Press ▶. Playback starts from the counter's zero point.

DISPLAY — ZERO SET MEMORY

◀◀ — ▶

■
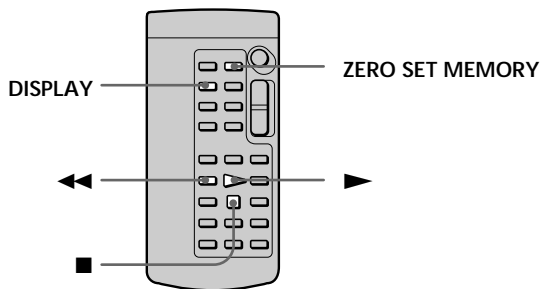
Notes
• When you press ZERO SET MEMORY before rewinding the tape, the zero set memory will be canceled.
• There may be a discrepancy of several seconds from the time code.
• The ZERO SET MEMORY indicator disappears when you press FN.

If a tape has a blank portion between recorded portions
The zero set memory may not work correctly.

Searching the boundaries of a recorded tape by title – TITLE SEARCH

CM only

If you use a cassette with cassette memory, you can search for the boundaries of a recorded tape by title. Use the Remote Commander for this operation.

Before operation
Set CM SEARCH in 🎞 to ON in the menu settings. (The default setting is ON.)

(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 → PHOTO SEARCH
(no indicator) ← PHOTO SCAN ←

(3) Press ◄◄ or ►► on the Remote Commander to select the title for playback. Your camcorder automatically starts playback of the scene having the title that you selected.
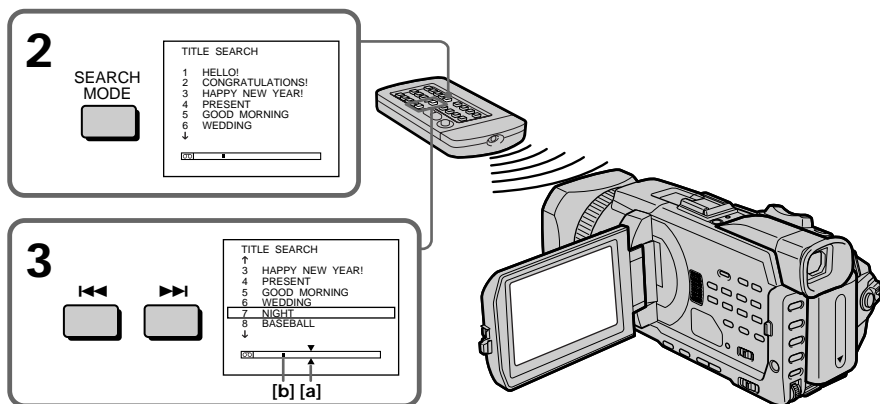
Advanced Playback Operations

2

SEARCH
MODE

TITLE SEARCH
1 HELLO!
2 CONGRATULATIONS!
3 HAPPY NEW YEAR!
4 PRESENT
5 GOOD MORNING
6 WEDDING
↓

3

◄◄   ►►

TITLE SEARCH
↑
3 HAPPY NEW YEAR!
4 PRESENT
5 GOOD MORNING
6 WEDDING
7 NIGHT
8 BASEBALL
↓

[b] [a]

[a] Actual point you are trying to search for
[b] Present point on the tape

To stop searching
Press ■.

If you use a cassette without cassette memory
You cannot superimpose or search a title.

If a tape has a blank portion between recorded portions
The title search may not work correctly.

To superimpose a title
See page 119.

Searching a recording by date – DATE SEARCH

You can automatically search for the point where the recording date changes and start playback from that point (date search). Use a cassette with cassette memory for convenience. Use the Remote Commander for this operation.
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

Before operation
•You can use this function only when playing back a cassette with cassette memory.
•Set CM SEARCH in ▥ to ON in the menu settings. (The default setting is ON.)

(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 → PHOTO SEARCH ┐
└   (no indicator) ←――――――――――― PHOTO SCAN ←┘
```

(3) Press ▶◀◀ or ▶▶▶ on the Remote Commander to select the date for playback. Your camcorder automatically starts playback at the beginning of the selected date.

2
SEARCH MODE

DATE SEARCH
1   SEP/ 5/02
2   SEP/ 6/02
3   DEC/24/02
4   JAN/ 1/03
5   FEB/11/03
6   APR/29/03

3
▶◀◀   ▶▶▶

DATE SEARCH
1   SEP/ 5/02
2   SEP/ 6/02
3   DEC/24/02
4   JAN/ 1/03
5   FEB/11/03
6   APR/29/03

[b] [a]

[a] Actual point you are trying to search for
[b] Present point on the tape

To stop searching
Press ■.

Searching a recording by date – DATE SEARCH

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 portion between recorded portions
DATE SEARCH may not work correctly.

Cassette memory
The tape with cassette memory can hold six recording dates. If you search among seven or more dates, see "Searching for the date without using cassette memory" below.

Searching for the date without using cassette memory

(1) Set the POWER switch to VCR.
(2) Press MENU, then select CM SEARCH in ▣ to OFF with the SEL/PUSH EXEC dial (p. 213).
(3) Press SEARCH MODE on the Remote Commander repeatedly until the DATE SEARCH indicator appears. The indicator changes as follows:

┌→ DATE SEARCH → PHOTO SEARCH → PHOTO SCAN → (no indicator) ─┐

(4) Press ◄◄ on the Remote Commander to search for the previous date or press ►►| on the Remote Commander to search for the next date. Your camcorder automatically starts playback at the point where the date changes. Each time you press ◄◄ or ►►| your camcorder searches for the previous or next date.

To stop searching
Press ■.

Advanced Playback Operations

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Searching for a photo
– PHOTO SEARCH/PHOTO SCAN

You can search for a still image you have recorded on a tape **(PHOTO SEARCH)**.
You can also search for still images one after another and display each image for
five seconds automatically regardless of cassette memory **(PHOTO SCAN)**. Use the
Remote Commander for these operations.
Use this function to check or edit still images.

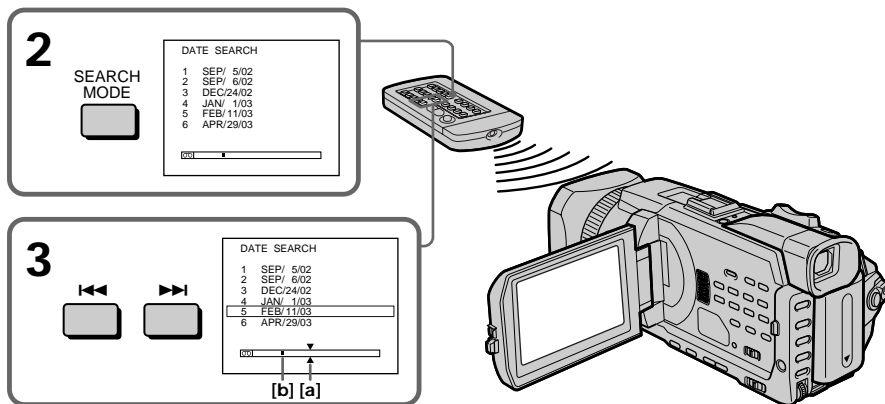## Searching for a photo by using cassette memory

Before operation
• You can use this function only when playing back a cassette with cassette memory.
• Set CM SEARCH in ▣ to ON in the menu settings. (The default setting is ON.)

(1) Set the POWER switch to VCR.
(2) Press SEARCH MODE on the Remote Commander repeatedly until the
PHOTO SEARCH indicator appears. The indicator changes as follows:

TITLE SEARCH → DATE SEARCH → PHOTO SEARCH
(no indicator) ← PHOTO SCAN

(3) Press ◄◄ or ►► on the Remote Commander to select the date for playback.
Your camcorder automatically starts playback of the photo having the date
that you selected.

[a] : Actual point you are trying to search for
[b] : Present point on the tape

To stop searching
Press ■.

Searching for a photo without using cassette memory

(1) Set the POWER switch to VCR.
(2) Press MENU, then turn the SEL/PUSH EXEC dial to select CM SEARCH in
 🖿 to OFF, then press the dial (p. 213).
(3) Press SEARCH MODE on the Remote Commander repeatedly until the
 PHOTO SEARCH indicator appears. The indicator changes as follows:

┌→DATE SEARCH → PHOTO SEARCH → PHOTO SCAN → (no indicator)┐

(4) Press �◀◀ or ▶▶▎ on the Remote Commander to select the photo for playback.
 Each time you press ▎◀◀ or ▶▶▎ your camcorder searches for the previous or
 next photo.
 Your camcorder automatically starts playback of the photo.

To stop searching
Press ■.

Searching for a photo – PHOTO SEARCH/PHOTO SCAN

Scanning photos

(1) Set the POWER switch to VCR.
(2) Press SEARCH MODE on the Remote Commander repeatedly until the PHOTO SCAN indicator appears. The indicator changes as follows:

