

**SONY**<sup>®</sup>

3-858-174-12 (1)

# **Digital Video Camera Recorder**

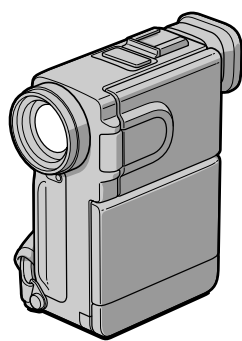
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## Operating Instructions

Before operating the unit, please read this manual thoroughly,  
and retain it for future reference.

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èÄ Å%ò´íÖÖÏÜ†Ú†`ÈÄÈ†ÖÖ† †Ú†,îÈ†ÚÁÍ,ìÖÖ Ó´ÚÈÚÄ,  
ÓÓÈ†ÏÈÖÚ†,%ò†ììÖÄ ÚíÖ,Ó%òÖÚ,ÓÈÖÓì †ñÈÚÄÄ,Ó%òñ  
%ò†ì,ìÄÈ`Èì ÖÖ †,Óí.



**DCR-PC7E**

Mini **DV** Digital  
Video  
Cassette  
**Handycam Vision**<sup>™</sup>

©1996 by Sony Corporation

DCR-PC7E.3-858-174-12(E,R)





**Before you begin**


**Using this manual**

**εΑ Α%ο ιτ-τΙΟΙ ρΙΟΟιUτUτ-ΕΕ**

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**Welcome !**

Congratulations on your purchase of this Sony Handycam Vision™ camcorder. With your Handycam Vision, you can capture life's precious moments with superior picture and sound quality. Your Handycam Vision is loaded with advanced features, but at the same time it is very easy to use. You will soon be producing home video that you can enjoy for years to come.

As you read through this manual, buttons and settings on the camcorder are shown in capital letters. e.g., Set the POWER switch to CAMERA. As indicated with  in the illustrations, you can hear the beep sound to confirm your operation.

**Note on TV colour systems**


TV colour systems differ from country to country. To view your recordings on a TV, you need an PAL system-based TV.

**Precaution on copyright**

Television programmes, films, video tapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provision of the copyright laws.

**ΝΟ· Ο ΟΟΕτΙΟ,τU, !**

εΟΑ%ο τ.ΙηΑιτUτΟΟ ΕΟ· ΑUΑιΕΑι  
%οτΙΙΟΕ ,Ε%οΑΟιτΙΑ ° Handycam Vision ™  
UΕ ι° Sony. ε ΟΟΙΟ~ ,τUτ-ΑΕ  
,Ε%οΑΟιτΙΑ ° Handycam τUτ ΟΙΟΕΑUΑ  
ΑτUΑ-τUιΑU, %οΟ Ο,,ΕΑ τUτ ι,,ΙΟ,ΑιΕη  
ΕΕΑιΕ Ο Ο Α,ΟΟιΟ%οι ι τUτ-ΑΟΥ,Οι  
ΕΑΟ· τUτΑιΕη Ε Α,Uιτ.  
τUτ τ ,Ε%οΑΟιτΙΑ τ Handycam Vision  
ΟΟιτ-Αιτ UΟΟ,Α τΑιU,Ο,τΙι ιΕ  
UUιτ-ΕηιΕ, ΙΟ , UΟ ΕΑ , Αη ΑΑ Ο-Αι  
ΙΑ,ΙΟ ΕΟΟΟι,ΑΟ,τUτ . ΟΙΟ Α τUτ· U%οΑUΑ  
ΟΟΑ%οτUτ, ΟΑιΑΕι-Α ,Ε%οΑΟΟ Ο, τUτ ι,  
ΙΟΥΟ ιΕ ΟΙΟΕΑUΑ ιτUτΕ%οτUτ,Οη  
ΟΟΟΙΑ%οUτ-ΕΑ,,Ο%ο·

αΟ,,%οτUτ· U%οΑUΑ-ΕUτUτ, %οτΙΙΟΑ UΙΟ,Ο%ου,Ο,  
Uτ-ΕUτ,τUτUΑ, τUτ ΙΙΟΟιΕ Ε UΟΥτΙΟ,ιΕ ιτ  
,Ε%οΑΟιτΙΑ Α ΟΟιτΑτΙ° Ατ,,ιτ,ι° ιΕ ·Uι,τUτΕ.  
ε Ει. ΙΟΥτΙΟ,ΕUΑ , ιιτ-τUτΑι, POWER ,  
ΟΟΙΟΕΑιΕΑ CAMERA.  
ΟΟιΕ ιτ ΕΟUιιτ, UιτΑ°,τUτUΟη ΑιτΙ  UΟ  
τUτ ΙΟΕΑUΑ ΟiUτUτ ΑUτΙΑ ι-Ε Α,UΙΟ,ΟΕ  
ΟΕ,,ιτ ι%οη ΟΟ%ου,Α Ε%οΑιΕη τUτ-ΑΕ τUτ·

ε ΕiΑτ-τΙΕΑ ι ΟΕΟUΑιτΙ  
^,ΑUΙΟ,,Ο UΑiΑ,Ε%οΑιΕη

εΕΟUΑιτ^ ,ΑUιΟ,Ο UΑiΑ,Ε%οΑιΕη ΟUιΕ-τUτUΟη  
,Ατ,ΕΟΕiΟΟUΕ ΟUΟU τΙ°. Νη Ο ΟΟiΟΥ τ  
τUτ-Ει ΑτUΕΟΑΕ ΟΟUΑiΑ,ΕΑΟ UτUτ  
iΑΟ·iΟ%οΕiΟ ΕΟΟΟι,ΑΟ,τUτ, UΑiΑ,ΕΑΟ ,  
ΟΟiΟ,τΙι Ε ιτ ΕΕΟUΑiΑ PAL.

ε Α%οΟΟUΑ ΑΕΑiΕΑΟ· τUτUΟ ΟiΟι  
Ο τUτ,Α

iΑiΑ,ΕΑΕΟιι-Α Ο Ο, τUτ ι, iΕiΟΥΕiτ, ι°  
,Ε%οΑΟiΑiU° Ε %ο U,,ΕΑ ιτUτ ΕτΙ ιΟ,,UU ·U,  
Ατ-Ε-Αι° τUτUΟ ΟiΕi Ο τUτ,Οi.  
τUτUΟ τUτ,ΟiΟ-ιτη ΑτUΕΟ, UτUτΕι ιτUτ ΕτΙΟ,  
iΟΕΑU Ο ΟUΕ,Ο Α-ΕU, UΟiΟ,Εηi ΑτΙΟιτUτ·  
τUτUΟ ΟiΟi Ο τUτ,Α.

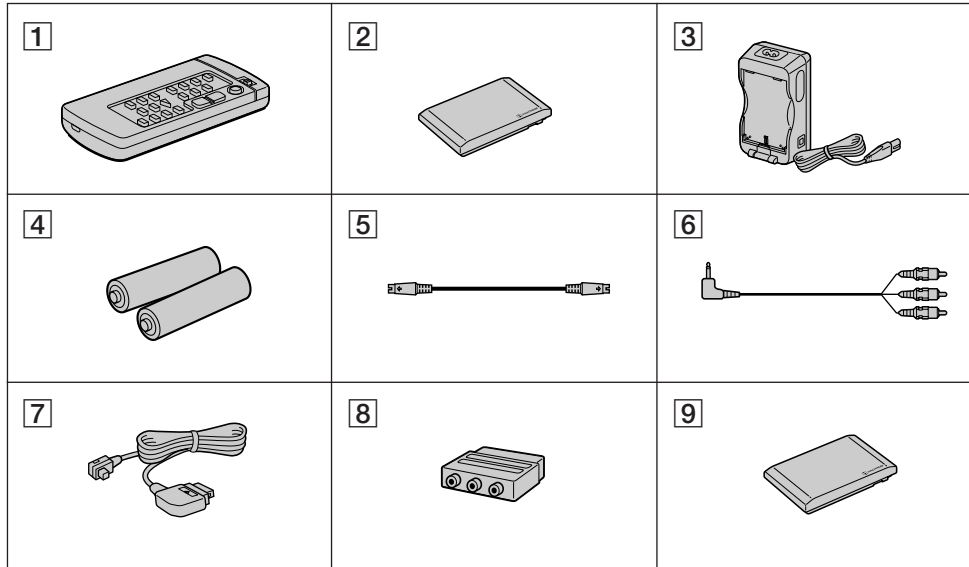


## Checking supplied accessories

ò Ó,À Í±  
 Ò Èí±,±Áì°  
 Ò Èí±%òíÄÈÍÓÙÄÈ

Check that the following accessories are supplied with your camcorder.

è Ó,À ,ÚÄ,´ÚÓÒíÄ%òÚ,`ÈÄÔ Èí±%òíÄÈÍÓÙÈ  
 Ò Èí±,±,ÚÒíí Í Ç±-ÄÈ,È%òÄÓí±íÄ Ä.



1 Wireless Remote Commander (1) (p. 85)

2 NP-F100 battery pack (1) (p. 7)

3 AC-V100 AC power adaptor (1) (p. 7, 25)  
 The shape of the plug varies from region to region.

4 R6 (size AA) battery for Remote Commander (2) (p. 86)

5 S video connecting cable (1) (p. 47, 53)

6 A/V connecting cable (1) (p. 47, 53)

7 DK-626 connecting cord (1) (p. 25)

8 21-pin adaptor (1) (p. 48)

9 Battery terminal cover (1) (p. 10)

1 ÄÄÒÒ Ó,Ó%òì`È ÒÚí,Ú %òÈÒÚ±ì`ÈÓìÒ,Ó  
 ÚÒ ±,íÄìÈíí (1) (ÒÚ . 85)

2 Ä±Ú± ÄÈì`È .íÓí NP-F100 (1) (ÒÚ . 7)

3 ëÄÚÄ,ÓÈ ±%ò±ÓÚÄ ÒÄ Äí. ÚÓí± AC-V100 (1)  
 (ÒÚ . 7, 25)  
 íÓ í± `ÚÄÒÒÄí,ìÓÈ ,ÈííÈ ±ÁíÈ`±ÄÚÒíí ,  
 Ä±,ÈÒÈÍÓÙÈÈÓÚ Ä,ÈÒí±ÈÓÓÍ,ÁÓ,±íÈíí.

4 Ä±Ú± ÄÈí± R6 ( ±ÁíÄ Óí ÄÄ) %òíí ÒÚí,Ú±  
 %òÈÒÚ±ì`ÈÓìÒ,Ó ÚÒ ±,íÄìÈíí (2) (ÒÚ . 86)

5 ëÓÄ%òÈìÈÚÄí,ì`È í±.Äí, S-,È%òÄÓ (1)  
 (ÒÚ . 47, 53)

6 ëÓÄ%òÈìÈÚÄí,ì`È í±.Äí, ±Ú%òÈÓ/,È%òÄÓ  
 (1) (ÒÚ . 47, 53)

7 ëÓÄ%òÈìÈÚÄí,ì`È ñÚ DK-626 (1)  
 (ÒÚ 25)

8 21-Ú° ,ìÓ,`È ±%ò±ÓÚÄ (1) (ÒÚ . 48)

9 ä `í± .±Ú± ÄÈì`ì íÓìÚ±íÚÓ, (1) (ÒÚ .  
 10)

## Getting started

# Charging and installing the battery pack

Before using your camcorder, you first need to charge and install the battery pack. To charge the battery pack, use the supplied AC power adaptor.

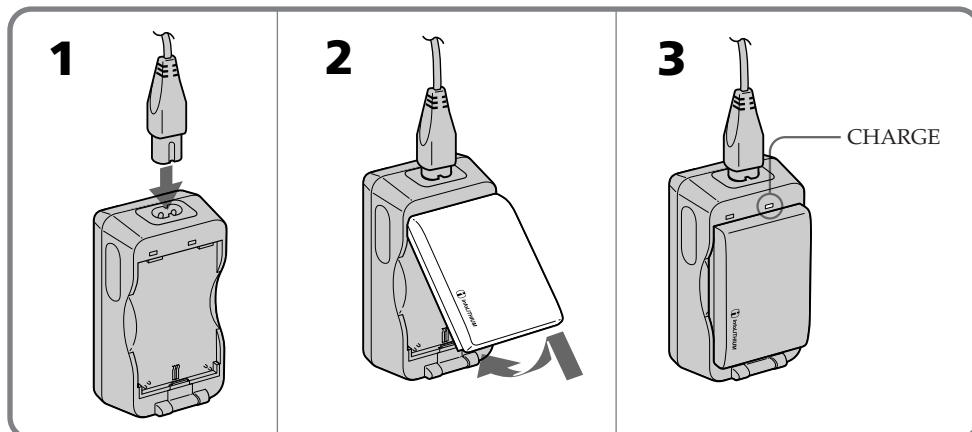
This camcorder operates with the NP-F100/NP-F200 "InfoLITHIUM" battery pack.

"InfoLITHIUM" is a trademark of Sony Corporation.

## Charging the battery pack

- (1) Connect the mains lead to the AC power adaptor.
- (2) Align the hooks of the battery pack with the AC power adaptor. Then fit the battery pack in the direction of the arrow.
- (3) Connect the mains lead to mains. The CHARGE lamp (orange) lights up. Charging begins.

When the CHARGE lamp goes out, normal charge is completed (**Normal charge**). For a full charge, which allows you to use the battery longer than usual, leave the battery pack in place for approximately one hour (**Full charge**). Unplug the cord from the mains, then remove the battery pack and install it into the camcorder. You can also use the battery pack before it is completely charged.



Continued to the next page

## Getting started / InfoLITHIUM

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Continued to the next page







## Charging and installing the battery pack

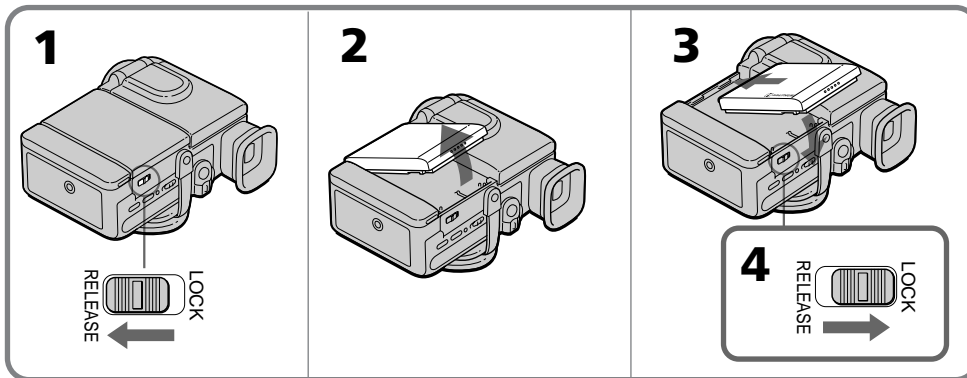
á† fl%ó† È ÛòÙ†íó,††  
·†Ú† ÂÈíó,,ó ·íó†

### Installing the battery pack

- (1) Set the BATT LOCK/RELEASE switch to RELEASE.
- (2) Remove the battery terminal cover.
- (3) Align the hooks of the battery pack with the catches of the camcorder and place the battery pack in place.
- (4) Set the BATT LOCK/RELEASE switch to LOCK.

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- (1) íòÙ†íó,ÈÚÁ ÒÁ Áí† ·†ÚÁ†, BATT LOCK/RELEASE, ÒíóÉÁ†ÈÁ RELEASE.
- (2) è†È†ÈÚÁ † †í† ·†Ú† ÂÈ††, †íó††íó,,
- (3) á†·ÁÒÈÚÁ † †È †Ú† ÂÈíó,,ó ·íó† Á† Á††,†Ú†,È%Áó††Á ° È ÛòÙ†íó,ÈÚÁ ·†Ú† ÂÈ†È †íó† †ÁòÚó.
- (4) íòÙ†íó,ÈÚÁ ÒÁ Áí† ·†ÚÁ†, BATT LOCK/RELEASE, ÒíóÉÁ†ÈÁ LOCK.



### To remove the battery pack

Follow the procedure above and in step 3, remove the battery pack. When removing the battery pack, be careful not to drop it.

### Note on battery terminal cover

To protect the battery terminals, install the battery terminal cover after the battery pack is removed.

### Note on BATT LOCK/RELEASE switch

Be sure that the BATT LOCK/RELEASE switch is set to LOCK when the battery pack is installed. Otherwise, it may drop out when you use the camcorder.

### To prevent malfunction

In the following cases make sure that the POWER switch is set to OFF first.

- Installing and removing the battery pack.
- Inserting and ejecting a cassette.

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3, Ò†È†ÈÚÁ ·†Ú† ÂÈ†È †íó†. è È Ò††ÚÈÈ  
·†Ú† ÂÈíó,,ó ·íó† ·Ú%,ÚÁ ÒòÚó ÒÈ†, †Úó·  
Á,ò†Á Û ò†ÈÚ.

è È†Á·††ÈÁ † ††Á †Ú† ÂÈ††  
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ÒòíÁ Ò††ÚÈ† ·†Ú† ÂÈíó,,ó ·íó†.

è È†Á·††ÈÁ † ÒÁ Áí† ·†ÚÁ†, BATT  
LOCK/RELEASE  
†·Á%ÈÚÁò,, †Úó ÒÁ Áí† ·†ÚÁ†, BATT LOCK/  
RELEASE †††%ÈÚó††, ÒíóÉÁ†ÈÁ LOCK,  
†ó,,%† ÛòÙ†íó,†Á† ·†Ú† ÂÈ†È †íó†. Ç  
Ó ÒÚÈ,†íó† ò††·†Á ò††ÈÁÚ, °ò†òÚ,, †ó,,%†  
Ç ·Ú%ÁÚÁ Èòóó†,Áó,†Ú,,È%Áó††Á Û.

Ñ†† Ó Á%òÚ, †·Á†È†† †ÈÈòó †.†óóÚÈ  
Ç Ò†Á%ò†† È† ò††·†††, ÒòÁ, †·Ú·Á%ÈÚÁò,, †Úó  
·†† ·†ÚÁ†, POWER ÛòÙ†íó,†Á† ,  
ÒòíóÉÁ†ÈÁ OFF.  
• íòÙ†íó,†† È Á††Á†† ·†Ú† ÂÈíó,,ó ·íó†.  
• ÇòÚ†,†† È †Ú††È,††ÈÁ ††òòÁÚ°.

## Inserting a cassette

## ÇÒÚ±,Í± Í±ÒÒÁÚ°

You can use mini DV cassette with <sup>Mini</sup> DV logo\* only.

Make sure that the power source is installed.

- (1) Place the grip strap away from the lid of the cassette compartment to avoid damaging the lid.
- (2) Open the lid of the cassette compartment and push ▲ EJECT inside the lid. The cassette compartment automatically lifts up and opens.
- (3) Insert a cassette with the window facing out.
- (4) Push the cassette compartment. The cassette compartment is automatically pulled down.
- (5) Close the lid until it clicks.

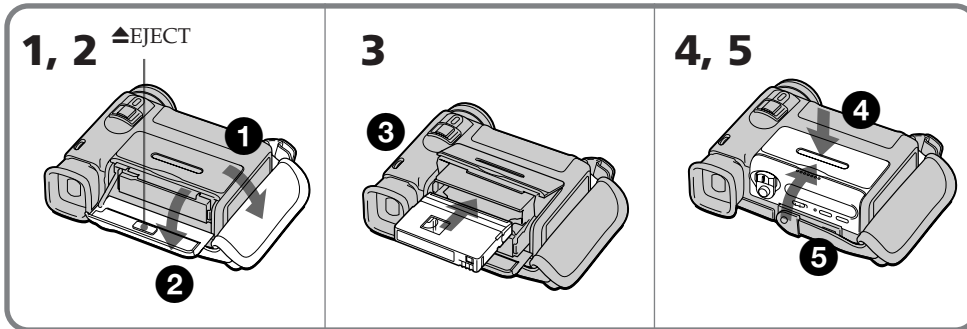
\* <sup>Mini</sup> DV is a trademark.

Ç° ÍÒÉÁÚÁ ÈÒÒÓÍ,ÁÓ,±Ú, ÚÓÍ,ÍÓ Í±ÒÒÁÚÚ mini DV, co Áíáíóí <sup>Mini</sup> DV logo\*.

í-Á%ÉÚÁÒ, °ÚÓ ÈÓÚÓ°ÍÉÍ ÓÉÚ±Èñ ÙÒÚ±Ó,ÍÁì.

- (1) ±±ÒÒÓÍÓÉÉÚÁ ÁíÁìíÓÉÁ±,±Ú, ÓÚÓ ÓíÁ ÓÚ Í °ÍÉ Í±ÒÒÁÚÍÓ,Ó ÓÚÓÁÍ±,Ó ÉÁ-ÁÈ±ÍÉÁ ÓÓ, ÁÈ%ÁìÈñ Í °ÍÉ.
- (2) éÚÍ ÓÉÚÁ Í °ÍÚ Í±ÒÒÁÚÍÓ,Ó ÓÚÓÁÍ±. Ç±ÉÍÉÚÁ ▲ EJECT ,ÍÚÚ È Í °ÍÉ. ±±ÒÒÁÚÍ°È ÓÚÓÁÍ±,ÚÓÍ±ÚÉ°ÁÓÍÉ ÓÓ%ÉÍ±ÁÚÓñÈ ÓÚÍ °,±ÁÚÓñ.
- (3) ÇÒÚ±, ÚÁ Í±ÒÒÁÚÚ ÓÍÓ°ÍÓÍ, Ó. ±°Áì°Í Í±ÚÉÚ.
- (4) Ç±ÉÍÉÚÁ Í±ÒÒÁÚÍ°È ÓÚÓÁÍ. ±±ÒÒÁÚÍ°È ÓÚÓÁÍ±,ÚÓÍ±ÚÉ°ÁÓÍÉ,Úñ,È,±ÁÚÓñ,ÍÉÁ.
- (5) ±±Í ÓÉÚÁ Í °ÍÚ, ÓÓÍ± ÓÍ± ÍÁ Á±°ÁìíÁÚÓñ.

\* <sup>Mini</sup> DV ñ,ÍñÁÚÓñ ÚÓ,± Í°Í Áí±ÍÓÍ.



### Note

Before you close the lid of the cassette compartment, make sure the cassette compartment is completely pulled down.

### To eject the cassette

Follow the procedure above and in step 3, take out the cassette.

### To Prevent Accidental Erasure

Slide and open the tab on the cassette to expose the red mark. If you try to record with the red mark exposed, the [RECORD] and [EJECT] indicators flash on the LCD screen or in the viewfinder, and you cannot record on the tape. To re-record on this tape, slide and close the tab to cover the red mark.

è ÈíÁ°±ÈÉÁ

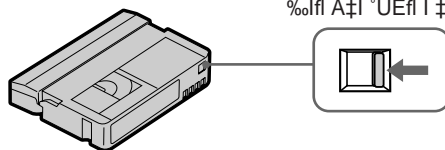
èÁ Á% ÚÁÍ Í±Í Á±Í °Ú, Í °ÍÚ Í±ÒÒÁÚÍÓ,Ó ÓÚÓÁÍ±Ú-Á%ÉÚÁÒ, °ÚÓÍ±ÒÒÁÚÍ°ÈÓÚÓÁÍ ÓÓÍÍÓÓÚ, ,ÚñÍÚÚ,ÍÉÁ.

Ñíñ , °Ú±ÍÍÉ,±ìÈñ Í±ÒÒÁÚ°

èíÁ%Úñ, °ÁÓÈÖ±ìÈÈ Ó Ó°Á%Ú Á, ÓÚííÚÁ 3,Ú%±ÈÉÚÁÍ±ÒÒÁÚÚ.

Ñíñ Ó Á%ÓÚ, ±°ÁìÈñ ÒíÚ°±ÈíÓ,Ó ÓÚÈ ±Èñ

è%Éì,ÚÁÈÓÚÍ ÓÉÚÁíÁÓÁÒÓÚÍ±±ÒÒÁÚÁ, °ÚÓ. °°ÍÓ,È%ìÓ Í ±ÒÍÚ, ÍÁÚÍÚ. ÓÒÍÉ Ç° ÓÓÓ°Ú±ÁÚÁÒ, °ÓÓÍÈÚ, Á±ÓÈÓ, Ó È,È%ÉÍÓÈ Í ±ÒÍÓÈ ÍÁÚÍÁ, ÚÓ Èì%ÈÍ±ÚÓ ° [RECORD] È ▲.Ú%ÚÚ ÍÈ,±Ú, Í± °Í±Á ÚáÑ ÈÍÉ, È%ÓÈÓÍ±ÚÁíÁ, È Ç° ÍÁ ÓÍÓÉÁÚÁ Ó ÓÉÁ,ÁÓÚÉ Á±ÓÈÓ, Í± °ÚÚ ÍÁÚÍÚ. Ñíñ, °ÓÓÍÁìÈñ ÍÓ,ÓÈ Á±ÓÈÓÈ Í± Ú±ÍÚ, ÍÁÚÍÚ Ó%Éì, ÚÁ È Á±Í ÓÉÚÁ ÍÁÓÁÓÚÓÍ %ññ Á±Í °ÚÈñ Í ±ÒÍÓÈ ÍÁÚÍÉ.





**To finish recording [b]**

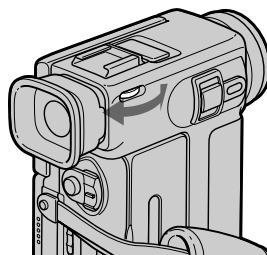
Press START/STOP again to stop recording. Set the POWER switch to OFF. Then, eject the cassette and remove the battery pack.

**[a]**



**To focus the viewfinder lens**

If you cannot see the indicators in the viewfinder clearly, or after someone else has used the camcorder, focus the viewfinder lens. Turn the viewfinder lens adjustment dial so that the indicators in the viewfinder come into sharp focus.



**Note on Standby mode**

If you leave the camcorder in Standby mode for 5 minutes while the cassette is inserted, the camcorder turns off automatically. This prevents wearing down the battery and wearing out the tape. To resume Standby mode, while pressing the small green button on the POWER switch, set it to OFF once, and then to CAMERA. To start recording, press START/STOP.

**Note on recording mode**

This camcorder records and plays back in SP (standard play) mode and in LP (long play) mode. Select SP or LP in the menu system.

**Νῆν ὀφείλῃς ἀποβῆθαι [b]**

Πῶς ἀποβῆθαι ἀπὸ τοῦ κάμερα. Ἐπιλέξτε τὸν ὀφθαλμικὸν ὄργανον, ἀποβῆθαι τὴν ταινίαν, ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας καὶ ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας.

**[b]**



**Νῆν ἐπιλέξτε τὸν ὀφθαλμικὸν ὄργανον**

Ἐπιλέξτε τὸν ὀφθαλμικὸν ὄργανον ἀποβῆθαι τὴν ταινίαν ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας καὶ ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας. Ἐπιλέξτε τὸν ὀφθαλμικὸν ὄργανον ἀποβῆθαι τὴν ταινίαν ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας καὶ ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας. Ἐπιλέξτε τὸν ὀφθαλμικὸν ὄργανον ἀποβῆθαι τὴν ταινίαν ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας καὶ ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας.

Ἐπιλέξτε τὸν ὀφθαλμικὸν ὄργανον ἀποβῆθαι τὴν ταινίαν ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας καὶ ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας. Ἐπιλέξτε τὸν ὀφθαλμικὸν ὄργανον ἀποβῆθαι τὴν ταινίαν ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας καὶ ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας. Ἐπιλέξτε τὸν ὀφθαλμικὸν ὄργανον ἀποβῆθαι τὴν ταινίαν ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας καὶ ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας.

Ἐπιλέξτε τὸν ὀφθαλμικὸν ὄργανον ἀποβῆθαι τὴν ταινίαν ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας καὶ ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας. Ἐπιλέξτε τὸν ὀφθαλμικὸν ὄργανον ἀποβῆθαι τὴν ταινίαν ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας καὶ ἀποβῆθαι τὸν ἀποθηκευτικὸν φάκελο τῆς μπαταρίας.

## Camera recording

á±ÖÈÒ Ò ÖÓÍÒ<sup>~</sup>  
É%ÁÓÍ±ÌÁ

### Notes on LP mode

- We recommend to use this camcorder to play back a tape recorded on this camcorder. If a tape recorded on other camcorder is played back on this camcorder, or vice versa, mosaic-pattern noise may appear.
- When you record in SP and LP modes on one tape or you record some scenes in LP mode, the playback picture may be distorted or the time code may not be written properly between scenes.
- We recommend to use a Sony ME cassette.
- You cannot make audio dubbing on a tape recorded in LP mode. Use the SP mode for the tape to be audio dubbed.


### Notes on the time code

- The time code indicates the recording or playback time, "0:00:00" (hours : minutes : seconds) in CAMERA mode and "0:00:00:00" (hours : minutes : seconds : frames) in PLAYER mode.
- Be sure not make a blank portion when recording, because the time code will start from "0:00:00:00" again. You cannot rewrite the time code on the tape if there is a blank portion between pictures.

### Note on connecting an external microphone

You can record audio sound by connecting the VMC-LM7 adaptor (not supplied) and an external microphone. Connect the microphone to the MIC jack of the VMC-LM7 adaptor. While recording through an external microphone, the built-in microphone of the camcorder does not work.

### Note on the beep sound

As indicated with  in the illustrations, a beep sounds when you turn the power on or when you start recording, and two beeps sound when you stop recording, confirming the operation. Several beeps also sound as a warning of any unusual condition of the camcorder. Note that the beep sound is not recorded on the tape. If you do not want to hear the beep sound, select "OFF" in the menu system.

### Note on remaining tape indicator

The indicator may not be displayed accurately depending on the tape. Though the indicator does not appear at the time of recording, it will appear in a few seconds.

### è ÈÌÁ±ÌÈÈ Í ÁÈÈÌÙ LP

- à° ÁÍÓÍÁÌ%ÚÁÌ ÈÒÒÓÌ, ÁÓ, ±Ú, %±ÌÌÙ, É%ÁÓÍ±ÌÁ Ù %±ÌÌÙ, ÓÓÒ ÓÈÁ, Á%ÁÌÈÈÈ ÍÁÌÙ, Á±ÖÈÒ±ÌÖÈ Ì± %±ÌÌÖÈ, É%ÁÓÍ±ÌÁ Á, ÖÓÌÈÈ ÍÁÌÙ±, Á±ÖÈÒ±ÌÌ±Ì Ì± %Ú, ÖÈ, É%ÁÓÍ±ÌÁ Á, Ú%ÁÚ, ÓÓÒ ÓÈÁ, Ö%ÈÚ, Ö±Ì±%±ÌÌÖÈ, É%ÁÓÍ±ÌÁ ÁÈÈÈÈ±Ö, Ö ÓÚ, ÚÓÍÖÈÁÚ, ÖÓ±ÈÚ, Ö±Ì ÍÓÁ±È±È±È Á±ÁÚ± ÖÓÍÁÌ.
- ÖÓÌÈÈ Ç° Á±ÖÈÒ° ±ÁÚÁ, ÁÈÈÈ± LP È SP Ì± Ö%±ÌÙ È ÚÚ ÈÁ ÍÁÌÙÚ ÈÈÈ ÁÓÌÈÈ Ç° Á±ÖÈÒ° ±ÁÚÁ ÍÁÌÙÚ ° Á °ÁÌ° ÁÈÈÈÁ LP, ÚÓ, ÓÓÒ ÓÈÁ, Ö%ÈÚ, ÖÍÓÁÈÁÓ, ±ÈÁÌÈÁ ÍÖÈÁÚ, °Ú, ÈÓÌ±ÈÁÍÓ ÈÈÈ, ÁÌÁÌÌÖÈ ÍÓ%Ú ÍÖÈÁÚ, °Ú, Á±ÖÈÒ±Ì ÍÁÖ ±ÈÈ, ÍÓ ÍÁÈ%Ú Ö°Á±ÈÈ.
- à° ÁÍÓÍÁÌ%ÚÁÌ ÈÒÒÓÌ, ÁÓ, ±Ú, Ì±ÖÖÁÚÚ Sony ME.
- à° ÖÓÓÍ ÁÚÈÚÁ ÁÈÈÈ SP %±ÌÌÙ ÍÁÌÙ, Ì± ÍÓÚÓ ° Á, Ú%ÁÚ, ° ÖÓÌÈÈÚ Ö±Ì ±Ú%ÈÖ%Ú, ÈÈ Ö, ±ÈÁ, Ç° ÍÁ ÓÍÖÈÁÚÁ, ° ÖÓÌÈÈÚ, ±Ú%ÈÖ%Ú, ÈÈ Ö, ±ÈÁ Ì± ÍÁÌÙÚ, Á±ÖÈÒ±ÌÙ, ÁÈÈÈÁ LP.


### è ÈÌÁ±ÌÈÈÈ Í, ÁÌÁÌÌÓÍÚ ÍÓ%Ú

- Ç° ÁÌÁÌÌÖÈ ÍÓ%Ú Ù±Á°, ±ÁÚ, Á±È Á±ÖÈÒÈ ÈÈÈ, ÖÓÒ ÓÈÁ, Á%ÁÌÈÈÈ ÖÓÒ ÈÈÈÈÓÚ "0:00:00" (Ç° : ÍÈÌÙÚ : ÓÁÌÙÌ%), ÁÈÈÈÁ CAMERA, È ÖÓ Ö ÈÈÈÈÓÚ "0:00:00:00" (Ç° : ÍÈÌÙÚ : ÓÁÌÙÌ% : Ì±% ), ÁÈÈÈÁ PLAYER.
- ÁÚ% ÚÁ, ÈÈÈ±ÚÁÌ, °Ú, ° ÍÁ ÖÓÍÚÈÍÓ, ÍÁÁ±ÖÈÒ±ÌÖÈ ±ÖÚÈ Ö ÈÁ±ÖÈÒÈ, Ú±Ì±Ì, ÁÌÁÌÌÖÈ ÍÓ%Ú ÖÍÓ, Ì± ÍÁÚ ÖÚ°ÁÚ Ö "0:00:00:00". Ç° ÍÁ ÍÖÈÁÚÁ ÖÁ ÁÁ±ÖÈÒ±Ú, ÁÌÁÌÌÖÈ ÍÓ%Ú Ì± ÍÁÌÙÁ, ÁÓÌÈÈ Ì± ÍÁÈ ÖÚ°ÁÚ, Ú, Ú ÍÁÁ±ÖÈÒ±Ì Ì± ±ÖÚÈ ÍÁÈ%Ú ÈÁÓ, ±ÈÁÌÈÈÈ.