```
 ┌→ TITLE SEARCH* → DATE SEARCH → PHOTO SEARCH ┐
 └─  (no indicator) ←─────────────── PHOTO SCAN ←┘
```

* Displayed only when CM SEARCH is set to ON in the menu settings.
(3) Press ⏮ or ⏭ on the Remote Commander.
Each photo is played back for about five seconds automatically.

To stop scanning
Press ■.

If a tape has a blank portion between recorded portions
PHOTO SEARCH/PHOTO SCAN may not work correctly.

The available number of photos that can be searched using the cassette memory
The available number is up to 12 photos. However, you can search 13 photos or more using the PHOTO SCAN.

94

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.

Before operation
•Set DISPLAY in ETC 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/TOUCH PANEL, DATA CODE
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.
Connect the A/V connecting cable to the AUDIO/VIDEO jack.
Refer to the operating instructions of the VCR.
(3) Set the POWER switch to VCR on your camcorder.
(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
Press ■ on both your camcorder and the VCR.

Editing

95
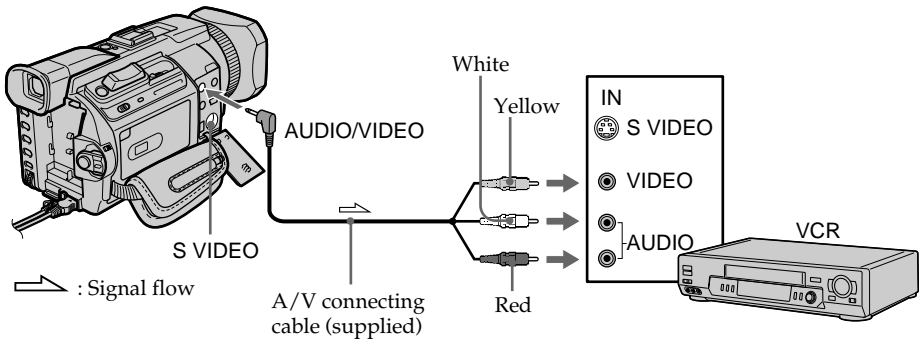
Dubbing a tape

You can edit on VCRs that support the following systems:
8 8 mm, **Hi8** Hi8, **VHS** VHS, **S VHS** S-VHS, **VHSC** VHSC, **S VHSC** S-VHSC,
B Betamax, **ED Beta** ED Betamax, **Mini DV** mini DV, **DV** DV, **D** Digital8, **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 and the white or the red plug to the audio input 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.

If your VCR has an S video jack
Pictures can be reproduced more faithfully by using an S video cable (optional).
With this connection, you do not need to connect the yellow (video) plug of the A/V connecting cable.
Connect an S video cable (optional) to the S video jacks of both your camcorder and the VCR.
This connection produces higher quality DV format pictures.

Dubbing a tape

Using the i.LINK cable

Simply connect the i.LINK cable (optional) to the ⚡ DV Interface on your camcorder and to DV IN on the DV products. With a digital-to-digital connection, video and audio signals are transmitted in digital form for high-quality editing. You cannot dub the titles, display indicators or the contents of cassette memory or letters on the "Memory Stick" index screen.
Set the input selector on the VCR to the DV input position if the VCR is equipped with the input selector.

(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 on your camcorder.
(4) Play back the recorded tape on your camcorder.
(5) Start recording on the VCR. Refer to the operating instructions of the VCR.

Editing

⚡ DV

DV IN

⟶ : Signal flow

DV

i. LINK cable (optional)
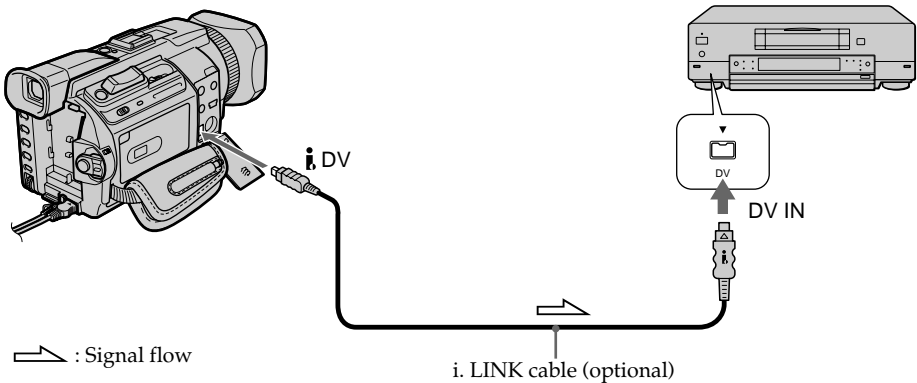
When you have finished dubbing a tape
Press ■ on both your camcorder and the VCR.

You can connect one VCR only using the i.LINK cable
See page 233 for more information about i.LINK.

Pictures processed by the picture effect, the digital effect or PB ZOOM
These pictures are not output through the ⚡ DV Interface.

If you record a playback pause picture with the ⚡ DV Interface
The recorded picture becomes rough. Also, when you play back the picture using other video equipment, the picture may jitter.

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Dubbing only desired scenes
– Digital program editing (on tapes)

You can duplicate selected scenes (programs) for editing onto a tape without operating the VCR.
Scenes can be selected by frame. You can set up to 20 programs.
Your camcorder can dub on a "Memory Stick." See p. 160 for more information.

Unwanted scene   Unwanted scene

Switch the order
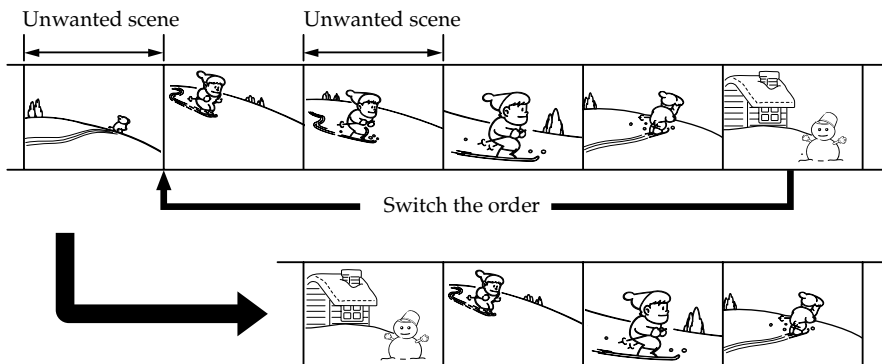
Before operating the Digital program editing on tapes recorded on other equipment
Step 1 Connecting the VCR.
Step 2 Setting the VCR for operation (p. 99, 103).
Step 3 Adjusting the synchronization of the VCR (p. 104).
When you dub using the same VCR again, you can skip steps 2 and 3.

Using the Digital program editing on tapes recorded on other equipment
Operation 1 Making a program (p. 106).
Operation 2 Performing the program (dubbing a tape) (p. 108).

Note
When editing digital video on tapes, the operation signals cannot be sent with the ⏻ LANC.

Step 1: Connecting the VCR

You can connect both an A/V connecting cable and an i.LINK cable.
When you use the A/V connecting cable, connect the devices as illustrated on page 95.
When you use the i.LINK cable, connect the devices as illustrated on page 97.

If you connect using the i.LINK cable
With a digital-to-digital connection, video and audio signals are transmitted in digital form for high-quality editing.

Dubbing only desired scenes – Digital program editing (on tapes)

Step 2: Setting the VCR to operate with the A/V connecting cable

To edit using the VCR, send the control signal by infrared rays to the remote sensor on the VCR.
When you connect using the A/V connecting cable, follow the procedure below, steps **(1)** to **(4)**, to send the control signal correctly.

(1) Set the IR SETUP code

① Set the POWER switch to VCR on your camcorder.
② Turn the power of the connected VCR on, then set the input selector to LINE.
   When you connect a video camera recorder, set its power switch to VCR/VTR.
③ Press MENU, then turn the SEL/PUSH EXEC dial to set VIDEO EDIT in ETC to TAPE, then press the dial (p. 217).
④ Turn the SEL/PUSH EXEC dial to select EDIT SET, then press the dial.
⑤ Turn the SEL/PUSH EXEC dial to select CONTROL, then press the dial.
⑥ Turn the SEL/PUSH EXEC dial to select IR, then press the dial.
⑦ Turn the SEL/PUSH EXEC dial to select IR SETUP and turn the dial to select IR SETUP code number of your VCR, then press the dial.
   Check the code in "About IR SETUP codes." (p. 100)

Editing

MENU

3

```
OTHERS
📼 DATA CODE
📼 BEEP
📹 COMMANDER
🖳 DISPLAY
📼 VIDEO EDIT    READY
  ⏎RETURN

ETC◄
  ⏎
  [MENU] : END
```
⇨
```
OTHERS
📼 DATA CODE
📼 BEEP
📹 COMMANDER
🖳 DISPLAY
📼 VIDEO EDIT  ◄RETURN
  ⏎RETURN      TAPE
               MEMORY
ETC◄
  ⏎
  [MENU] : END
```
⇨
```
VIDEO EDIT         0:08:55:06
MARK           1  IN
UNDO
ERASE ALL
START
EDIT SET

TOTAL  0:00:00:00
SCENE  0
〰〰〰〰〰〰〰〰〰〰〰〰〰〰
[MENU] : END
```

4

```
VIDEO EDIT         0:08:55:06
MARK
UNDO
ERASE ALL
START
EDIT SET        IR

TOTAL  0:00:00:00
SCENE  0
〰〰〰〰〰〰〰〰〰〰〰〰〰〰
[MENU] : END
```
⇨
```
VIDEO EDIT         0:08:55:06
EDIT SET
CONTROL       IR
ADJ TEST
"CUT-IN"
"CUT-OUT"
IR SETUP
PAUSEMODE
IR TEST
⏎RETURN
[MENU] : END
```

5

```
VIDEO EDIT         0:08:55:06
EDIT SET
CONTROL   ◄IR
ADJ TEST    i. LINK
"CUT-IN"
"CUT-OUT"
IR SETUP
PAUSEMODE
IR TEST
⏎RETURN
[MENU] : END
```

7

```
VIDEO EDIT         0:08:55:06
EDIT SET
CONTROL
ADJ TEST
"CUT-IN"
"CUT-OUT"
IR SETUP      3
PAUSEMODE
IR TEST
⏎RETURN
[MENU] : END
```

Dubbing only desired scenes – Digital program editing (on tapes)

About IR SETUP codes

The IR SETUP code is stored in the memory of your camcorder. Be sure to set the correct code to match your VCR. The default setting is code number 3.

Brand	IR SETUP code
Sony	1, 2, 3, 4, 5, 6
Admiral (M. Wards)	89
Aiwa	47, 54, 80
Akai	49, 51
Audio Dynamic	21, 35
Bell&Howell (M. Wards)	36
Broksonic	21, 70, 82
Canon	77, 78
Citizen	47
Craig	47, 73
Curtis Mathis	8, 77, 80
Daewoo	26, 40, 77
DBX	21, 33, 35
Dimensia	8
Emerson	26, 48, 59, 70, 80, 81, 82
Fisher	36, 37, 44, 45
Funai	80
General Electric	8, 32*, 77, 94*, 101
Goldstar/LG	47
GO VIDEO	71
Hitachi	8, 42, 78
HQ	40
Instant Replay	77, 78
JC Penny	8, 21, 33, 35, 36, 42, 77
JVC	12, 13, 14, 21, 33, 35
Kenwood	21, 33, 35, 47
LXI (Sears)	36, 37, 42, 44, 45, 47, 49, 80
Magnavox	17, 77, 78, 83
Marantz	21, 33, 35
Marta	47
Memorex	37, 77
Minolta	8, 42

Brand	IR SETUP code
Mitsubishi/MGA	22, 23, 24, 28, 29
Multitech	23, 32, 80
NEC	21, 33, 35
Olympic	77, 78
Optimus	22
Orion	60
Panasonic	16, 17, 77, 78
Pentax	8, 42
Philco	26, 70, 77, 78
Philips	47, 77, 78, 83
Pioneer	78
Quasar	6, 16, 17, 77, 78
RCA/PROSCAN	7, 8, 16, 40, 41, 42, 77, 78, 78*, 83, 101
Realistic	22, 36, 37, 77, 80, 88
Sansui	21
Singer	73
Samsung	24, 24*, 32, 32*, 41, 94, 94*
Sanyo	26, 36, 37, 47
Scott	22, 23, 24, 28, 32, 37, 40, 41
Sharp	88, 89
Shintom	73
Signature 2000	80, 89
Sylvania	77, 78, 80, 83
Symphonic	80
Tashiro	47
Tatung	21, 33, 35
Teac	21, 33, 35, 80
Technics	77, 78
Toshiba	7, 40, 49
Wards	37, 47, 88, 89, 95
Yamaha	21, 33, 35, 36
Zenith	95

* TV/VCR component

Note on IR SETUP codes

Digital program editing is not possible if the VCR does not support IR SETUP codes.

(2) Setting the modes to cancel the recording pause on the VCR
① Turn the SEL/PUSH EXEC dial to select PAUSEMODE, then press the dial.
② Turn the SEL/PUSH EXEC dial to select the mode to cancel recording pause on the VCR, then press the dial.
Refer to the operating instructions of your VCR.


```
1  VIDEO EDIT          0:08:55:06
   EDIT SET
     CONTROL
     ADJ TEST
     "CUT–IN"
     "CUT–OUT"
     IR SETUP
    [PAUSEMODE] ◄PAUSE
     IR TEST       REC
    ⏎RETURN        PB
   [MENU] : END
```

```
2  VIDEO EDIT          0:08:55:06
   EDIT SET
     CONTROL
     ADJ TEST
     "CUT–IN"
     "CUT–OUT"
     IR SETUP
    [PAUSEMODE]  PAUSE
     IR TEST
    ⏎RETURN
   [MENU] : END
```
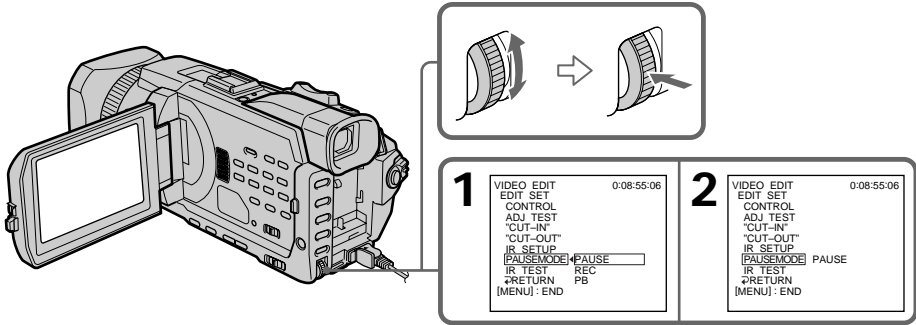
Buttons to cancel recording pause on the VCR
The buttons vary depending on your VCR. To cancel recording pause:
– Select PAUSE if the button to cancel recording pause is ❙❙.
– Select REC if the button to cancel recording pause is ●.
– Select PB if the button to cancel recording pause is ▶.

(3) Setting your camcorder and the VCR to face each other
Locate the infrared rays emitter of your camcorder and face it towards the remote sensor of the VCR.
Set the devices about 30 cm (12 in.) apart, and remove any obstacles between the devices.

Infrared rays emitter

VCR

Remote sensor

A/V connecting cable (supplied)
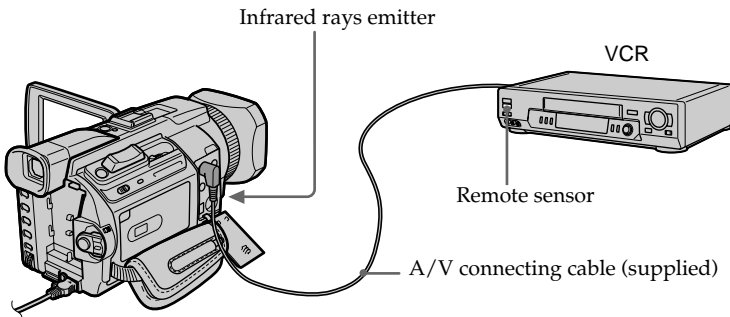
(4) Confirming VCR operation
1 Insert a recordable tape into the VCR, then set to recording pause.
2 Turn the SEL/PUSH EXEC dial to select IR TEST, then press the dial.
3 Turn the SEL/PUSH EXEC dial to select EXECUTE, then press the dial.
   If the VCR starts recording, the setting is correct.
   When recording is finished, the indicator changes to COMPLETE.


```
2   VIDEO EDIT           0:08:55:06
    EDIT SET
      CONTROL
      ADJ TEST
      "CUT–IN"
      "CUT–OUT"
      IR SETUP      ENGAGE
      PAUSEMODE     REC PAUSE
      IR TEST      ◀RETURN
      ◆RETURN       EXECUTE
    [MENU] : END
```

```
3   VIDEO EDIT           0:08:55:06
    EDIT SET
      CONTROL
      ADJ TEST
      "CUT–IN"
      "CUT–OUT"
      IR SETUP
      PAUSEMODE
      IR TEST       COMPLETE
      ◆RETURN
    [MENU] : END
```
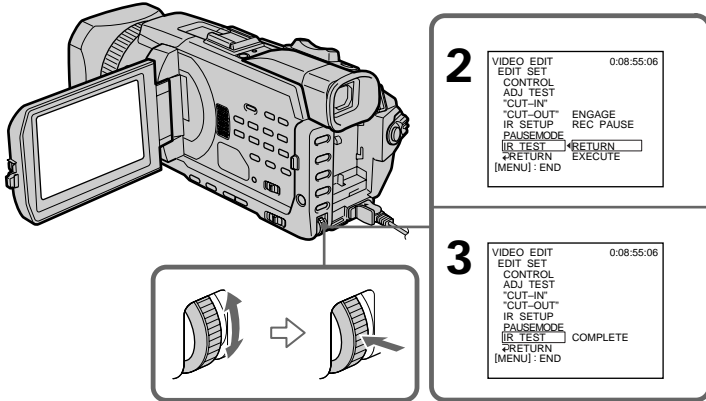
When the VCR does not operate correctly
• After checking the code in "About IR SETUP codes", set the IR SETUP or the
  PAUSEMODE again.
• Place your camcorder at least 30 cm (12 in.) away from the VCR.
• Refer to the operating instructions of your VCR.

Dubbing only desired scenes – Digital program editing (on tapes)

Step 2: Setting the VCR to operate with the i.LINK cable

When you connect using the i.LINK cable (optional), follow the procedure below.

(1) Set the POWER switch to VCR on your camcorder.
(2) Turn the power of the connected VCR on, then set the input selector to DV input. When you connect a digital video camera recorder, set its power switch to VCR/VTR.
(3) Press MENU, then turn the SEL/PUSH EXEC dial to set VIDEO EDIT in ETC to TAPE, then press the dial (p. 217).
(4) Turn the SEL/PUSH EXEC dial to select EDIT SET, then press the dial.
(5) Turn the SEL/PUSH EXEC dial to select CONTROL, then press the dial.
(6) Turn the SEL/PUSH EXEC dial to select i.LINK, then press the dial.

Editing

MENU
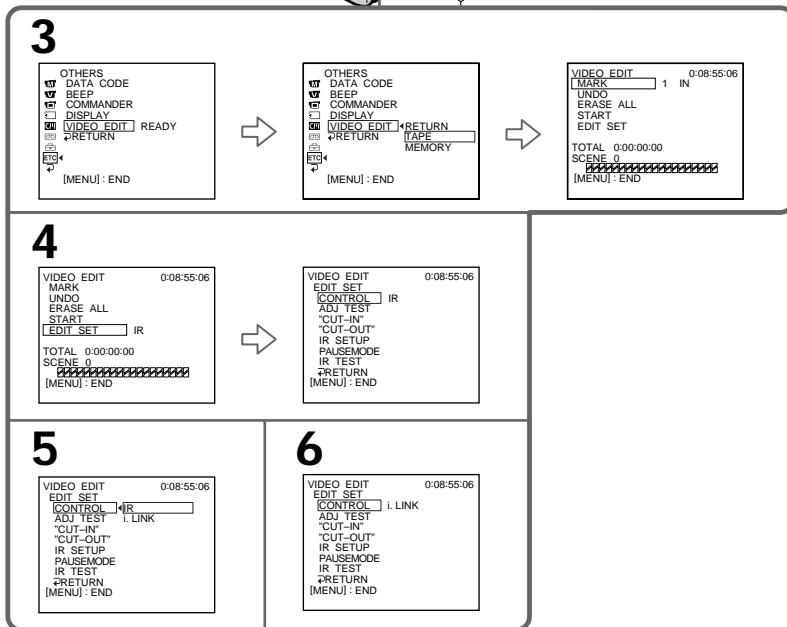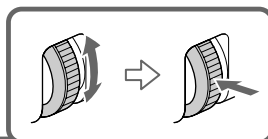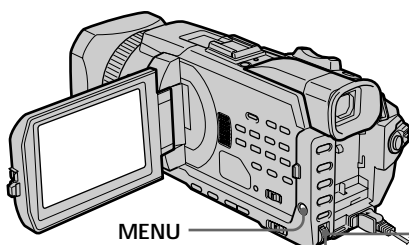
When you connect using an i.LINK cable
You cannot dub the titles, display indicators.

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Step 3: Adjusting the synchronization of the VCR

You can adjust the synchronization of your camcorder and the VCR. Have a pen and paper ready for notes. Before operation, eject a cassette from your camcorder.

(1) Insert a blank tape (or a tape you want to record over) into the VCR, then set to recording pause.
When you select i.LINK in CONTROL, you do not need to set to recording pause.
(2) Turn the SEL/PUSH EXEC dial to select ADJ TEST, then press the dial.
(3) Turn the SEL/PUSH EXEC dial to select EXECUTE, then press the dial.
IN and OUT are recorded on an image for five times each to calculate the number values for adjusting the synchronization.
The EXECUTING indicator flashes on the screen.
When finished, the indicator changes to COMPLETE.
(4) Rewind the tape in the VCR, then start slow playback.
Take a note of the first number value of each IN and the closing number value of each OUT.
(5) Calculate the average of all the first number values of each IN, and the average of all the last number values of each OUT.
(6) Turn the SEL/PUSH EXEC dial to select "CUT-IN", then press the dial.
(7) Turn the SEL/PUSH EXEC dial to select the average number value of IN, then press the dial.
The calculated start position for recording is set.
(8) Turn the SEL/PUSH EXEC dial to select "CUT-OUT", then press the dial.
(9) Turn the SEL/PUSH EXEC dial to select the average number value of OUT, then press the dial.
The calculated stop position for recording is set.
(10) Turn the SEL/PUSH EXEC dial to select ⮌ RETURN, then press the dial.

Dubbing only desired scenes – Digital program editing (on tapes)

2,3