### è ÈÌÁ±ÌÈÈÁ Í ÖÓ%ÖÓÁ%ÈÌÁÈÈ, ÌÁ-ÌÁ, Ö ÍÈÈ ÖÚÓÍ±

Ç° ÍÖÈÁÚÁ Á±ÖÈÒ°, ±Ú, Á, ÚÍÓ, ÓÁ ÖÓÒ Ö, ÖÈ%ÁÌÈÈÁ ÖÚÚÁÌ ÖÓ%±ÌÌ, ÁÌÈÈÈ±%±ÚÁ ± VMC-LM7 (ÍÁ Ö ÈÈ±, ±ÁÚÖ±) È ÌÁ-ÌÁ, Ö ÍÈÈ ÖÚÓÍ±. è Ö%ÖÓÁ%ÈÌÈÚÁÌÈÈÈ ÖÚÓÍ±, ÍÁÁ%ÚMIC±±%±ÖÚÁ Á VMC-LM7, è±È ÁáÖÈÈ ° Á ÁÁ, ÍÁ ÌÈÈÈ ÈÈÈ ÖÚÓÍ, ÖÚ ÖÁÌÈÈÈ ÈÈÈ ÖÚÓÍ, É%ÁÓÍ±ÌÁ ÌÁ ±, ÖÚ±ÁÚ.

### è ÈÌÁ±ÌÈÈÁ Í ÁÚÌÁ ÍÓÍÚ Á, ÚÍÓ, ÖÍÚ ÖÈ, Ì±ÌÙ

á±Ì Ù±Á±ÍÓ Ì± ÈÓÚÌ±Ì Ö ÖÓÍÒ°  , Ö%ÈÈ ÁÚÌÁ ÌÈÈ ÖÈÈ, Ì±Ì Á, ÚÈÚ, ÍÓ, %± Ç° , ÌÌ, ±ÁÚÁ ÖÈÚ±ÈÁ ÈÈÈ Ì± ÈÈ±ÁÚÁ Á±ÖÈÒ, È %±, ± ÁÚÌÁ ÌÈÈ ÖÈÈ, Ì±Ì Á, ÚÈÚ, ÍÓ, %± Ç° ÖÓÚ±Ì±ÈÈ, ±ÁÚÁ Á±ÖÈÒ, ÖÓ%Ú, Á È%±±È ÚÁÌ Ö±Ì Ì± ÖÚÚ, ÇÁÓÍÓ, ÍÓ ÁÚÌÁ ÌÈÈ, ÖÈÈ, Ì±Ì, Ú±ÈÁ, Ú%ÁÚ Á, ÚÈÚ, Ì± ÁÓÚ, Á Ö Á%ÚÓ ÁÈÈ%ÁÌÈÈÈ Ì±ÍÓ, Ö, ÈÈ, Ú%±, ÍÁÖ, °ÍÓ, Ö ÖÓÓÚÖ±ÈÈÈ È%ÁÓÍ±ÌÁ °. á±ÍÁÚ ÚÁ, °ÚÓ ÁÚÌÁ ÌÈÈ ÖÈÈ, Ì±Ì ÍÁ Á±ÖÈÒ, ±ÁÚÖ± Ì± ÍÁÌÙÚ. ÖÓÌÈÈ Ç° ÍÁ, ÍÓÚÈÚÁ ÖÍÚ±Ú, ÁÚÌÁ ÌÈÈ ÖÈÈ, Ì±Ì, ÚÓ, ° Á ÈÚÁ "OFF", ÖÈÖÚÁÌÁ ÍÁÌ.

### è ÈÌÁ±ÌÈÈÁ Í ÈÌ%ÈÈ±ÚÓ Ú ÖÓÚ±, ÁÈÒÈÈ ÍÁÌÙ°

áÌ%ÈÈ±ÚÓ ÍÖÈÁÚ ÖÚÓ, ±È±Ú, Ö±ÌÁ ÚÓ°ÍÓ Á±ÈÈÈÈÖÚÈ ÖÚ ÍÁÌÙ. Ñ±ÈÁ ÁÓÌÈÈÈÈÈÈÈ±ÚÓ ÍÁ ÖÓ±È, ÚÓ, Ö, Á±È Ì±±± Á±ÖÈÒÈ, ÖÍ ÖÓ±È, ÈÚÓ± Ì± ÍÁÓÍÓ, ÍÓ ÖÁÌÙÌ% ÖÓÁÈÁ.

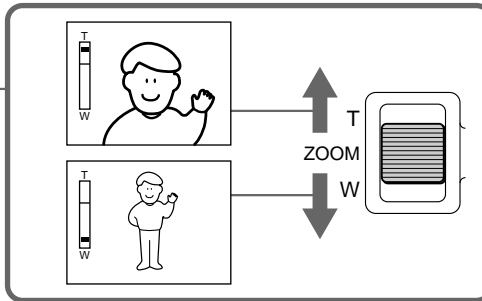
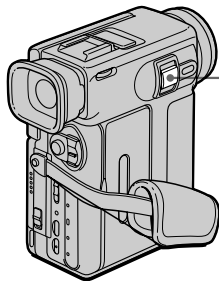
## Using the zoom feature

Zooming is a recording technique that lets you change the size of the subject in the scene.

For more professional-looking recordings, use the zoom function sparingly.

“T” side: for telephoto (subject appears closer)

“W” side: for wide-angle (subject appears farther away)



## Zooming speed (Variable speed zooming)

Press the power zoom switch a little for a relatively slow zoom; press it still more for a high-speed zoom. Zooming speed while the camcorder is in the Standby mode is faster than that in the recording mode making it easier to compose the scene.

## When you shoot a subject using a telephoto zoom

If you cannot get a sharp focus while in extreme telephoto zoom, press the “W” side of the power zoom switch until the focus is sharp. You can shoot a subject that is at least about 80 cm (about 2 5/8 feet) away from the lens surface in the telephoto position, or about 1 cm (about 1/2 inch) away in the wide-angle position.

àÒÒÓÍ,ÁÓ,†ÌÈÄ ÙÛÌÍ·ÈÈ Ì†ÁÁ%†,È%ÁÓÍ†ÌÄ °

ç†ÁÁ% ,È%ÁÓÍ†ÌÄ ° ñ,ÌñÁÙÒñ ÙÁÌÈ~ÀÒÌÈÌ  
 Ò ÈÁÌÓÍÁ†ÒÈÒÈ,ÍÓÚÓ °È ÓÓÁ,ÓñÁÙÇ†Ì  
 ÈÁÌÁñÚ, †ÁÌÄ °·ÁÌÚ†, Ì†%Á. Ñññ·ÓÍÁÁ  
 Ò ÓÚÁÒÒÈÓÌ†,ÍÓ,Ó,È%†Á†ÒÈÒÁÈÙÌÁ ÀìÒ  
 ÈÒÒÓÍ,ÁÙÈÙÁ ÙÛÌÍ·ÈÈ Ì†ÁÁ%†,È%ÁÓÍ†ÌÄ °.  
 èÚÓ ÓÌ† “ i”: %ññ ÙÁÌÁÙÓÓÓ (Ó·ÁÌÚ  
 Ò ÈÈÈ†ÁÙÒñ)  
 èÚÓ ÓÌ† “ W”: %ññ È ÓÍÓ,Ó Ù,Ì† Ò·ÁÌÈÈ  
 (Ó·ÁÌÚ Ù%†ñÁÙñ)

éÍÓ ÓÓÙ, Ì†ÁÁ%†,È%ÁÓÍ†ÌÄ ° (Ì†ÁÁ%  
 Ò †ÁÌÈ~ÌÒÈ ÓÍÓ ÓÓÙ,.)  
 èÁ Á%ÈÌ ÙÁ ~†, Ò È,Ó%Ó,Ó  
 Ù †ÌÓÙÓÌ†ÚÓ † ÌÁÌÌ,Ó %ññ Ò †ÌÈÙÁÌ,ÍÓ  
 ÌÁ%ÁÌÌÓ,Ó Ì†ÁÁ%†,È%ÁÓÍ†ÌÄ °;  
 ÓÁ Á%ÈÌ ÙÁ Á,Ó Á·Á %†Ì·Á %ññ Ì†ÁÁ%† Ì†  
 °ÓÍÓÈÓÍÓ ÓÓÙÈ.éÍÓ ÓÓÙ, Ì†ÁÁ%†,ÍÓ,%†  
 ,È%ÁÓÍ†ÌÄ † Ì†ÍÓ%ÈÙÒñ, ÁÈÈÌÁ  
 ,ÓÓÓ,ÍÓÓÙÈ,·Ù%ÁÙ·ÓÙ ÁÁ,·ÁÌÓÍÓ ÓÓÙ,  
 Ì†ÁÁ%†, ÁÈÈÌÁ†ÒÈÒÈ,·ÙÓ%†ÁÙ  
 ,ÓÁÌÓÈÌÓÓÙ,·ÓÌÁÁ ÌÁ,ÌÒÈ ÌÓÍÓÓÍÓ,ÌÈ Ò·ÁÌ.

äÓ,%† Ç ° ÒÌÈ†ÁÙÁ Ó·ÁÌÚ, ÈÒÒÓÍ,ÁÙñ  
 Ì†ÁÁ% , ÁÈÈÌÁ ÙÁÌÁÙÓÓÓ  
 ÓÒÌÈ Ç· ÌÁ ÌÓÈÁÙÁ ÓÍÓÙ·ÈÙ,·ÁÙÍÓÈ  
 ÙÓÍÓÈÈ Ó,ÌÈ,Ó , Áññ Ì†ÈÌÁ,Ó Ì†ÁÁ%†,  
 ÁÈÈÌÁÙÁÌÁÙÓÓÓ,ÓÁ ÁÌÁ·ÈÙÁ  
 ÓÁ ÁÌÌ·†ÁÌ, Ò È,Ó%Ó,Ó Ù †ÌÓÙÓÌ†ÚÓ †,  
 ÓÓÙÓ ÓÍÓ·W%ÓÙÁÌ,ÓÓ,ÓÓÌ†Ç· ÌÁ ÓÓÍÓÈÙÁ  
 ~ÁÙÍÓÈ ÙÓÍÓÈÈ Ó,ÌÈ. Ç ° ÌÓÈÁÙÁ ÒÌÈ†Ù,  
 Ó·ÁÌÚ, ÍÓÓÓ °È ÓÓ ÌÁÌ,·ÁÈ ÌÁ Á Ì† 80 ÓÌ  
 Ù%†ÌÁÌ ÓÙ ÓÓ,Á ñÓÓÙÈ Ó·ÁÌÚÈ,†,  
 ÓÓÍÓÈÁÌÈÈ ÙÁÌÁÙÓÓÓ,ÈÈÈ Ù%†ÁÌ  
 Ò È·ÌÈÁÈÙÁÌ,ÍÓ Ì† 1 ÓÌ, ÓÓÍÓÈÁÌÈÈÈ  
 È ÓÍÓ,Ó Ù,Ì†.

Basic operations / εθΙΟ,Ì·Á ÓÓÁ †ÈÈ





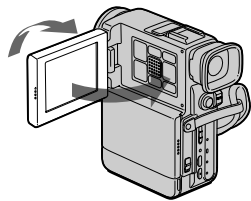


**To let the subject monitor the shot**  
 Turn the LCD panel 180 degrees (p. 32).

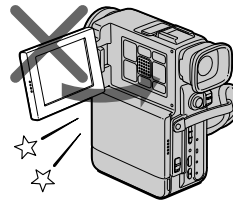
**Notes on the LCD panel**

- When closing the LCD panel, turn it vertically until it clicks **[a]**.
- When turning the LCD panel, turn it always vertically; otherwise, the camcorder body may be damaged or the LCD panel may not close properly **[b]**.
- Close the LCD panel completely when not in use.
- Do not push nor touch the LCD when moving the LCD panel.
- You may find it difficult to view the LCD screen due to glare when using the camcorder outdoors.

**[a]**



**[b]**



óóó° %±ú, óáíóèíóóó, òèí±áíóíó  
 ~áíó, áíú í±·í %±ú, ó·áííú  
 èó.á íèúá ò±áí, ùáñ í± 180 °, ±%úóó, (òú .  
 32)

- è èíá~±íèí í ò±áíè ùáñ
- è è áíí °, ±íèè ò±áíè ùáñ  
 óó, ó ±è, ±èúááá, á úèí±í, íó%óúái óó,  
 óóí± óí± íá á±·áíííáúóíí **[a]**.
- è è, ±·áíèè ò±áíè ùáñ %ó, è, ±èúá áá  
 , òá, %±, á úèí±í, íó; èíè, ó óúè, íóí  
 òíú±á íó óúó, è%áóí±íá ° íóéáú °ú,  
 óó, áè%ài èíè ò±áí, ùáñ íóéáú °ú,  
 á±í °ú± íáó ±èí, íó **[b]**.
- èóííóóó, á±í óèúá ò±áí, ùáñ, íó, %±  
 óí±íáèóóóí, áúáúóíí.
- çá í±èèí±èúá è íá ú ó, ±èúá ùáñ ò è  
 óá áíá~áíèè ò±áíè ùáñ.
- ç·íóéáúá óúóííúú, òíó ú ù%òíóóúííè ò è  
 ó óóíóú á í±·í ±íá ùáñ éá-á± óú·íáóí±  
 ò è èóóóí, áó, ±íèè, è%áóí±íá ° í± úíè·á.

## Camera recording

á±ÔËÒ ò ôóíó~  
,É%ÅÓí±íÀ °

### Selecting the start/stop mode

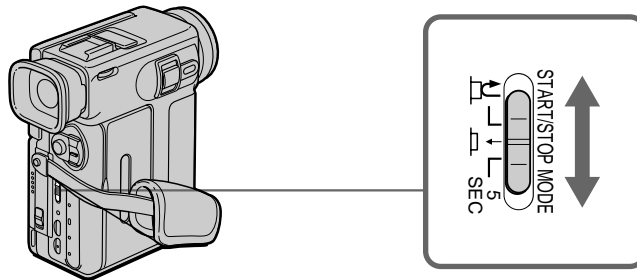
- ☰ : When you press START/STOP, the camcorder starts recording. When you press the button again, the camcorder stops recording. (factory setting)
- ⊣ : As long as you keep pressing START/STOP, the camcorder records. When you release the button, the camcorder stops recording.
- 5SEC**: When you press START/STOP, the camcorder records for 5 seconds and stops. (p. 33)

When you select ⊣ or **5SEC**, you cannot use the fade-in/fade-out function.  
When you select **5SEC**, the remaining tape indicator is not displayed.

### Ç°·Ó ÂËËí± Á±ÔÛÒì±/ÓÓÚ±ìó,±

- ☰ : äÓ,± Ç° ì±ËËí±ÁÚÁ START/STOP, É%ÅÓí±íÀ ± ì±ËËí±ÁÚ Á±ÔËÒ. äÓ,± Ç° ì±ËËí±ÁÚÁ °ÚÚ ììÓÓíÚ ÓÓííÚ, É%ÅÓí±íÀ ± ÓÓÚ±ì±,ìË,±ÁÚ Á±ÔËÒ. (á±Ô%Óí±íí ÚÓÓ±ìó,ì±)
- ⊣ : èÓí± Ç° %Å ËËÚÁ START/STOP, ì±ËËí±ÚÓíÓÓÓÚÓííË,É%ÅÓí±íÀ ± °ÓÓíííÁÚ Á±ÔËÒ. äÓ,± Ç° ÓÓÚÓÓí±ÁÚÁ ììÓÓíÚ,É%ÅÓí±íÀ ± ÓÓÚ±ì±,ìË,±ÁÚ Á±ÔËÒ.
- 5SEC**: äÓ,± Ç° ì±ËËí±ÁÚÁ START/STOP, É%ÅÓí±íÀ ± Ó ÓËÁ,Ó%ËÚÁ±ÔËÒ, ÚÁ°ìËÁ5 ÓÁííÚ%Ë ÓÓÚ±ì±,ìË,±ÁÚÒíí. (ÓÓ . 33)

ÒÒíË Ç° ,°Ë ±ÁÚÁ ⊣ ËË 5SEC, Ç° ìÁ ÓíÓËÁÚÁ ËÓÓÓí,ÁÓ,±Ú, ÚÚíí°Ë, ,Á%ÀìËíí/ ,°Á%ÀìËíí ËÁÓ. ±ËÁìËíí.  
äÓ,± Ç° ,°Ë ±ÁÚÁ 5SEC Ëì%Ëí±ÚÓ ÓÓÚ±,ÁËÓíí ìÁíí° ÓÓÓ. ±Ë±Ú,Óíí ìÁ·Ú%ÁÚ.



### To attach an accessory

Attach an accessory (not supplied) to the accessory shoe.

### Ñííí Ò Ëí ÁÔíÀìËíí %ÓÓÓÓííËÚÁí,ìó,,Ó Ó·Ó Ú%Ó,±ìËíí

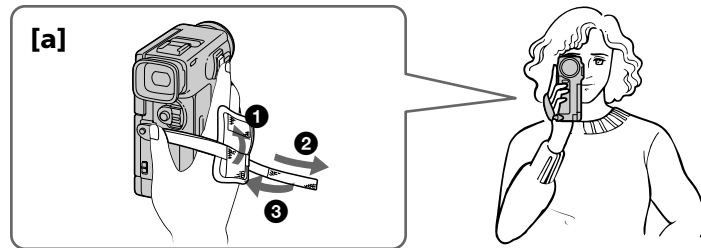
è Ëí ÁÔËÚÁ%ÓÓÓÓííËÚÁí,ìóÁÓ·Ó Ú%Ó,±ìËÁ (ìÁ Ò Ëí±,±ÁÚÒíí) í, °Ó%ÓÚ %ííí, ÓÓÓíó,±ÚÁí,ìó,,Ó Ó·Ó Ú%Ó,±ìËíí.

# Hints for better shooting

ΕΠΙΧΕΙΡΗΣΙΑΚΕΣ ΣΥΜΒΟΥΛΕΣ ΓΙΑ ΒΕΤΤΕΡΕΣ ΑΠΟΤΕΛΕΣΜΑΤΑ

For hand-held shots, you will get better results by holding the camcorder according to the following suggestions:

- Hold the camcorder firmly and secure it with the grip strap so that you can easily manipulate the controls with your thumb. **[a]**



- Place your elbows against your side.
- Hold the camcorder with your left hand to keep it steadier.
- Adjust the LCD panel angle.
- Keep your fingers away from the lens.
- Place your eye firmly against the viewfinder eyecup.
- Be sure not to touch the built-in microphone.
- Be sure not to touch the FOCUS button by accident.
- Use the LCD panel frame or the viewfinder frame as a guide to determine the horizontal plane.
- You can record in a low position to get an interesting recording angle. Lift the LCD panel up to record from a low position. **[b]**
- You can also record in a high position. Lift the LCD panel down to record from a high position. **[c]**

- Για χειροκίνητες λήψεις, θα έχετε καλύτερα αποτελέσματα αν κρατάτε την κάμερα σύμφωνα με τις ακόλουθες προτάσεις:
- Κρατήστε την κάμερα σταθερά και ασφαλίστε την με το λουράκι, ώστε να μπορείτε να χειριστείτε εύκολα τον χειριστή. **[α]**

- επιχειρήστε την κάμερα με το αριστερό χέρι για να είναι πιο σταθερή.
- ρυθμίστε την οθόνη LCD.
- Μην αγγίζετε το φακό.
- Κρατήστε το μάτι σας σταθερά πάνω στο πρίσμα.
- Μην αγγίζετε το μικρόφωνο που είναι ενσωματωμένο στην κάμερα.
- Μην αγγίζετε το κουμπί FOCUS κατά λάθος.
- Μπορείτε να γυρίσετε από χαμηλό σημείο για να έχετε ένα ενδιαφέρον γωνιακό πλάνο. Ανοίξτε την οθόνη LCD προς τα πάνω για να γυρίσετε από χαμηλό σημείο. **[β]**
- Μπορείτε επίσης να γυρίσετε από υψηλό σημείο. Ανοίξτε την οθόνη LCD προς τα κάτω για να γυρίσετε από υψηλό σημείο. **[γ]**



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ΕΠΙΧΕΙΡΗΣΙΑΚΕΣ ΣΥΜΒΟΥΛΕΣ ΓΙΑ ΒΕΤΤΕΡΕΣ ΑΠΟΤΕΛΕΣΜΑΤΑ

## Hints for better shooting

## Εύχρηστοι συμβουλές για καλύτερο αποτέλεσμα

### Place the camcorder on a flat surface or use a tripod

Try placing the camcorder on a table top or any other flat surface of suitable height. If you have a tripod for a still camera, you can also use it with the camcorder. When attaching a non-Sony tripod, make sure that the length of the tripod screw is less than 6.5 mm (9/32 inches). Otherwise, the screw may damage the inner parts of the camcorder.

### If you wear glasses

You can bend back the eyecup to get a better view of viewfinder [d].

### Cautions on the LCD panel and on the viewfinder

- Do not pick up the camcorder by the viewfinder or the LCD panel [e].
- Do not place the camcorder so as to point the viewfinder or the LCD panel toward the sun. The inside of the viewfinder or the LCD panel may be damaged. Be careful when placing the camcorder under sunlight or by a window [f].
- Do not point the lens toward the sun with a close-up lens attached. Doing so may damage the camcorder.

Ποτέ μην κρατάτε την κάμερα από τον ελαστικό ή από την οθόνη LCD. Η κάμερα μπορεί να βλάψει ή να καταστρέψει το εσωτερικό της αν κρατηθεί από αυτά τα σημεία. Όταν χρησιμοποιείτε τρίποδο που δεν είναι της Sony, βεβαιωθείτε ότι το μήκος του βιδώματος είναι μικρότερο από 6,5 mm (9/32 ίντσες). Διαφορετικά, το βιδώμα μπορεί να βλάψει τα εσωτερικά μέρη της κάμερας.

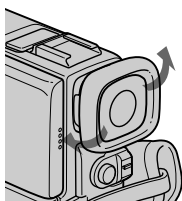
Εάν φοράτε γυαλιά, μπορείτε να κάμψετε πίσω το φιλτράκι για να έχετε καλύτερη ορατότητα από τον ελαστικό [d].

Μην κρατάτε την κάμερα από τον ελαστικό ή από την οθόνη LCD. Η κάμερα μπορεί να βλάψει ή να καταστρέψει το εσωτερικό της αν κρατηθεί από αυτά τα σημεία. Όταν χρησιμοποιείτε τρίποδο που δεν είναι της Sony, βεβαιωθείτε ότι το μήκος του βιδώματος είναι μικρότερο από 6,5 mm (9/32 ίντσες). Διαφορετικά, το βιδώμα μπορεί να βλάψει τα εσωτερικά μέρη της κάμερας.

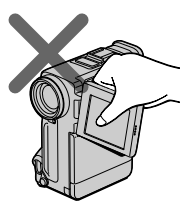
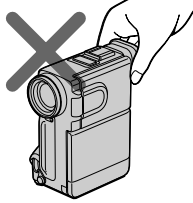
Μην αφήνετε τον ελαστικό ή την οθόνη LCD να δείχνουν προς τον ήλιο. Το εσωτερικό του ελαστικού ή της οθόνης LCD μπορεί να βλάξει ή να καταστρέψει αν η κάμερα βρίσκεται στον ήλιο ή κοντά σε ένα παράθυρο [f].

Μην δείχνετε τον φακό με ένα φακό πρόσδεσης προς τον ήλιο. Αυτό μπορεί να βλάξει ή να καταστρέψει την κάμερα.

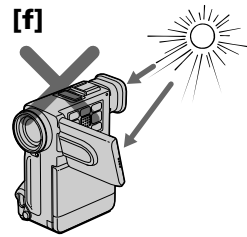
[d]



[e]



[f]



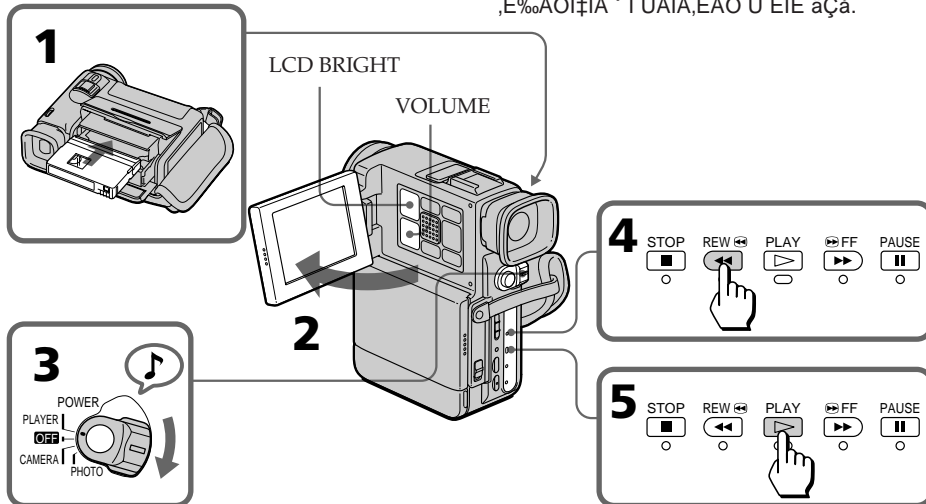
## Playing back a tape

## Παίζοντας ταινία

You can monitor the playback picture on the LCD screen or in the viewfinder.

- (1) Insert the recorded tape with the window facing out.
- (2) Open the LCD panel.
- (3) While pressing the small green button on the POWER switch, set it to PLAYER. The tape transport buttons light up.
- (4) Press ◀ to rewind the tape.
- (5) Press ▶ to start playback.
- (6) Adjust the volume using VOLUME +/- and the brightness of the LCD screen using LCD BRIGHT +/-.

You can also monitor the picture on a TV screen, after connecting the camcorder to a TV or VCR.



- To stop playback, press ■.
- To rewind the tape, press ◀.
- To fast-forward the tape rapidly, press ▶▶.

### Using the Remote Commander

You can control playback using the supplied Remote Commander. Before using the Remote Commander, insert the R6 (size AA) batteries.

### To display the LCD screen/viewfinder screen indicators

- Press DISPLAY.
- To erase the indicators, press again.

Μπορείτε να παρακολουθήσετε την εικόνα στην οθόνη LCD ή στο οπίσθιο φακό.

- (1) Εισάγετε την ηχογραφημένη ταινία με το παράθυρο να είναι προς τα έξω.
  - (2) Ανοίξτε το LCD.
  - (3) Πατώντας το μικρό πράσινο κουμπί που βρίσκεται στο διακόπτη ΠΡΟΒΟΛΕΥΣΗΣ, θέστε τον διακόπτη στην κατάσταση ΠΡΟΒΟΛΕΥΣΗΣ. Τα κουμπιά μεταφοράς ταινίας ανάβουν.
  - (4) Πατήστε ◀ για να επαναπολιτίσει η ταινία.
  - (5) Πατήστε ▶ για να ξεκινήσει η αναπαραγωγή.
  - (6) Ρυθμίστε τον ήχο χρησιμοποιώντας τα κουμπιά VOLUME +/- και το φωτισμό της οθόνης LCD χρησιμοποιώντας LCD BRIGHT +/-.
- Μπορείτε επίσης να παρακολουθήσετε την εικόνα σε οθόνη τηλεόρασης, αφού συνδέσετε την κάμερα σε τηλεόραση ή VCR.

- Να σταματήσετε την αναπαραγωγή, πατήστε ■.
- Να επαναπολιτίσετε την ταινία, πατήστε ◀.
- Να προπολιτίσετε την ταινία γρήγορα, πατήστε ▶▶.

Μπορείτε να ελεγχώτε την αναπαραγωγή χρησιμοποιώντας τον παρεχόμενο τηλεχειριστήριο. Πριν χρησιμοποιήσετε το τηλεχειριστήριο, εισάγετε τις μπαταρίες R6 (τύπου AA).

- Για να εμφανίσετε την οθόνη LCD/οπίσθιο φακό, πατήστε DISPLAY.
- Για να σβήσετε τα δείγματα, πατήστε ξανά.

## Playing back a tape

### Using headphones

Connect headphones (not supplied) to the AUDIO VIDEO OUT/ jack (p. 83). You can adjust the volume of the headphones using VOLUME +/-.

### To view the playback picture in the viewfinder

Close the LCD panel. The viewfinder turns on automatically.

When using the viewfinder, you can monitor the sound only by using headphones.

To view on the LCD screen again, open the LCD panel. The viewfinder turns off automatically.

## Various playback modes

### To view a still picture (playback pause)

Press **II** during playback. To resume playback, press **II** or **▷**.

### To locate a scene (picture search)

Keep pressing **◀◀** or **▶▶** during playback. To resume normal playback, release the button.

### To monitor the high-speed picture while advancing the tape or rewinding (skip scan)

Keep pressing **◀◀** while rewinding or **▶▶** while advancing the tape. To resume normal rewinding or fast-forward, release the button.

### To view the picture at 1/3 speed (slow playback)

Press **▶** on the Remote Commander during playback. For slow playback in reverse direction, press **<**, then press **▶**. To resume normal playback, press **▷**.

### To view the picture at double speed

For double speed playback in the reverse direction, press **<**, then press **×2** on the Remote Commander during playback. For double speed playback in the forward direction, press **>**, then press **×2** during playback. To resume normal playback, press **▷**.

## ÇÒÒÒ ÓĒÁ,Â%ÂÌĒÂ ÎÂÏÚ°

àÒÒÒĪ,ÁÓ,±ĪĒÂ „ÓĪÓ,Ī°Ī, ÚÂĪÂÚÓĪÓ,  
èÓ%ÓÓÂ%ĒĪĒÚÂ „ÓĪÓ,Ī°Ī ÚÂĪÂÚÓĪ° (ĪÂ  
Ó ĒĪ,±,ÚÓĪ) Ī „ĪÂÂ%Ú AUDIO VIDEO OUT/ (Ī  
(ÓÚ, 83). Ç° ÓĪÓĒÁÚÂ Â,ÚĪĒ Ó,±Ú,  
„ ÓĪÓÓÚ, „ÓĪÓ,Ī°Ī ÚÂĪÂÚÓĪÓ, ò ÓÓĪÓ°  
VOLUME +/-.

ŊĪĪ, ÓÒÒ ÓĒÁ,Â%ÂÌĒĪ ĒÁÓ· ±ĒÂĪĒĪ ,  
Ē%ÓĒĪÓĪ±ÚÂĪÂ  
á±Ī ÓĒĪÚÂ Ó±ĪÂĪ ÚāŊ. ÇĒ%ÓĒĪÓĪ±ÚÂĪ,  
ĪĪ, ĒĒÚÓĪ ±,ÚÓĪ±ÚĒĒ-ÂÓĪĒ.  
è ĒĒÓÓĪ,ÁÓ,±ĪĒĒ,Ē%ÓĒĪÓĪ±ÚÂĪĪ Ç° ĪÓĒÁÚÂ  
ÓĪÚ-±Ú, Â,ÚĪ ÚÓĪ,ĪÓ Ò ÓÓĪÓ „ ÓĪÓ,Ī°Ī  
ÚÂĪÂÚÓĪÓ, ŊĪĪ Ó ÓÓĪÓÚ ± Ī± ĪĪÂ ÚāŊ  
ÓĪÓ,± ÚÓĪ ÓĒĪÚÂ Ó±ĪÂĪ ÚāŊ. ÇĒ%ÓĒĪÓĪ±ÚÂĪ,  
ĪĪ, ĒĒÚÓĪ ±,ÚÓĪ±ÚĒĒ-ÂÓĪĒ.

## ê±ÂĪĒĒĪ°Ī ÂĒĒĪ° ,ÓÒÒ ÓĒÁ,Â%ÂÌĒĪ

ŊĪĪ Ó ÓÓĪÓÚ ± ĪÂÓÓ%,ĒĒĪÓ Ó  
ĒÁÓ· ±ĒÂĪĒĪ (Ó±ÚÂ±, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪ)  
ç±ĒĪĒÚÂ **II**, Ó, ÂĪĪ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪ. ŊĪĪ  
„ÓÓÚ±ĪÓ,ĪÂĪĪ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪ Ī±ĒĪĒÚÂ **II**  
ĒĪĒ **▷**.

ŊĪĪ Ó-± ÚĒĒĪĒĪ Ò ±,ĪÂÏÚ± (ÓÓĒĪ  
ĒÁÓ· ±ĒÂĪĒĪ)  
ŊÂĒĒÚÂ Ī±ĒĒÚÓĒ ĪĪÓÓĪÚ **◀◀ ĒĪĒ ▶▶**, Ó  
ĪĪĪ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪ. ŊĪĪ „ÓÓÚ±ĪÓ,ĪÂĪĪ  
ĪÓ Ī±Ī,ĪÓ,Ó,ÓÓÓ ÓĒÁ,Â%ÂÌĒĪÓÚÓÚÓÚĒÚÂ  
ĪĪÓÓĪÚ.

ŊĪĪ ĪÓĪÚ ÓĪĪ ĒÁÓ· ±ĒÂĪĒĪ Ī±  
„ÓÓĪÓĒ ÓĪÓ ÓÓÚĒ, Ó, ÂĪĪ  
ÚÓĪÓ ÂĪÓĒĒ ÓÂ ĪĪÓÚĪĒ ĪÂÏÚ°, ÓÂ Â%  
ĒĪĒ Ī±Â±% (ÓÓĒĪ ĪÂÚÓ%ÓĪ Ó Ó,ÓĪ±)  
ŊÂĒĒÚÂ Ī±ĒĒÚÓĒ ĪĪÓÓĪÚ **◀◀**, Ó, ÂĪĪ  
ÓÂ ĪĪÓÚĪĒ ĪÂÏÚ° Ī±Â±% ĒĪĒ ĪĪÓÓĪÚ **▶▶**, Ó  
, ÂĪĪ ÓÂ ĪĪÓÚĪĒ ĪÂÏÚ°, ÓÂ Â%. ŊĪĪ  
„ÓÓÚ±ĪÓ,ĪÂĪĪ ĪÓ Ī±Ī,ĪÓĒ ÓÂ ĪĪÓÚĪĒ  
„ÓÂ Â%ĒĪĒĪ±Â±%ÓÚÓÚÓÚĒÚĒĪĪÓÓĪÚ.

ŊĪĪ Ó ÓÓĪÓÚ ± ĒÁÓ· ±ĒÂĪĒĪ Ī± 1/3  
ÓĪÓ ÓÓÚĒ (Â±ĪÂ%ĪÂĪĪÓÂ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪ)  
ç±ĒĪĒÚÂ **▶** Ī± ÓÚĪ, ÚÂ %ĒÓÚ±ĪĒÓĪÓ, Ó  
ÚÓ ±,ĪÂĪĪ, Ó, ÂĪĪ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪ. ŊĪĪ  
Â±ĪÂ%ĪÂĪĪÓ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪ, Ó- ±ÚĪÓĪ  
Ī±Ó ±,ĪÂĪĒĒ Ī±ĒĪĒÚÂ **<**, ± Â±ÚÂĪ **▶**. ŊĪĪ  
„ÓÓÚ±ĪÓ,ĪÂĪĪ ĪÓ Ī±Ī,ĪÓ,Ó  
„ÓÓÓ ÓĒÁ,Â%ÂÌĒĪ Ī±ĒĪĒÚÂ **▷**.

ŊĪĪ Ó ÓÓĪÓÚ ± ĒÁÓ· ±ĒÂĪĒĪ Ò  
Ú%, ÓÂĪĪÓĒ ÓĪÓ ÓÓÚ,  
ŊĪĪÚ%, ÓÂĪĪĪÓĪÓ ÓÓÚĒ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪ,  
Ó- ±ÚĪÓĪ Ī±Ó ±,ĪÂĪĒĒ Ī±ĒĪĒÚÂ **<**, ± Â±ÚÂĪ  
Ī±ĒĪĒÚÂ **×2** Ī± ÓÚĪ, ÚÂ %ĒÓÚ±ĪĒÓĪÓ, Ó  
ÚÓ ±,ĪÂĪĪ, Ó, ÂĪĪ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪ. ŊĪĪ  
Ú%, ÓÂĪĪĪÓĪÓ ÓÓÚĒ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪ,  
Ī±Ó ±,ĪÂĪĒĒ, ÓÂ Â% Ī±ĒĪĒÚÂ **>**, ± Â±ÚÂĪ  
Ī±ĒĪĒÚÂ **×2**, Ó, ÂĪĪ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪ. ŊĪĪ  
„ÓÓÚ±ĪÓ,ĪÂĪĪ ĪÓ Ī±Ī,ĪÓ,Ó  
„ÓÓÓ ÓĒÁ,Â%ÂÌĒĪ Ī±ĒĪĒÚÂ **▷**.

**To view the picture frame-by-frame**

Press ◀ or ▶ on the Remote Commander in playback pause mode. If you keep pressing the button, you can view the picture at 1/25 speed. To resume normal playback, press ▷.

**To change the playback direction**

Press ◀ on the Remote Commander for reverse direction or ▶ on the Remote Commander for forward direction during playback. To resume normal playback, press ▷.

**Notes on playback**

- The sound is muted in the various playback modes.
- During playback other than normal playback, the previous recording may appear in mosaic image. This is not malfunction.
- When playback pause mode lasts for 5 minutes, the camcorder automatically enters stop mode. To resume playback, press ▷.

**Note on slow playback**

The slow playback can be performed smoothly on this camcorder; however, this function does not work for an output signal from the DV OUT jack.

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 ΕΑΟ ρ'ΕΑίΕη  
 ρ'ΕίΕύΑ ◀▶ ΕίΕ ▶ ρ'ι Όύι,ύΑ  
 %ΕΟύη'Εόιό,,ό ύό ρ'ιΑίΕη, ΑΕΕΙΑ ΌϋΑ°  
 ,όόό ΟΕΑ,Α%ΑίΕη.όόίΕρ'Α ΕΕύΑ·ύ%ΑύΑ  
 %Α Εϋ, ίιόόιύ ρ'ΕϋόΕ, ύό ρ'ιόΕΑύΑ  
 ό όόίϋ Ε,ϋ, ΕΑΟ ρ'ΕΑίΕΑ ρ'ι 1/25  
 όίό όόύΕ. Νίη, όόόύηίό,ίΑίΕη ίό ρ'ι,ίό,,ό  
 ,όόό ΟΕΑ,Α%ΑίΕη ρ'ΕίΕύΑ ▷.

Νίη ΕΑίΑίΑίΕη ρ'ιό ρ'ιΑίΕη  
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 ρ'ΕίΕύΑ < ρ'ι Όύι,ύΑ %ΕΟύη'Εόιό,,ό  
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 > ρ'ι Όύι,ύΑ %ΕΟύη'Εόιό,,ό ύό ρ'ιΑίΕη %ή  
 ρ'ιό ρ'ιΑίΕη,όΑ Α% ,ό , Αή  
 ,όόό ΟΕΑ,Α%ΑίΕη. Νίη,όόόύηίό,ίΑίΕη  
 ίό ρ'ι,ίό,,ό ,όόό ΟΕΑ,Α%ΑίΕη ρ'ΕίΕύΑ ▷.

- ε ΕΙΑ ρ'ιΕη ί ,όόό ΟΕΑ,Α%ΑίΕ.
- ά,ύί ·ύ%Αύ ό Ε,ιύ-Αι, ρ'ΑίΕ'ι' ΑΕΕίη,όόό ΟΕΑ,Α%ΑίΕη.
- ρ'ό, Αή,όόό ΟΕΑ,Α%ΑίΕη, ΑΕΕΙΑ  
 ΌύίΕ'ιόι όύ ίό ρ'ι,ίό,,ό ΕΑΟ ρ'ΕΑίΕη  
 ρ'ιΑΑ ΑϋΕόή'ι' ρ'ι ρ'ιό, ίό,,ύύ ΕίΑύ,  
 ίόΑϋΕ'ι'Ε,Ε%. ύύό ίΑ η,ηΑύόη  
 ίΑΕόό ρ'ιόόύ.
- όόίΕ ΑΕΕίόϋΑ° ΑϋΕόΕό όόόίΕϋΑύόη,  
 ύΑ-ΑίΕΑ 5 ίΕιύύ, Ε%ΑόίϋΑ ρ'  
 ρ'ιύόιϋΕ-ΑόίΕ,όΕ%Αύ, ΑΕΕί όόόύηίό,ϋ.  
 Νίη,όόόύηίό,ίΑίΕη,όόό ΟΕΑ,Α%ΑίΕη  
 ρ'ΕίΕύΑ ▷.

ε ΕΙΑ ρ'ιΕΑ ί ΑϋίΑ%ΑίΑίόιό  
 ,όόό ΟΕΑ,Α%ΑίΕ.  
 άϋίΑ%ΑίΑίό,όόό ΟΕΑ,Α%ΑίΕΑ ρ'ι ρ'ιόΕ  
 ,Ε%ΑόίϋΑ Α ίόΕΑύ ·ύ, 'όόίΑίό  
 όίϋ,ίό, ό%ιϋίό, %ιϋη ρ'ιϋίΕη ίΑ ·ύ%Αύ  
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 DV OUT.

## Searching for the end of the picture

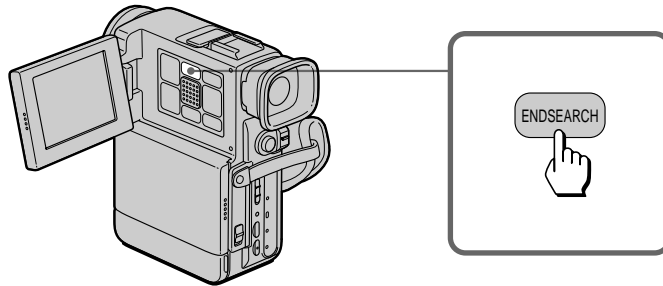
èÓËÒÍ ÍÓÌ`‡  
ÈÁÓ· ‡ÈÀÌÈfl

You can go to the end of the recorded portion after you record and play back the tape. The tape starts rewinding or fast-forwarding and the last about 5 seconds of the recorded portion plays back. Then the tape stops at the end of the recorded picture (**End Search**).

Open the LCD panel and press END SEARCH during recording standby. This function works when the POWER switch is set to CAMERA, PLAYER or PHOTO.

Ç° ÌÓÈÁÚÁ ÒÁ ÆÈÚÈ Í ÍÓÌ`Ú Á‡ÔÈÒ‡ÌÍÓÈ  
‡ÔÚÈÓÓÓÍÁÁ‡ÔÈÓÈÈ,ÓÓÓ ÓÈÁ,Â%ÀÌÈfl  
ÌÁÌÚ°. àÁÌÚ‡ Ì‡ÈÌ‡ÁÚ ÓÁ ÁÌ‡Ú°,‡Ú,Òfl  
Ì‡Á‡%ÈÈÈ,ÓÁ Á%,È Ò È.ÌÈÁÈÚÁÌ,ÌÓ  
ÓÓÓÍÁ%ÌÈÁ5ÓÁÍÚ%Á‡ÔÈÒ‡ÌÍÓÈ‡ÓÚÈ.Ú%ÚÚ  
,ÓÓÓ ÓÈÁ,Â%ÀÌÈ. à‡ÚÁÌ ÍÁÌÚ‡ ÓÓÚ‡ÍÓ,ÈÚÓfl,  
ÍÓÌ`Á Á‡ÔÈÒ‡ÌÍÓ,Ó ÈÁÓ· ‡ÈÀÌÈfl ( ÓÓÈÓÍ  
ÍÓÌ`‡).

éÚÍ ÓÈÚÁ Ò‡ÌÁÌ, ÙãÑ È Ì‡ÈÈÈÚÁ END  
SEARCH.  
Ñ‡Ì‡fl ÙÚÌÍÈfl ‡.ÓÚ‡ÁÚ, ÍÓ,%‡  
,ÍÌ ‡ÚÁÌ. POWER ÙÓÚ‡ÍÓ,ÌÁÌ ÌÈ.Ó ,  
ÓÓÍÓÈÁÌÈÁ CAMERA, PLAYER ÈÈÈ PHOTO.



### Note on End Search

The End Search function does not work once you have ejected the cassette after you recorded in the tape or if you do not record after you have inserted a tape.

è ÈÌÁ‡ÌÈÁ Í ÙÚÌÍÈÈ ÓÓÈÓÍ‡ ÍÓÌ`‡  
ÌÚÌÍÈfl ÓÓÈÓÍ‡ Á‡ÔÈÒÈÈ ÌÁ ‡.ÓÚ‡ÁÚ, ÁÓÍÈ Ç°  
,ÚÓÍÌÍÚÍÈ Ì‡ÓÓÁÚÚ ÓÓÓÍÁ, °ÓÓÌÁÌÈfl  
Á‡ÔÈÒÈ Ì‡ ÍÁÌÚÚ, ÈÈÈ ÁÓÍÈ Ç° ÌÁ Ó ÓÈÁ,ÁÌÈ  
Á‡ÔÈÒ, ÓÓÓÍÁ,ÓÚ‡,ÌÈ ÌÁÌÚ°.



## Advanced operations

# Using alternative power sources

You can choose any of the following power sources for your camcorder: battery pack, mains, and 12/24 V car battery. Choose the appropriate power source depending on where you want to use your camcorder.

Place	Power source	Accessory to be used
Indoors	Mains	Supplied AC power adaptor
Outdoors	Battery pack	Battery pack NP-F100 (supplied), NP-F200
In the car	12 V or 24 V car battery	Sony car battery charger DC-V515

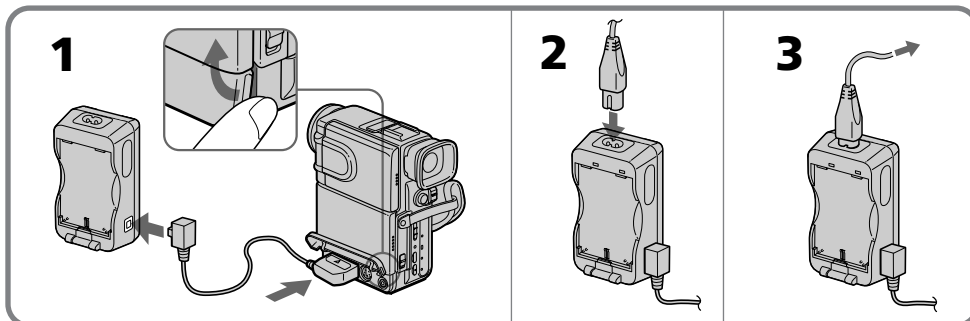
### Note on power sources

Disconnecting the power source or removing the battery pack during recording or playback may damage the inserted tape. If this happens, restore the power supply again immediately.

## Using the mains

To use the supplied AC power adaptor:

- (1) Open the jack cover and connect the connecting plug on the camcorder to the DC OUT jack on the AC power adaptor using the supplied connecting cord.
- (2) Connect the mains lead to the AC power adaptor.
- (3) Connect the mains lead to mains.



Continued to the next page

## Using alternative power sources

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## Using alternative power sources

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### Charging the battery pack

You can charge the battery pack installed in the camcorder by connecting the AC power adaptor to the camcorder and setting the POWER switch to OFF. The CHARGE lamp lights up, and goes out when normal charge is completed. For a full charge, leave the battery pack in place for approximately one hour. Charging time of the supplied NP-F100 battery pack is as follows:  
Full charge: approx. 2 hours and 30 minutes  
Normal charge: approx. 1 hours and 30 minutes

### Charging two battery packs at the same time

Install one battery pack in the camcorder and another one on the AC power adaptor. The CHARGE lamps on the camcorder and on the AC power adaptor light up, and go out when normal charge is completed. For a full charge, leave the battery pack in place for approximately one hour. If either of the CHARGE lamps remains lit, charging both battery packs is not completed. Time taken to charge two NP-F100 battery packs simultaneously is as follows:  
Full charge: approx. 2 hours and 40 minutes  
Normal charge: approx. 1 hours and 40 minutes

### Notes on the CHARGE lamp

- The CHARGE lamp will remain lit for a while even if the unit is unplugged after use. This is normal.
- If the CHARGE lamp does not light, disconnect the mains lead. After about one minute, reconnect the mains lead.

á± ñ%óÍ± ·±Ú± ÁÈÌÓ, Ò ·ÍÓÍ± Ç° ÍÒÈÁÚÁ Á± ñÈ±Ú, ÚÓÚ±ÍÓ, ÌÁÌÈÈ Ì± Ì±ÌÁ Á ·±Ú± ÁÈÌÈÈ ·ÍÓÍ ÓÚÚÁÍ ÓÓ%ÓÓÁ%ÈÌÈÈÒÁÚÁ, Ç±±ÓÚÁ ±ÒÁ ÁÌ. ÚÓÍ± Í, È%ÁÓÍ±ÌÁ Á È ÚÓÚ±ÍÓ, ÌÈ ±ÍÚÁÍñ POWER, ÒÓÍÒÈÁÌÈÈÁ OFF. ±±ÍÒÓ~Í± CHARGE ·Ú%ÁÚ, Ó ÁÚ, È ÓÓ, ±ÒÍÁÚ, ÍÓ, %± ÍÓ Ì± Ì±ñ Á± ñ%óÍ± ·Ú%ÁÚ Á±, Á ·ÁÌ±. ÑÌñ ÓÓÍÒÈ Á± ñ%óÍÈ ÓÓÚ±, ÚÁ ·±Ú± ÁÈÌÈÈ ·ÍÓÍ Ì± ÌÁÓÚÁ Ó È·ÈÁÈÚÁÌ, ÌÓ Ì± Ó%ÈÌ ±±Ò. Ç ÁÌñ Á± ñ%óÍÈ Ó ÈÌ±, ±ÁÍÓ, Ó ·±Ú± ÁÈÌÓ, Ó ·ÍÓÍ± NP-F100 ·Ú%ÁÚ ÓÍÁ%Ú, ·ÈÌ: èÒÍ±ñ Á± ñ%óÍ±: Ó È·ÈÁ. 2 ~±Ò± 30 ÌÈÌÚÚ ÇÓ Ì± Ì±ñ Á± ñ%óÍ±: Ó È·ÈÁ. 1 ~±Ò± 30 ÌÈÌÚÚ

á± ñ%óÍ± %Ú, ÚÍ ·±Ú± ÁÈÌÈÈ ·ÍÓÍÓ, Ó%ÓÍÓ, ÁÌÁÌÒ ÌÓÚ±ÍÓ, ÈÚÁ Ó%ÈÌ ·±Ú± ÁÈÌÈÈ ·ÍÓÍ, È%ÁÓÍ±ÌÁ Ú, ±ÚÓ ÓÈÌ±ÒÁÚÁ, ÓÈ±±%±ÓÚÁ ÓÁ ÁÌ. ÚÓÍ±. ±±ÍÒÓ~ÌÈÈ CHARGE Ì± È%ÁÓÍ±ÌÁ ÁÈÌÈÈÒÁÚÁ, ÓÍ±±ÓÚÁ ÁÒÁ ÁÌ. ÚÓÍ± ·Ú%ÁÚ, Ó ÁÚ ÈÓÓ, ±ÒÍÚÚ, ÍÓ, %± ÍÓ Ì± Ì±ñ Á± ñ%óÍ± ·Ú%ÁÚ Á±, Á ·ÁÌ±. ÑÌñ ÓÓÍÒÈ Á± ñ%óÍÈ ÓÓÚ±, ÚÁ ·±Ú± ÁÈÌÈÈ ·ÍÓÍ Ì± ÌÁÓÚÁ Ó È·ÈÁÈÚÁÌ, ÌÓ Ì± Ó%ÈÌ ±±Ò. ÓÒÍÈ Ó%±ÈÁ %Ú, Ì±±ÍÒÓ~ÁÍ CHARGE ÓÓÚ±ÁÚÓñ, Ó ÁÚ, ÚÓ Á± ñ%óÍ± Ó·ÓÈÌ ·±Ú± ÁÈÌÈÈ ·ÍÓÍÓ, ÌÁ Á±, Á ·ÁÌ±. Ç ÁÌñ %ññ Á± ñ%óÍÈ %Ú, ÚÍ ·±Ú± ÁÈÌÈÈ ·ÍÓÍÓ, NP-F100 ·Ú%ÁÚ ÓÍÁ%Ú, ·ÈÌ: èÒÍ±ñ Á± ñ%óÍ±: Ó È·ÈÁ 2 ~±Ò± 40 ÌÈÌÚÚ ÇÓ Ì± Ì±ñ Á± ñ%óÍ±: Ó È·ÈÁ 1 ~±Ò± 40 ÌÈÌÚÚ

è ÈÌÁ~±ÌÈñ Í Ì±ÍÒÓ~ÌÁ CHARGE

- ±±ÍÒÓ~Í± CHARGE ·Ú%ÁÚ ÓÓÚ±, ±Ú Óñ, Ó ñ~ÁÈ Á~Á, ÚÁ~ÁÌÈÁ ÌÁÍÓÚÓ Ó, Ó, ÁÌÁÌÈ, %±ÈÁÁÓÈ±ÒÓ± ±ÚÓÚÓÓÁ%ÈÌÁÍÓÚÁÚÈ ÓÓÓÍÁ ÈÓÓÓÍ, ÁÓ, ±ÌÈñ. ùÓÓ ñ, ññÁÚÓñ ÌÓ Ì± Ì± Ì±.
- ÓÓÍÈÌ±ÍÒÓ~Í± CHARGE ÌÁ, Ó ÈÚ, ÚÓÓÓÁ%ÈÌÈÚÁ Ó Ó, Ó%± ÌÁÍÚ ÓÓÈÚ±ÌÈñ. è È·ÈÁÈÚÁÌ, ÌÓ ~Á ÁÁÓ%ÚÌÈÌÚÚÓÍÓ, ±ÓÓ%ÓÓÁ%ÈÌÈÚÁ Ó Ó, Ó%± ÌÁÍÚ ÓÓÈÚ±ÌÈñ.

**To remove the connecting cord**

While pressing the button on the connecting plug, pull out the connecting cord. Never pull the connecting cord itself. When you use the AC power with the connecting cord, the battery pack installed in the camcorder is not used because the AC power has priority over the battery pack.

**WARNING**

The mains lead must only be changed at a qualified service shop.

**PRECAUTION**

The set is not disconnected from the AC power source (mains) as long as it is connected to the mains, even if the set itself has been turned off.

**Using a car battery**

Use a car battery charger such as Sony DC-V515 (not supplied). Connect the car battery cord to the cigarette lighter socket of a car (12 V or 24 V). Connect the car battery charger and the camcorder using the supplied DK-626 connecting cord.

**Note on the battery pack**

You cannot charge the battery pack (NP-F100, NP-F200) using the car battery charger DC-V515.



This mark indicates that this product is a genuine accessory for Sony video product. When purchasing Sony video products, Sony recommends that you purchase accessories with this "GENUINE VIDEO ACCESSORIES" mark.

Νίη òíηÚÈη òóÀ%ÈiÈÚÁi ió,ó ñÚ † ç†ÈÈi†η ií00iÚ i† òóÀ%ÈiÈÚÁi ióí †Á·ÁiÁ, °Ú†ÈÚÁ òóÀ%ÈiÈÚÁi,i'È ñÚ . çÈiÓ,,%0† iÁ ÚñiÈÚÁ Á† 0†i ñÚ . àÓ,%0†ÇÈ00Ói,ÁÚÁÁ0ÁÚÁ,0È†%0ÚÁ ÓÁ Ái. Ú0i†,iÁ0ÚÁ ò 00Á%ÈiÈÚÁi i'í ñÚ 0i, .†Ú† ÁÈi'È ·iÓi, Ú0Ú†iÓ,iÁiì'È , È%0Á0i†iÁ ÁiÁ ·Ú%0ÁÚÈ00Ói,Á0,†Ú 0ñ, Ú†i i†i0ÁÚÁ,0È†%0ÚÁ ÓÁ Ái.Ú0i†ÈiÁÁÚ ò·0È ÈÚÁÚÓÁ Á%0·†Ú† ÁÈi'í·iÓiÓi.

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à000i,ÁÚÈÚÁ Á† η%0i'È ,°0 ηiÈÚÁi, †iíÚiÚñÚ0 i0È ·†Ú† ÁÈ, i†i i†0 ÈiÁ , Sony DC-V515(iÁ0 Èi†,†ÁÚ0ñ)è0%000Á%ÈiÈÚÁ ñÚ †,Ú0iÓ·Èi,iÓ,ó †iíÚiÚñÚ0 † i ,iÁÁ%0Ú 0È,† ÁÚiÓ,ó 0 ÈiÚ È,†ÚÁñ†,Ú0iÓ·Èñ (12 Ç ÈiÈ 24 Ç). è0Á%ÈiÈÚÁ Á† η%0i'È ,°0 ηiÈÚÁi, †,Ú0iÓ·Èi,iÓ,ó †iíÚiÚñÚ0 † È,È%0Á0i†iÁ Ú, È000i,ÁÚñ 0 Èi†,†Ái'È 00Á%ÈiÈÚÁi,i'È ñÚ DK-626.

è ÈiÁ~†iÈÁ i ·†Ú† ÁÈi0iÚ ·iÓiÚ Ç iÁ i0ÈÁÚÁ Á† η%0ÈÚ, ·†Ú† ÁÈi'È ·iÓi (NP-F100, NP-F200) 0 È000i,Á0,†iÈÁi Á† η%0iÓ,ó ,°0 ηiÈÚÁñ† †,Ú0iÓ·Èi,iÓ,ó †iíÚiÚñÚ0 † DC-V515.



ç†0Ú0ñ'ÈÈ Ái†i Úi†Á,†ÁÚ, ~Ú0 %0†i†η ò 0%0Úi'Èñ η,ññÁÚ0ñ 00%0iÈi0È 0 Èi†%0iÁÈi00Ú, È%00Á00 0%0Úi'ÈÈ Sony. 00iÈÇ° 00iÚ0†ÁÚÁÈ%0Á00 0%0Úi'È Sony, Ú0 i° ÁiÓiÁi%0ÚÁi, ~Ú0° Ç° 00iÚ0†iÈ 0 Èi†%0iÁÈi00ÚÈ, 00iÁ·Áiì'Á Ái†iÓi "GENUINE VIDEO ACCESSORIES".

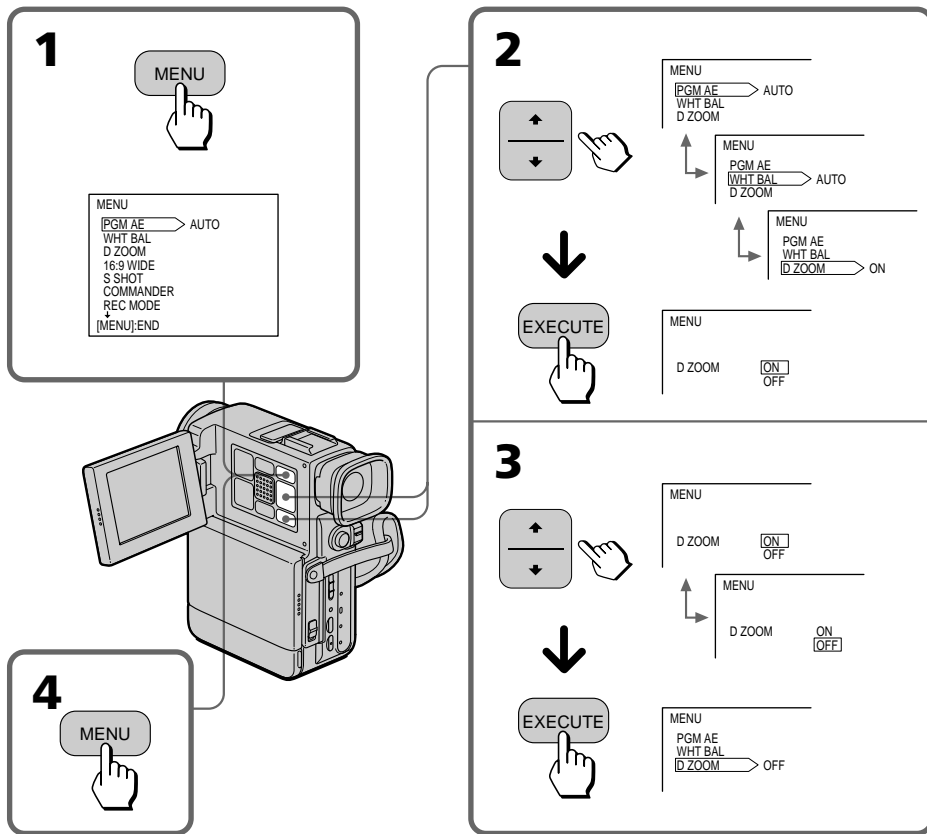
# Changing the mode settings

# Αλλάζοντας τις ρυθμίσεις λειτουργίας

You can change the mode settings in the menu system to further enjoy the features and functions of the camcorder.

- (1) Press MENU to display the menu on the LCD screen.
- (2) Press  $\downarrow$  or  $\uparrow$  to select the desired item, then press EXECUTE. Only the selected item is displayed.
- (3) Press  $\downarrow$  or  $\uparrow$  to select the desired mode, then press EXECUTE. If you want to change the other modes, repeat steps 2 and 3.
- (4) Press MENU to erase the menu display.

- (1) Πατήστε το κουμπί MENU για να εμφανιστεί το μενού στην οθόνη LCD.
- (2) Πατήστε  $\downarrow$  ή  $\uparrow$  για να επιλέξετε το επιθυμητό αντικείμενο, στη συνέχεια πατήστε το κουμπί EXECUTE. Μόνο το επιλεγμένο αντικείμενο θα εμφανιστεί στην οθόνη.
- (3) Πατήστε  $\downarrow$  ή  $\uparrow$  για να επιλέξετε τον επιθυμητό τρόπο λειτουργίας, στη συνέχεια πατήστε το κουμπί EXECUTE. Εάν θέλετε να αλλάξετε άλλους τρόπους λειτουργίας, επαναλάβετε τα βήματα 2 και 3.
- (4) Πατήστε το κουμπί MENU για να σβήσει το μενού στην οθόνη LCD.



**Note on changing the mode settings**

Menu items differs depending on the setting of the POWER switch to PLAYER or CAMERA/PHOTO.

**Selecting the mode setting of each item**

**Items for both CAMERA/PHOTO and PLAYER modes**

**COMMANDER <VTR4/OFF/ID/ID SET>**

- Select VTR4 when using the supplied Remote Commander for the camcorder.
- Select OFF when not using the Remote Commander.
- Select ID when using the Remote Commander set to the ID number.
- Select ID SET when setting the ID number to the Remote Commander.

**REC MODE <SP/LP>**

- Select SP when recording in SP (standard play) mode.
- Select LP when recording in LP (long play) mode.

**BEEP <ON/OFF>**

- Select ON so that beeps sound when you start/stop recording, etc.
- Select OFF when you do not want to hear the beep sound.

**LCD COLOUR**

Select this item and change the level of the indicator by pressing + or - to adjust the colour intensity of the picture.

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**àÁiÄiÄiÈÄ ÛÓÙ±iÓ,Ói ÄÈÈiÓ,**

iÓÙ±iÓ,iÈ %fi Ó.ÓÈi ÄÈÈiÓ,, CAMERA/PHOTO È PLAYER COMMANDER <VTR4/OFF/ID/ID SET>  
 • Ç·Ä ÈÚÄ VTR4 Ò ÈÈÓÓi,ÁÓ,±iÈÈ Ó Èi±,±ÁiÓ,ÓÓÚi,ú±%ÈÓÙ±iÈÓiìÓ,Ó ÛÓ ±,iÄiÈfi %fi,È%ÄÓi±iÁ °.  
 • Ç·Ä ÈÚÄ OFF,ÁÓiÈ ÓÚi,ú±%ÈÓÙ±iÈÈÓiÓ,Ó ÛÓ ±,iÄiÈfiÄÈÈÓÓi,ÁÚÁÚÓfi.  
 • Ç·Ä ÈÚÄ ID Ò ÈÈÓÓi,ÁÓ,±iÈÈ ÓÚi,ú± %ÈÓÙ±iÈÈÓiìÓ,ÓÚÓ ±,iÄiÈfi, ÛÓÙ±iÓ,iÄiìÓ,Ó i± iÓiÄ ID.  
 • Ç·Ä ÈÚÄ ID SET Ò È ÛÓÙ±iÓ,iÄ iÓiÄ ± ID i± ÓÚi,úÄ %ÈÓÙ±iÈÈÓiìÓ,Ó ÛÓ ±,iÄiÈfi.

**REC MODE <SP/LP>**

- Ç·Ä ÈÚÄ SP Ò ÈÄ±ÓÈÈÈ, ÄÈÈiÄ SP (ÓÚ±i±,úiÓ,ÓÓÓÓ ÓÈÄ,Ä%ÄiÈfi).
- Ç·Ä ÈÚÄ LP Ò ÈÄ±ÓÈÈÈ, ÄÈÈiÄ LP (i%ÄiÄiìÓ,Ó,ÓÓÓ ÓÈÄ,Ä%ÄiÈfi).

**BEEP <ON/OFF>**

- Ç·Ä ÈÚÄ ON, ~úÓ.° ÁÚiÄiÄ iÄ ÓÈ,,i±i° Ä,ú±iÈ, iÓ,,%± Ç° i±~Èi±ÁÚÄ/ÓÓÙ±iÈ,±ÁÚÄÄ±ÓÈÈ,ÈÚ.%.  
 • Ç·Ä ÈÚÄ OFF, ÓÓiÈ Ç° iÄ iÓÚÈÚÄ Ói~±ú, ÁÚiÄiÄ iÈ Ä,úiÓ,ÓÈ ÓÈ,,i±i.

**LCD COLOUR**

Ç·Ä ÈÚÄ %±iìÛ ÛÓÙ±iÓ,iÚ È ÈÁiÄiÈÚÄ Û Ó,Äi, Èi%Èi±úÓ ± ÓÚÚÁi i±È±ÚÈfi + ÈiÈ - %fi Ä,úíÈ Ó,iÈ fi iÓÓÚÈÈ,ÁÚ±ÈÁÓ. ±ÈÄiÈfi.

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## Changing the mode settings

## ÀÁÂÃÄÅ ÆÇÈÉÊËÌÍÎÏÐ ÑÒÓÔÕÖ×ØÙÚÛÜÝ ÞÀ

### Items for CAMERA/PHOTO mode only PGM AE\* <AUTO/SPORTS/SUNSETMOON/ LANDSCAPE>

- Select AUTO to set PROGRAM AE (Auto Exposure) automatically depending on your shooting situation.
- Select SPORTS to set PROGRAM AE to the sports lesson mode.
- Select SUNSETMOON to set PROGRAM AE to the sunset and moon mode.
- Select LANDSCAPE to PROGRAM AE to the landscape mode.

### WHT BAL\* <AUTO/HOLD/OUTDOOR/INDOOR>

- Normally select AUTO to adjust the white balance automatically.
- Select HOLD when recording monochromatic subject or background.
- Select OUTDOOR when recording in the outdoor mode.
- Select INDOOR when recording in the indoor mode.

### D ZOOM <ON/OFF>

- Select ON to activate digital zooming.
- Select OFF not to use the digital zoom. The camcorder goes back to 10x optical zoom.

### 16:9 WIDE <OFF/ON>

- Normally select OFF.
- Select ON to record a 16:9 wide picture to watch on a wide-screen TV.

### S SHOT <ON/OFF>

- Normally select ON.
- Select OFF when you do not have to worry about camera-shake.

### REC LAMP <ON/OFF>

- Normally select ON.
- Select OFF when you do not want the camera recording/battery lamp at the front of the unit to light up.

### CLOCK SET

Select this item to reset the date or time.

### ìòùþìó,íë úóì,íó %íñ ÆËË±

#### CAMERA/PHOTO

#### PGM AE\* <AUTO/SPORTS/SUNSETMOON/ LANDSCAPE>

- Ç°·À ÉÚÀ AUTO %íñ ùòùþìó,íë PROGRAM AE (±,úóì±úë·Àóíóë íóóóÁë·ËË) ±,úóì±úë·Àóíë, Á±,Ëóëíóóúë óú Ç±·ÀË ÓËú±·ËË Ò·Àííë.
- Ç°·À ÉÚÀ SPORTS %íñ ùòùþìó,íë PROGRAM AE ì± ÆËËí òóó úë,ì, Ì·Á±íñúëË.
- Ç°·À ÉÚÀ SUNSETMOON %íñ ùòùþìó,íë PROGRAM AE ì± ÆËËí Á±íó%± òóíì± Ë Ì·Û·ì°.
- Ç°·À ÉÚÀ LANDSCAPE %íñ ùòùþìó,íë PROGRAM AE ì± Ì±í%± ±úúí°ë ÆËËí.

#### WHT BAL\* <AUTO/HOLD/OUTDOOR/ INDOOR>

- é·°·íó ,·ë ±ÉÚÀ AUTO %íñ Æ,,úíë ó,íë ·±í±íò± ·Áíó,,ó ±,úóì±úë·Àóíë.
- Ç°·À ÉÚÀ HOLD Ò È Á±òëòë íóíó, óííó,,ó Ó··Áíú± Ëíë úóì±.
- Ç°·À ÉÚÀ OUTDOOR Ò È Á±òëòë, ÆËËíÀ Ó··Áííë ,ìÀ íóíÀ·Àíëíñ.
- Ç°·À ÉÚÀ INDOOR Ò È Á±òëòë, ÆËËíÀ Ó··Áííë , òóíÀ·ÀíëË.

#### D ZOOM <ON/OFF>

- Ç°·À ÉÚÀ ON %íñ íúúë,ËÁ±·ËË °È ù,óÉ Ù ±íóúóí±·ËË.
- Ç°·À ÉÚÀ OFF Ò È ÌÁËòóóí,Áó,±íëË °È ù,óÉ Ù ±íóúóí±·ËË. ÇË%·Àóí±íÀ ± ,ÓÁ, ±±Áúóííóóúë·Àóíúë Ù ±íóúóí±·ËË 10í.

#### 16:9 WIDE <OFF/ON>

- é·°·íó ,·ë ±ÉÚÀ OFF.
- Ç°·ë ±ÉÚÀ ON %íñ Á±òëòë ÈÁÓ· ±ËÀíëíñ , Ë óíóúó í±úíóí ÆËËíÀ 16:9 %íñ Ò óóíóú ± ì± Ë óíóí ±ííóí úÁíÀ,ÈÁÓ Æ.