```
VIDEO EDIT          0:08:55:06
EDIT SET
  CONTROL
  ADJ TEST   RETURN
  "CUT–IN"    EXECUTE
  "CUT–OUT"
  IR SETUP    ENGAGE
  PAUSEMODE  REC PAUSE
  IR TEST
[ME
```

```
VIDEO EDIT          0:08:55:06
EDIT SET
  CONTROL
  ADJ TEST   EXECUTING
  "CUT–IN"
  "CUT–OUT"   No. 5
  IR SETUP    IN
  PAUSEMODE  –60
  IR TEST
[ME
```

```
VIDEO EDIT          0:08:55:06
EDIT SET
  CONTROL
  ADJ TEST   COMPLETE
  "CUT–IN"
  "CUT–OUT"
  IR SETUP
  PAUSEMODE
  IR TEST
  RETURN
[MENU] : END
```

6

```
VIDEO EDIT          0:08:55:06
EDIT SET
  CONTROL
  ADJ TEST
  "CUT–IN"       0
  "CUT–OUT"
  IR SETUP
  PAUSEMODE
  IR TEST
  RETURN
[MENU] : END
```

8

```
VIDEO EDIT          0:08:55:06
EDIT SET
  CONTROL
  ADJ TEST
  "CUT–IN"
  "CUT–OUT"      0
  IR SETUP
  PAUSEMODE
  IR TEST
  RETURN
[MENU] : END
```

Notes
- When you complete step 3, the image used to adjust the synchronization is recorded for about 50 seconds.
- If you start recording from the very beginning of the tape, the first few seconds of the tape may not record properly. Be sure to allow about 10 seconds' lead before starting recording.
- When the recording unit cannot be operated properly by the i.LINK cable, leave the connection as it is, and make the A/V connecting cable settings (p. 99). Video and audio are sent by digital signals.

Operation 1: Making a program

(1) Insert the tape for playback into your camcorder, and insert a tape for recording into the VCR.

(2) Press MENU, then turn the SEL/PUSH EXEC dial to set VIDEO EDIT in ETC to TAPE, then press the dial (p. 217).

(3) Search for the beginning of the first scene you want to insert using the video operation buttons, then pause playback.
You can fine-adjust one frame at a time with EDITSEARCH.

(4) Press MARK on the Remote Commander, or turn the SEL/PUSH EXEC dial to select MARK, then press the dial.
The IN point of the first program is set, and the top part of the program mark changes to light blue.

(5) Search for the end of the first scene you want to insert using the video operation buttons, then pause playback. You can fine-adjust one frame at a time with EDITSEARCH.

(6) Press MARK on the Remote Commander, or the SEL/PUSH EXEC dial.
The OUT point of the first program is set, then the bottom part of the program mark changes to light blue.

(7) Repeat steps 3 to 6, then set the program.
When the program is set, the program mark changes to light blue.
You can set up to 20 programs in maximum.

MENU

2

```
OTHERS
🔟  DATA CODE
🔟  BEEP
🔟  COMMANDER
🔟  DISPLAY
🔟  VIDEO EDIT   READY
🔟  ⇄RETURN
ETC◄
 ⏎
      [MENU] : END
```

```
OTHERS
🔟  DATA CODE
🔟  BEEP
🔟  COMMANDER
🔟  DISPLAY
🔟  VIDEO EDIT  ◄RETURN
🔟  ⇄RETURN      TAPE
ETC◄             MEMORY
 ⏎
      [MENU] : END
```