#### S SHOT <ON/OFF>

- é·°·íó ,·ë ±ÉÚÀ ON.
- Ç°·ë ±ÉÚÀ OFF, íó,,%± Ç° ÌÀ ·ÁóóóíóÁúÁó, ó% òË±íëË Ì±íÀ °.

#### REC LAMP <ON/OFF>

- é·°·íó ,·ë ±ÉÚÀ ON.
- Ç°·À ÉÚÀ OFF, Áòíë Ç° ÌÀ íóúëúÀ, ~úó·° Á±,,ó ±í±ó, Ì±íóóí± Á±±òëòë Ì±íÀ óë/ Á± í%±±·±ú± ÆËíó,,ó·íóí± Ì± ÓÁ Æ%íÀË Ò±íÁíë±óó± ±ú±.

#### CLOCK SET

- Ç°·À ÉÚÀ %±ííú, ùòùþìó,íú %íñ Æ,,úíë ó,íë %±ú° ëíë , ÁíÁíë.

**Items for PLAYER mode only**  
**AUDIO MIX\***

Select this item and adjust the balance between the stereo 1 and stereo 2 by pressing  $\blacktriangledown$  or  $\blacktriangle$ .

**DATA CODE <DATE/CAM or DATE>**

- Select DATE/CAM to display date and recording data during playback.
- Select DATE to display date during playback.

\* These settings are retained even when the battery is removed, as long as the vanadium-lithium battery is charged. As far as the items without an asterisk are concerned, their settings return to the default 5 minutes or more after the battery is removed.

**When recording a close subject**

When REC LAMP is set to ON, the red camera recording lamp on the front of the camcorder may reflect on the subject if it is close. In this case, we recommend you set REC LAMP to OFF.

**Note**

When playing back a tape recorded in the 16-bit mode, you cannot adjust the balance in AUDIO MIX.

i00i0, iE u0i, i0 %0fi AEEit PLAYER  
AUDIO MIX\*

C° A tEUÁ uU u0Uti0, iE E A, UIE UEUÁ  
· #ti0 · Ai0, 0 iA E%U 0UÁ A0 1 E 0U A0 2  
0UUÁi itEtUÉfi  $\blacktriangledown$  EIE  $\blacktriangle$ .

DATA CODE <DATE/CAM EIE DATE>

- C° A EUÁ DATE/CAM %0fi 0U0. tEÁiEfi  
%0tU° E %0tli' i ÁtOE0E , 0 , Áifi  
, 000 0EÁ, A%ÁiEfi.
- C° A EUÁ DATE %0fi 0U0. tEÁiEfi %0tU° , 0  
, Áifi, 000 0EÁ, A%ÁiEfi.

\* uUE u0Uti0, iE 00Ut, U0fi%0tEÁ0 E 0ifiUEE  
· tUt AIEi0, 0 · i0it%0UÁi 00 , 00it  
Át fiEÁit, tit%0EÁ, 0· iEUÉÁ, tfi · tUt AIEit.  
0U0it0tAU0fiU0Uti0, 0i · ÁÁÁ, ÁÁ%0tE, U0  
0iE , 0Á, t~t, U0fi í E0i0%0i0iU 000U0fiE,  
~Á ÁÁ 5 iEiU0 EIE · 0iÁÁ 000iÁ 0ifiUEfi  
· tUt AIEi0, 0 · i0it.

e E ÁtOE0E · iEÁi0 t000i0EÁi0, 0  
0 · ÁiUt  
á0, %0t U0li' Efi REC LAMP u0Uti0, iÁit it  
ON, í t0itfi iti00~it ÁtOE0E, E%0Á0ititÁ 0E  
it 0Á A%0iÁE 0tÁiE, E%0Á0ititÁ ° i0EÁU  
0U tEtU, 0fi0U0 · ÁiUt, Á0iE 0i t000i0EÁi  
0~Ái · iEÁi0. C ~U0i 0iU~tÁ i°  
Ái0iÁi%0UÁi u0Uti0, EÚ, REC LAMP it OFF.

e E iA~t iEÁ  
á0, %0t, 000 0EÁ, 0%0EÚ0fiÁiUt, ÁtOE0tliifi,  
16-· EU0, 0i AEEiÁ, C° iÁ 0i0EÁUÁ  
0U Á, UIE 0, tU, · #ti0 E AUDIO MIX.



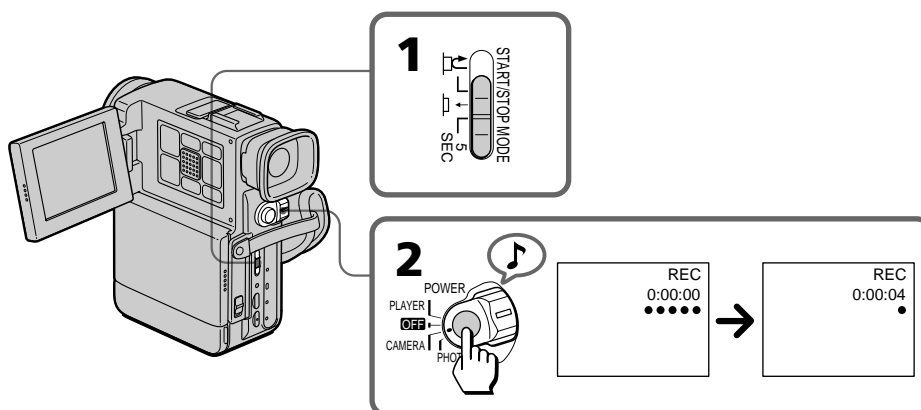


## Shooting scenery in several short takes

Long, continuous shots of scenery tend to be dull, and have to be edited to make an interesting video. With 5SEC. REC (5-second recording) mode, the camcorder records for only 5 seconds and then switches to Standby mode, so that you will automatically take a series of quick shots resulting in a lively video.

**(1)** Set START/STOP MODE to **5SEC.** Five dots appear on the LCD screen or in the viewfinder.

**(2)** Press START/STOP. Recording starts. The dots disappear at a rate of one per second. When 5 seconds elapse and all the dots disappear, the camcorder switches to Standby mode automatically.



### To extend the recording time

Press START/STOP again before all the dots disappear. Recording continues for 5 seconds from the moment you press START/STOP.

### To cancel 5-second recording

Set START/STOP MODE to **⏏**. If you set the switch while recording, recording continues.

### Note on 5-second recording

You cannot use FADER function during 5-second recording.

5-Second Recording Mode

5-Second Recording Mode (5SEC. REC) allows you to record in 5-second intervals. This mode is useful for capturing quick shots of scenery, which can be edited together to create a lively video. To use this mode, set the START/STOP MODE dial to 5 SEC. When you press the START/STOP button, recording begins for 5 seconds. As the recording progresses, five dots on the LCD screen or in the viewfinder disappear one by one. When all five dots disappear, the camcorder automatically switches to Standby mode.

**(1)** Set the START/STOP MODE dial to 5 SEC. The LCD screen or viewfinder will display five dots.

**(2)** Press the START/STOP button. Recording begins for 5 seconds.

When the recording time reaches 5 seconds, the camcorder automatically switches to Standby mode.

To extend the recording time, press the START/STOP button again before all the dots disappear. Recording will continue for 5 seconds from the moment you press the START/STOP button.

To cancel 5-second recording, set the START/STOP MODE dial to **⏏**. If you set the dial while recording, recording will continue.

Note on 5-second recording: You cannot use the FADER function during 5-second recording.

# Fade-in and fade-out

Ç, Â%oÂiËÂ Ë , °, Â%oÂiËÂ  
ËÁÓ. †ÊÂiËfl

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

When fading in, the picture gradually fades in from black while the sound increases. When fading out, the picture gradually fades to black while the sound decreases.

### When fading in [a]

- (1) While the camcorder is in Standby mode, press FADER. The fade indicator starts flashing.
- (2) Press START/STOP to start recording. The fade indicator stops flashing.

### When fading out [b]

- (1) During recording, press FADER. The fade indicator starts flashing.
- (2) Press START/STOP to stop recording. The fade indicator stops flashing, and then recording stops.

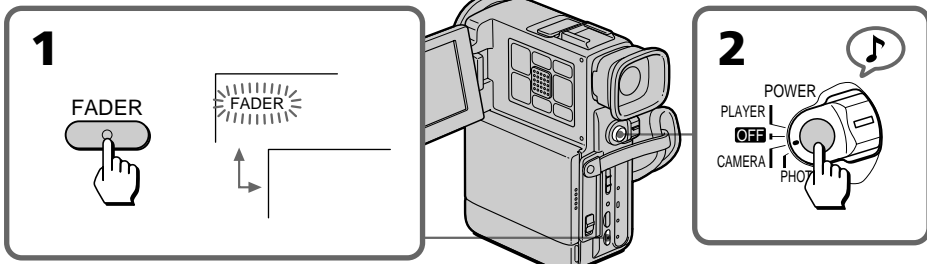
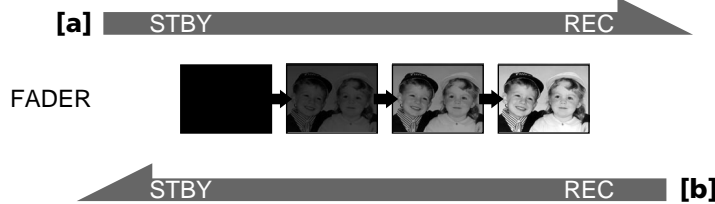
Ç° iOËÁÚÂ Ôi†,iO ,,Ó%oËÚ, Ë , °, Ó%oËÚ,  
ËÁÓ. †ÊÂiËÁ. Ó Ë%o†,†flÇ† ÂËÁ†ÔËÓË  
Ô ÓÚÂÔËÓËi†,i'Ë, Ë%o.  
è Ë,,Â%oÂiËËËÁÓ. †ÊÂiËÁÔÓÓÚÂÔÂiO  
,,Ó%oËÚÔfl ÓÚ~Â iO,,Ó ËiË iOÁ†Ë~iO,,Ó Ó  
Ó%o iO, ÂiAi i' ÔÓ, ~ÂiËÁi Á,Úi†. è Ë  
,,Â%oÂiËËËÁÓ. †ÊÂiËÁÔÓÓÚÂÔÂiO  
,,Ó%oËÚÔfl %oÓ~Â iO,,Ó ËiË iOÁ†Ë~ÂiO,,Ó Ó  
Ó%o iO, ÂiAi i' ÔÓiËËÁiËÁi Á,Úi†.

### Nífl ,,Â%oÂiËfl ËÁÓ. †ÊÂiËfl [a]

- (1) äÓ,,%o†, Ë%oÁÓi†iÁ †i†iÓ%oËÚÔfl, ÂËËiÁ  
,,ÓÚÓ,iOÓÚË i†ËiËÚÁ FADER. ài%oËi†ÚÓ  
,,Â%oÂiËfl i†~Ëi†ÁÚ iË,,†Ú.
- (2) Ç†ËiËÚÁ START/STOP %oífl i†~†i† Á†ÔËÓË.  
ài%oËi†ÚÓ ,,Â%oÂiËfl ÔÂ ÂÓÚ†ÁÚiË,,†Ú.

### Nífl , °, Â%oÂiËfl ËÁÓ. †ÊÂiËfl [b]

- (1) ÇÓ, Âfl Á†ÔËÓËË i†ËiËÚÁ  
FADER. ài%oËi†ÚÓ ,,Â%oÂiËfl i†~Ëi†ÁÚ  
iË,,†Ú.
- (2) Ç†ËiËÚÁ START/STOP %oífl ÓÓÚ†iO,†  
Á†ÔËÓË. ài%oËi†ÚÓ,,Â%oÂiËfl ÔÂ ÂÓÚ†ÁÚ  
iË,,†Ú, Ë Á†ÔËÓ, ÓÓÚ†i†,iË,†ÁÚÔfl.



### To cancel the fade-in/fade-out function

Before pressing START/STOP, press FADER until the fade indicator disappears.

When the START/STOP MODE control is set to  $\pm$  or 5SEC

You cannot use the fade-in/fade-out function.

Nífl ÓÚiÁi° ÚÚií~ËË ,,Â%oÂiËfl/  
, °, Â%oÂiËfl ËÁÓ. †ÊÂiËfl

èÁ Â%o i†Ëi†ÚËÁi START/STOP i†ËiËiËÚÁ  
FADER%ÓÚÁiÓÓ, ÓÓi†Ëi%oËi†ÚÓ ,,Â%oÂiËfl  
iÁËÓ~ÁÁiÁÚ.

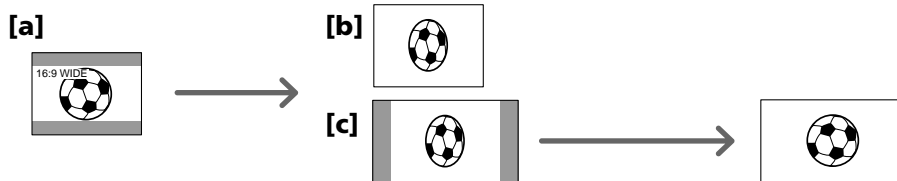
äÓ,,%o† Â,ÚiíflÚÓ START/STOP MODE  
ÚÓÚ†iO,iÁi, ÔÓiOËÁiËÁ  $\pm$  ËiË 5SEC  
Ç° iÁ ÔiOËÁÚÁ ËÔÓÓi,ÁÓ,†Ú, ÚÚií~Ë,  
,,Â%oÂiËfl/, °, Â%oÂiËfl ËÁÓ. †ÊÂiËfl.

## Using the wide mode function

αὐτοματῶς, ἡ εἰκόνα ἔχει ἰσομετρία  
 ἔξω ὀριζῶντος, ὅπου ἔχει

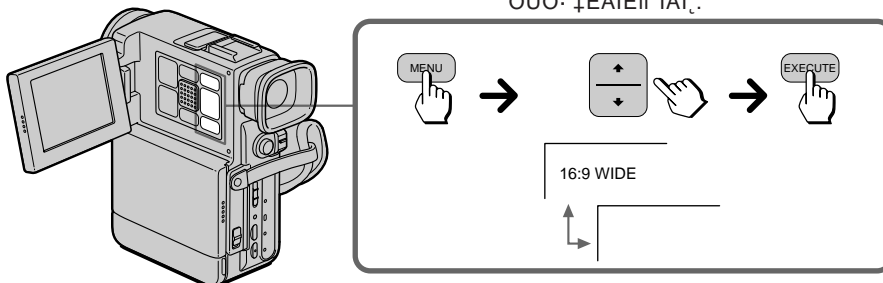
You can record a 16:9 wide picture to watch on the 16:9 wide-screen TV (16:9WIDE). The picture with black bands at the top and the bottom on the LCD screen or in the viewfinder **[a]** is normal. The picture on a normal TV **[b]** is horizontally compressed. You can watch the picture of normal images on a wide-screen TV **[c]**.

ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος, ὅπου ἔχει ἰσομετρία ἔξω ὀριζῶντος (16:9 WIDE). ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος, ὅπου ἔχει ἰσομετρία ἔξω ὀριζῶντος **[a]**. ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος, ὅπου ἔχει ἰσομετρία ἔξω ὀριζῶντος **[b]**. ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος, ὅπου ἔχει ἰσομετρία ἔξω ὀριζῶντος **[c]**.



- (1) Press MENU to display the menu on the LCD screen.
- (2) Press  $\downarrow$  or  $\uparrow$  to select 16:9 WIDE, then press EXECUTE. 16:9WIDE appears on the LCD screen.
- (3) Press  $\downarrow$  or  $\uparrow$  to select ON, then press EXECUTE.
- (4) Press MENU to erase the menu display.

- (1) Πῦξ ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος. ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος.
- (2) Πῦξ ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος, ὅπου ἔχει 16:9 WIDE, ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος EXECUTE. 16:9 WIDE ὀφείλει, εἰς ὅσον ἡ ἰσομετρία ἔξω ὀριζῶντος.
- (3) Πῦξ ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος, ὅπου ἔχει ON, ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος EXECUTE.
- (4) Πῦξ ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος ὅπου ἔχει ἰσομετρία ἔξω ὀριζῶντος. ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος.



**To cancel wide mode**  
 Select OFF in the menu system.

### To watch the tape recorded in wide mode

To watch the tape recorded in 16:9WIDE mode, set it to full mode. For details, refer to the instruction manual of your TV. Note that the picture recorded in 16:9WIDE mode looks compressed on a normal TV.

#### Note on wide mode

You cannot select or cancel the wide mode during recording.

ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος, ὅπου ἔχει ἰσομετρία ἔξω ὀριζῶντος. ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος.

ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος, ὅπου ἔχει ἰσομετρία ἔξω ὀριζῶντος, ὅπου ἔχει ἰσομετρία ἔξω ὀριζῶντος. ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος, ὅπου ἔχει ἰσομετρία ἔξω ὀριζῶντος. ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος, ὅπου ἔχει ἰσομετρία ἔξω ὀριζῶντος.

ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος ἡ εἰκόνα ἔχει ἰσομετρία ἔξω ὀριζῶντος.

## Photo recording

## á†ÔËÒ, ÛÓÚÓ, †ÛËË

You can record a still picture like a photograph for about seven seconds. This mode is useful when you want to enjoy a picture such as a photograph or when you print a picture using a video printer (not supplied). You can record about 510 pictures on a 60-minute tape.

Shutter speed is automatically adjusted up to 1/1000 depending on the exposure.

**(1)** While pressing the small green button on the POWER switch, set it to PHOTO.

**(2)** Keep pressing START/STOP lightly until a still picture and "PHOTO CAPTURE" appear on the LCD screen or in the viewfinder.

Recording does not start yet. To change the still picture, release START/STOP, select still picture again, and keep pressing START/STOP lightly again.

If you press the PHOTO button on the Remote Commander when a still picture appears on the LCD screen or in the viewfinder, the camcorder will record that still picture.

However, you cannot select other still pictures by using this button.

**(3)** Press START/STOP deeper.

"PHOTO REC" flashes and the still picture on the LCD screen or in the viewfinder is recorded for about seven seconds. The sound during those seven seconds is also recorded and the pictures appear like an animation on the LCD screen or in the viewfinder. You cannot change the POWER switch or press START/STOP during recording.

Ç° ÎÔËÁÚÁ Á†ÔËÒ° †Û ÎÁÒÓ%„ËËÎÓÁ  
ËÁÓ. †ËÁÏËÁ, Ì† ÛÓÚÓ„ †ÛË. ÛÁ ÁÏËÁ  
ÏÁÓÏÏÏ ÌË ÒÁÏÛÏ%„ ÛÓÓÛ ÁËËÏ Ì† Ì†ÁÛÓÏ  
Ó~ÁÏ, ÓÓÏÁÁÏÏ, ÌÓ %„† Ç° ÌÓÛËÛÁ  
Ì† ÓÏÏË%„†Û, ÓÏ ËÁÓ. †ËÁÏËÁÏ ÓÓÏÓËËÏ Ì†  
ÛÓÓÛ, †ÛË. ËÏË ÌÓ %„† Ç° %„ÁÏ†ÁÛÁ  
†ÓÓÁ †ÛÏÛËÁÓ. †ËÁÏËË,ËÓÓÓÏ,ÁÛÏ  
Ë%„ÁÓÓ ËÏÛÁ (ÏÁ Ó ËÏ† †ÁÛÓÏ). Ç° ÎÔËÁÚÁ  
Á†ÔËÒ†Û, Ó Ë.ÏËÁËÛÁÏ, ÌÓ 510 ËÁÓ. †ËÁÏËË  
Ì† 60-ÏËÏÛÏÛÏ. ÏÁÏÛÛ.

ËÏÓ ÓÓÛÁ†ÛÓ †Á,ÛÏË ÛÁÛÓÏ

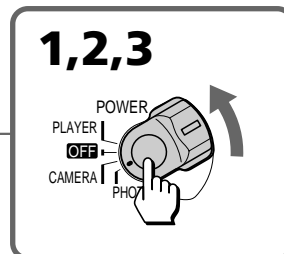
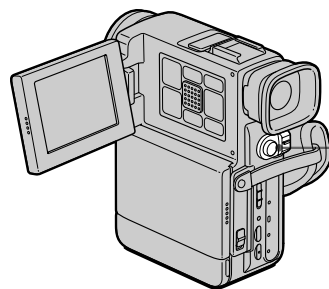
†,ÛÓÏ†ÛË ÁÓÏË%„Ó 1/1000, Á†,ËÓËÏÓÓÛË ÓÛ  
ÏÓÓÓÁËËË.

**(1)** Ç†ËËÏ†† Ì†ÏÁÏ,ÏÛ ÁÁÏÁÏÛ, ÌÏÓÓÏÛ Ì†  
„Ï Ì†ÛÁÏÁ POWER ÛÓÛ†ÏÓ,ËÛÁ Á„Ó,  
ÓÓÏÓËÁÏËÁ PHOTO.

**(2)** È Ë%„Á ËË, †ËÛÁ ÓÏÁÏ, † Ì†Ë†ÛÓË ÌÏÓÓÏÛ  
START/STOP%„ÓÛÁÏ ÓÓ, ÓÓÏ†  
ÏÁÓÓ%„ËËÎÓÁ ËÁÓ. †ËÁÏËÁË "PHOTO  
CAPTURE" ÏÁ ÓÓÏ,ÏÛÓÏ, Ì† Ï† ÏÁ ÛÁÑ  
ËÏË, Ë%„ÓËÓÏ†ÛÁÏÁ. á†ÔËÒ, ÓÓÏ† Á~Á ÏÁ  
Ì†~†Û.

ÑÏÏ ËÁÏÁÏÁÏËÏ ÏÁÓÓ%„ËËÏÓ„Ó  
ËÁÓ. †ËÁÏËÏÓÛÓÛÓÛËÛÁ START/STOP,  
„Á ËÛÁ%„Ó Û,ÓÁÏÁÓÓ%„ËËÎÓÁ  
ËÁÓ. †ËÁÏËÁËÓÏÓ,†Ó Ë%„Á ËË,†ËÛÁ  
ÓÏÁ, Ì† Ì†Ë†ÛÓË ÌÏÓÓÏÛ START/STOP.  
ÓÓÏË Ç° Ì†ËËÏ†ÁÛÁ ÌÏÓÓÏÛ ËççËË Ì†  
ÓÛÏ ÛÁ%„ËÓÛ†ÏËÓÏÏ,ÓÛÓ †,ÏÁÏËÏ, ÌÓ,%„†  
ÏÁÓÓ%„ËËÎÓÁ ËÁÓ. †ËÁÏËÁ ÓÓÏ,Ï†ÁÛÓÏ Ì†  
Ï† ÏÁ ÛÁÑ ËÏË, Ë%„ÓËÓÏ†ÛÁÏÁ,  
Ë%„ÁÓÏ†ÏÁ †.Û%„ÁÛ Á†ÔËÒ° †Û. ÏÓ  
ÏÁÓÓ%„ËËÎÓÁ ËÁÓ. †ËÁÏËÁ, Ë%„†ÏÏÓ, Ç°  
ÏÁ ÏÔËÁÚÁ. °. †Û %„Ó Û,ÓÁ ÏÁÓÓ%„ËËÎÓÁ  
ËÁÓ. †ËÁÏËÁ Ó ËÓÓÓÏ,ÁÓ,†ÏÁÏ %„†ÏÏË  
ÏÏÓÓÏË.

**(3)** Ç†ËËÏÛÁ START/STOP „ÏÛ.ËÁ.  
"PHOTO REC" .Û%„ÁÛ ÏË,†Û. Ë  
ÏÁÓÓ%„ËËÎÓÁ ËÁÓ. †ËÁÏËÁ Ì† Ï† ÏÁ  
ÛÁÑ ËÏË, Ë%„ÓËÓÏ†ÛÁÏÁ. Û%„ÁÛ  
Á†ÔËÒ° †Û, ÓÏ Ó Ë.ÏËÁËÛÁÏ, ÌÓ, ÛÁ~ÁÏËÁ  
ÓÁÏË ÓÁÏÛÏ%„. á,ÛÏ,Ó, ÁÏÏ ÏÛËÏ ÓÁÏË  
ÓÁÏÛÏ%„Ó Û†ËÁ.Û%„ÁÛ Á†ÔËÒ° †Û, ÓÏ.  
áÛÏ ÛËÓÏËÏ†ËÏ ÓÓÏ,Ï†ÁÛÓÏ Ì† Ï† ÏÁ  
ÛÁÑ ËÏË, Ë%„ÓËÓÏ†ÛÁÏÁ,Ó, ÁÏÏ Á†ÔËÒË.  
Ç° ÏÁ ÏÔËÁÚÁ ËÁÏÁÏËÛ. ÛÓÛ†ÏÓ,ÏÛ  
„Ï Ì†ÛÁÏÏ POWER ËÏË Ì†Ë†Û, ÌÏÓÓÏÛ  
START/STOP,Ó, ÁÏÏ Á†ÔËÒË.

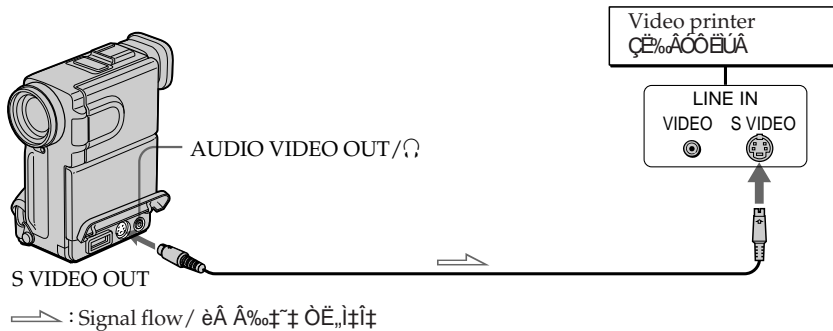


**Note on the still picture**

When the still picture recorded on this camcorder is played back on another VCR, the picture may be blurred. This is not malfunction.

**Printing the still picture**

You can print a still picture by using the video printer (not supplied). Connect the video printer using the supplied S video connecting cable. Refer to the instruction manual of the video printer as well.



**If the video printer is not equipped with S VIDEO input**

Use the supplied A/V connecting cable. Connect it to the AUDIO VIDEO OUT jack and connect the yellow plug of the cable to the VIDEO input of the video printer.

è ÈÌÄ~±ìÈÄ í ÌÄÓÓ%,ÈÈÌÓÌÙ  
 ÈÁÓ. ±ÈÄìÈ  
 äÓ,±ÈÄìÈÄÓ%,ÈÈÌÓÄÈÁÓ. ±ÈÄìÈÄ,  
 ÁÄÖÈc±ììÓÄ ì± ±ÈÄìÈÄ,ÈÈ%ÄÓì±ìÄ Ä,  
 ÖÖÖ ÖÈÄ,Ó%ÈÙÖñì±%Ù,ÓìÄÇÄ,  
 ÈÁÓ. ±ÈÄìÈÄ ÌÓÈÄÙ. °Ù, ±ÄÌ°Ù°Ì. ùÚÓ ÌÄ  
 ñ,ñÄÙÖñ ÌÄÈÓÖ ±ìÓÓÙ,.

**è±ÖÖÄ~±Úì± ÌÄÓÓ%,ÈÈÌÓ,,Ó  
 ÈÁÓ. ±ÈÄìÈÄñ**


Ç° ÌÓÈÄÙÄ ì±ÓÄ~±Ù±Ù, ÌÄÓÓ%,ÈÈÌÓÄ  
 ÈÁÓ. ±ÈÄìÈÄ Ò ÈÖÖÓì,ÁÓ,±ÈÄì  
 ,ÈÈ%ÄÓÖ ÈìÙÄ ±(ÌÄÖ Èì±,±ÄÙÖñ).  
 èÓ%ÖÖÄ%ÈÈÈÙÄ,ÈÈ%ÄÓì±.Äì ÌÈÈ%ÄÓÖ ÈìÙÄ Ù  
 Ò ÈÖÖÓì,ÁÓ,±ÈÄì Ò Èì±,±ÄÌÓ,,Ó  
 ÖÖÄ%ÈÈÈÙÄì,ì,Ó ì±.Äñ S-ÈÈ%ÄÓ. èìÖÙ ÈÙÄ  
 Ù±ìÈÄ ÙìÓ,Ó%ÖÙ,ÓÓÓ ÌÖÖÌÙ±Ù±ÈÈ  
 ÈÈ%ÄÓÖ ÈìÙÄ±.

ÖÖÌÈ,ÈÈ%ÄÓÖ ÈìÙÄ ÌÄ ÖÖì±Äì ,ìÓ%Öì S-  
 ÈÈ%ÄÓ  
 àÖÖÓì,ÄÙÈÙÄ Ò Èì±,±ÄÌ°È ÖÖÄ%ÈÈÈÙÄì,ÈÈ  
 ì±.Äì ±Ù%ÈÖ/ÈÈ%ÄÓ èÓ%ÖÖÄ%ÈÈÈÙÄ  
 Ò Èì±,±ÄÌ°È ÖÖÄ%ÈÈÈÙÄì,ÈÈ ì±.Äì, ±Ù%ÈÖ/  
 ÈÈ%ÄÓ Ì,ÌÄÄ%Ù AUDIO VIDEO OUT/Ç, Ç °ÙÖì  
 ÖìÙ~±Ä ÖÖ%ÖÖÄ%ÈÈÈÙÄ ÈÄìÙ°È ±Ä Äìì  
 ,ìÓ%ÙVIDEOì±,ÈÈ%ÄÓÖ ÈìÙÄ Ä.




Advanced operations / ÌÖÖÄ-ÄìÖÙ,Ó,ñìÄ ÖÖÄ ±ÈÈ


## Releasing the SteadyShot function

## éÚÍÎ ~ÀÌËÂ ÛÛÌÍ~ËË STEADYSHOT




When you shoot, the  indicator appears on the LCD screen or in the viewfinder. This indicates that the SteadyShot function is working and the camcorder compensates for camera-shake.

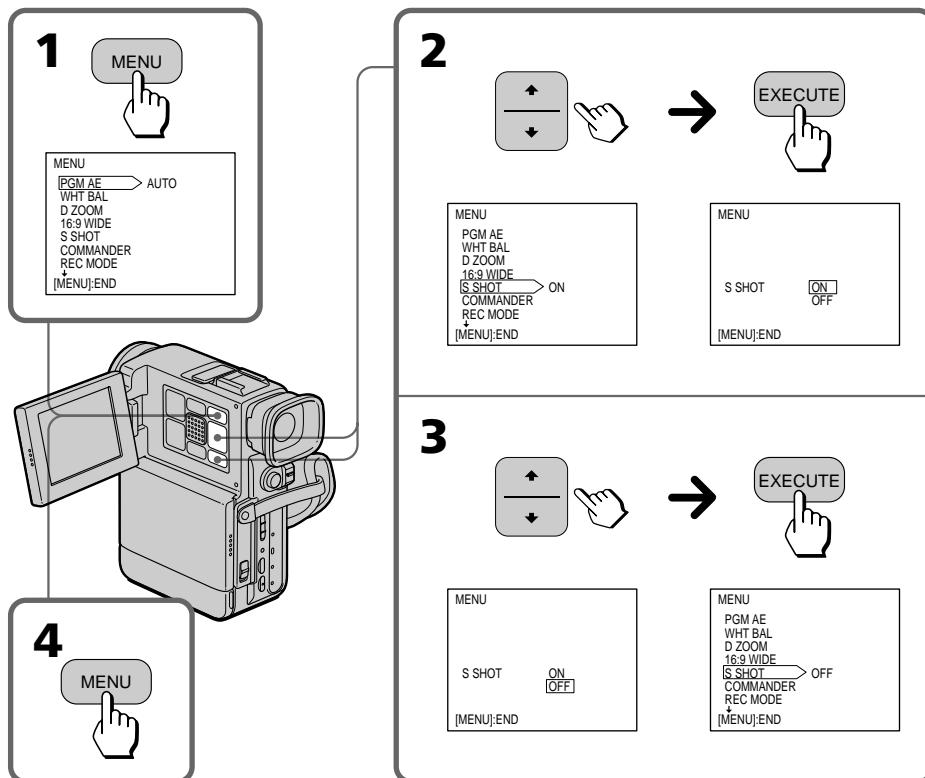
You can release the SteadyShot function when you do not need to use the SteadyShot function. Do not use the SteadyShot function when shooting a stationary object with a tripod.

- (1) Press MENU to display the menu on the LCD screen.
- (2) Press  or  to select S SHOT, then press EXECUTE.
- (3) Press  to select OFF, then press EXECUTE.
- (4) Press MENU to erase the menu display.

äö,%,° Ò ÖÉÁ,Ó%ÉÚÁ Ò ÁíÏÛ, Èì%Èí±ÚÓ   
 ÓÓñ,íñÁÚÓñ ì± Ñ ±íÁ ÛáÑ. ùÚÓ ÛÍ±Á°,±ÁÚ  
 ì± ÚÓ, ÑÓ ÛÛÌÍ~ËË ÛÓÚÓË~Ë,ÓË Ò ÁíËË  
 ±·ÓÚ±ÁÚ %íñ íÓÍÓÁì±~ËË % ÖË±Ëñ  
 ,È%ÁÓí±Á °.

Ç° íÓÉÁÚÁ ÓÚÍÎ~ËË ÛÛÌÍ~ËË ÛÓÚÓË~Ë,ÓË  
 Ò ÁíËË, íÓ,%, Ç° ÌÁ ÌÛË%±ÁÚÁÓ,  
 ÈÓÓÓí,ÁÓ,±ËËË ÛÛÌÍ~ËË ÛÓÚÓË~Ë,ÓË Ò ÁíËË.  
 ÇÁ ÈÓÓÓí,ÁÚËÚÁ ÛÛÌÍ~ËË ÛÓÚÓË~Ë,ÓË Ò ÁíËË  
 Ò È Ò ÁíËË ÌÁÓÓ%,ÈËí ì Ó·ÁíÚÓ, Ò  
 ÓÓÍÓ~ Û ÁìÓ,È.


- (1) Ç±ËËËÚÁ MENU %íñ ÓÚÓ· ±ËÁËñ ìÁì,  
 ì± Ñ ±íÁ ÛáÑ.
- (2) Ç±ËËËÚÁ  ËËË  %íñ ,° Ò ± S SHOT, ±  
 Á±ÚÁÏ ì±ËËËÚÁ EXECUTE.
- (3) Ç±ËËËÚÁ  %íñ ,° Ò ± OFF, ± Á±ÚÁÏ  
 ì±ËËËÚÁ EXECUTE.
- (4) Ç±ËËËÚÁ MENU %íñ ÓÚËË ±Ëñ %ÈÓÓíÁñ  
 Ì Á Ì.



**To activate the SteadyShot function again**


Select ON in step 3, then press EXECUTE.

**Notes on the SteadyShot function**

- The SteadyShot function will not correct excessive camera-shake.
- When the SteadyShot function is released, the  indicator does not appear.

Νίη ηίÚË,ËÁ±ÈË ÛÛíÈË ÛÛÓËÈ,ÓË Ò·ÁíË ÒíÓ,± Ç·Á ÈÚÁ ON , ÒÛíÚÁ 3, ± Á±ÚÁí ìËËËÚÁ EXECUTE.

è ÈíÁ~ìËη í ÛÛíÈË ÛÛÓËÈ,ÓË Ò·ÁíË

- ìÛíÈη ÛÛÓËÈ,ÓË Ò·ÁíË ìÁ ÒÚíÓ ÁíÚË ÚÁÚ·ÁíÁ íÓ,Ó% ÒË±Ëη ,È%ÁÓí±íÁ °.
- äÓ,%± ÛÛíÈη ÛÛÓËÈ,ÓË Ò·ÁíË ÒÚí,·Áí±, Èí%Ëí±ÚÓ  ÒÓη,íηÚ, Òη ìÁ Û%ÁÚ.

# Using the PROGRAM AE function

# PROGRAM AE

You can select from three PROGRAM AE (Auto Exposure) modes to suit your shooting situation. When you use PROGRAM AE, you can get a capture high-speed action, record night views, etc.

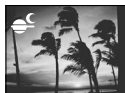
PROGRAM AE (Auto Exposure) modes to suit your shooting situation. When you use PROGRAM AE, you can get a capture high-speed action, record night views, etc.

## Selecting the best mode

Select a proper PROGRAM AE mode referring to the description on each PROGRAM AE mark in the viewfinder or the PROGRAM AE mode indication on the LCD screen or in the viewfinder.

## PROGRAM AE

PROGRAM AE (Auto Exposure) modes to suit your shooting situation. When you use PROGRAM AE, you can get a capture high-speed action, record night views, etc.



### SPORTS: Sports lesson mode

Capturing high-speed action in sports such as golf or tennis

SPORTS: Capturing high-speed action in sports such as golf or tennis

### SUNSETMOON: Sunset & Moon mode

Recording sunset, night views, fireworks or neon signs

SUNSETMOON: Recording sunset, night views, fireworks or neon signs

### LANDSCAPE: Landscape mode

Recording a landscape through a window or wire net

LANDSCAPE: Recording a landscape through a window or wire net

### Notes on focus setting

- In the Sports lesson mode, you cannot take close-ups because the camcorder is set to focus only on subjects in the middle to far distance.
- In the Sunset & Moon and Landscape modes, the camcorder is set to focus only on distant subjects.

- In the Sports lesson mode, you cannot take close-ups because the camcorder is set to focus only on subjects in the middle to far distance.
- In the Sunset & Moon and Landscape modes, the camcorder is set to focus only on distant subjects.

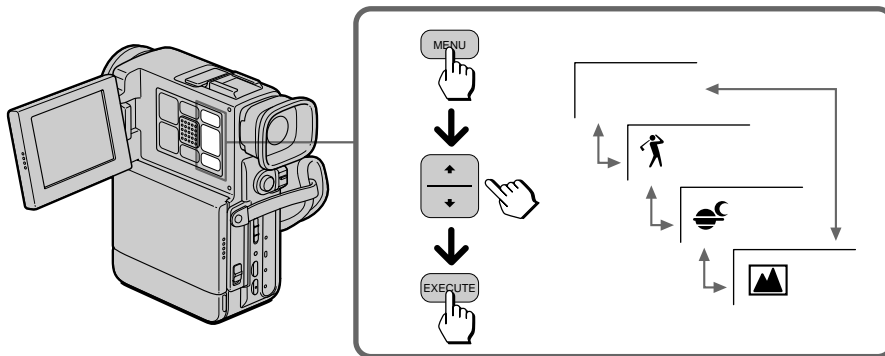


### Using the PROGRAM AE function

- (1) While the camcorder is in recording or Standby mode press MENU to display the menu on the LCD screen.
- (2) Press  $\blacktriangledown$  or  $\blacktriangle$  to select PGM AE, then press EXECUTE.
- (3) Press  $\blacktriangledown$  or  $\blacktriangle$  to select the desired mode, then press EXECUTE. If you want to change the other modes, repeat steps 2 and 3. The symbol of the selected mode appears on the LCD screen.
- (4) Press MENU to erase the menu display.

### àÒÒÓÍ, ÁÓ, †ìÈÄ ÙÙìí`ÈÈ PROGRAM AE

- (1) äÓ, %†, È%ÁÓí†iÁ †ì†iÓ%ÈÙÒí, ÂÈÈiÁ Á†ÓÈÒÈ ÈiÈ, ÓÚÓ, iÓÓÙÈ †ÈÈiÈÚÁ MENU %íí ÓÚÓ. †ÈÄiÈíí iÁì, † †i †iÁ ÚãÑ.
- (2) †ÈÈiÈÚÁ  $\blacktriangledown$  ÈiÈ  $\blacktriangle$  %íí, °Ó † PGM AE, † Á†ÚÁi †ÈÈiÈÚÁ EXECUTE.
- (3) †ÈÈiÈÚÁ  $\blacktriangledown$  ÈiÈ  $\blacktriangle$  %íí, °Ó † ÈÄi†ÁiÓ, Ó ÂÈÈi†, † Á†ÚÁi †ÈÈiÈÚÁ EXECUTE. ÓÓiÈ Ç° iÓÓÙÈÁ ÈÁiÁiÈÚ, †%Ú, ÓÈ ÂÈÈi ÓÓ, ÚÓ ÈÚÁ ÓÙiÚ° 2È3. èÈi, Ói, °. †iíÓ, Ó ÂÈÈi† ÓÓí, ÈÙÒí † †i †iÁ ÚãÑ.
- (4) †ÈÈiÈÚÁ MENU %íí ÓÙÈ †iÈí ÓÚÓ. †ÈÄiÈíí iÁì.



**To return to automatic adjustment mode**  
Select AUTO in the PGM AE menu. The symbol of the PROGRAM AE mode disappears.

Ñííí, ÓÁ, †Ú† í ÂÈÈiÙ †, ÚÓi†ÚÈ`ÁÓiÓÈ Á, ÙiÈ Ó, iÈ Ç° Á ÈÚÁ AUTO, iÁì PGM AE. èÈi, Ói ÂÈÈi† PROGRAM AE ÈÓ`ÁÁiÁÚ.

**Note on shutter speed**  
The shutter speed in Sports lesson mode is from 1/250 to 1/4000.

è ÈiÁ`†iÈÄ í ÓiÓ ÓÓÙÈ Á†Ú, Ó † èiÓ ÓÓÚ, Á†Ú, Ó †%íí ÂÈÈi† ÓÓÓ ÚÈ, j† Á†ííÚÈÈ-Ú%ÁÚÓÚ 1/250%Ó 1/4000.

**Note on locking the exposure**  
If the exposure is locked when using the PROGRAM AE function, the exposure is automatically released when the PROGRAM AE mode is changed.

è ÈiÁ`†iÈÄ í ÙÈiÓÈ Ó, †iÈ. °iÓÓÁÈ`ÈÈ ÓÓiÈ °iÓÓÁÈ`Èí-Ú%ÁÚÁ†ÚÈiÓÈ Ó, ††È È ÈÓÓÓi, ÁÓ, †iÈÈ ÙÙìí`ÈÈ PROGRAM AE, °iÓÓÁÈ`Èí, ÓÁ, ††ÁÚÓí í †, ÚÓi†ÚÈ`ÁÓiÓiÙ ÂÈÈiÙ, iÓ, %† ÈÁiÁiíÁÚÓí ÂÈÈi PROGRAM AE.

- Notes on white balance setting**
- In the Sunset & Moon and Landscape modes, the white balance is automatically set to outdoor mode.
  - If the white balance is set to AUTO, it is automatically set when using the PROGRAM AE function.

- è ÈiÁ`†iÈÈ í ÙÓÚ†iÓ, iÁ -††iÓ† -ÁiÓ, Ó
- Ç° ÂÈÈi†: Á†iÓ%† ÓÓi† È ÙÙìí`ÈÈ i†i%`†ÚiÓi -††iÓ -ÁiÓ, Ó †, ÚÓi†ÚÈ`ÁÓiÈ ÙÓÚ†i†, iÈ, †ÁÚÓí † ÂÈÈi Ó`ÁiÈÈ ì† ÙiÈ`Á.
  - ÓÓiÈ -††iÓ -Ái, Ó, Ó ÙÓÚ†iÓ, iÁì † AUTO, Ói †, ÚÓi†ÚÈ`ÁÓiÈ ÙÓÚ†i†, iÈ, †ÁÚÓí Ó È ÈÓÓÓi, ÁÓ, †iÈÈ ÙÙìí`ÈÈ PROGRAM AE.

# Focusing manually

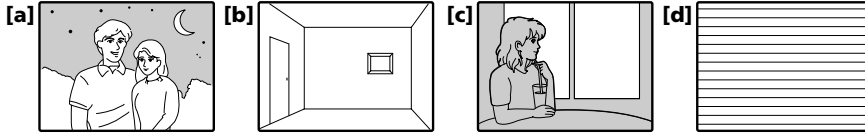
## εϋ~ι±fl ùοίúòë ó,ί±

### When to use manual focus

In the following cases you should obtain better results by adjusting the focus manually.

äó,,%ο± Èòòóí,άó,±ú, ù~ìú, ùοίúòë ó,ίú

ç óíá%οû,~έι òìú~±fl, ç° ðóέâuá òóìú~έú, ίú~έá άáúì ú±ú°, óú ά,,úîέ ó,±, ùοίúòë ó,ίú, ù~ìú,.




- Insufficient light **[a]**
- Subjects with little contrast — walls, sky, etc. **[b]**
- Too much brightness behind the subject **[c]**
- Horizontal stripes **[d]**
- Subjects through frosted glass
- Subjects beyond nets, etc.
- Bright subject or subject reflecting light
- Shooting a stationary subject when using a tripod

- çÄ%οòòú±úó~ìòáóó,ά~άîέά **[a]**
- é·άίú° ò ð±í~ì ίοίú ±òúóí - òúάì°, ðä-ò è ú,%ο. **[b]**
- èíέ-ίóí fl îέέ ùòì ά± ó·άίúóí **[c]**
- έó έάóίú±ì,ì^ά òóίúò° **[d]**
- ë·άίí± ó·άίúó, ~ά άά ð±úέ ó,±ìíόά òúάîíó
- é·άίú° ά± òάúίóέ è ú,%ο.
- ü îέέ ó·άίú έíέ ó·άίú óú ±έ±,~έέ òάú
- ë·άίí± ðáòó%ο,έέìó,,ó ó·άίú± ò èòòóí,άó,±íέάíú άíó,,έ


## Focusing manually

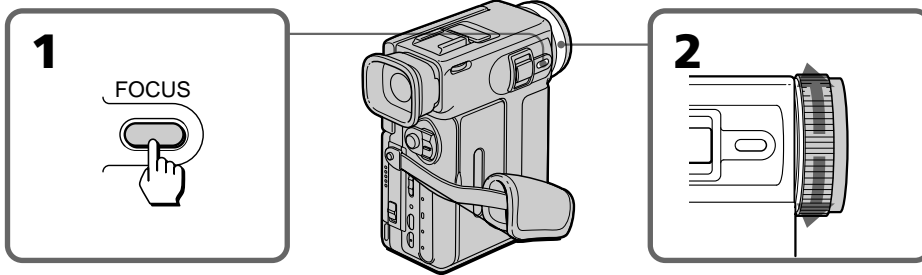
When focusing manually, first focus in telephoto before recording, and then reset the shot length.

- (1) Press FOCUS lightly. The  indicator appears on the LCD screen or in the viewfinder.
- (2) Turn the focus ring to focus on the subject.


## εὐρίστη ὑοίυοε ό,ίτ

ε̇ ε̇ ὑ̇ί̇ο̇ε̇ ὑ̇οί̇υ̇ο̇ε̇ ό,ί̇ά̇ ο̇ό̇ά̇ τ̇, ὀοί̇η̇ε̇ύ̇ά̇ ὑ̇οί̇υ̇ο̇ε̇ ό,ί̇υ̇, ἄ̇ε̇ε̇ί̇ά̇ύ̇ά̇ί̇ά̇ύ̇ο̇ύ̇ο̇ό̇ά̇ ἄ̇% ἄ̇τ̇ό̇ε̇ό̇, τ̇ά̇τ̇ύ̇ά̇ί̇ύ̇ο̇ύ̇τ̇ί̇ό̇,ε̇ύ̇ά̇ τ̇ο̇ό̇ύ̇ο̇ί̇ε̇ά̇ ὀ̇ ἄ̇ί̇ε̇.

- (1) ε̇ί̇ά̇,ί̇τ̇ ἱ̇τ̇ε̇ί̇ε̇ύ̇ά̇ FOCUS. ἄ̇ί̇%ε̇ί̇τ̇ύ̇ό̇  ὀοί̇η̇,ε̇ύ̇ο̇η̇ ἱ̇τ̇ ἄ̇ί̇ τ̇ί̇ά̇ ὑ̇α̇ñ̇ ε̇ί̇ε̇, ἔ̇%ο̇ε̇ό̇ί̇τ̇ύ̇ά̇ί̇ά̇.
- (2) ε̇ό̇,ἄ̇ ἱ̇ε̇ύ̇ά̇ ἱ̇ό̇ί̇, ὀ̇ ὑ̇οί̇υ̇ο̇ε̇ ό,ί̇ε̇ %ο̇ί̇η̇ ὑ̇οί̇υ̇ο̇ε̇ ό,ί̇ε̇ ἱ̇τ̇ ὀ̇ ἄ̇ί̇ύ̇.



### To focus in infinity

Press FOCUS deeply.  indicator appears on the LCD screen or in the viewfinder.

### To return to the autofocus mode


Press FOCUS lightly to turn off  or  indicator.


### Shooting in relatively dark places

Shoot at wide-angle after focusing in the telephoto position.

### If lights up

Subject is too close.

ñ̇η̇ ὑ̇οί̇υ̇ο̇ε̇ ό,ί̇ε̇ ἱ̇τ̇ ἄ̇οί̇οί̇ά̇ί̇ό̇ό̇ύ̇, τ̇τ̇ε̇ί̇ε̇ύ̇ά̇ ἱ̇ό̇ό̇ί̇υ̇ FOCUS %ο̇ό̇ ἱ̇ό̇ί̇τ̇. ἄ̇ί̇%ε̇ί̇τ̇ύ̇ό̇  ὀοί̇η̇,ε̇ύ̇ο̇η̇ ἱ̇τ̇ ἄ̇ί̇ τ̇ί̇ά̇ ὑ̇α̇ñ̇ ε̇ί̇ε̇, ἔ̇%ο̇ε̇ό̇ί̇τ̇ύ̇ά̇ί̇ά̇.

ñ̇η̇, ὀ̇ά̇, τ̇ ἄ̇ί̇ε̇η̇ ἱ̇ ἄ̇ε̇ε̇ί̇ύ̇ τ̇, ὑ̇οί̇τ̇ύ̇ε̇ ἄ̇οί̇ο̇ε̇ ὑ̇οί̇υ̇ο̇ε̇ ό,ί̇ε̇ τ̇τ̇ε̇ί̇ε̇ύ̇ά̇ FOCUS %ο̇ί̇η̇, ἰ̇ί̇ ἄ̇ί̇ε̇η̇ ε̇ί̇%ε̇ί̇τ̇ύ̇ό̇ τ̇  ε̇ί̇ε̇ .

ε̇ ἄ̇ί̇τ̇, ὀ̇ύ̇ι̇ο̇ε̇ύ̇ά̇ί̇, ἱ̇ό̇ ὑ̇ά̇ί̇οί̇ ἱ̇ά̇ο̇ύ̇ά̇ ε̇ ὀ̇ε̇ά̇, ὀ̇%ε̇ύ̇ά̇ ὀ̇ ἄ̇ί̇ύ̇, ὀ̇οί̇ό̇ε̇ά̇ί̇ε̇ε̇ ἔ̇ε̇ ὀ̇ί̇ό̇, ὀ̇ ὑ̇, ἱ̇τ̇ ὀ̇ό̇ό̇ί̇ά̇, ὀ̇οί̇ἱ̇ά̇ί̇ε̇η̇ ὑ̇οί̇υ̇ο̇ε̇ ό,ί̇ε̇, ὀ̇οί̇ό̇ε̇ά̇ί̇ε̇ύ̇ά̇ί̇ά̇ύ̇ο̇ύ̇.

ὀ̇οί̇ε̇ά̇τ̇, ὀ̇ τ̇ά̇ύ̇ο̇η̇  ε̇ ἄ̇ί̇ύ̇ ἱ̇τ̇, ὀ̇%ε̇ύ̇ο̇η̇ ὀ̇ί̇ε̇ ἱ̇ό̇ί̇ ἱ̇ε̇ά̇ί̇ό̇.

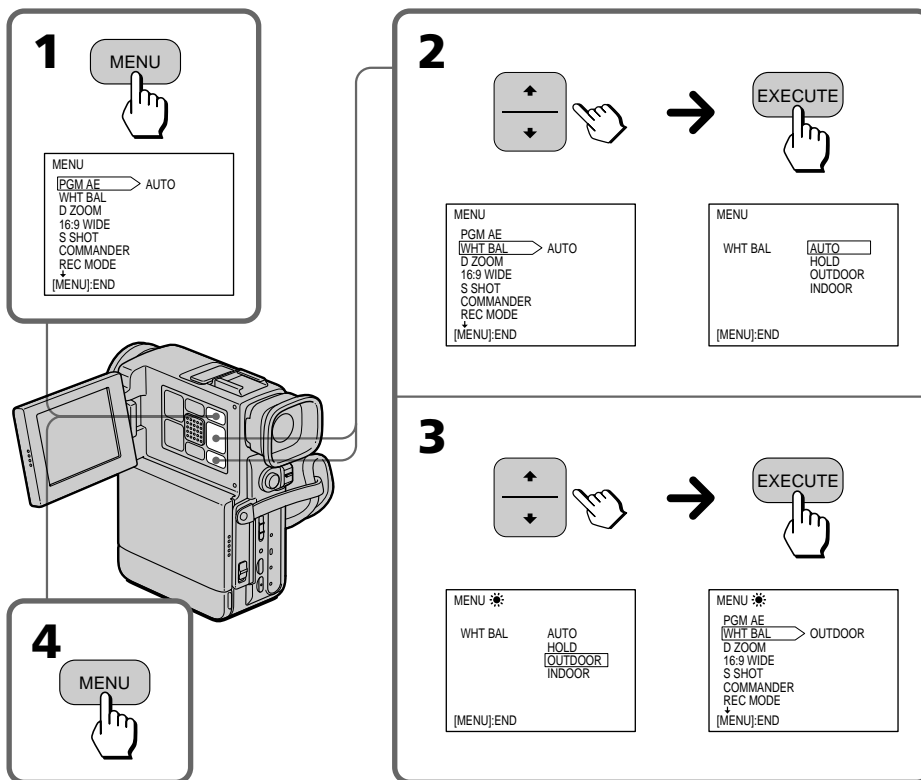


## Setting the White Balance

- (1) Press MENU to display the menu on the LCD screen during recording or Standby mode.
- (2) Press  $\blacktriangledown$  or  $\blacktriangle$  to select WHT BAL, then press EXECUTE.
- (3) Press  $\blacktriangledown$  or  $\blacktriangle$  to select the appropriate white balance mode, then press EXECUTE.  
Each time you press the button, the indicator changes:  
AUTO (no indicator)  $\rightarrow$  HOLD  $\rightarrow$   $\star$  (outdoor)  $\rightarrow$   $\odot$  (indoor)
- (4) Press MENU to erase the menu display.

## i0U#i0, i# #i#i0# #Ai0,,0

- (1) #i#i0U# MENU %i#n 0U0. #E#i#n iAi, i# #i#i0 Ua#N, 0, #i#n #i#i0E0E #iE, #E#i#i0, 0U0, i00U#E.
- (2) #i#i#i0U# #E#iE # %i#n #, 0# # WHT BAL, # #i#i0U#i# #i#i#i0U# EXECUTE.
- (3) #i#i#i0U# #E#iE # %i#n #, 0# # 00%oi 0%of#A,,0 #E#i#i#i0# #i#i0# #Ai0,,0, # #i#i0U#i# #i#i#i0U# EXECUTE.  
#i#E%#E #A 0 E i#E#i#i0E# i00i#E #i#%#E#i#i0U# E#i#i#i0#i#i0U#n 0i#A%#U, #E#i 0. #A0i:  
AUTO (i#A#U #i#%#E#i#i0U# #)  $\rightarrow$  HOLD  $\rightarrow$   $\star$  (i# #i#E#A)  $\rightarrow$   $\odot$  (, 00i#A#i#E#)
- (4) #i#i#i0U# MENU %i#n 0U#E #i#E#n 0U0. #E#i#i#n iAi.



### To return to automatic white balance mode

Select AUTO in step 3, then press EXECUTE.

#i#n #0A, #i#i# i #E#i#U  
#i#0i#i#E#A0i0E #A,,#i#E 0,i#E #i#i0#  
#Ai0,,0  
#i#E#i#i0U# #i#i0#i0,i#U AUTO, 0U#i#U# 3, #  
#i#i0U#i# #i#i#i0U# EXECUTE.

## Locking the exposure

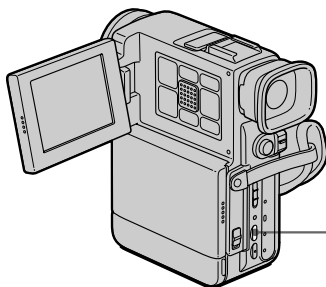
### When to lock the exposure

Lock the exposure by pressing the AE LOCK under the following cases.

- The background is too bright (backlighting)
- Insufficient light: most of the picture is dark
- Bright subject and dark background
- To record the darkness faithfully
- The subject is in the spotlight on a stage

### Locking the exposure

Press AE LOCK during recording, standby or PHOTO mode. The AE LOCK indicator appears on the LCD screen or in the viewfinder. The exposure is locked at the actual brightness.



### To return to automatic exposure mode

Press AE LOCK to turn off the AE LOCK indicator.

### Shooting with the sun behind you

If the light source is behind your subject, or in the following situation, the subject will be recorded too dark.

- The subject is indoors and there is a window behind the subject.
- Bright light sources are included in the scene.
- When shooting a person wearing white or shiny clothes in front of a white background, the face will be recorded too dark.

### Shooting in the dark

We recommend you to use a video light (not supplied). To get the best colour, you must maintain a sufficient light level.

## Locking the exposure

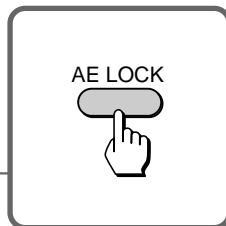
### When to lock the exposure

Lock the exposure by pressing the AE LOCK under the following cases.

- The background is too bright (backlighting)
- Insufficient light: most of the picture is dark
- Bright subject and dark background
- To record the darkness faithfully
- The subject is in the spotlight on a stage

### Locking the exposure

Press AE LOCK during recording, standby or PHOTO mode. The AE LOCK indicator appears on the LCD screen or in the viewfinder. The exposure is locked at the actual brightness.



To return to automatic exposure mode, press AE LOCK to turn off the AE LOCK indicator.

If the light source is behind your subject, or in the following situation, the subject will be recorded too dark.

- The subject is indoors and there is a window behind the subject.
- Bright light sources are included in the scene.
- When shooting a person wearing white or shiny clothes in front of a white background, the face will be recorded too dark.

We recommend you to use a video light (not supplied). To get the best colour, you must maintain a sufficient light level.

## Watching on a TV screen

## Watching on a TV screen

You can use the camcorder as a VCR by connecting it to your TV for playback. There are some ways to connect the camcorder to your TV. When monitoring the playback picture by connecting the camcorder to your TV, we recommend you to use the mains for the power source.

### If you connect directly to TV

Open the jack cover and connect the camcorder to the inputs on the TV by using the supplied A/V connecting cable. Set the TV/VCR selector on the TV to VCR. Procedure to play back is the same as when playing back on the LCD screen or in the viewfinder.

Turn down the volume of the camcorder.

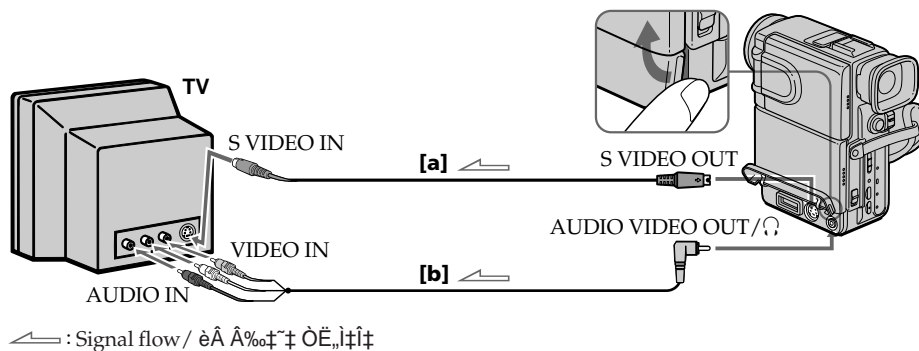
To get higher quality pictures in DV format, connect the camcorder to your TV using the S video connecting cable.

If you are going to connect the camcorder using the supplied S video connecting cable **[a]**, you do not need to connect the yellow (video) plug of the A/V connecting cable **[b]**.

è òòíóú ì± ´í ±ìÀ ÚÁÌÀ,ÉÁÓ ± Ç° ÌÓÉÁÚÁ ÈÒÓÓÌ,ÁÓ,±Ú, È%ÁÓì±ÌÀ Ù, Ì±ÁÓÚ,Á ãçà ÒÚÚÁÌ ÒÓ%ÒÓÁ%ÈÌÀÈÈÈ ÁÁ Í Ç±ÁÌÚ ÚÁÌÀ,ÉÁÓ Ù%íÈ,ÒÓÓ ÒÉÁ,Á%ÁÌÈÈ. èÚ-ÁÓÚ,Ù,Ù ÒÓ Á%ÁÌÀÌ-Á ÌÁÚÓ%° %íÈ ÒÓ%ÒÓÁ%ÈÌÀÈÈ,È%ÁÓì±ÌÀ ° ÚÁÌÀ,ÉÁÓ Ù. è ÈÒ ÒÓÍÓÚ ÁÓÓ ÒÉÁ,Ò%ÈÌ,Ó ÉÁÓ. ±ÈÀÌÈÒÚÚÁÌÓÓ%ÒÓÁ%ÈÌÀÈÈÈ,È%ÁÓì±ÌÀ ° Í Ç±ÁÌÚ ÚÁÌÀ,ÉÁÓ Ù Ì-ÁÍÓÌÀ%ÚÁÌ Ç±Ì ÈÒÓÓÌ,ÁÓ,±Ú, ´ÌÁÌÚ È-ÁÓÍÚ, ÒÁÚ, , Ì±ÁÓÚ,Á ÈÒÚÓ-ÌÈÌ± ÒÈÚ±ÈÈ.

ÒÒÌÈ Ç° ÒÓ%ÒÓÁ%ÈÌÀÚÁ Ò ÈÌÓ Í ÚÁÌÀ,ÉÁÓ Ù èÚÌ ÒÈÚÁÌ ~ÌÚ,ÌÁÁ%ÚÈÒÓ%ÒÓÁ%ÈÌÈÚÁ,È%ÁÓì±ÌÀ Ù Í,ÌÓ%±Ì ± ÚÁÌÀ,ÉÁÓ Á Ò ÈÒÓÓÌ,ÁÓ,±ÈÁÌ Ò ÈÌ±,±ÁÌÓ,,Ò ÒÓÁ%ÈÌÈÚÁÌ,Ì,Ó,Ì±-ÁÌ±Ú%ÈÓ,È%ÁÓ. ÌÓÚ±Ì,ÈÚÁ ÒÁÌÁÌÚÓ TV/VCR Ì± ÚÁÌÀ,ÉÁÓ Á,ÒÓÌÓÈÁÌÈÁ VCR. è Ò-Á%Ú ±,ÒÒÓ ÒÉÁ,Á%ÁÌÈÈ Ù±±ÈÈÁ, Ì±ÌÈ Ò È,ÒÓÓ ÒÉÁ,Á%ÁÌÈÈ Ì± ´í ±ìÀ ÚÁÌÀ ÈÌÈ,È%ÁÓÈÒì±ÚÁÌÀ. è ÒÌÈÁ,ÚÁ,, ÒÌÌÓÚ, Ì±,È%ÁÓì±ÌÀ Á. ÑÌÈ ÒÓÌÚ-ÁÌÈÈ ÌÚ-Á,,ó Ì±-ÁÓÚ,± ÉÁÓ. ±ÈÀÌÈÈ,ÚÓ Ì±ÚÁDV,ÒÓ%ÒÓÁ%ÈÌÈÚÁ,È%ÁÓì±ÌÀ Ù Í ÚÁÌÀ,ÉÁÓ Ù Ò ÈÒÓÓÌ,ÁÓ,±ÈÁÌ Ì±-ÁÌÈÈ S-,È%ÁÓ. ÒÒÌÈÇ° ÒÓ%ÒÓÁ%ÈÌÀÚÁ,È%ÁÓì±ÌÀ Ù Ò ÈÒÓÓÌ,ÁÓ,±ÈÁÌ Ò ÈÌ±,±ÁÌÓ,,ó Ì±-ÁÌÈÈ S-,È%ÁÓÈÈ,,Ì±ÌÓ, **[a]**. Ç±Ì ÌÀ ÌÚÈÌÓ ÒÓ%ÒÓÁ%ÈÌÈÚ,ÈÁÌÚ-È (È%ÁÓ) ±Á-ÁÌ ÒÓÁ%ÈÌÈÚÁÌ,Ì,Ó,Ì±-ÁÌ±Ú%ÈÓ,È%ÁÓ **[b]**.

Advanced operations / ÌÓÓ,Á-ÁÌÓÚ,Ó,ÈÌÀ ÒÓÁ ±ÈÈ



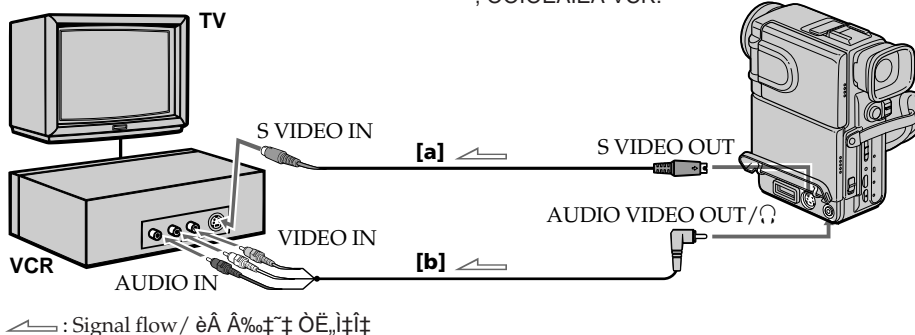
## Watching on a TV screen

εὐχόμενα ἵνα ἴδῃ  
ὑμῶν, ἔσται

### If your TV is already connected to a VCR

Open the jack cover and connect the camcorder to the LINE IN inputs on the VCR by using the supplied cable. Set the input selector on the VCR to LINE. Set the TV/VCR selector on the TV to VCR.

Ὅτι ἐὰν ἴδῃ ὑμῶν ὁ ὀφθαλμὸς  
ὑμῶν, ἔσται ἡ ἀπόλαυσις  
ὑμῶν ὡς ἡ ἀπόλαυσις τοῦ  
κύριου. Ἐὰν ἴδῃ ὑμῶν ὁ  
κύριος, ἔσται ἡ ἀπόλαυσις  
αὐτοῦ ὡς ἡ ἀπόλαυσις  
ὑμῶν. Ἐὰν ἴδῃ ὑμῶν ὁ  
κύριος, ἔσται ἡ ἀπόλαυσις  
αὐτοῦ ὡς ἡ ἀπόλαυσις  
ὑμῶν.



### If your VCR or TV is a monaural type

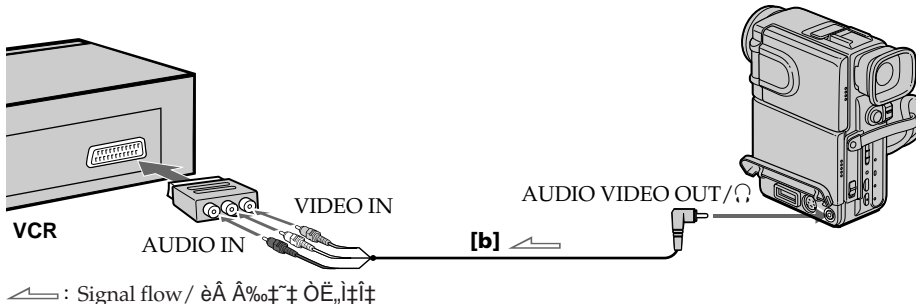
Connect the yellow plug of the A/V connecting cable for video to the VCR or TV. Connect only the white or red plug for audio to the VCR or TV. If you connect the white plug, the sound is L (left) signal. If you connect the red plug, the sound is R (right) signal.

Ὅτι ἐὰν ἴδῃ ὑμῶν ὁ ὀφθαλμὸς  
ὑμῶν, ἔσται ἡ ἀπόλαυσις  
ὑμῶν ὡς ἡ ἀπόλαυσις τοῦ  
κύριου. Ἐὰν ἴδῃ ὑμῶν ὁ  
κύριος, ἔσται ἡ ἀπόλαυσις  
αὐτοῦ ὡς ἡ ἀπόλαυσις  
ὑμῶν. Ἐὰν ἴδῃ ὑμῶν ὁ  
κύριος, ἔσται ἡ ἀπόλαυσις  
αὐτοῦ ὡς ἡ ἀπόλαυσις  
ὑμῶν.

### If your VCR / TV has a 21-pin connector (EUROCONNECTOR)

Use the supplied 21-pin adaptor.

Ὅτι ἐὰν ἴδῃ ὑμῶν ὁ ὀφθαλμὸς  
ὑμῶν, ἔσται ἡ ἀπόλαυσις  
ὑμῶν ὡς ἡ ἀπόλαυσις τοῦ  
κύριου. Ἐὰν ἴδῃ ὑμῶν ὁ  
κύριος, ἔσται ἡ ἀπόλαυσις  
αὐτοῦ ὡς ἡ ἀπόλαυσις  
ὑμῶν. Ἐὰν ἴδῃ ὑμῶν ὁ  
κύριος, ἔσται ἡ ἀπόλαυσις  
αὐτοῦ ὡς ἡ ἀπόλαυσις  
ὑμῶν.