```
VIDEO EDIT        0:08:55:06
MARK         1 IN
UNDO
ERASE ALL
START
EDIT SET

TOTAL 0:00:00:00
SCENE 0
🔲🔲🔲🔲🔲🔲🔲🔲🔲🔲🔲🔲
      [MENU] : END
```

4

```
VIDEO EDIT    ▶ ❚❚ 0:08:55:06
MARK         1 OUT
UNDO
ERASE ALL
START
EDIT SET

TOTAL 0:00:00:00
SCENE 0
🔲🔲🔲🔲🔲🔲🔲🔲🔲🔲🔲🔲
      [MENU] : END
```

6

```
VIDEO EDIT    ▶ ❚❚ 0:09:07:06
MARK         2 IN
UNDO
ERASE ALL
START
EDIT SET

TOTAL 0:00:12:00
SCENE 1
🔲🔲🔲🔲🔲🔲🔲🔲🔲🔲🔲🔲
      [MENU] : END
```

7

```
VIDEO EDIT    ▶ ❚❚ 0:10:01:23
MARK         4 IN
UNDO
ERASE ALL
START
EDIT SET

TOTAL 0:00:47:12
SCENE 3
🔲🔲🔲🔲🔲🔲🔲🔲🔲🔲🔲🔲
      [MENU] : END
```

Erasing the program you have set

Erase OUT first and then IN from of the last program.
(1) Turn the SEL/PUSH EXEC dial to select UNDO, then press the dial.
(2) Turn the SEL/PUSH EXEC dial to select EXECUTE, then press the dial.
The last set program mark flashes, then the setting is canceled.

To cancel erasing
Select RETURN with the SEL/PUSH EXEC dial in step 2.

Erasing all programs

(1) Turn the SEL/PUSH EXEC dial to select ERASE ALL.
(2) Turn the SEL/PUSH EXEC dial to select EXECUTE, then press the dial.
All the program marks flash, then the settings are canceled.

To cancel erasing all programs
Select RETURN with the SEL/PUSH EXEC dial in step 2.

To cancel a program you have set
Press MENU.
The program is stored in memory until the tape is ejected.

Editing

Note
You cannot operate recording during Digital program editing.

If the tape has a blank portion
You cannot set IN and OUT on the portion.

If there is a blank portion between IN and OUT on the tape
The total time code may not be displayed correctly.

Operation 2: Performing the program (Dubbing a tape)

Make sure that your camcorder and the VCR are connected, and that the VCR is set to recording pause. When you use an i.LINK cable, the following procedure is not necessary.
When you use a digital video camera recorder, set its power switch to VCR/VTR.

(1) Turn the SEL/PUSH EXEC dial to select START.
(2) Turn the SEL/PUSH EXEC dial to select EXECUTE, then press the dial.
Search for the beginning of the first program, then start dubbing.
The program mark flashes.
The SEARCH indicator appears during search, and the EDITING indicator appears during edit on the screen.
The PROGRAM indicator changes to light blue after dubbing ends.
When dubbing ends, your camcorder and the VCR automatically stop.

To stop dubbing during editing
Press ■ using the video operation buttons.

To end the Digital program editing
Your camcorder stops when the dubbing ends. Then the display returns to VIDEO EDIT in the menu settings.
Press MENU to erase the menu display.

You cannot record on the VCR when:
– The tape has run out.
– The write-protect tab on the cassette is set to lock.
– The IR SETUP code is not correct. (when IR is selected)
– The button to cancel recording pause is not correct. (when IR is selected)

NOT READY appears on the LCD screen when:
– The program to operate the Digital program editing has not been made.
– i.LINK is selected but an i.LINK cable is not connected.
– The power of the connected VCR is not turned on. (when you set i.LINK)
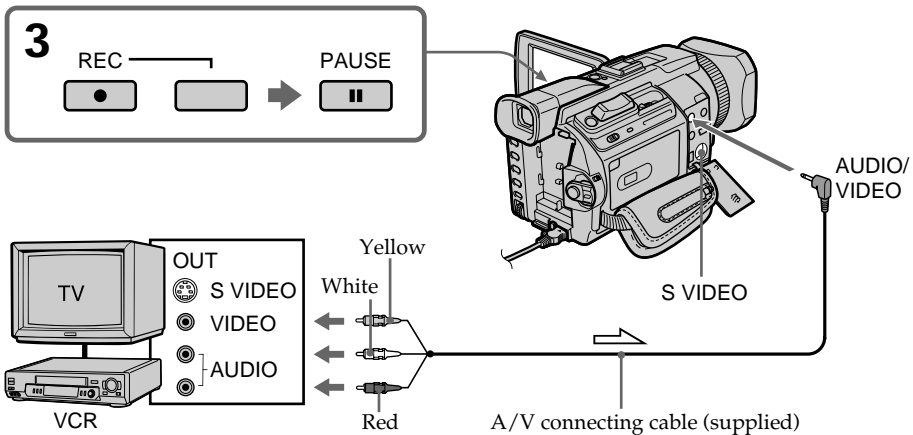
Recording video or TV programs

Using the A/V connecting cable

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

Before operation

Set DISPLAY in ETC to LCD 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 on your camcorder.
(3) Press ● REC and the button on its right simultaneously on your camcorder, then immediately press ❚❚ on your camcorder.
(4) Press ▶ on the VCR to start playback if you record a tape from a VCR. Select a TV program if you are recording from a TV. The picture from a TV or VCR appears on the screen.
(5) Press ❚❚ on your camcorder at the scene where you want to start recording from.

3 REC ——— PAUSE ● ❚❚

AUDIO/VIDEO

S VIDEO

OUT
TV
S VIDEO
Yellow
White
VIDEO
AUDIO
VCR
Red   A/V connecting cable (supplied)

�651⟶ : Signal flow

When you have finished dubbing a tape

Press ■ on both your camcorder and the VCR.

Using the Remote Commander

In step 3, press ● REC and MARK simultaneously, then immediately press ❚❚. In step 5, press ❚❚ at the scene where you want to start recording from.

If your TV or 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.

If your TV or VCR has an S video jack
Pictures can be reproduced more faithfully by using an S video cable (optional).
With this connection, you do not need to connect the yellow (video) plug of the A/V connecting cable.
Connect an S video cable (optional) to the S video jacks of both your camcorder and the TV or VCR.
This connection produces higher quality DV format pictures.
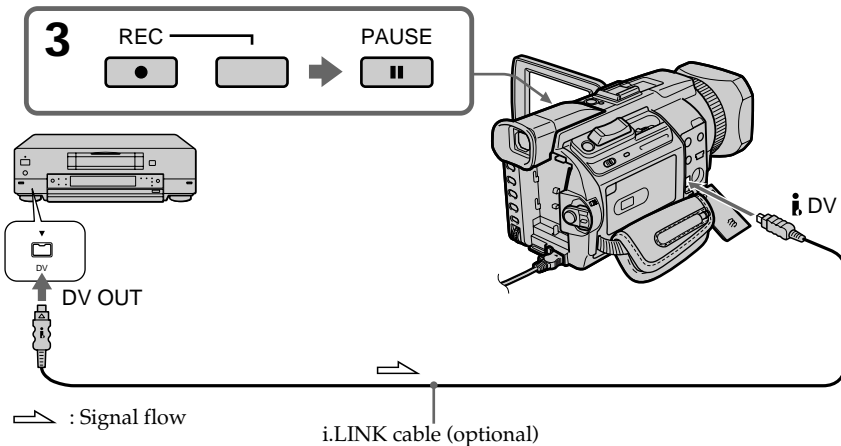
Note on the Remote Commander
Your camcorder works in the commander mode VTR 2. Commander modes 1, 2 and 3 are used to distinguish your camcorder from other Sony VCRs to avoid erroneous remote control operation. If you use another Sony VCR in the commander mode VTR 2, we recommend changing the commander mode or covering the sensor of the VCR with black paper.

Using the i.LINK cable

Simply connect the i.LINK cable (optional) to the 🔌 DV Interface on your camcorder and to DV OUT on the DV products. With a digital-to-digital connection, video and audio signals are transmitted in digital form for high-quality editing.

(1) Insert a blank tape (or a tape you want to record over) into your camcorder, and insert the recorded tape into the VCR.
(2) Set the POWER switch to VCR on your camcorder.
(3) Press ● REC and the button on its right simultaneously on your camcorder, then immediately press ❚❚ on your camcorder.
(4) Press ▶ on the VCR to start playback. The picture to be recorded appears on the screen.
(5) Press ❚❚ on your camcorder at the scene where you want to start recording from.

REC ——— PAUSE

🔌 DV

DV OUT

◁— : Signal flow

i.LINK cable (optional)

When you have finished dubbing a tape

Press ■ on both your camcorder and the VCR.

Using the Remote Commander

In step 3, press ● REC and MARK simultaneously, then immediately press ❚❚. In step 5, press ❚❚ at the scene where you want to start recording from.

Editing

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

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

If you record playback pause picture with the ⅈ **DV Interface**
The recorded picture becomes rough. When you play back the picture using your camcorder, the picture may jitter.

Before recording
Make sure that the DV IN indicator appears on the LCD screen or in the viewfinder. The DV IN indicator may appear on both equipment.

Note on the Remote Commander
Your camcorder works in the commander mode VTR 2. Commander modes 1, 2 and 3 are used to distinguish your camcorder from other Sony VCRs to avoid erroneous remote control operation. If you use another Sony VCR in the commander mode VTR 2, we recommend changing the commander mode or covering the sensor of the VCR with black paper.

Inserting a scene from a VCR
– Insert Editing

You can insert a new scene from a VCR onto your originally recorded tape by specifying the insert start and end points. Use the Remote Commander for this operation. Connections are the same as on page 109 or 111.
Insert a cassette containing the desired scene to insert into the VCR.
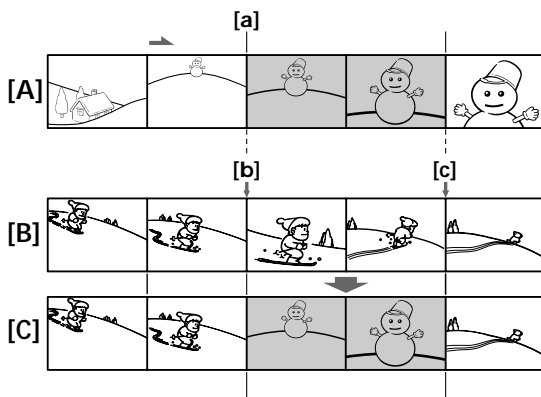
[A]: A tape that contains the scene to be superimposed
[B]: A tape before editing
[C]: A tape after editing

(1) Set the POWER switch to VCR on your camcorder.
(2) On the connected VCR, locate just before the insert start point **[a]**, then press **II** to set the VCR to the playback pause.
(3) On your camcorder, locate the insert end point **[c]**. Then press **II** to set your camcorder to the playback pause.
(4) Press ZERO SET MEMORY on the Remote Commander. The ZERO SET MEMORY indicator flashes and the end point of the insert is stored in memory. The tape counter shows "0:00:00."
(5) On your camcorder, locate the insert start point **[b]** by pressing ◄◄, then press ● REC and the button on its right simultaneously.
(6) First press **II** on the VCR, and after a few seconds press **II** on your camcorder to start inserting the new scene.
Inserting automatically stops near the zero point on the tape counter. Your camcorder automatically returns to the recording pause.

Inserting a scene from a VCR – Insert Editing
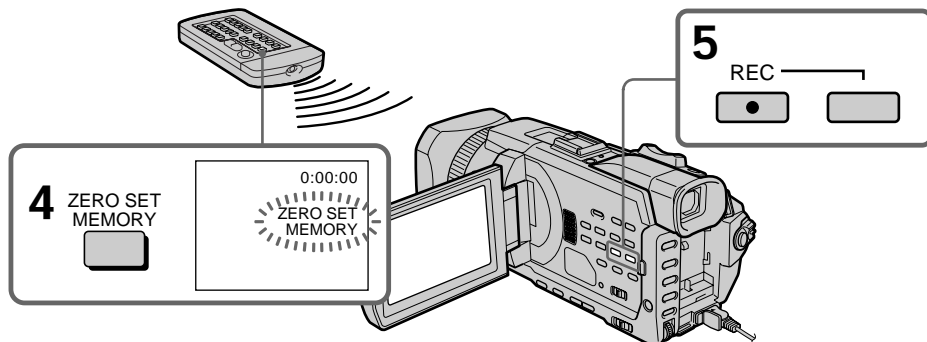
To change the insert end point
Press ZERO SET MEMORY again after step 5 to erase the ZERO SET MEMORY
indicator and begin from step 3.

Using the Remote Commander
In step 5, press ● REC and MARK simultaneously, then immediately press ❚❚. In step 6,
press ❚❚ at the scene where you want to start recording from.

Note
Pictures and sound recorded on the portion between the insert start and end points will
be erased when you insert the new scene.

**If you insert scenes on the tape recorded on another camcorder (including another
DCR-TRV940/TRV950)**
The pictures and sound may be distorted. We recommend that you insert scenes on a
tape recorded on your camcorder.

When the inserted picture is played back
Pictures and sound may be distorted at the end of the inserted portion. This is not a
malfunction.
Pictures and sound at the start point and the end point may be distorted in the LP
mode.

To insert a scene without setting the insert end point
Skip steps 3 and 4. Press ■ when you want to stop inserting.

If you press FN
The ZERO SET MEMORY indicator is not display.

Note on the Remote Commander
Your camcorder works in the commander mode VTR 2. Commander modes 1, 2 and 3
are used to distinguish your camcorder from other Sony VCRs to avoid erroneous
remote control operation. If you use another Sony VCR in the commander mode VTR 2,
we recommend changing the commander mode or covering the sensor of the VCR with
black paper.

Audio dubbing

You can record audio to add to the original sound on a tape by connecting audio equipment or a microphone. If you connect audio equipment, you can add sound to your recorded tape already recorded in the 12-bit mode by specifying the start and end points. The original sound will not be erased.
Use the Remote Commander for this operation.
Select one of the following connections to add audio.

Connecting the microphone with the MIC jack

MIC
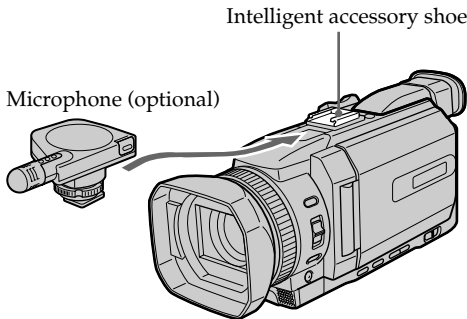(PLUG IN POWER)

Microphone (optional)
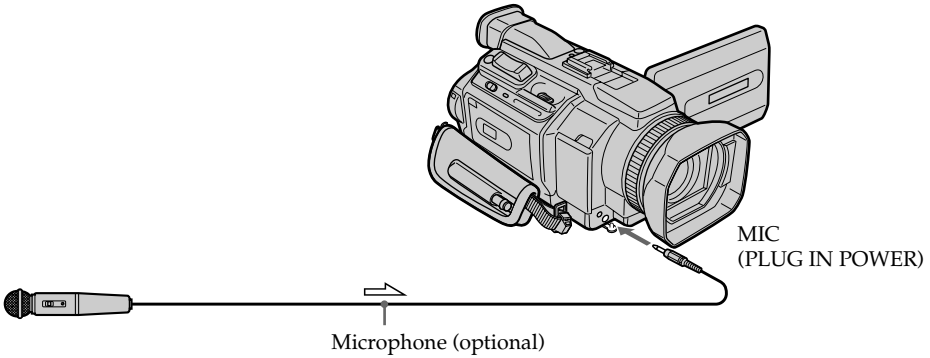
▭➢ : Signal flow

You can check recorded picture and sound by connecting your camcorder to a TV with the A/V connecting cable.
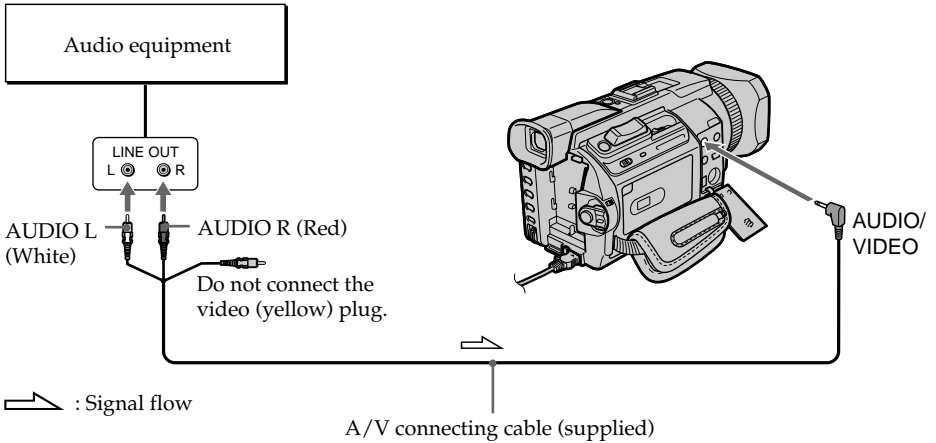Recorded sound is not output from a speaker. Check the sound by using a TV or headphones.

Connecting the microphone to the intelligent accessory shoe

Intelligent accessory shoe

Microphone (optional)

Audio dubbing

Connecting the A/V connecting cable to the AUDIO/VIDEO jack

Audio equipment

LINE OUT
L ◉   ◉ R

AUDIO L (White)

AUDIO R (Red)

Do not connect the video (yellow) plug.

AUDIO/ VIDEO

A/V connecting cable (supplied)

⇒ : Signal flow

Dubbing with the built-in microphone

No connection is necessary.

Notes
• When dubbing with the AUDIO/VIDEO jack or the built-in microphone, pictures are not output through the S VIDEO jack or the AUDIO/VIDEO jack. Check the recorded picture on the screen. You can check the recorded sound by using headphones.
• You cannot add audio with the 🎬 DV Interface.

If you make all the connections
The audio input to be recorded will take precedence over others in the following order:
• MIC (PLUG IN POWER) jack
• Intelligent accessory shoe
• AUDIO/VIDEO jack
• Built-in microphone

116

Audio dubbing

Adding audio on a recorded tape

Choose a connection described on the previous pages, and connect audio equipment or microphone to your camcorder. Then follow the procedure below.

(1) Insert the recorded tape into your camcorder.
(2) Set the POWER switch to VCR on your camcorder.
(3) Locate the recording start point by pressing ►. Then press ❙❙ at the point where you want to start recording to set your camcorder to the playback pause.
(4) Press AUDIO DUB . The green ⏏❙❙ indicator appears on the screen.
(5) Press ❙❙ and start playing back the audio you want to record at the same time. The new sound is recorded in stereo 2 (ST2) during playback. While audio is being recorded, the red ⏏ appears on the screen.
(6) Press ■ at the point where you want to stop recording.

AUDIO DUB

AUDIO DUB

Editing
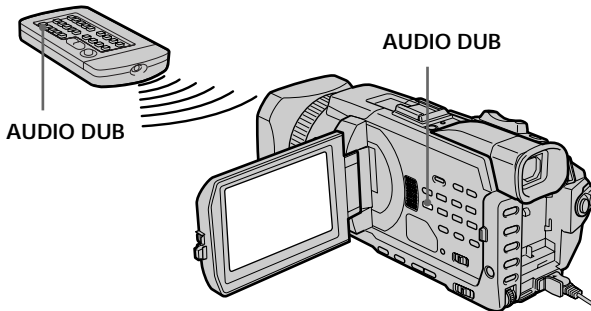
When you dub the recorded sound
You can adjust the recorded sound by using MIC LEVEL (p. 79). However, when the camcorder is connected to the AUDIO/VIDEO jack, sound cannot be adjusted.
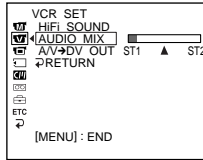
To add audio more precisely
Press ZERO SET MEMORY on the Remote Commander at the point where you want to stop recording later in the playback.
Carry out from steps 3 to 5. Recording automatically stops at the point where ZERO SET MEMORY was pressed.

Monitoring the new recorded sound

(1) Play back the tape on which you added audio.
(2) Turn the SEL/PUSH EXEC dial to select AUDIO MIX in 🔲 in the menu settings, then press the dial.