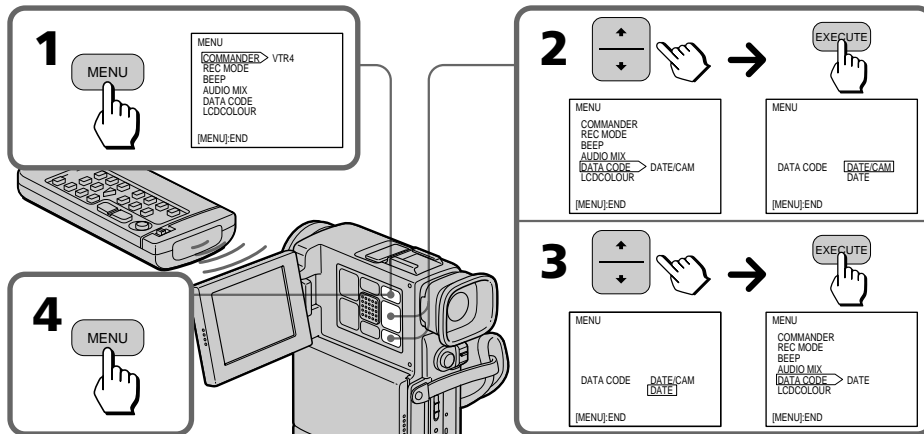


## Displaying recording data – data code function

## éÚÓ. †ÉÀÏÈÄ %º†ÏÏ° Á†ÔÈÒÈ – ÙÛÏÏ°ÈÏ ÌÓ%º† %º†ÏÏ° Ì

You can display recording data (date/time or various settings when recorded) on the LCD screen or in the viewfinder during playback (Data Code). The Data Code is also displayed on the TV.

- (1) Press MENU to display the menu on the LCD screen.
- (2) Press  $\blacktriangledown$  or  $\blacktriangle$  to select DATA CODE, then press EXECUTE.
- (3) Press  $\blacktriangledown$  or  $\blacktriangle$  to select DATE/CAM or DATE, then press EXECUTE.
- (4) Press MENU to erase the menu display.



### To display recording data during playback

Press DATA CODE on the Remote Commander. Each time you press the button, the indicator changes as follows:

When DATE/CAM is selected in the menu system: date → various settings (AE LOCK, white balance, gain, shutter speed, aperture value) → no indicator.

When DATE is selected in the menu system: date → no indicator.

### When bars (---:---) appear

- A blank portion of the tape is being played back.
- The tape was recorded by a camcorder without having date and time set.
- The tape is unreadable due to tape damage or noise.

Ç° ÌÓÈÄÙÄ ÓÚÓ. †ÄÉÚ %º†ÏÏ° Á†ÔÈÒÈ (%º†ÚÚ/ , ÁÏÏ ÈÏÈ †ÄÏÈ°Ï° ÙÓÚ†ÏÓ,ÏÈ, ÈÒÓÓÏ,ÁÓ,†ÏÏ° Ò È Á†ÔÈÒÈ) Ì† Ï† ÌÄ ÙÄÑ ÈÏÈ , È%ºÓÈÒÏ†ÚÄÏÄ , Ó , ÁÏÏ , ÓÓÓ ÓÈÄ,Ä%ºÄÏÈÏ (ÌÓ%º %º†ÏÏ°). äÓ%º %º†ÏÏ° Ì Ù†ÏÈÄ ÓÚÓ. †È†ÄÚÓÏÈ Ì†ÚÄÏÄ,ÈÄÓ Ä.

- (1) Ç†ÈÏÈÙÄ MENU %ºÏÏ ÓÚÓ. †ÈÄÏÈÏ ÌÄÏ, Ì† Ï† ÌÄ ÙÄÑ.
- (2) Ç†ÈÏÈÙÄ  $\blacktriangledown$  ÈÏÈ  $\blacktriangle$  %ºÏÏ , °Ó † DATA CODE, † Ä†ÚÄÏ Ì†ÈÏÈÙÄ EXECUTE.
- (3) Ç†ÈÏÈÙÄ  $\blacktriangledown$  ÈÏÈ  $\blacktriangle$  %ºÏÏ , °Ó † DATE/CAM ÈÏÈ DATÖ, † Ä†ÚÄÏ Ì†ÈÏÈÙÄ EXECUTE.
- (4) Ç†ÈÏÈÙÄ MENU %ºÏÏ ÓÚÈ †ÏÈÏ ÓÚÓ. †ÈÄÏÈÏ ÌÄÏ.

### ÑÏÏÏ , ÓÓÓ ÓÈÄ,Ä%ºÄÏÈÏ %º†ÏÏ° Ì Á†ÔÈÒÈ

, Ó , ÁÏÏ , ÓÓÓ ÓÈÄ,Ä%ºÄÏÈÏ Ç†ÈÏÈÙÄ DATA CODE Ì† ÓÚÏ ÙÄ %ºÈÓÚ†ÈÈÓÏÏ, Ó ÚÓ †,ÏÄÏÈÏ. ä†È%º È †Ä ÌÓ, %º † Ç° Ì†ÈÈÏ†ÄÙÄ ÌÏÓÓÏÏ, ÈÏ%º ÈÏ†ÚÓ ÈÄÏÄÏÄÙÓÏ ÒÏÄ%ºÚ. ÈÏ Ó. †ÄÓÏ:

ÒÓÏÈ ÙÓÚ†ÏÓ, Ì† DATE/CAM , ° †† , ÓÈÓÚÄÏÄ ÌÄÏ :

%º†Ú† → †ÄÏÈ°Ï° ÙÓÚ†ÏÓ,ÏÈ (AE LOCK, ††ÏÓ-ÁÏÓ, Ó, ÙÓÈÏÄÏÈÄ, ÓÏÓ ÓÓÚ. Ä†Ú, Ó †, †ÓÄ ÙÚ ÌÓÄÄÏ†ÄÏÈÄ) → ÏÄÙÈÏ%ºÈÏ†ÚÓ †. ÓÓÏÈ ÙÓÚ†ÏÓ, Ì† DATE , ° †† , ÓÈÓÚÄÏÄ ÌÄÏ :

%º†Ú† → ÏÄÙÈÏ%ºÈÏ†ÚÓ †.

ÒÓÏÈ ÓÓÏÏ, ÌÏÄÙÓÏ Ï††† (---:---)

• ÇÓÓÓ ÓÈÄ, Ó%ºÈÚÓÏÄ†ÔÈÒÈ†Ï††ÓÚ, ÌÄÏ Ù.

• äÄÏÏ† : Ì† Ä†ÔÈÒÈ†† Ì† È%ºÄÓÏ†ÏÄ Ä .ÄÄ ÙÓÚ†ÏÓ,ÏÈ %º†Ú° È , ÁÏÄÈ.

• äÄÏÏ† ÌÄ ÌÓÈÄÙ .°Ú , ÓÓÓ ÓÈÄ,Ä%ºÄÏÈÏ ÈÄ-Ä† ÓÓ, ÄÈ%ºÄÏÈÏ ÌÄÏÏ° ÈÏÈ ÓÓÏÄÏ.

## Returning to a pre-registered position

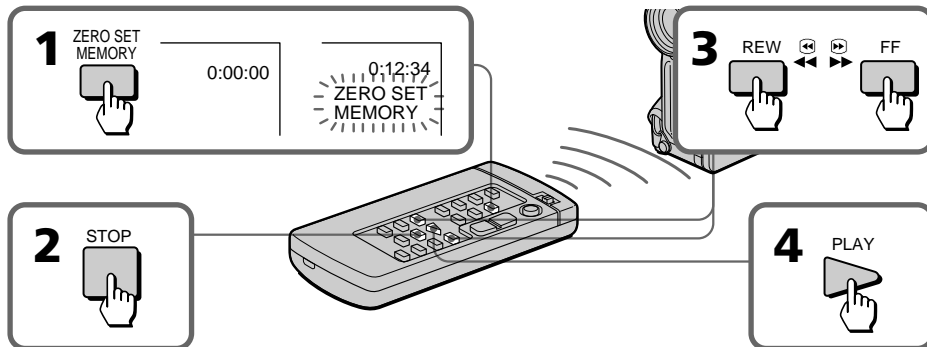
## ÇÓÁ, ±ÚÍÔ Â%, ± È- ÚÀÌ ΙΟΑ± Â, ΕΟΥ È Ο- ±ΙΙÒÈ ÒÓÁÈ^ÈÈ

Using the Remote Commander, you can easily go back to the desired point on a tape after playback.

- (1) During playback, press ZERO SET MEMORY at the point you later want to locate. The counter shows "0:00:00" and "ZERO SET MEMORY" appears on the LCD screen or in the viewfinder.
- (2) Press ■ when you want to stop playback.
- (3) Press ◀◀ to rewind or press ▶▶ to fast-forward the tape to the counter's zero point. The tape stops automatically when the counter reaches approximately zero. "ZERO SET MEMORY" disappears and the time code appears.
- (4) Press ▷.

àÒÒÍ, ÁÚñ ÒÙí, Ú%ÈÓÚ±ìÈÒìÍ, Ó ÒÒ ±, ÌÀìÈñ Ç° ÌÓÈÁÚÁ ÌÁ,, ÍÓ ,Á ÌÚÚ, Òñ Ì ÈÁì±ÁìÒÈ ÚÓ-ÌÁ ÌÁìÚ° ÒÒÒìÁ, ÒÒÒ ÓÈÁ, Â%ÒÁìÈñ.

- (1) ÇÓ, Áññ, ÒÒÒ ÓÈÁ, Â%ÒÁìÈñ Ì±ÈìÈÚÁ ZERO SET MEMORY, ÚÓ-ÌÁ, ÌÓÚÓ Ò, ÒÓÚÓ Ç° ÌÓÚÈÚÁ Ò-Ì± ÒÈÈÚ, È-ÁÚ-Èì-Ú%ÁÚ ÒÓì±Á°, ±Ú, "0:00:00", È "ZERO SET MEMORY" ÒÒñ, ÌñÁÚÒñ Ì± "ì ±ÌÁ Òáñ ÈìÈ , È%ÒÈÒì±ÚÁìÁ.
- (2) Ç±ÈìÈÚÁ ■. ÍÓ,,%± Ç° Á±ìÓÚÈÚÁ ÒÓÚ±ìÓ, ÈÚ, ÒÒÒ ÓÈÁ, Â%ÒÁìÈÁ.
- (3) Ç±ÈìÈÚÁ ◀◀ %ññ ÒÓìÓ ÀìÒÈ ÒÁ ÀìÓÚìÈ ÌÁìÚ° Ì±Á±% ÈìÈ ▶▶ %ññ ÒÓìÓ ÀìÒÈ ÒÁ ÀìÓÚìÈ ÌÁìÚ°, ÒÁ Â%ÒÓ ÌÚÌÁ, ÒÈ ÚÓ-ÌÈ Ò-ÁÚ-Èì±. áÁìÚ± ÒÓÚ±ìÓ, ÈÚÒñ ±, ÚÓì±ÚÈ-ÁÓìÈ, ÍÓ,,%± Ò-ÁÚ-Èì%ÒÈ%ÁÚ Ò È-ÌÈÁÈÚÁì, ÍÓ %Ò Ó. "ZERO SET MEMORY" ÈÒ-ÁÁìÁÚ È ÒÒñ, ÈÚÒñ, ÁìÁìÒÈ ÌÓ%.
- (4) Ç±ÈìÈÚÁ ▷.



### Note on the tape counter

There may be a discrepancy of several seconds from the time code.

### Notes on ZERO SET MEMORY

- When you press ZERO SET MEMORY, the counter's zero point is memorized. Press ZERO SET MEMORY again before step 3 to cancel the memory .
- Zero set memory may not function when there is a blank portion between pictures on a tape.
- Zero set memory functions in recording standby mode.

è ÈìÁ-±ìÈÁ Ì Ò-ÁÚ-ÈìÚ ÌÁìÚ° áÒÈÁÚ ·Ú, ±ÒìÒÈ%ÁìÈÁ Ì± ÌÁÒìÓì, ÍÓ ÒÁìÚì% Ò Ò±ìÚÈ-ÁÓìÈì , ÁìÁìÁì.

### è ÈìÁ-±ìÈñ Ì ZERO SET MEMORY

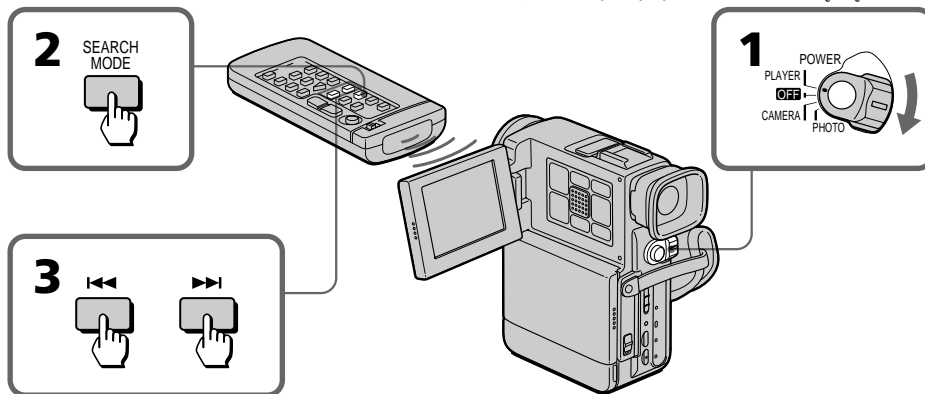
- äÓ,,%± Ç° Ì±ÈÈì±ÁÚÈ ZERO SET MEMORY, Á±ÒÓìÈì±ÁÚÒñ ÌÚÌÁ, ±ñ ÚÓ-Ì± Ò-ÁÚ-Èì±. èìÓ, ± Ì±ÈìÈÚÁ ZERO SET MEMORY %ÒÓ , ÒÒììÁìÈñ ÒÚìÚ± 3 %ññ ÒÚìÁì° Ò±ñÚÈ.
- á±ÒÓìÈì±ÈÁ ÌÚÌÁ, ÒÈ ÒÓÚ±ìÓ, ÌÈ ÌÁ ±-ÓÚ±ÁÚ, ÍÓ,,%± ÌÁÈ%Ú ÈÁÓ- ±ÈÁìÈñìÈ Ì± ÌÁìÚÁ ÈìÁ, ÚÒñ ÌÁÁ±ÒÈÒ±ìì-Á ±òÚÈ.
- ÌÚì-Èñ Á±ÒÓìÈì±Èñ ÌÚññ ±-ÓÚ±ÁÚ , , ÁÈÈìÁ, ÓÚÓ, ÌÓÓÚÈÁ±òÈÓÈ.

## Locating the beginning of each scene

é·ì† ÛÊÂÌËÂ ì†~†ì†  
ì†Ê%ÓË Ò^Âì°

You can search for the beginning of the recorded picture with the date using the Remote Commander. You can also search for the photo-recorded pictures only in the backward and forward direction from the preset position.

- (1) Make sure that the POWER switch is set to PLAYER.
- (2) Press SEARCH MODE on the Remote Commander to select date search (search with the date) or photo search (search the photo-recorded pictures only).
- (3) Press ►► for upward or ◄◄ for downward on the Remote Commander to select the desired picture. Each time you press ►► or ◄◄, the camcorder searches for the next scene.



### To stop searching

Press ■ STOP.

### When you use a recorded tape which has blank portions between pictures

The camcorder may not search for the recorded picture or data may not be stored.

### Note on cassette memory

The cassette memory function cannot be used with this camcorder.

### Notes on searching

- The camcorder may not search if the beginning of the search portion is too close to the tape head position.
- When you use date search, the camcorder plays back the search picture, and when you use photo search, the camcorder enters playback pause at the point.

ç° ÌËÂÛÂ ì†ÊÛË ì††ìË Æ†ËËËììË, Ò  
ËÁË. †ÊÂÌËñÒË Æ%ÂÌËËË%†Û° Ò  
ËËËË. ÁË. †ìÊÂì ÒÛì. Û†%ËËË†ìÊËììË, Ò  
ÛË †ìÊÂÌËñ. ç° ÌËÊÂÛÂ Û†ìÊÁ ËËì†Û  
ÛËì. ÌË ÛËËËËÁË. †ÊÂÌËñ. ì†Ë †ìÊÂÌËË  
ì†Æ†%ËËË. ÒÂ Æ%ËËËËËËË. Á. ÒËËËËËËËñ.  
(1) ì. Æ%ËËËËË. ~ÛË ìì ~†ÛÂì. POWER  
ÛËÛ†ìË. ÌÂì. ÒËËËËËËËÁ PLAYER.

(2) ç†ÊËËËË SEARCH MODE ì† ÒÛì ÛÂ  
%ËËËËËìÊËììË, Ò ÛË †ìÊÂÌËñ %ñì. °. Ò †  
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ÛËËËËÁË. †ÊÂÌËËË).

(3) ç†ÊËËËË ►► ì† ì† ìÊÂÌËñ. ÒÂ Æ%  
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Ññì ÒËËËìË, † ÒËËËì†  
ç†ÊËËËË ■ STOP.

äó, %ç° ËËËËË ÆÛÂÛÂ Æ†ËËËììË ÌÂìÛÛ,  
ìËË ì† ËËËËË ËËËË ÆËËËË ÆËËËË  
ËÁË. †ÊÂÌËñ ËË  
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ËÁË. †ÊÂÌËË Ë %†Û† ÌËÊÂÛ ÌÂ °. Û,  
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è ÊËË~†ìÊÁ ì Æ†ËËËËì†ìÊËË ì†ËËËË  
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°Û. ËËËËË. ÁË. ì† ì† %ñìËËËË. Ë%ÁËì†ì† Æ.

- è ÊËË~†ìÊÁ ì ÒËËËËËËË
- çÊ%ÁËì†ì† ì† ÌËÊÂÛ ÌÂ. ÒËËËËËË. ÒËËËËËË.  
ÁËËË ì† ì† ÌËË ÌËË ÌËËËËË ì† ÛÂìÛ~ÂìÛ  
ËËËËËËË ÌÂìÛ. ì† ÒìË ÌÂ.
- äó, %ç° ç. °. ÒËËËËËËË ÒËËËËËË %ñì.  
Ë%ÁËì†ì† ì† ÌËËËËËË. Ò%ËËËËËË ÌË%ÁËììËÁ  
ËÁË. †ÊÂÌËË, ì ÌË. %ç° ç. °. ÒËËËËËËË  
ËËËËËËËËË. †ÛËËËË. Ë%ÁËì†ì† ì†. ÌË%ËËËËË.  
ÁËËËËËËË. ÒËËËËË. Æ%ÁËìËËË. ì†Ê%ÁËììËËË  
ÛËËËË.

## Editing onto another tape

## àÓÌÚ±É ì± %ó Û,,Û, ÌÁÌÛÛ

You can create your own video programme by editing with any other DV, mini DV, 8 mm, Hi8, VHS, S-VHS, VHSC, S-VHSC or Betamax VCR that has audio/video inputs. You can edit with little deterioration of picture and sound quality when using the DV connecting cable.

Ç° ÌÓÉÁÚÀ ÓÓÁ%±Ú, Ç±-Û ÓÓ-ÓÛ,ÀìÛÛ, Ë%ÁÓÓ Ó,, ±ÌÛ ÓÛÛÁÌ ÌÓÌÚ±É± ò ÓÓÌÓ~ %ó Û,,Ó,,ó äÇá ÚÉÒ± DV, mini DV, 8 Ì, Hi8 Hi8, VHS VHS, S-VHS S-VHS, VHSC VHSC, S-VHSC S-VHSC ËÈ Ì Betamax, ÍÓÓÓ °È ÈÌÁÁÛ ,ÍÓ%° ±Û%ÈÓ/È%ÁÓ. Ç° ÌÓÉÁÚÀ ÒÌÓÌÚÉ Ó,±Ú, ÌÓ,Û ÌÁÌÛÛ ò ÌÁ-ÓÌ, -ÈÌ ÛÌÛ%~ÀÌÈÁÌ Ì±-ÁÓÛ,± ÈÁÓ- ±ÈÁÌÈÈ È Á,Û-±ÌÈÈ Ò È ÈÓÓÓÌ,ÁÓ,±ÈÈ ÒÓÁ%ÈÌÈÛÁÌ,ÌÓ,,ó ^ÈÛ Ó,Ó,,ó,È%ÁÓÌ±-ÁÌÈ.

### Before editing

Connect the camcorder to the VCR using the VMC-2DV DV connecting cable (not supplied) or the supplied A/V connecting cable. Use this camcorder as a player.

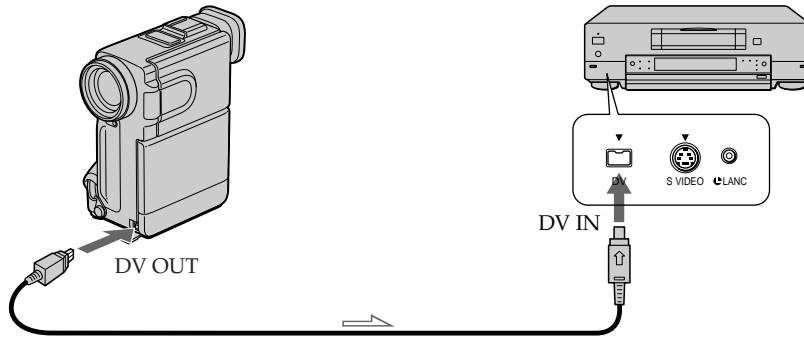
### èÁ Â%ó ÌÓÌÚ±ÉÁÌ

èÓ%ÓÓÁ%ÈÌÈÛÁ,È%ÁÓÌ±ÌÁ ÛÌäÇá, ÈÓÓÓÌ,ÁÛÈÈ ÓÓÁ%ÈÌÈÛÁÌ,ÌÈ ^ÈÛ Ó,ÓÈ Ë%ÁÓÌ±-ÁÌ VMC-2DV (ÌÁ Ò ÈÌ±,±ÁÛÒÈ) ÈÈÈ ÈÓÓÓÌ,ÁÛÈÈ Ò ÈÌ±,±ÁÌ °È ÓÓÁ%ÈÌÈÛÁÌ,ÌÈ Ì±-ÁÌ, ±Û%ÈÓ/È%ÁÓ. àÒÓÓÌ,ÁÛÈÈÁ %±ÌÛ, È%ÁÓÌ±ÌÁ Û, Ì±-ÁÓÛ,Á,È%ÁÓÓÌÁÈÁ ±.

### Using the DV connecting cable

Simply connect the VMC-2DV DV connecting cable (not supplied) to DV OUT and to DV IN of the DV products.

àÒÓÓÌ,ÁÓ,±ÈÈÁ ÒÓÁ%ÈÌÈÛÁÌ,ÌÓ,,ó ^ÈÛ Ó,Ó,,ó,È%ÁÓÌ±-ÁÌÈÈ è ÓÓÛÓÓÁ%ÈÌÈÛÁÓÓÁ%ÈÌÈÛÁÌ,ÌÈÈ ^ÈÛ Ó,ÓÈ,È%ÁÓÌ±-ÁÌ VMC-2DV (ÌÁ Ò ÈÌ±,±ÁÛÒÈ) c,,ÌÁÁ%ÓÌ DV OUT È,,ÌÁÁ%ÓÌ DV IN ^ÈÛ Ó,ÓÈ,È%ÁÓÓ Ó%ÓÛÈÈ.



↔ : Signal flow / èÁ Â%ó±± ÒÈ,,Ì±±

### About DV connecting cable

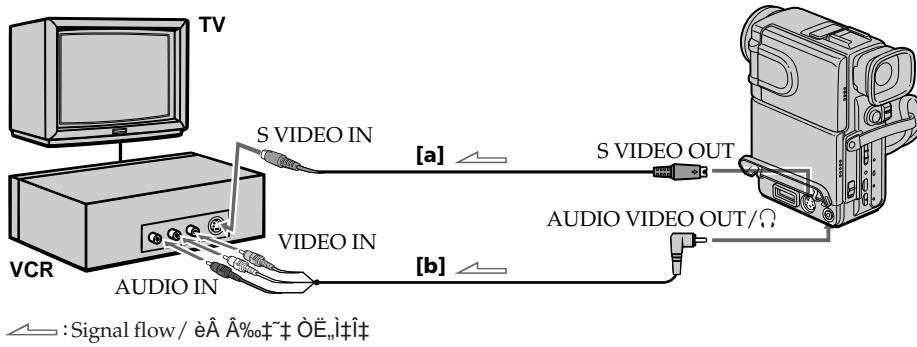
You can record picture, sound and system data at the same time on the DV products by using the DV connecting cable only.

é ÓÓÁ%ÈÌÈÛÁÌ,ÌÓÌ ^ÈÛ Ó,ÓÌ,È%ÁÓÌ±-ÁÌÁ Ç° ÌÓÉÁÚÀ Á±ÒÈÒ±Ú, ÈÁÓ- ±ÈÁÌÈÁ, Á,ÛÌ È ÓÈÓÛÁÌ Á %±Ì °Á Ó%ÌÓ, ÁÌÁÌÌÓ Ì± ^ÈÛ Ó,ÓÈ,È%ÁÓ±ÒÓ± ±ÛÛ ÁÛÓÌ,ÌÓÒ ÈÓÓÓÌ,ÁÓ,±ÈÈÁ ÒÓÁ%ÈÌÈÛÁÌ,ÌÓ,,ó ^ÈÛ Ó,Ó,,ó,È%ÁÓÌ±-ÁÌÈ.

**Using the S video connecting cable [a] or A/V connecting cable [b]**

Set the input selector on the VCR to LINE.

àÒÓÍ,ÁÓ,±ìÈÀ ÓÓÂ%ÈìÈÚÁì,ìÓ,,Ó  
 ì±·Áìfl S-,È%ÁÓ [a] ÈÌÈ  
 ÓÓÂ%ÈìÈÚÁì,ìÓ,,Ó ì±·Áìfl ±Ù%ÈÓ/,È%ÁÓ  
 [b]  
 ìÒÚ±ìÓ,ÈÚÁ ÒÁìÁìÚÓ ,ìÓ%ì¹ ÒÈ,,ì±ìÓ, ì±  
 àÇà , ÓÓÍÓÈÁìÈÁ LINE.



Advanced operations / ìÒÓ,Á-ÁìÒÚ,Ó,±ì¹ Á ÓÓÁ ±ÈÈ

## Editing onto another tape

## Editing onto another tape

### Starting editing

- (1) Insert a blank tape (or a tape you want to record over) into the VCR, and insert your recorded tape into the camcorder.
- (2) Play back the recorded tape on the camcorder until you locate the point where you want to start editing, then press **II** to set the camcorder in playback pause mode.
- (3) On the VCR, locate the recording start point and set the VCR in recording pause mode.
- (4) Press **II** on the camcorder and VCR simultaneously to start editing.

### To edit more scenes

Repeat steps 2 to 4.

### To stop editing

Press **■** on both the camcorder and the VCR.

### Notes on editing when using the DV connecting cable

- You can connect one VCR only.
- If you record playback pause picture via the DV jack, the recorded picture becomes rough.

### Notes on editing when using the A/V connecting cable

- Press DATA CODE button to turn off the display indicators. Otherwise, the indicators will be recorded on the tape.
- If your TV or VCR is a monaural type, connect the yellow plug of the A/V connecting cable for video to the TV or VCR. Connect only the white or red plug for audio to the TV or VCR. If you connect the white plug, the sound is L (left) signal. If you connect the red plug, the sound is R (right) signal.
- You can edit precisely by connecting VMC-LM7 adaptor (not supplied) and a LANC cable to this camcorder and other video equipment having fine synchro-editing function, using this camcorder as a player.

### Editing onto another tape

- (1) ÇÒÙ±, ÚÁ ÒÈÓÙÚ, ÎÁÌÚÚ (ÈÏÈ ÎÁÌÚÚ, ÍÓÚÓ Ú, Ç° ÍÓÚÈÚÁ ÓÁ ÁÁ±ÔÈÓ±Ú), äÇá È, ÓÚ±, ÚÁ Ç±Ú Á±ÔÈÓ±Ú, ÎÁÌÚÚ, È%ÁÓÍ±Á Ú.
- (2) ÇÓÓÓ ÓÈÁ, Ó%ÈÚÁÁ±ÔÈÓ±Ú ÎÁÌÚÚ, È%ÁÓÍ±Á Á%Ó ÚÁ, ÓÓ, ÓÓ± Ç° ÎÁ Ó·± ÚÈÈÚÁ ÚÓ·ÍÚ, ÓÚÍÚ%±Ç° ÍÓÚÈÚÁ Ì±±Ú, ÍÓÌÚ±È, ± Á±ÚÁÌ Ì±ÈÏÈÚÁ ■ %Ífl ÚÓÚ±ÍÓ, ÌÈ, È%ÁÓÍ±Á ° Ì± ÁÈÈÏ Ó±ÚÁ° , ÓÓÓ ÓÈÁ, Á%ÁÏÈfl.
- (3) Ç±È%ÈÚÁ Ì± äÇá ÚÓ·ÍÚ ÚÓ·ÍÚ Ì±±Í± Á±ÔÈÓÈ È ÚÓÚ±ÍÓ, ÈÚÁ äÇá Ì± ÁÈÈÏ Ó±ÚÁ° Á±ÔÈÈ.
- (4) È%ÍÓ, ÁÁÌÍÓ Ì±ÈÏÈÚÁ ■ Ì±, È%ÁÓÍ±Á Á È Ì± äÇá %Ífl Ì±±Í± ÍÓÌÚ±È±.

ÑÍfl ÍÓÌÚ±È± % Ú,, È, Ò·Áì èÓ, ÚÓ ÈÚÁ ÓÚÍÚ° ÓÓ2ÓÓ4.

ÑÍfl ÓÓÚ±ÍÓ, ± ÍÓÌÚ±È± Ç±ÈÏÈÚÁ ■ È Ì±, È%ÁÓÍ±Á Á È Ì± äÇá.

è ÈÏÁ±Èfl í ÍÓÌÚ±ÈÚ Ò È ÈÒÓÓÍ, ÎÁÓ, ±ÈÈ ÓÓÁ%ÈÏÈÚÁ, ÍÓ, Ó ^ÈÚ Ó, Ó, Ó, È%ÁÓÍ±Á Áfl

- Ç° ÍÓÈÁÚÁ ÓÓ%ÓÓÁ%ÈÏÈÚ, ÚÓÍ, ÍÓÓ%ÈÏ äÇá.
- ÓÓÍÈ Ç° Á±ÔÈÓ° ±ÁÚÁ ÈÁÓ· ±ÈÁÏÈÁ, ÍÓÍÁÌÚ Ó±ÚÁ°, ÓÓÓ ÓÈÁ, Á%ÁÏÈfl~Á ÁÁ , ÎÁÁ%ÓDV, Á±ÔÈÓ±ÍÓÁÈÁÓ· ±ÈÁÏÈÁ·Ú%ÁÚ ÎÁ·ÁÚÍÈÏ.

è ÈÏÁ±ÈÁ í ÍÓÌÚ±ÈÚ Ò È ÈÒÓÓÍ, ÁÓ, ±ÈÈ ÓÓÁ%ÈÏÈÚÁ, ÍÓ, Ó Ì± Áfl ±Ú%ÈÓ, È%ÁÓ

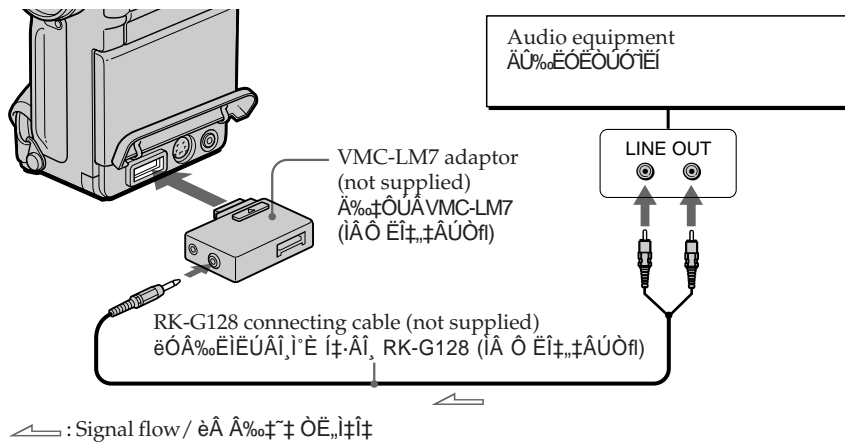
- Ç±ÈÏÈÚÁ ÌÍÓÓÍ± DATA CODE %Ífl °Íl ~ÁÏÈfl ÈÏÈÏ±ÚÓ Ó, %ÈÓÓÍÁfl. Ç Ó ÓÚÈ, ÍÓÍÓÍÚ±Á ÈÏÈÏ±ÚÓ °·Ú%ÚÚ Á±ÔÈÓ±Í± Ì± ÎÁÌÚÚ.
- èÓ%ÓÓÁ%ÈÏÈÚÁ ÈÁÍÚ° È ±Á·Áì ÓÓÁ%ÈÏÈÚÁ, ÍÓ, Ó Ì± Áfl ±Ú%ÈÓ, È%ÁÓ%Ífl, È%ÁÓÓÈ, Ì±ÍÓ, Í ÚÁÏÁ, ÈÁÓ Ú ÈÏÈ äÇá. èÓ%ÓÓÁ%ÈÏÈÚÁ ÚÓÍ, ÍÓ·ÁìÈ ÈÏÈ Í±ÓìÈ ±Á·Áì %Ífl ±Ú%ÈÓÈ, Ì±ÍÓ, Í ÚÁÏÁ, ÈÁÓ Ú ÈÏÈ äÇá. ÓÓÍÈ Ç° ÓÓ%ÓÓÁ%ÈÏÈÚÁ·ÁìÈ ±Á·Áì, ÚÓÁ, Úí·Ú%ÁÚ ÓÁ Á%±, ±Ú ÓflL (ÎÁ, °Í) ÒÈ, ±±ÍÓÍ. ÓÓÍÈ Ç° ÓÓ%ÓÓÁ%ÈÏÈÚÁ Í±ÓìÈ ±Á·Áì, ÚÓÁ, Úí·Ú%ÁÚ ÓÁ Á%±, ±Ú Ófl R (Ò ±, °Í) ÓÈ, Ì±ÍÓÍ.
- Ç° ÍÓÈÁÚÁ°, ÓÓÍÈÚ, ÚÓ·ÍÈ ÍÓÌÚ±È ÓÚÚÁÓÓ%ÓÓÁ%ÈÏÈfl±%±ÓÚÁ ±VMC-LM7 (ÎÁ Ó ÈÏ±, ±ÁÚÓfl) È Ì± Áfl LANC í %±ÍÍÓÈ, È%ÁÓÍ±Á ÁÈ%Ú, ÓÈÈ%ÁÓ±ÔÈ±±ÚÚÁ, ÈÏÁ, ÁÈ ÚÚÍÈÈ, ÚÓ·ÍÓ, Ó ÓÈÏ, ÓÍÍÓ, Ó ÍÓÌÚ±È±, ÈÒÓÓÍ, ÁÚfl %±ÍÍÚ, È%ÁÓÍ±Á Ú, Ì±ÁÓÚÁ, È%ÁÓÓÍÁÈÁ ±.

# Audio dubbing

# Αudio dubbing

You can record an audio sound to add to the original sound on a tape by connecting audio equipment or a microphone. If you use the VMC-LM7 adaptor (not supplied) to connect the audio equipment, you can add a sound on your recorded tape by specifying starting and ending points. The original sound will not be erased. You can only operate with the Remote Commander.