```
        VCR  SET
🔲  HiFi  SOUND
🔲◀AUDIO  MIX         ▮
🔲   A/V➔DV  OUT   ST1    ▲    ST2
🔲   ⮐RETURN
🔲
🔲
🔲
ETC
⮐
        [MENU] : END
```

(3) Turn the SEL/PUSH EXEC dial to adjust the balance between the original sound (ST1) and the new sound (ST2), then press the dial.

Five minutes after you remove the power supply or the battery pack, the AUDIO MIX setting returns to original sound (ST1) only. The default setting is original sound only.

Notes
• New audio cannot be recorded on a tape already recorded in the 16-bit mode (32 kHz, 44.1 kHz or 48 kHz).
• New audio cannot be recorded on a tape already recorded in the LP mode.
• You cannot add audio on the blank portion of the tape.

If an i.LINK cable (optional) is connected to your camcorder
You cannot add audio to a recorded tape.

We recommend that you add audio on a tape recorded with your camcorder
If you add audio on a tape recorded with another camcorder (including another DCR-TRV940/TRV950), the sound quality may become worse.

If you set the write-protect tab of the cassette to lock
You cannot record on a tape. Slide the write-protect tab to release the write protection.

Superimposing a title

CM only — If you use a tape with cassette memory, you can superimpose the title. When you play back the tape, the title is displayed for five seconds from the point where you superimposed it.
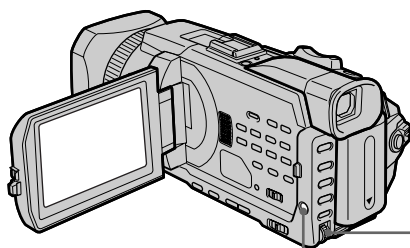
VACATION

(1) In the recording , recording standby, playback or playback pause, press MENU, then select TITLE in ▣ with the SEL/PUSH EXEC dial (p. 213).
(2) Turn the SEL/PUSH EXEC dial to select ▭, then press the dial.
(3) Turn the SEL/PUSH EXEC dial to select the desired title, then press the dial. The title flashes.
(4) Change the color, size, or position, if necessary.
   ① Turn the SEL/PUSH EXEC dial to select COLOR, SIZE or POSITION, then press the dial. The selected item appears.
   ② Turn the SEL/PUSH EXEC dial to select the desired item, then press the dial.
   ③ Repeat steps ① and ② until the title is laid out as desired.
(5) Press the SEL/PUSH EXEC dial again to complete the setting.
   In the recording, playback or playback pause:
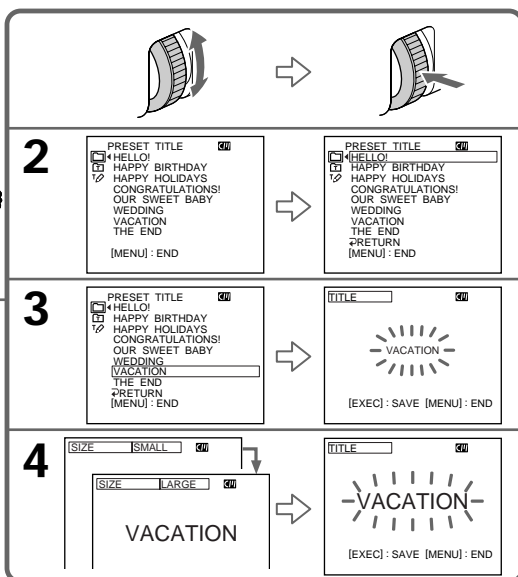   The TITLE SAVE indicator appears on the screen for five seconds and the title is set.
   In the standby:
   The TITLE indicator appears. When you press START/STOP to start recording, TITLE SAVE appears on the screen for five seconds, and the title is set.

Editing

MENU

2
```
PRESET TITLE        ▣
▭◀HELLO!
   HAPPY BIRTHDAY
   HAPPY HOLIDAYS
   CONGRATULATIONS!
   OUR SWEET BABY
   WEDDING
   VACATION
   THE END

[MENU] : END
```
⇨
```
PRESET TITLE        ▣
▭◀HELLO!
   HAPPY BIRTHDAY
   HAPPY HOLIDAYS
   CONGRATULATIONS!
   OUR SWEET BABY
   WEDDING
   VACATION
   THE END
  ⏎RETURN
[MENU] : END
```

3
```
PRESET TITLE        ▣
▭◀HELLO!
   HAPPY BIRTHDAY
   HAPPY HOLIDAYS
   CONGRATULATIONS!
   OUR SWEET BABY
   WEDDING
   VACATION
   THE END
  ⏎RETURN
[MENU] : END
```
⇨
```
TITLE               ▣