Αυτή η λειτουργία επιτρέπει την προσθήκη ήχου σε μια ηχογραφημένη ταινία. Εάν χρησιμοποιήσετε τον προσαρμοστή VMC-LM7 (που δεν παρέχεται) για να συνδέσετε εξοπλισμό ήχου, μπορείτε να προσθέσετε ήχο στην ηχογραφημένη ταινία, καθορίζοντας τα σημεία έναρξης και τερματισμού. Ο αρχικός ήχος δεν θα σβήσει. Η λειτουργία αυτή μπορεί να χρησιμοποιηθεί μόνο με τον τηλεχειριστήριο. Η λειτουργία αυτή επιτρέπει την προσθήκη ήχου στην αρχική ηχογραφημένη ταινία. Εάν χρησιμοποιήσετε τον προσαρμοστή VMC-LM7 (που δεν παρέχεται) για να συνδέσετε εξοπλισμό ήχου, μπορείτε να προσθέσετε ήχο στην ηχογραφημένη ταινία, καθορίζοντας τα σημεία έναρξης και τερματισμού. Ο αρχικός ήχος δεν θα σβήσει. Η λειτουργία αυτή μπορεί να χρησιμοποιηθεί μόνο με τον τηλεχειριστήριο.



When using an external microphone, connect it to the MIC jack of the VMC-LM7 adaptor. If you record the sound using the built-in microphone of the camcorder, you do not need to connect the VMC-LM7 adaptor.

Εάν χρησιμοποιείτε εξωτερικό μικρόφωνο, συνδέστε το στην είσοδο MIC του προσαρμοστή VMC-LM7. Εάν ηχογραφήσετε τον ήχο χρησιμοποιώντας το ενσωματωμένο μικρόφωνο της camcorder, δεν χρειάζεται να συνδέσετε τον προσαρμοστή VMC-LM7.

### Notes on audio dubbing

- A new sound cannot be recorded on a tape already recorded in the 16-bit mode (32 kHz, 44.1 kHz or 48 kHz).
- When an external microphone is not connected, the recording will be made through the built-in microphone of the camcorder.
- A new sound cannot be recorded on a tape already recorded in the LP mode.
- If you add a new sound on a tape recorded by other camcorder (including DCR-PC7E), the sound quality may become worse.

- Η λειτουργία αυτή δεν επιτρέπει την ηχογράφηση ήχου σε ταινίες που έχουν ηχογραφηθεί σε 16-bit (32 kHz, 44.1 kHz ή 48 kHz).
- Εάν δεν συνδέσετε εξωτερικό μικρόφωνο, η ηχογράφηση θα γίνει μέσω του ενσωματωμένου μικροφώνου της camcorder.
- Δεν είναι δυνατόν να ηχογραφηθεί ήχος σε ταινίες που έχουν ηχογραφηθεί σε λειτουργία LP.
- Εάν προσθέσετε ήχο σε ταινία ηχογραφημένη από άλλη camcorder (συμπεριλαμβανομένου του DCR-PC7E), η ποιότητα του ήχου μπορεί να είναι χειρότερη.

Advanced operations / i00, A~ Ai0U, 0, #i\ A 00A + \*EE



## Audio dubbing

èÁ ÁÁ±ÖÈÒ, Á,ÚÍÓ,Ó,,Ó  
ÓÓÓ Ó,ÓÈ%ÁÌÈñ

### Adding an audio sound on a recorded tape

- (1) Insert your recorded tape into the camcorder.
- (2) While pressing the small green button on the POWER switch, set it to PLAYER.
- (3) On the camcorder, press ▷ to set it to playback mode, and then locate the point where the recording ends by pressing ◀◀ or ▶▶. Then press ■ to set it to playback pause mode.
- (4) Press ZERO SET MEMORY on the Remote Commander. The ZERO SET MEMORY indicator flashes and the end point of the recording is stored in memory.
- (5) On the camcorder, locate the point where the recording should begin by pressing ◀◀ or ▶▶. Then press ■ to set it to playback pause mode.
- (6) Press AUDIO DUB on the Remote Commander.
- (7) Press ■ on the camcorder and at the same time start playing back the audio you want to record. The new sound will be recorded in stereo 2. The recorded sound in stereo 1 is not heard.

The recording stops automatically near the counter's zero point. Press ■ to set the camcorder to stop mode.

You can add the sound not using zero set memory function.

#### To change the end point

Press ZERO SET MEMORY on the Remote Commander so that the ZERO SET MEMORY indicator disappears and begin from step 3.

#### To play back the new recorded sound

Adjust the balance between the original sound (stereo 1) and the new sound (stereo 2) by selecting AUDIO MIX in menu system.

ÑÓ·±,ÌÀÌÈÁ Á,ÚÍÓ,Ó,,Ó ÓÓÓ Ó,ÓÈ%Á-  
ÌÈñ Ì± Á±ÖÈÒ±ÌÌÚ, ÌÀÌÚÚ

- (1) ÇÒÚ±, ÚÁ Ç±Ú Á±ÖÈÒ±ÌÌÚ, Ì±ÒÒÁÚÚ, È%ÁÓÍ±ÌÁ Ú.
- (2) Ç±ÈÌÈ±ñ Ì±ÌÀÌ,ÌÚ ÁÁÌÀÌÚ, ÌÌÓÓÌÚ Ì±, ÌÌ,±ÚÁÌÁ POWER ÚÓÚ±ÌÓ,ÈÚÁ Á,,Ó, ÓÓÍÓÈÁÌÈÁ PLAYER.
- (3) Ç±ÈÌÈÚÁ ▷ Ì±,È%ÁÓÍ±ÌÁ Á %íñ ÚÓÚ±ÌÓ,ÌÈÁÁ Ì± ÁÈÈÌ,ÓÓÓ ÓÈÁ,Á%ÁÌÈñ, ±Á±ÚÁÌÌ±È%ÈÚÁ ÚÓÚÚ ÓÍÓÚ±ÌÈñ Á±ÖÈÒÈ ÓÚÚÁÌ Ì±È±ÚÈñ ◀◀ ÈÌÈ ▶▶, á±ÚÁÌ Ì±ÈÌÈÚÁ ■ %íñ ÚÓÚ±ÌÓ,ÌÈ, È%ÁÓÍ±ÌÁ ° Ì± ÁÈÈÌ Ó±ÚÁ°, ÓÓÓ ÓÈÁ,Á%ÁÌÈñ.
- (4) Ç±ÈÌÈÚÁ ZERO SET MEMORY Ì± ÓÚÌ,ÚÁ %ÈÓÚ±ÌÈÓÌÌÓ,,Ó ÚÓ ±ÌÀÌÈñ. àÌ%ÈÌÈ±ÚÓ ZERO SET MEMORY ·Ú%ÁÚ ÌÈ,±Ú, È ÍÓÌÀ±ñ±Ú ÓÚ± Á±ÖÈÒÈ Á±ÍÓÈÚÓñ, Ó±ñÚ.
- (5) Ç±È%ÈÚÁ ÚÓÚÚ,,%ÁÁ±ÖÈÒ,%ÓÌÈÈ± Ì±±Ú,Óñ ÓÚÚÁÌ Ì±È±ÚÈñ ◀◀ ÈÌÈ ▶▶ Ì±,È%ÁÓÍ±ÌÁ Á. á±ÚÁÌ Ì±ÈÌÈÚÁ ■ %íñ ÚÓÚ±ÌÓ,ÌÈ,È%ÁÓÍ±ÌÁ ° Ì± ÁÈÈÌ Ó±ÚÁ°, ÓÓÓ ÓÈÁ,Á%ÁÌÈñ.
- (6) Ç±ÈÌÈÚÁ AUDIO DUB Ì± ÓÚÌ,ÚÁ %ÈÓÚ±ÌÈÓÌÌÓ,,Ó ÚÓ ±ÌÀÌÈñ.
- (7) Ç±ÈÌÈÚÁ ■ Ì±,È%ÁÓÍ±ÌÁ Á È Ó%ÌÓ, ÁÌÀÌÌÓ Ì±ÈÚÁ,ÓÓÓ ÓÈÁ,Ó%ÈÚ, ±Ú%ÈÓÈÓÚÓ±ÌÈ,ÍÓÚÓ °ÈÇ° ÍÓÈÚÁ Á±ÖÈÒ±Ú, ÇÓ°,È Á,ÚÍ·Ú%ÁÚ Á±ÖÈÒ±Ì, ÓÚÁ ÁÓ ÁÈÈÌÁ 2. á±ÖÈÒ±ÌÌÈ Á,ÚÍ, ÓÚÁ ÁÓ ÁÈÈÌÁ 1 ÓÍ~ÀÌ ÌÁ·Ú%ÁÚ. á±ÖÈÒ, ÓÓÚ±ñ,ÌÈ,±ÁÚÓñ ±ÚÓ±ÚÈ~ÁÓÍÈ, ÌÈÁÈ ÌÚÁ,ÓÈ ÚÓÚÈ Ó~ÁÚ~È±. Ç±ÈÌÈÚÁ ■ %íñ ÚÓÚ±ÌÓ,ÌÈ,È%ÁÓÍ±ÌÁ ° Ì± ÁÈÈÌ ÓÓÚ±ÌÓ,±. Ç° ÍÓÈÁÚÁ Á±ÖÈÒ,±Ú, Á,ÚÍ·ÁÁ ÈÓÓÓÍ,ÁÓ,±ÌÈñ ÚÚÌÍÈÈ Á±ÓÍÈÌ±ÌÈñ ÌÚÁ,ÓÈ ÚÓÚ±ÌÓ,ÌÈ.

ÑÌñ ÈÁÌÀÌÈñ ÍÓÌÀ~ÌÓÈ ÚÓ~ÌÈ Ç±ÈÌÈÚÁ ZERO SET MEMORY Ì± ÓÚÌ,ÚÁ %ÈÓÚ±ÌÈÓÌÌÓ,,Ó ÚÓ ±ÌÀÌÈñ Ú±Ì, ~ÚÓ° ÈÌ%ÈÌÈ±ÚÓ ZERO SET MEMORY ÈÓ~ÁÁ È Ì±ÈÌÈÚÁ ÓÓñÚ, Ò ÓÚÌÌÚ± 3.

ÑÌñ,ÓÓÓ ÓÈÁ,Á%ÁÌÈñ ÌÓ,Ó,,Ó Á±ÖÈÒ±ÌÌÓ,,Ó Á,ÚÍ± éÚ Á,ÚÍÈ ÚÈÚÁ. ±±ÌÒ ÌÁÈ%Ú ÈÒÍÓ%Ì'Ì Á,ÚÍÓÍ (ÓÚÁ ÁÓ ÁÈÈÌ 1) È ÌÓ,~Ì Á,ÚÍÓÍ (ÓÚÁ ÁÓ ÁÈÈÌ 2) ÓÚÚÁÌ, ° Ó ± AUDIO MIX, ÓÈÓÚÁÌÁ ÌÀÌ.



**Additional information**

**Charging the vanadium-lithium battery in the camcorder**

Your camcorder is supplied with a vanadium-lithium battery installed so as to retain the date and time, etc., regardless of the setting of the POWER switch. The vanadium-lithium battery is always charged as long as you are using the camcorder. The battery, however, will get discharged gradually if you do not use the camcorder. It will be completely discharged in about 1/2 year if you do not use the camcorder at all. Even if the vanadium-lithium battery is not charged, it will not affect the camcorder operation. To retain the date and time, etc., charge the battery if the battery is discharged. The following are charging methods:

- Connect the camcorder to mains using the supplied AC power adaptor, and leave the camcorder with the POWER switch turned off for more than 24 hours.
- Or, install the fully charged battery pack in the camcorder, and leave the camcorder with the POWER switch turned off for more than 24 hours.

**When disposing of the camcorder**

Remove the vanadium-lithium battery, and dispose of the camcorder and the vanadium-lithium battery according to the disposal system in your country. The vanadium-lithium battery is installed in the cassette compartment.

- (1) Remove the four screws at the bottom.
- (2) Remove the panel using a screwdriver.
- (3) Remove the two small screws on the circuit board and dispose of it together with the vanadium-lithium battery.

**ΝΟΟΘΗΕΥΑΙ, ΙΤΗ ΕΙΥΟ ΙΤ'ΕΗ**

**ΑΤ, ΦΙ%ΟΙΤ, ΤΙΤ%ΕΑ, Ο-ΙΕΥΕΑ, ΟΕ :ΤΥΤ ΑΕΙΕ, Ε%ΑΟΙΤΙΑ Α**

Çττ, Ε%ΑΟΙΤΙΑ τ ΟΟΙτ'Αιτ, ττ%ΕΑ, Ο-ΙΕΥΕΑ, ΟΕ :ττ ΑΕΙΟΕ %φφ ΟΟι, ττΑΙΕφ%τ'Ε Ε, ΑΙΑΙΕ Ε.Υ., ΙΑΑτ, ΕΟΕΙΟ ΟΥ ΟΟΥτΙΟ, ΙΕ, ; ίι, ττΑίφφ POWER. Çττ%ΕΑ, Ο-ΙΕΥΕΑ, ττττ ΑΕΙτ, ΟΑ, %τ'ΟΟ%Ατ φΕτ'ΑΥΟφ, ΟΟιτ'Ε ΕΟΟΟΙ ΑΥΑΥΑ, Ε%ΑΟΙΤΙΑ. Ε%Οιτ'ΙΟ, ττττ ΑΕΙτ'ΟΟΟΥΑΟΑΙΙΟ.Υ%ΑΥ τ'Α φΕτ'ΕΥ, Οφ, ΑΟΙΕ Ç ΕΟΟΟΙ ΑΥΑΥΑ, Ε%ΑΟΙΤΙΑ. Υτ'ΙΟ, ΑΙΑΙΕ. είτ' ΟΟΙΙΟΟΥ. τ'Α φ%ΕΥΟφ Ο Ε-ΙΕΑΕΥΑΙ ΙΟ Ατ'ΟΟι, Ο%τ, ΑΟΙΕ Ç ΙΑ. Υ%ΑΥΑ ΕΟΟΟΙ ΑΟ, τ'Υ, Ε%ΑΟΙΤΙΑ. Υ, ΥΑ-ΑΙΕΑ %ΙΕΥΑΙ, ΙΟ, ΟΟΑ ΕΟ%τ. Ντ'ΕΑ ΑΟΙΕ, τττ%ΕΑ, Ο-ΙΕΥΕΑ, ττττ ΑΕΙτ ΙΑ Ατ φΕΑίτ, τ'Ο ΙΑ. Υ%ΑΥ. ΙΕφΥ, Ιτ τ'ΟΟΥ, Ε%ΑΟΙΤΙΑ. Νίφφ ΟΟι, ττΑΙΕφ%τ'Ε, ΑΙΑΙΕ Ε.Υ., Ατ φΕτ'ΕΥΑ :τττ ΑΕΙΥ, ΑΟΙΕ :τττ ΑΕΙτ τ'Α φΕΑίτ. εΥ-ΑΟΥ, Υ ΟΙΑ%ΟΥ. ΕΑ ΙΑΥΟ% Ατ φ%οίΕ:

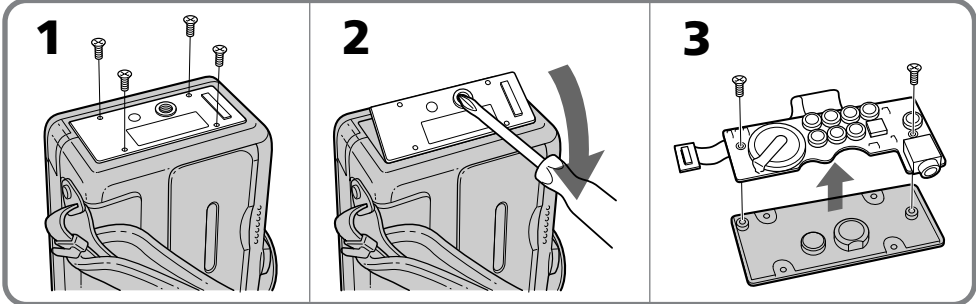
- εΟ%ΟΟΑ%ΕΙΕΥΑ Ε%ΑΟΙΤΙΑ ΥΙ ΙΑΙΥ Ε ΑΟΙΟΕ ΟΑΥΕ Ο ΕΟΟΟΙ ΑΟ, τ'ΙΕΑΙ Ο Είτ, τ'ΑΙΟ, ΟΟΑΥΑ, Ο, Οτ%τ'ΟΥΑ τ'ΟΑ ΑΙ. ΥΟΙτ'ΕΟΟΥτ, ΥΑ, Ε%ΑΟΙΤΙΑ. ΥΟ Ε, ; ίι τ'ΑίΙΟΙ, ; ίι τ'ΥΑΙΑ POWER. ΟΙΑΑ, τ'Αι Ιτ 24 τ'Οτ.
- ΙΟΥτ'ΙΟ ΕΥΑ ΟΟΙΙΟΟΥ, Ατ φΕΑίτ'Ε :τττ ΑΕΙ'Ε. ΙΟΙ, Ε%ΑΟΙΤΙΑ. Υ Ε ΟΟΥτ, ΥΑ, Ε%ΑΟΙΤΙΑ. Υ Ο Ε, ; ίι τ'ΑίΙΟΙ, ; ίι τ'ΥΑΙΑ POWER. ΟΙΑΑ, τ'Αι Ιτ 24 τ'Οτ.

**ε Ε ΙΕΙ, Ε%τ'ΕΕ, Ε%ΑΟΙΤΙΑ**

ι%τ'ΙΕΥΑ, τττ%ΕΑ, Ο-ΙΕΥΕΑ, Υ :τττ ΑΕΙΥ Ε ΙΕΙ, Ε%Ε ΥΕΥΑ, Ε%ΑΟΙΤΙΑ. Υ Ε, τττ%ΕΑ, Ο-ΙΕΥΕΑ. Υ :τττ ΑΕΙΥ, ΟΟΟΥ, ΑΥΟΥ, ΕΕ Ο ΟΕΟΥΑΙΟΕ ΙΕΙ, Ε%τ'ΕΕ, Çττ'ΑΕ ΟΥ ΤΙΑ. Çτττ%ΕΑ, Ο-ΙΕΥΕΑ, ττττ ΑΕΙτ ΥΟΥτ'ΙΟ, ΙΑΙτ, Ιτ'ΟΟΑΥΙΟΙ ΟΥΟΑΙΑ.

- (1) εΥΙ ΥΥΕΥΑ τ'ΑΥ' Α, ΕΙΥτ Ιτ %ΙΕ'Α.
- (2) εΙΕΙΕΥΑ Οτ'ΑΙ, Ο ΕΟΟΟΙ ΑΟ, τ'ΙΕΑΙ ΟΥ, Α ΥΙΕ.
- (3) εΥΙ ΥΥΕΥΑ %τ, τ'ΙΑΙ ΙΕΙ, ΕΙΥτ Ιτ ΙΟΙΥτ'ΕΙΟΕ Οτ'ΥΑ Ε ΙΕΙ, Ε%Ε ΥΕΥΑ, ΙΑΟΥΑ Ο :τττ%ΕΑ, Ο-ΙΕΥΕΑ, ΟΕ :τττ ΑΕΙΟΕ.

Additional information / ΝΟΟΘΗΕΥΑΙ, ΙΤΗ ΕΙΥΟ ΙΤ'ΕΗ



## Resetting the date and time

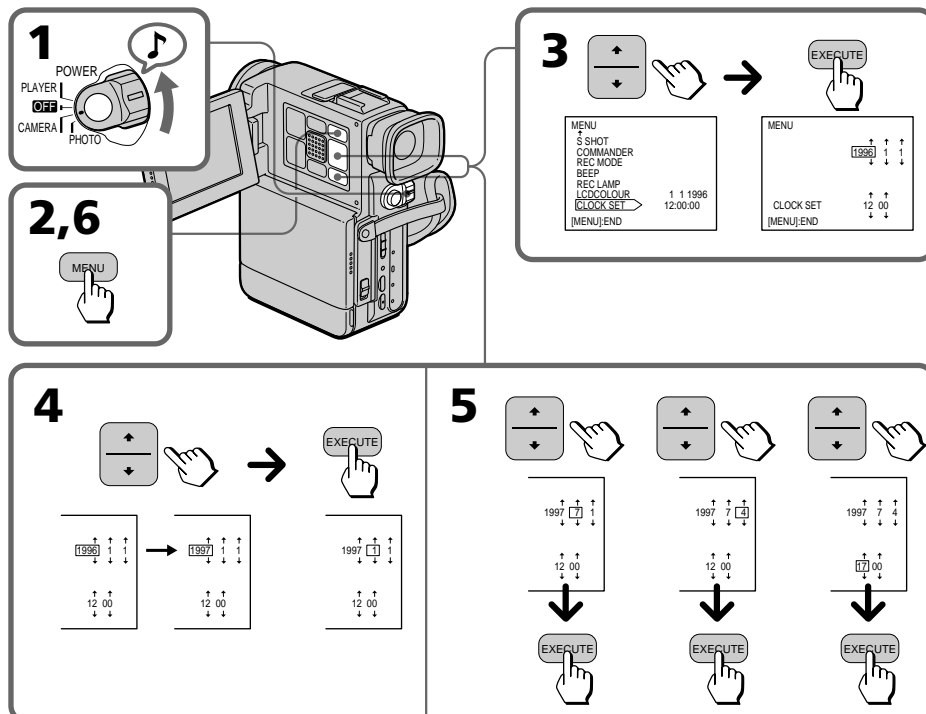
## Resetting the date and time

The date and time are set at the factory. Set the time according to your local time. If you do not use the camcorder for about a year, the date and time settings may be released (bars may appear) because the vanadium-lithium battery installed in the camcorder will have been discharged. In this case, first charge the vanadium-lithium battery, then reset the date and time.

- (1) While pressing the small green button on the POWER switch, set it to CAMERA.
- (2) Press MENU to display the menu on the LCD screen.
- (3) Select CLOCK SET, then press EXECUTE.
- (4) Press  $\blacktriangledown$  or  $\blacktriangle$  to adjust the year, and then press EXECUTE.
- (5) Set the month, day, hour and minutes by pressing  $\blacktriangledown$  or  $\blacktriangle$  and pressing EXECUTE.
- (6) Press MENU to erase the menu display.

Resetting the date and time is necessary when the vanadium-lithium battery is discharged. The date and time settings may be released (bars may appear) because the vanadium-lithium battery installed in the camcorder will have been discharged. In this case, first charge the vanadium-lithium battery, then reset the date and time.

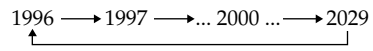
- (1) While pressing the small green button on the POWER switch, set it to CAMERA.
- (2) Press MENU to display the menu on the LCD screen.
- (3) Select CLOCK SET, then press EXECUTE.
- (4) Press  $\blacktriangledown$  or  $\blacktriangle$  to adjust the year, and then press EXECUTE.
- (5) Set the month, day, hour and minutes by pressing  $\blacktriangledown$  or  $\blacktriangle$  and pressing EXECUTE.
- (6) Press MENU to erase the menu display.



**To correct the date and time setting**

Repeat steps 2 to 5.

**The year indicators changes as follows:**

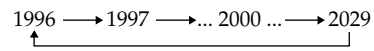


**Note on the time indicator**

The internal clock of this camcorder operates on a 24-hour cycle.

Νίη ίό ΆίύΈ ό,ίΈ ûòú†ìó,óí %ó†ú° È  
, ΆίΆìÈ  
èó,ύó ÈúÂôÛìú° òó2ôó5.

àì%óÈí†úó „ó%† ÈÁìΆìfiÁúòfi òíÁ%óÛ ζÈì  
ó. †Áóì:



è ÈíÁ~†ìÈÁ í Èì%óÈí†úó Û , ΆíΆìÈ  
Çóú ÓÁìì°Á ~†ò° %ó†ììóÈ ,È%óΆóí†íÁ °  
†·óú†,Û , 24-~†òó,óì ^ÈííÁ.

# Usable cassettes and playback modes

àÒÒÓÍ, ÁÚÁÍ, Á Í±ÒÒÁÚ° È  
 ÁÊËÍ°, ÒÒÒ ÓÉÁ, Á%ÒÁÏËÍ

## Selecting cassette types

You can use the mini DV cassette only. You cannot use any other **8** mm, **Hi8** Hi8, **VHS** VHS, **S-VHS** S-VHS, **VHS-C** VHSC, **S-VHS-C** S-VHSC or **B** Betamax cassette.

## When you play back

**Copyright signal**  
 Using this camcorder, you cannot play back a tape that has recorded a copyright control signals for copyright protection of software. "COPY INHIBIT" appears on the LCD screen, in the viewfinder or on the TV screen if you try to play back such a tape. This camcorder does not record copyright control signals on the tape when it records.

**Audio mode**  
 12-bit mode: The original sound can be recorded in stereo 1, and the new sound in stereo 2 in 32 kHz. The balance between stereo 1 and stereo 2 can be adjusted by selecting AUDIO MIX in the menu system during playback. Both sounds can be played back.  
 16-bit mode: A new sound cannot be recorded but the original sound can be recorded in high quality. Moreover, it can also play back sound recorded in 32 kHz, 44.1 kHz or 48 kHz. When playing back a tape recorded in the 16-bit mode, 16BIT indicator appears on the LCD screen or in the viewfinder.  
 You cannot record in the 16-bit mode using this camcorder.

**Recording mode**  
 When you play back a tape, the SP/LP indicator on the LCD screen or in the viewfinder shows the recording mode SP/LP.

**Note on cassette memory**  
 The cassette memory function cannot be used with this camcorder.

## Ç°·Ó ÚËÒÓ, Í±ÒÒÁÚ

Ç° ÍÓËÁÚÁ ÈÒÒÓÍ, ÁÓ, ±Ú, ÚÓÍ, ÍÓ Í±ÒÒÁÚ° mini DV. Ç° ÍÁ ÍÓËÁÚÁ ÈÒÒÓÍ, ÁÓ, ±Ú, Í±ÒÒÁÚÚ Í±ÍÚ, -ÏÈ·Ó %Ò, Ú, Í±ÒÒÁÚÚ **8** Ì, **Hi8** Hi8, **VHS** VHS, **S-VHS** S-VHS, **VHS-C** VHSC, **S-VHS-C** S-VHSC ÈÏË **B** Betamax.

## äÒ, %Ò±Ç°, ÓÒÒ ÓÉÁ, Ó%ÒËÚÁ

èË, Ì±Í ±, ÚÓ ÒÍÓ, Ó Ò ±, ± àÒÒÓÍ, ÁÚÍÍ %Ò±ÍÚ, È%ÒÁÓÍ±ÍÁ Ú Ç° ÍÁ ÍÓËÁÚÁ, ÒÒÒ ÓÉÁ, ÁÒÚË ÍÁÍÚÚ, ÍÓÚÓ ±Í·Í± Á±ÒËÒ±Í Ò ÈÒÒÓÍ, ÁÓ, ±ÏËÁÍ ÍÓÍÚ ÓÍ, Ì, ÒË, Ì±ÍÓ, ±, ÚÓ ÒÍÓ, Ó Ò ±, ± %ÒÍÍ Á±ÈÚ° ±, ÚÓ ÒÍÓ, Ó Ò ±, ± Ó, ±ÍÍ°. "COPY INHIBIT" ÓÓÍ, ÍÍÁÚÓÍÍ Ì± "Í ±ÍÁ ÚäÑ, , È%ÒËÒÍ±ÚÁÍÁ ÈÏË Ì± "Í ±ÍÁ ÚÁÍÁ, ÉÁÓ ±, ÁÓÍË Ç° Ó·Ú±ÁÚÁÓ, ÓÒÒ ÓÉÁ, ÁÒÚË Ú±ÍÚ, ÍÁÍÚÚ. Ñ±ÍÍ±Í, È%ÒÁÓÍ±ÍÁ ± ÍÁ Á±ÒËÒ, ±ÁÚ ÍÓÍÚ ÓÍ, Ì, Á ÒË, Ì±Í° ±, ÚÓ ÒÍÓ, Ó Ò ±, ± Ì± ÍÁÍÚÁ, Ó, ÁÍÍ Á±ÒËÒË.

ÄÚ%ÒËÓ ÁÊËÍ  
 12-ËÚÓ, È ÁÊËÍ: àÒÍÓ%ÒÍÈ Á, ÚÍ ÍÓËÁÚ·Ú, Á±ÒËÒ±Í, ÓÚÁ ÁÓ ÁÊËÍÁ 1, ± ÍÓ, È Á, ÚÍ, ÓÚÁ ÁÓ ÁÊËÍÁ 2 Ì± ±ÒÚÓÚÁ 32 ÍË°. Á±Í±ÍÓ ÍÁÈ%ÒÚÓÚÁ ÁÓ ÁÊËÍÓÍ 1 È ÓÚÁ ÁÓ ÁÊËÍÓÍ 2 ÍÓËÁÚ·Ú, ÓÚ Á, ÚÍÈ Ó, ±Í ÓÚÚÁÍ, °. Ó ± AUDIO MIX, ÒËÓÚÁÍÁ ÍÁÍ, Ó, ÁÍÍ, ÓÓÒ ÓÉÁ, Á%ÒÁÏËÍ. è·± Á, ÚÍÓ, Í ÓÓÒ Ó, ÓÈ%ÒÁÏËÍÍÓ, ÚÚ·Ú, ÓÒÒ ÓÉÁ, Á%ÒÁÏ°. 16-ËÚÓ, È ÁÊËÍ: ÇÓ, È Á, ÚÍ ÍÁ ÍÓËÁÚ·Ú, Á±ÒËÒ±Í, ÍÓ ÈÒÍÓ%ÒÍÈ Á, ÚÍ ÍÓËÁÚ·Ú, Á±ÒËÒ±Í Ò, °ÓÍËÍ Ì± ÁÒÚ, ÓÍ. äÒ, ÒÁÍÚ, È%ÒÁÓÍ±ÍÁ ±ÍÓËÁÚ, ÓÒÒ ÓÉÁ, Ó%ÒËÚ, Á, ÚÍ, Á±ÒËÒ±ÍÈ Ì± ±ÒÚÓÚÁ 32 ÍË°, 44,1 ÍË° ÈÏË 48 ÍË°. è È, ÓÒÒ ÓÉÁ, Á%ÒÁÏËÈ ÍÁÍÚ, Á±ÒËÒ±ÍÓË, 16-ËÚÓ, ÓÍ ÁÊËÍÁ ÈÍ%ÈÍ±ÚÓ, 16BIT ÓÓÍ, ÍÍÁÚÓÍÍ Ì± "Í ±ÍÁ ÚäÑ ÈÏË, È%ÒËÒÍ±ÚÁÍÁ.  
 Ç° ÍÁ ÍÓËÁÚÁ Ó ÓÉÁ, Ó%ÒËÚ, Á±ÒËÒ, 16-ËÚÓ, ÓÍ ÁÊËÍÁ Ò ÈÒÒÓÍ, ÁÓ, ±ÏËÁÍ %Ò±ÍÚËÈ, È%ÒÁÓÍ±ÍÁ °.

èÁÊËÍ Á±ÒËÒË  
 è È, ÓÒÒ ÓÉÁ, Á%ÒÁÏËÈ ÍÁÍÚ° ÈÍ%ÈÍ±ÚÓ SP/LP Ì± "Í ±ÍÁ ÚäÑ ÈÏË, È%ÒËÒÍ±ÚÁÍÁ ÓÓÍ±Á, ±ÁÚ ÁÊËÍ Á±ÒËÒË SP/LP.

è ÈÍÁ±ÏËÁ Í Á±ÒÓÍÈÍ±ÏËÓ Í±ÒÒÁÚ° ÍÚÍÍÈÍÍ Á±ÒÓÍÈÍ±ÏËÍÍ Í±ÒÒÁÚ° ÍÁ ÍÓËÁÚ·Ú, ÈÒÒÓÍ, ÁÓ, ±Í± Ì± %Ò±ÍÚËÈ, È%ÒÁÓÍ±ÍÁ Á.

**Notes on the mini DV cassette**

**To prevent accidental erasure**

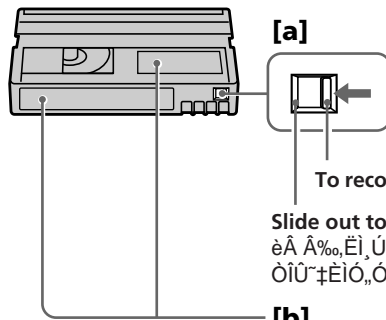
Slide out the protect tab on the cassette so that the red portion is visible. **[a]**

**When affixing a label on the mini DV cassette**

Be sure to affix a label on only the location as illustrated below so as not to cause malfunction of the camcorder. **[b]**

**After using the mini DV cassette**

Rewind the tape to the beginning, put the cassette in its case, and store it in an upright position.



**è ÈÏÄ~±lËfl í Í±ÒÒÄÚÄ mini DV**

Ñífl Ô Ä%ÓÚ, ±ÄlËfl ÔÏÚ~±ÈlÓ,,Ó  
 ÒÚË ±lËfl  
 èÄ Ä%,Èl, ÚÄ Ä±ÈÚlÈ lÄÖÄÒÚÓl ± Í±ÒÒÄÚÄ  
 Ú±l, ~ÚÓ. °. Ì± ,È%l± í ±lÒl±fl lÄÚl±. **[a]**

è È Ô ÈlÄË,±lËË ~ÚËlÄÚlË ±  
 Í±ÒÒÄÚÚ mini DV  
 é.flÄ±ÚÄl, lÓ ±lÄËËÄ ~ÚËlÄÚlË ÚÓl, lÓ ±  
 lÄÓÚÓ, Úl±Ä±lÓÄ lËËÄ ± ÈÓÚlÄ, Ú±l,  
 ~ÚÓ. lÄ ; Ä, ±Ú, ÔÓ, ÄÈ%ÄlËÄ  
 ,È%ÄÓl±lÄ °. **[b]**

èÒÒlÄ ÈÒÒÓl,ÁÓ,±lËfl í±ÒÒÄÚ° mini  
 DV  
 èÄ ÄlÓÚ±ÈÚÄ lÄlÚÚ l±Ä±% l± l±flÓ,  
 ÓÓlÓÈÈÚÄ l±ÒÒÄÚÚ, ÄÄ ÚÚÚfl Èl ±lËÚÄ ÄÄ,  
 ,Ä ÚËl±l, lÓl ÓÓlÓÈÄlËË.

Additional Information / Νόσθηεύαι] ±fl ÈlÚÓ l±Èfl

**We recommend to use an ME cassette**

You can get the highest quality pictures with this camcorder using an ME cassette which is the highest quality cassette.

You may not get as good quality with lesser quality cassettes.

â° ÄlÓlÄl%ÚÄl ÈÒÒÓl,ÁÓ,±Ú, í±ÒÒÄlÚ  
 ä Ö  
 Ç° lÓËÄÚÄ ÓÓlÚÈÚ, l±È, °ÒÄÄ l±ÄÒÚ,Ó  
 ÈÄÓ. ±ÈÄlËfl l± Ç±ÄÈ ,È%ÄÓl±lÄ Ä Ó  
 ÈÒÒÓl,ÁÓ,±lËÄl l±ÒÒÄÚ° äÖ, lÓÚÓ ±fl  
 Ó. l±%±ÄÚ l±È, °Èl l±ÄÒÚ,Ól.  
 Ç° lÄ lÓËÄÚÄ ÓÓlÚÈÚ, lÓ ÓÓ,Ó l±Ä,ÒÚ,±  
 Ó ÈÈÒÒÓl,ÁÓ,±lËË lÚ%Èl l±ÒÒÄÚ.