     VACATION

[EXEC] : SAVE  [MENU] : END
```

4
```
SIZE     SMALL   ▣
  SIZE     LARGE   ▣

     VACATION
```
⇨
```
TITLE               ▣

     VACATION

[EXEC] : SAVE  [MENU] : END
```

Superimposing a title

If you set the write-protect tab of the tape to lock
You cannot superimpose or erase the title. Slide the write-protect tab to release the write protection.

To use a custom title
If you want to use a custom title, select ▣ in step 2.

If the tape has a blank portion
You cannot superimpose a title on the portion.

If the tape has a blank portion between recorded portions
Titles may not be displayed correctly.

Titles superimposed with your camcorder
• Titles are displayed by only the ᴹⁱⁿⁱ DV format video equipment with an index titler.
• The point you superimposed the title may be detected as an index signal when searching a recording with other video equipment.

If the tape has too many index signals
You may not be able to superimpose a title because memory becomes full. In this case, delete data you do not need.

To not display titles
Set TITLE DSPL to OFF in the menu settings (p. 213).

Title setting
• The title color changes as follows:
  WHITE ←→ YELLOW ←→ VIOLET ←→ RED ←→ CYAN ←→ GREEN ←→ BLUE
• 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 SMALL, you have nine choices for the title position.
  If you select LARGE, you have eight choices for the title position.

One cassette can have up to about 20 titles, with each title comprising five characters
However, if the cassette memory is full with date, photo and cassette label data, one cassette can have only up to about 11 titles each comprising five characters.
Cassette memory capacity is as follows:
– six date data
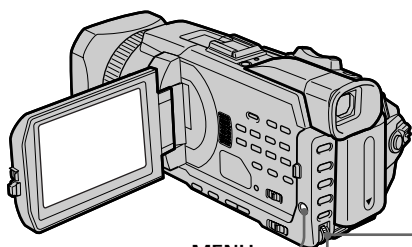– 12 photo data
– one cassette label

If the " FULL" mark appears
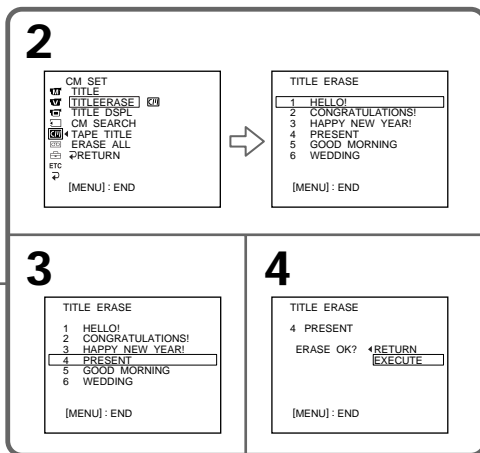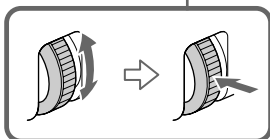The cassette memory is full. Erase unwanted titles.

Superimposing a title

Erasing a title

(1) Set the POWER switch to CAMERA or VCR.
(2) Press MENU, then turn the SEL/PUSH EXEC dial to select TITLEERASE in ⬛, then press the dial (p. 213).
(3) Turn the SEL/PUSH EXEC dial to select the title you want to erase, then press the dial. ERASE OK ? indicator appears.
(4) Make sure that the title is the one you want to erase, and turn the SEL/PUSH EXEC dial to select OK, then press the dial. OK changes to EXECUTE.
(5) Turn the SEL/PUSH EXEC dial to select EXECUTE, then press the dial. The ERASING flashes on the screen. When the title is erased, the COMPLETE is displayed.

2

```
CM SET
    TITLE
⬛  TITLEERASE  ⬛
⬛  TITLE DSPL
⬛  CM SEARCH
⬛ ◄ TAPE TITLE
⬛  ERASE ALL
⬛  ⤸RETURN
ETC
⤶
    [MENU] : END
```

```
TITLE ERASE
1   HELLO!
2   CONGRATULATIONS!
3   HAPPY NEW YEAR!
4   PRESENT
5   GOOD MORNING
6   WEDDING

    [MENU] : END
```

MENU

3

```
TITLE ERASE
1   HELLO!
2   CONGRATULATIONS!
3   HAPPY NEW YEAR!
4   PRESENT
5   GOOD MORNING
6   WEDDING

    [MENU] : END
```

4

```
TITLE ERASE
4   PRESENT

  ERASE OK?  ◄ RETURN
             EXECUTE

    [MENU] : END
```
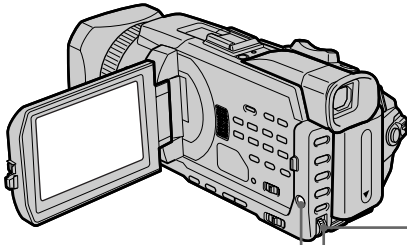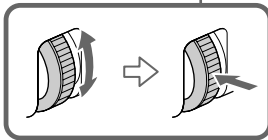
To cancel erasing a title
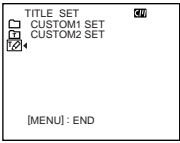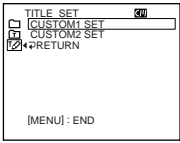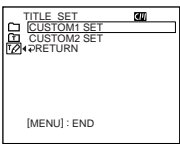Select RETURN in step 4 or 5.

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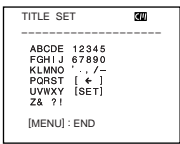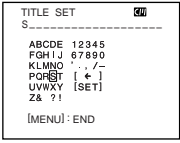
You can make up to two titles and store them in the memory of your camcorder. Each title can have up to 20 characters.

(1) Set the POWER switch to CAMERA or VCR.
(2) Press MENU, then turn the SEL/PUSH EXEC dial to select TITLE in 🎬, then press the dial (p. 213).
(3) Turn the SEL/PUSH EXEC dial to select 📝 , then press the dial.
(4) Turn the SEL/PUSH EXEC dial to select CUSTOM1 SET or CUSTOM2 SET, then press the dial.
(5) Turn the SEL/PUSH EXEC dial to select the column of the desired character, then press the dial.
(6) Turn the SEL/PUSH EXEC dial to select the desired character, then press the dial.
(7) Repeat steps 5 and 6 until you have selected all characters and completed the title.
(8) To finish making your own titles, turn the SEL/PUSH EXEC dial to select [SET], then press the dial.

3

| TITLE SET 🎬 |
| □ CUSTOM1 SET |
| 🖽 CUSTOM2 SET |
| 📝◀ |
| [MENU] : END |

| TITLE SET 🎬 |
| □ CUSTOM1 SET |
| 🖽 CUSTOM2 SET |
| 📝◀RETURN |
| [MENU] : END |

4

| TITLE SET 🎬 |
| □ CUSTOM1 SET |
| 🖽 CUSTOM2 SET |
| 📝◀RETURN |
| [MENU] : END |

| TITLE SET 🎬 |
| _____ |
| ABCDE 12345 |
| FGHIJ 67890 |
| KLMNO '.,/– |
| PQRST [←] |
| UVWXY [SET] |
| Z& ?! |
| [MENU] : END |

MENU

5
~
7

❶
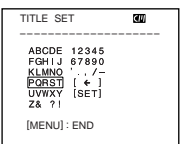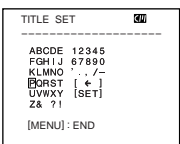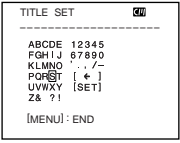| TITLE SET 🎬 |
| _____ |
| ABCDE 12345 |
| FGHIJ 67890 |
| KLMNO '.,/– |
| PQRST [←] |
| UVWXY [SET] |
| Z& ?! |
| [MENU] : END |

❷
| TITLE SET 🎬 |
| _____ |
| ABCDE 12345 |
| FGHIJ 67890 |
| KLMNO '.,/– |
| PQRST [←] |
| UVWXY [SET] |
| Z& ?! |
| [MENU] : END |

❸
| TITLE SET 🎬 |
| _____ |
| ABCDE 12345 |
| FGHIJ 67890 |
| KLMNO '.,/– |
| PQRST [←] |
| UVWXY [SET] |
| Z& ?! |
| [MENU] : END |

❹
| TITLE SET 🎬 |
| S_____ |
| ABCDE 12345 |
| FGHIJ 67890 |
| KLMNO '.,/– |
| PQRST [←] |
| UVWXY [SET] |
| Z& ?! |
| [MENU] : END |

Making your own titles

To change a title you have stored
In step 4, select CUSTOM1 SET or CUSTOM2 SET, depending on which title you want to change, then press the SEL/PUSH EXEC dial. Turn the SEL/PUSH EXEC dial to select [←], then press the dial to delete the title. The last character is erased. Enter the new title as desired.

If you take five minutes or longer to enter characters in the standby while a cassette is set 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 proceed from step 1.
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 delete the title
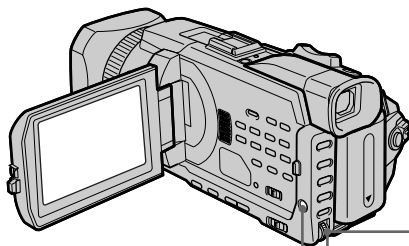Select [←]. The last character is erased.

To enter a space
Select [Z&　？！], then select the blank part.

Editing

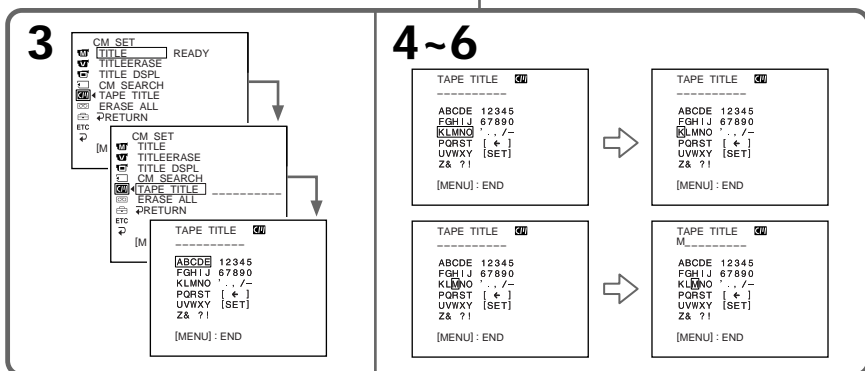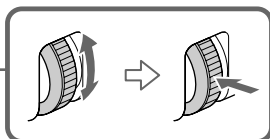**123**

Labeling a cassette

CM only

If you use a cassette with cassette memory, you can label a cassette. Labels can consist of up to 10 characters and is stored in cassette memory. When you insert the labeled cassette and when the POWER switch is set to CAMERA or VCR, the label is displayed for about five seconds.

(1) Insert the cassette you want to label.
(2) Set the POWER switch to CAMERA or VCR.
(3) Press MENU, then turn the SEL/PUSH EXEC dial to select TAPE TITLE in [CM], then press the dial (p. 213). Tape title display appears.
(4) Turn the SEL/PUSH EXEC dial to select the column of the desired character, then press the dial.
(5) Turn the SEL/PUSH EXEC dial to select the desired character, then press the dial.
(6) Repeat steps 4 and 5 until you finish the label.
(7) Turn the SEL/PUSH EXEC dial to select [SET], then press the dial.
The label is stored in the memory.

MENU

3

```
CM SET
  TITLE         READY
  TITLEERASE
  TITLE DSPL
  CM SEARCH
  TAPE TITLE
  ERASE ALL
  RETURN

ETC
      [M
```

```
        CM SET
  TITLE
  TITLEERASE
  TITLE DSPL
  CM SEARCH
  TAPE TITLE
  ERASE ALL
  RETURN

ETC
      [M
```

```
TAPE TITLE    CM
––––––––––
ABCDE  12345
FGHIJ  67890
KLMNO  ' . , /–
PQRST  [ ← ]
UVWXY  [SET]
Z& ?!

[MENU] : END
```

4~6

```
TAPE TITLE    CM
––––––––––
ABCDE  12345
FGHIJ  67890
KLMNO  ' . , /–
PQRST  [ ← ]
UVWXY  [SET]
Z& ?!

[MENU] : END
```

```
TAPE TITLE    CM
––––––––––
ABCDE  12345
FGHIJ  67890
KLMNO  ' . , /–
PQRST  [ ← ]
UVWXY  [SET]
Z& ?!

[MENU] : END
```

```
TAPE TITLE    CM
––––––––––
ABCDE  12345
FGHIJ  67890
KLMNO  ' . , /–
PQRST  [ ← ]
UVWXY  [SET]
Z& ?!

[MENU] : END
```

```
TAPE TITLE    CM
M–––––––––
ABCDE  12345
FGHIJ  67890
KLMNO  ' . , /–
PQRST  [ ← ]
UVWXY  [SET]
Z& ?!

[MENU] : END
```

To erase the label you have made
In step 4 turn the SEL/PUSH EXEC dial to select [←], then press the dial. The last character is erased.

To change the label you have made
Insert the cassette to change the label, and operate in the same way to make a new label.

If you set the write-protect tab of the cassette to lock
You cannot label the tape. Slide the write-protect tab to release the write protection.

If the tape has too many index signals
You may not be able to label a cassette because the cassette memory becomes full. In this case, delete data you do not need.

If you have superimposed titles in the cassette
When the label is displayed, up to four titles also appear.

When the "-----" indicator has fewer than 10 spaces
The cassette memory is full.
The "-----" indicates the number of characters you can select for the label.

To delete the title
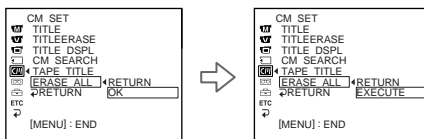Select [←]. The last character is erased.

To enter a space
Select [Z&   ? !], then select the blank part.

Erasing all the data in cassette memory

You can erase all the data in cassette memory at once.

(1) Set the POWER switch to CAMERA or VCR.
(2) Press MENU, then turn the SEL/PUSH EXEC dial to select ERASE ALL in 🎞, then press the dial (p. 213).
(3) Turn the SEL/PUSH EXEC dial to select OK, then press the dial. OK changes to EXECUTE.

```
 CM  SET                          CM  SET
🎞  TITLE                        🎞  TITLE
🎞  TITLEERASE                   🎞  TITLEERASE
🎞  TITLE DSPL                   🎞  TITLE DSPL
🎞  CM SEARCH                    🎞  CM SEARCH
🎞  TAPE TITLE                   🎞  TAPE TITLE
🎞 ⟨ERASE ALL ⟩RETURN           🎞 ⟨ERASE ALL ⟩RETURN
🎞  ⟳RETURN    OK                🎞  ⟳RETURN    EXECUTE
ETC                              ETC
⟳                               ⟳
    [MENU] : END                     [MENU] : END
```

(4) Turn the SEL/PUSH EXEC dial to select EXECUTE, then press the dial. ERASING flashes on the screen. When all the data is erased, COMPLETE is displayed.

To cancel deleting
Select RETURN with the SEL/PUSH EXEC dial in step 3 or 4.

Using a "Memory Stick" – Introduction

You can record and play back images on the "Memory Stick" supplied with your camcorder. You can easily play back, record or delete images. You can exchange image data with other equipment such as your computer etc., using the USB cable for the "Memory Stick" supplied with your camcorder.

On file format

Still image (JPEG)
Your camcorder compresses image data in JPEG format (extension .jpg).
Moving picture (MPEG)
Your camcorder compresses picture data in MPEG format (extension .mpg).

Typical image data file name

Still image
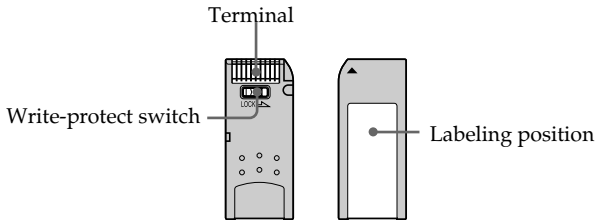100-0001:   This file name appears on the screen of your camcorder.
Dsc00001.jpg: This file name appears on the display of your computer.

Moving picture
MOV00001:   This file name appears on the screen of your camcorder.
Mov00001.mpg: This file name appears on the display of your computer.

Using a "Memory Stick"

Terminal

Write-protect switch

Labeling position

- You cannot record or erase images when the write-protect switch on the "Memory Stick" is set to LOCK.
- The position and shape of the write-protect switch may be different depending on the model.
- We recommend backing up important data on the hard disk of your computer.
- Image data may be damaged in the following cases:
  – If you eject the "Memory Stick" or turn the power off during reading or writing.
  – If you use a "Memory Stick" near static electricity or magnetic fields.
- Prevent metallic objects or your finger from coming into contact with the metal parts of the terminal.
- Stick the label at the labeling position.
- Do not bend, drop or apply strong shock to a "Memory Stick."
- Do not disassemble or modify a "Memory Stick."
- Do not let a "Memory Stick" get wet.
- Do not use or keep a "Memory Stick" in locations that are:
  – Extremely hot such as in a car parked in the sun or under the scorching sun.
  – Under direct sunlight
  – Very humid or subject to corrosive gases
- When you carry or store a "Memory Stick," put it in its case.

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"Memory Stick" formatted on computer

The "Memory Stick" formatted on Windows OS or Macintosh computers is not guaranteed compatible with your camcorder.

Notes on image data compatibility

• Image data files recorded on the "Memory Stick" by your camcorder conform with the Design Rules for Camera File Systems universal standard established by the JEITA (Japan Electronics and Information Technology Industries Association). You cannot play back on your camcorder still images recorded on other equipment (DCR-TRV890E/TRV900/TRV900E or DSC-D700/D770) that does not conform with this universal standard. (These models are not sold in some areas.)
• If you cannot use the "Memory Stick" that is used with other equipment, format it with this camcorder (p. 212). However, formatting erases all information on the "Memory Stick."

• "Memory Stick" and ⬛ MEMORY STICK ™ are trademarks of Sony Corporation.
• All other product names mentioned here may be the trademarks or registered trademarks of their respective companies.
  "TM" and "®" are not mentioned in each case in this manual.

"Memory Stick" Operations

Inserting a "Memory Stick"

(1) Slide the MEMORY OPEN in the direction of the arrow to open the "Memory Stick" slot.
(2) Insert a "Memory Stick" in the "Memory Stick" slot as far as it can go with the ▶ mark facing up as illustrated. Close the "Memory Stick" slot.

1
Access lamp
MEMORY OPEN

"Memory Stick" slot

2

▶ mark
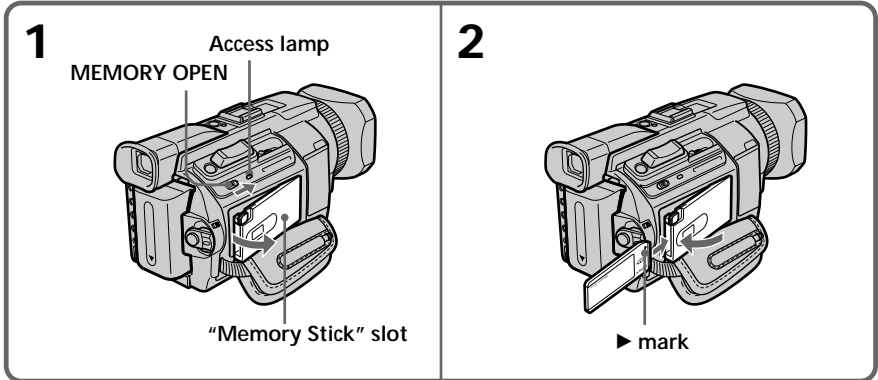
Ejecting a "Memory Stick"

Press MEMORY EJECT once lightly to eject it.
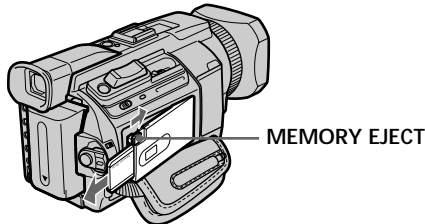
MEMORY EJECT

While the access lamp is lit or flashing
Do not shake or knock your camcorder because your camcorder is reading the data from the "Memory Stick" or recording the data on the "Memory Stick." Do not turn the power off, eject the "Memory Stick." Otherwise, image data may become damaged.

If " MEMORYSTICK ERROR" is displayed
Reinsert the "Memory Stick" a few times. The "Memory Stick" may be damaged if the indicator is still displayed. If this occurs, use another "Memory Stick."