## Tips for using the battery pack

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This section shows you how you can get the most out of your battery pack.

### Preparing the battery pack

#### Always carry additional batteries

Have sufficient battery pack power to do 2 to 3 times as much recording as you have planned.

#### Battery life is shorter in a cold environment

Battery efficiency is decreased, and the battery will be used up more quickly, if you are recording in a cold environment.

#### To save battery power

Do not leave the camcorder in Standby mode when not recording to save the battery power. A smooth transition between scenes can be made even if recording is stopped and started again. While you are positioning the subject, selecting an angle, or looking at the LCD screen or through the viewfinder, the lens moves automatically and the battery is used. The battery is also used when a tape is inserted or removed.

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**When to replace the battery pack**

While you are using your camcorder, the remaining battery indicator on the LCD screen or in the viewfinder decreases gradually as battery power is used up [a]. The remaining time in minutes also appears.



When the remaining battery indicator reaches the lowest point, the indicator appears and starts flashing in the viewfinder. When the indicator in the viewfinder changes from slow flashing to rapid flashing while you are recording, set the POWER switch to OFF on the camcorder and replace the battery pack. Leave the tape in the camcorder to obtain a smooth transition between scenes after the battery pack has been replaced. Depending on conditions, the indicator may flash, even if there are 5 to 10 minutes remaining.

**Notes on the rechargeable battery pack**

**Caution**  
Never leave the battery pack in temperatures above 60°C (140°F), such as in a car parked in the sun or under direct sunlight.

**The battery pack heats up**  
During charging or recording, the battery pack heats up. This is caused by energy that has been generated and a chemical change that has occurred inside the battery pack. This is not cause for concern, and is normal.

**è È ÁτĪĀĪĀ τÚτ ĀÈĪÓ,,Ó ĩÓĪτ**

äÓ,,%τÇ° ÈÖÖÓĪ,ĀÚĀÚĀ,È%ĀÓĪτĪĀ Ú, ÈĪ%ÈĪτÚÓ ÓÓÚτ,Ā,,ÓÓηĀτ η%ττÚτ ĀÈĪÓ,,Ó ĩÓĪτ, ,È%ÓÈÖĪτÚĀĪĀ È, ÓĪÓĪĀ %ÈÖÖĪĀη ÓÓÓÚĀÓĪĪÓ ÚĪĪĪ, τĀÚÓηÓÓĪĀ Ā ÈÖÖÓĪ,ĀÓ,τĪÈηĀτ η%ττÚτ ĀÈĪÓ,,Ó ĩÓĪτ [a]. τĪĪÈĀ ÓÓη,ĪηĀÚÓηη ÓÓÚτ,ĀĀÓη, ĀĪη, ĪÈĪÚÚτ.

äÓ,,%τÈĪ%ÈĪτÚÓ ÓÓÚτ,Ā,,ÓÓηĀτ η%ττÚτ ĀÈĪÓ,,Ó ĩÓĪτ%ÓÓÚÈ,τĀÚ ĪτÈĪÈĀĀÈ ÚÓĪÈ, ÈĪ%ÈĪτÚÓ ÓÓη,ĪηĀÚÓη È ĪτÈĪτĀÚ ĪÈ,,τÚ, ,È%ÓÈÖĪτÚĀĪĀ. äÓ,,%τÈĪ%ÈĪτÚÓ È%ÓÈÖĪτÚĀĪĀ ÈĀĪĪηĀÚ ĪĀ%ĪĪĪÓĀ ĪÈ,,τĪÈĀ Īτ °ÓÚ ÓĀ ĪÈ,,τĪÈĀ,Ó, ĀĪηĀτÓÈÖÈ, ÚÓÚτĪÓ,ÈÚĀ ,°Ī,τÚĀĪ POWER, ÓÓĪÓÈĀĪÈĀ OFF Īτ,È%ĀÓĪτĪĀ Ā È ÁτĪĀĪÈÚĀ τÚτ ĀÈĪÈ ĩÓĪ. éÓÚτ, ÚĀ ĪĪĪÚÚ, ,È%ĀÓĪτĪĀ Ā %Īη ÓÓĪÚĀĪÈη ÓĪτ,ĪÓ,Ó ÓĀ ĀĪÓ%τ ĪĀÈ%ÓÚ ÒĀĪτĪÈ ÓÓÓĪĀ ÁτĪĪĪ° τÚτ ĀÈĪÓ,,Ó ĩÓĪτ. ÇĀτ,ÈÖÈĪÓÓÚÈÓÓÚÓÓÚÓηÚĀĪ ÓÚ,ÈĪ%ÈĪτÚÓ ĪÓÈĀÚĪÈ,,τÚ,, %ττÈĀ ĀÓĪÈ ÓÓÚτĪÓÓ,ĀĀÓÚ 5%Ó 10ĪÈĪÚÚ.

**è ÈĪĀτĪÈη Ī ÓĀ ĀĀτ ηÈτĀĪÓĪŪ τÚτ ĀÈĪÓĪŪ ĩÓĪŪ**

èĀ%ÓÓÚĀĀÈĀĪÈĀ ÇÈĪÓ,,%τ ĪĀ ÓÓÚτ,ĪηÈÚĀ τÚτ ĀÈĪÈ ĩÓĪ Ó È ÚĀĪÓĀ τÚÚĀ Ó,Ā 60°C (140°F), ĪτĪ ĪτÈĪĀ, ,τÚÓĪÓÈĪĀ, ÓÈÓτĪÓ,τĪĪÓĪ Īτ ÓÓĪĪĀ ÈĪÈ ÓÓ% Ó ηĪĪÈ ÓÓĪĪĪĪĪÈ ĪŪτĪÈ.



ĀτÚτ ĀÈĪÈ ĩÓĪ Īτ,, Ā,τĀÚÓη ÇÓ, ĀĪηĀτ η%ĪÈÈĪÈĀτÓÈÈ τÚτ ĀÈĪÈ ĩÓĪ Īτ,,Ā,τĀÚÓηη. ùÚÓ,Ā,τĪÓ „ĀĪĀ È ÚĀĪÓÈ ĪĀ,ÈĀÈ È ĪÈĪÈĀÓĪÈĪÈ ĀτĪÈηĪÈ,ĪÓÚÓĀÓÈÖĪÓ%ηÚ,ĪŪŪ È τÚτ ĀÈĪÓ,,Ó ĩÓĪτ. ùÚÓ ĪĀ %ÓĪÈĪÓ °Ú, ÓÈÈĪÓÈ%ĪηĀÓÓĪÓÈÖÓÚ,τÈη,ĪηĀÚÓη ĪÓ ĪτĪ,ĪĪ.

## Tips for using the battery pack

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### “InfoLITHIUM” battery pack

The “InfoLITHIUM” battery pack is a lithium battery pack which can exchange data with compatible video equipment about its battery consumption.

Sony recommends that you use the “InfoLITHIUM” battery pack with video equipment having the  mark. When you use this battery pack with video equipment having the  mark, the video equipment will indicate the remaining battery time in minutes.\* However, if you use it with video equipment not having this mark, the remaining battery capacity will not be indicated in minutes.

\* The indication may not be accurate depending on the condition and environment which the equipment is used under.

### Battery pack care

- **Remove the battery pack from the camcorder after using it**, and keep it in a cool place. When the battery pack is installed to the camcorder even if the POWER switch is set to OFF. This shortens battery life.
- The battery pack is always discharging even when it is not in use after charging. Therefore, you should charge the battery pack right before using the camcorder.

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### The life of the battery pack

If the battery indicator flashes rapidly just after turning on the camcorder with a fully charged battery pack, the battery pack should be replaced with a new fully charged one.

### Charging temperature

You should charge batteries at temperatures from 10°C to 30°C (from 50°F to 86°F). Lower temperatures require a longer charging time.

### Notes on charging

#### A brand-new battery pack

A brand-new battery pack is not charged. Before using the battery pack, charge it completely.

#### Recharge the battery pack whenever you like

You do not have to discharge it before recharging. If you charged the battery pack fully but you did not use it for a long time, it becomes discharged. Then recharge the battery pack before use.

### Notes on the terminals

#### If the terminals (metal parts on the back) are not clean, the battery charge duration will be shortened.

When the terminals are not clean or when the battery pack has not been used for a long time, repeatedly install and remove the battery pack a few times. This improves the contact condition. Also, wipe the +, - and C terminals with a soft cloth or paper.

#### Be sure to observe the following

- Keep the battery pack away from fire.
- Keep the battery pack dry.
- Do not open nor try to disassemble the battery pack.
- Do not expose the battery pack to any mechanical shock.

ε Οί ΟίϋΕ. ° .ϋϋ ρΕίΟ, Ο .ίΟίϋ  
 ΟΟίΕ Εί%ΕίϋϋΟ ϋϋ ρΕίΟ, Ο .ίΟίϋ Ε, ϋϋ  
 ° Οϋ Ο Ο ϋϋ ΟΟΟίΑ, ή ~ ΑίΕπ  
 , Ε%ΑΟίϋΑ ° Ο ΟΟίΟϋϋ ϋ ρΕΑίϋ  
 ϋϋ ρΕίϋ .ίΟίΟί, ϋϋ ρΕίϋ .ίΟί  
 %ΟίΕΑί ° ϋ, ΑϋΑίΑί ίΟ, ϋ ΟΟίΟϋϋ,  
 Αϋ ρΕΑίϋ ϋϋ ρΕίϋ .ίΟίΟί.

ίΑίΟΑ ϋϋ ϋϋ ρΕί  
 ϋ ρΕίϋ ϋϋ ρΕίϋ .ίΟί Ο Ε  
 ϋΑίΟΑ ϋϋ ΑΟϋ 10°ε%Ο30°ε(Οϋ50°F%Ο86°F).  
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 %ίΕϋΑί, ίΟ, Ο, ΑίΑίΕ Αϋ ρΕίϋ.

#### ε ΕίΑ~ϋίΕπ ί Αϋ ρΕίΑ

εΟ, Α ~ ΑίΟ ίΟ, ° Ε .ϋϋ ρΕίϋ .ίΟί  
 εΟ, Α ~ ΑίΟ ίΟ, ° Ε .ϋϋ ρΕίϋ .ίΟί ίΑ  
 Αϋ ρΕΑί. εΑ Α% ΕΟΟΟί, ΑΟ, ϋΕΑί ϋϋ ρΕίΟ, Ο  
 .ίΟίϋ ΟΟίΟϋϋ ϋ ρΕΕϋΑ, Ο.

εΟ%Αϋ ρΕϋΕϋΑ ϋϋ ρΕίϋ .ίΟί,  
 ίΟ, % ϋ ϋ ϋΕϋΑ  
 ϋϋ ίΑ ίϋΕίΟ ϋ ρΕϋ, Α, Ο ΟΑ Α%  
 ΟΟ%Αϋ ρΕίϋ. ΟΟίΕϋ ϋΟίΟϋϋ, Αϋ ρΕίϋ  
 ϋϋ ρΕίϋ .ίΟί, ίΟ ίΑ ΕΟΟΟί, ΑΟ, ϋΕ Α, Ο  
 %ίΕϋΑί, ίΟΑ, Αίπ, ϋΟΟί ϋ ρΕΕϋΟπ. ίΟ, % ϋ  
 Αϋ ρΕΕϋΑ ϋϋ ρΕίϋ .ίΟίΟΑ Α%  
 ΕΟΟΟί, ΑΟ, ϋΕΑί.

#### ε ΕίΑ~ϋίΕπ ί ίΟίϋϋϋϋϋ

ΟΟίΕ ίΟίϋϋϋ (ίΑϋϋίΕ~ΑΟίΕΑ ~ϋΟϋΕ ίϋ  
 Αϋ%ίΑΕ ΟϋΟ ΟίΑ) Αϋ, ρΑίΑί, ϋΟ  
 Ο Ο%ΟίΕΕϋΑί, ίΟϋϋ, %ΑΕΟϋ, Επ  
 ϋϋ ρΕίΟ, Ο .ίΟίϋ ϋϋΑϋ ΟΟί ϋ ~ Αίϋ.  
 εΟ, % ϋ ϋίΟίϋϋϋ ϋϋ, ρΑίΑί, ΕίΕ ΑΟίΕ  
 ϋϋ ρΕίϋ .ίΟί ίΑ . ϋ ΕΟΟΟί, ΑΟ, ϋ  
 ϋΑ~ΑίΕΑ %ίΕϋΑί, ίΟ, Ο, ΑίΑίΕ, ΟΟ, ϋΟ ΕϋΑ  
 ϋΟϋϋϋ, ϋϋ Ε ΟίπϋΕΑ ϋϋ ρΕίΟ, Ο .ίΟίϋ  
 ίΑΟίΟί, ίΟ ϋ. ϋϋϋ ϋϋϋϋ ϋϋΟΟϋΟπΕΑ  
 ίΟίϋϋϋϋ, ϋΕΑ Ο Οϋ ΕϋΑ ίΟίϋϋϋϋ +, - Ε ϋ  
 ίπ, ίΟΕ ϋίϋ, ΕίΕ ϋίϋ, ΟΕ.

- ϋϋϋϋϋ ϋΟ ΟΟ.ί %ϋΕϋΑ ΟίΑ%ϋϋ~ΑΑ
- ϋϋΕϋΑ ϋϋ ρΕίϋ .ίΟί ΟΟ%ϋ, Α Οϋ  
 Ο, ήπ.
- ϋϋΕϋΑ ϋϋ ρΕίϋ .ίΟί ΟϋίΕ.
- ϋΑ ΟϋϋΕϋΑΟ Οϋί ϋ, ΕίΕ ϋΑΟ. ϋϋ,  
 ϋϋ ρΕίϋ .ίΟί.
- ϋΑ ΟΟ%Α ϋϋΕϋΑ ϋϋ ρΕίϋ .ίΟί ίΕίϋΕί  
 ίΑίϋΕ~ΑΟίΕ ϋϋ ϋ.



# Maintenance information and precautions

àlÙÓ Ì†Èfl ÔÓ Ûì%Ô Æ†  
†ÔÔ† †ÚÓÈÔ À%ÔÔÚÓ ÓÈlÓÚÈ

## Moisture condensation

If the camcorder is brought directly from a cold place to a warm place, moisture may condense inside the camcorder, on the surface of the tape, or on the lens. In this condition, the tape may stick to the head drum and be damaged or the camcorder may not operate correctly. To prevent possible damage under these circumstances, the camcorder is furnished with moisture sensors. Take the following precautions.

### Inside the camcorder

If there is moisture inside the camcorder, the beep sounds and the  indicator flashes. If this happens, none of the function except cassette ejection will work. Open the cassette compartment, turn off the camcorder, and leave it about 1 hour. When  indicator flashes at the same time, the cassette is inserted in the camcorder. Eject the cassette, turn off the camcorder, and leave also the cassette about 1 hour.

### On the lens

If moisture condenses on the lens, no indicator appears, but the picture becomes dim. Turn off the power and do not use the camcorder for about 1 hour.



### How to prevent moisture condensation

When bringing the camcorder from a cold place to a warm place, put the camcorder in a plastic bag and allow it to adapt to room conditions over a period of time.

- (1) Be sure to tightly seal the plastic bag containing the camcorder.
- (2) Remove the bag when the air temperature inside it has reached the temperature surrounding it (after about 1 hour).

## äÓl%ÀlÒ†Èfl ,l†,,È

ÒÒlÈ ,È%ÀÓl†iÀ †Ô ÈlÀÒÀl†Ô flÒÈÀ  
lÓl%lÓ,Ò lÀÓÚ† ,ÚÁÓlÓÀ lÀÓÚÓ, l†† lÓÈÁÚ  
ÓlÓl%ÀlÒÈ Ó,†Ú Òfl ,lÙ È ,È%ÀÓl†iÀ ° ,l†  
ÒÓ,À llÓÚÈÈ lÀlÙ° ÈlÈ l† Ó·ÀlÙÈ,À. Ç  
Ú†lÓl ÓÓÓÚÓflÈÈ lÀlÙ† lÓÈÁÚ Ó ÈlÈÓlÙ, l  
·††·†lÙ ,ÓlÓ,lÈ È ·Ù%ÀÚ ÓÓ, ÀÈ%Àl†, ÈlÈ  
,È%ÀÓl†iÀ † lÀ ÓlÓÈÁÚ †ÓÚ†Ú, Ó†,Èl,lÓ.  
Nlfl Ó À%ÓÚ, †·ÀlÈfl ,ÓÁlÓÈlÓ,Ó  
ÒÓ, ÀÈ%ÀlÈfl ,È%Ú Ù†lÈ,Ó·ÓÚÓflÙÁl,ÓÚ,,  
,È%ÀÓl†iÀ † Ól†ÈÁl† %Ô†Ù·Èl†È ,l†,,È.  
è·l%†ÈÚÁÓlÀ%Ú,ÈÁÓ À%ÔÓÚÓ ÓÈlÓÚÈ.

ÇlÙÚ È ,È%ÀÓl†iÀ °  
ÒÒlÈ ,lÙ È ,È%ÀÓl†iÀ ° ÓÈÁÓ†  
lÓl%ÀlÒ†Èfl ,l†,,È, ÚÓ ·Ù%ÀÚ Á,Ù†Ú,  
ÁÚflÀ lÈ ÒÈ,†l†, È Èl%Èl†ÚÓ  ·Ù%ÀÚ  
lÈ,†Ú. ÓÒlÈ ~ÚÓ ÓlÙ·ÈlÓ, ÚÓ lÈl†ÈÁ  
ÚÙlÈÈÈ, l ÓlÁ ,·Ù†lÈ,†lÈfl l†ÓÓÁÚ, lÀ  
·Ù%ÚÚ †ÓÚ†Ú,·éÚl ÓÈÚÁl†ÓÓÁlÙÈÓÓÚÁl,  
·fl ~ÈÚÁ ,È%ÀÓl†iÀ Ù È ÓÓÚ†,ÚÁ ÁÁ  
Ó È·ÈÁÈÚÁl,lÓ l† 1 ~†Ó. ÓÒlÈ Èl%Èl†ÚÓ   
·Ù%ÀÚ lÈ,†Ú , ÚÓ ÈÁ Ò†lÓÁ ,Àfl, ÚÓ Àl†ÈÚ  
l†ÓÓÁÚ† ,ÓÚ†,Àl† ,È%ÀÓl†iÀ Ù.  
Ç·ÙÓlÈÈÚÁ l†ÓÓÁÚÚ, ·fl ~ÈÚÁ  
,È%ÀÓl†iÀ ÙÈÓÓÚ†,ÚÁl†ÓÓÁÚÚ·ÁÁ  
ÈÓÓÓl,ÁÓ,†lÈfl Ù†lÈÁ Ó È·ÈÁÈÚÁl,lÓ l† 1  
~†Ó.




ç† Ó·ÀlÙÈ,À  
ÒÒlÈ ,l†† ÓlÓl%ÀlÒÈ Ó,†l†Ó, l†  
Ó·ÀlÙÈ,À, lÈl†ÈÁ Èl%Èl†ÚÓ ° ÓÓfl,lflÙ Òfl  
lÀ·Ù%ÚÚ,lÓ ÈÁÓ·†ÈÁlÈÁ ÓÚ†lÁÚ ÙÙÓfl·l.  
Ç·fl ~ÈÚÁ ÓÈÚ†lÈÁ È lÀ ÈÓÓÓl,ÁÚÈÚÁ  
,È%ÀÓl†iÀ Ù Ó È·ÈÁÈÚÁl,lÓ 1 ~†Ó.

ä†l Ó À%ÓÚ, †ÚÈÚ, lÓl%ÀlÒ†Èfl  
,l†,,È  
ÒÒlÈ ,È%ÀÓl†iÀ †Ô ÈlÀÒÀl†ÈÀ,lÓl%lÓ,Ò  
lÀÓÚ†,ÚÁÓlÓÀlÀÓÚÓ,ÚÓÓÓlÓÈÈÚÁ  
,È%ÀÓl†iÀ Ù , ÓÓlÈ ~ÚÈlÀlÓ,È Ó†lÁÚ È  
%Ô†ÈÚÁ ÀÈ †%ÔÙÈÈ Ó,†Ú Òfl l ÓlÈlÙl·l  
ÚÓlÓ,Èfl Á† lÀlÓÚÓ °È ÓÁ ÈÓ%, ÀlÀlÈ.  
(1) é·flÁÚÁl,lÓ ÓlÓÚlÓ Á†l ÓÈÚÁ  
ÓÓlÈ ~ÚÈlÀlÓ,È Ó†lÁÚ,ÓÓ%Á È†~ÈÈ  
l†iÀ Ù.  
(2) Ç·l,ÚÁ l†iÀ Ù, lÓ,,%Ô ÙÁlÓÁ †ÚÚ †  
,ÓÁ%Úl†,lÙÈ ÈÓ†lÁÚ†%ÔÓÚÈ,lÁÚ  
ÚÁlÓÁ †ÚÚ ° Ól ÙÈ†·Á,Ó,ÓÁ%Úl†  
(Ó È·ÈÁÈÚÁl,lÓ ~Á ÁÁ 1 ~†Ó).




## Video head cleaning

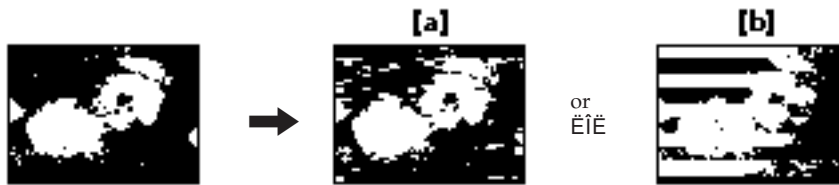
To ensure normal recording and clear pictures, clean the video heads.

The video heads may be dirty when:

- mosaic-pattern noise appears on the playback picture
- playback pictures do not move
- playback pictures are hardly visible
- playback pictures do not appear
- the  indicator and "  CLEANING CASSETTE" message appear one after another or the  indicator flashes on the LCD screen or in the viewfinder

## é~ÈÒÙÍ† ,È%ÔÁÓ,,ÓÍÓ,ÓÍ

Νίφι Ó·ΑÔÔΑ~ΑίÈñ ÌÓ Ì†Ì ÌÓÈ Α†ÔÈÒÈ È  
 ~ÁÚÍÓ,,ÓÈÁÓ. †ÈÁìÈñ Ó~È~†ÈÚÁ  
 ,È%ÔÁÓ,,ÓÍÓ,ÍÈ.  
 ÇÈ%ÔÁÓ,,ÓÍÓ,ÍÈ Ì†,Á ÌÓÁ Á†,, ñÁìÁì°, ÌÓ,,%†:  
 • àÓÁ†È~ì†ñ ÒÁÚì† ÒÓíÁì, ÒÓñ,ÌñÁÚÓñ Ì†  
 ,ÓÓÓ ÓÈÁ,Ó%ÈìÓÈÁÓ. †ÈÁìÈÈ.  
 • ÇÓÓÓ ÓÈÁ,Ó%Èì~ÁÈÁÓ. †ÈÁìÈñÌÁ  
 ÒÁ ÌÁÌ~Á†, ÙÓñ.  
 • ÇÓÓÓ ÓÈÁ,Ó%ÈìÓÈÁÓ. †ÈÁìÈÈ  
 ÙÚ%ìÓÓ ÒÓì†Ú È,†ÁìÓÁ.  
 • ÇÓÓÓ ÓÈÁ,Ó%ÈìÓÈÁÓ. †ÈÁìÈÈÌÁ  
 ÒÓñ,ÌñÁÚÓñ.  
 • àì%Èì†ÚÓ  È ÒÓÓ~ÁìÈÁ "  CLEANING  
 CASSETE" ÒÓñ,Ìñ, ÙÓñ% Ù,, Á†% Ù,,ÓíÈÈ  
 Èì%Èì†ÚÓ ÌÈ,,†ÁÚ Ì† Ì† ÌÁ ÙáÑ ÈÈÈ ,  
 È%ÔÈÓì†ÚÁìÁ.



If [a] or [b] happens, clean the video heads with the Sony DVM12CL cleaning cassette (not supplied). Check the picture and if the above problem persists, repeat the cleaning. (Do not repeat cleaning more than 5 times in one session.)

### Note

If the DVM12CL cleaning cassette (not supplied) is not available in your area, consult your nearest Sony dealer.

ÒÓìÈ ÌÓÓÓìÙ~ÈÚÓñ ÒÓÓÓÓñÌÈÁ [a] ÈÈÈ [b],  
 Ó~ÈÓÙÈÚÁ, È%ÔÁÓ,,ÓÍÓ,ÍÈ Ò ÒÓíÓ~  
 Ó~ÈÓÙÈÚÁì, ÌÓÈ Ì†ÒÒÁÚ~ Sony DVM12CL (ÌÁ  
 Ò Èì†,†ÁÚÓñ). èÓÓíÁÓ Ó,Á ÌÈÈÁÓ. †ÈÁìÈñ,  
 ÀÓÈÈ ÓÍÓ, ÒÁ Á~Á "Á†~ÙìÁìÓ", ÒÓ, ÙÓ ÈÚÁ  
 Ó~ÈÓÙÍÚ. (çÁÔÓ, ÙÓ ñÈÚÁÓ~ÈÓÙÍÚ. ÓíÁÁ5 †Á  
 Á†Ó%ÈìÓ ÈÁì.)

è ÈìÁ~†ìÈÁ  
 ÒÓìÈ Ó~ÈÓÙÈÚÁì, ÌÓÈ Ì†ÒÒÁÚ~ DVM12CL (ÌÁ  
 Ò Èì†,†ÁÚÓñ) ÌÁÚ, Ò Ó%†ÈÁ, Ç†~ÁÈ Ó~ì†ÓÙÈ,  
 Ò ÓíÓìÒÙì, ÙÈ ÙÈÚÁÓ, Ù Ç†~Á,, Ò~ÌÈÈ†È~Á,, Ò  
 %ÈìÁ †Sony.

## Maintenance information and precautions

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±ÒÓ± ±ÙÒÈÒ Æ%ÒÓÙÒ ÒÈìÒÙÈ

### Precautions

#### Camcorder operation

- Operate the camcorder on 7.2 V (battery pack) or 8.4 V (AC power adaptor).
- Should any solid object or liquid get inside the casing, unplug the camcorder and have it checked by Sony dealer before operating it any further.
- Avoid rough handling or mechanical shock. Be particularly careful of the lens.
- Keep the POWER switch set to OFF when not using the camcorder.
- Do not wrap up the camcorder and operate it since heat may build up internally.
- Keep the camcorder away from strong magnetic fields or mechanical vibration.

#### On handling tapes

- Do not insert anything in the small holes on the cassette.
- Do not open the tape protect cover or touch the tape.
- Avoid touching or damaging the terminals. To remove dust, clean the terminals with a soft cloth.

#### Camcorder care

- When the camcorder is not to be used for a long time, disconnect the power source and remove the tape. Periodically turn on the power, operate the camera and player sections and play back a tape for about 3 minutes.
- Clean the lens with a soft brush to remove dust. If there are fingerprints on the lens, remove them with a soft cloth.
- Clean the camcorder body with a dry soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent which may damage the finish.

### èÂ%ÒÓÙÒ ÒÈìÒÙÈ

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- ùìÒÒìÙ±ÙÈ ÙÈÙÀ,È%ÀÓì±ìÀ ÙÓÙ7,2Ç (-±Ù± ÆÈìÒ,Ò-ìÒì±) ÈìÈ 8,4 Ç (ÒÀÙÀ,Ò,,Ò ±%±ÙÒÀ ±ÒÀ ÆìÙÒì±)
- ÒÒìÈ Ì±ìÈÒÈ-ìÈ-Ù% Ù,À %È Ò Æ%ìÀÙ ÈìÈ ÈÈ%ìÒÙÙ, ÒÒÒ±ìÈ, ÌÒ ÒÙÒ, ÙÒ, Ìì-ÈÙÀ,È%ÀÓì±ìÀ ÙÈÒ Ò,À, ÙÀÀÀÙ%ÈìÀ ±Sony ÒÀ Æ%±ì ÌÀÈ-ÀÈ ÆÀ ÌÒÒìÙ±Ù±ÈÀÈ.
- àÀ-À,±ÈÙÀ,, Ù-Ò,Ò Ò-±-ÀìÈñ ÈìÈ ÌÀìÈ-ÀÒìÈì Ù%± Ò,, ÆÙ% ÙÀ ÒÒÒ-ÀììÒ ÒÙìÒ ÒÈì° Ò Ò-ÀìÙÈ,Òì.
- ÑÀ ÈÈÙÀ, Ìì-±ÙÀì, POWER ÒÒìÒÈÀìÈÈ OFF, ÌÒ,,±,È%ÀÓì±ìÀ ± ÌÀ ÈÒÒÒìÀÙÀÙÒñ.
- çÀ Æ±, Ò ±È,±ÈÙÀ,È%ÀÓì±ìÀ Ù È ÌÀ ÌÒÒìÙ±ÙÈ ÙÈÙÀ ÆÀ, Ù±ìÒìÒÒÙÒñìÈÈ, Ù±ì Ì±ìÒÈÁÙ Ò ÒÈÁÒÈÙÈ, ÌÙÙ ÆììÀ ÒÒ, ÌÀÈÀ ÙÀìÒÀ ±ÙÙ °
- ÑÀ ÈÈÙÀ,È%ÀÓì±ìÀ ÙÒÒ%±ì-ÀÓÙ ÒÈì, Ìì, ÌÈÙì° ÒÒìÀÈ ÈìÈ ÌÀìÈ-ÀÒìÒÈ, È-±ÈÈ.

éÙìÒÒÈÙÀì ÌÒ Ò-±-ÀìÈñ Ò ÌÀìÙ±ìÈ

- çÈ-À,, Ò ÌÀ, ÙÒ±, ÌñÈÙÀ, Ì±ìÀì, ÌÈÀ ÒÙÀ ÒÙÈñ±±ÒÒÀÙÀ.
- çÀ ÒÙì°, ±ÈÙÀ Æ±ÈÙìÙ, Ì-ìÙ ÌÀìÙ° È ÌÀÙ Ò,±ÈÙÀìÀìÙÙ.
- àÀ-À,±ÈÙÀ Ì±ò±ìÈñ ÈìÈ ÒÒ, ÆÈ%ÀìÈñ ÌÒìÙ±ìÙÒ, Ñìñ Ù%±ìÀìÈñ ÒÈÈ ÒÈ-±ÈÙÀ ÌÒìÙ±ìÙ° Ìñ,, ÌÒÈ Ùì±ì,,.

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- äÒ,,±,È%ÀÓì±ìÀ ± ÌÀ ÈÒÒÒì ÀÙÀÙÒñ, ÙÀ ÆìÈÀ%ìÈÙÀì ÌÒ,Ò, ÆìÀìÈ, ÒÙÒÒÀ%ÈìÈÙÀ ÈÒÙÒÈìÈÒÈÙ±ìÈÈ Ù%±ìÈÙÀìÀìÙÙ, èÀ ÈÒ%È-ÀÒìÈ, Ìì-±ÈÙÀ ÒÈÙ±ìÈÀ, ±-ÒÙ±ÈÙÀ Ò ÒÀìÈñÈ Ì±ìÀ ° È ÒìÀÈÀ ± È, ÒÒÒ ÒÈÀ, Ò%ÈÙÀìÀìÙÙ Ò È-ìÈÀÈÙÀì, ÌÒ, ÙÀ-ÀìÈÀ 3-ì ÌÈìÙÙ.
- éÈ-±ÈÙÀ Ò-ÀìÙÈ, Ò ÒÒìÒ° Ìñ,, ÌÒÈ ÌÈÒÙÒÈÈ %ñ Ù%±ìÀìÈñ,, ñÀÈ. ÒÒìÈ ÈìÀ, ÙÒñ ÒÙÒÀ ±ÙìÈ Ò±ì, Æ, Ì± Ò-ÀìÙÈ, Æ, ÙÒ Ù%±ìÈÙÀ Èì Ò ÒÒìÒ° Ìñ,, ÌÒÈ Ùì±ìÈ.
- éÈ-±ÈÙÀ ÌÒ ÒÙÒ ±ÒÒ± ±Ù± Ò ÒÒìÒ° ÒÙìÒÈ Ìñ,, ÌÒÈ Ùì±ìÈ ÈìÈ Ìñ,, ÌÒÈ Ùì±ìÈ, ÒìÀì,± ÒìÒ-ÀììÒÈ ±ÒÙ, Ò Òì ÙìÀ ÆììÒ, Ò ÌÒ-À,, Ò Ò Æ%ÒÙ,±, çÀ ÈÒÒÒì, ÀÈÙÀ Ì±ìÈ-ìÈ-ÒÙÈÒÒ, ±ÒÙ, Ò ÈÙÀìÀÈ, ÌÒÙÒ ÆìÒ,, ÙÙ ÒÒ, Æ%ÈÙ, ÒÙ%ÀììÙ.

### AC power adaptor

#### Charging

- Use only a lithium ion type battery pack NP-F100/NP-F200.
- Place the battery pack on a flat surface without vibration during charging.
- The battery pack will get hot during charging. This is normal.

#### Others

- Unplug the unit from the mains when not in use for a long time. To disconnect the power cord, pull it out by the plug. Never pull the cord itself.
- Do not operate the unit with a damaged cord or if the unit has been dropped or damaged.
- Do not bend the AC power cord forcibly, or put a heavy object on it. This will damage the cord and may cause a fire or an electrical shock.
- Be sure that nothing metallic comes into contact with the metal parts of the connecting plate. If this happens, a short may occur and the unit may be damaged.
- Always keep the metal contacts clean.
- Do not disassemble the unit.
- Do not apply mechanical shock or drop the unit.
- While the unit is in use, particularly during charging, keep it away from AM receivers and video equipment because it will disturb AM reception and video operation.
- The unit becomes warm while in use. This is normal.
- Do not place the unit in locations that are:
  - Extremely hot or cold
  - Dusty or dirty
  - Very humid
  - Vibrating

If any difficulty should arise, unplug the unit and contact your nearest Sony dealer.

### ε&U&,O&τ&O&U& O&A&.U&O&τ

- ά&O&O&O&I&.A&U&E&U&A& U&O&I&.I& .U&τ& A&E&I&°E& .I&O&I& NP-F100/NP-F200 I&E&U&E&A&,O&-E&O&I&O&,O&U&E&O&τ&.
- ε&τ&A&I&A&O&U&E&U&A& .U&τ& A&E&I&°E& .I&O&I& I&τ& O&I&O&O&I&O&E& O&O&,A& I&O&O&U&E& .A&A& .E& .τ&°E&E& ,O& , A&I&fl A&τ&fl%O&I&E&.
- A&τ&U&τ& A&E&I&°E& .I&O&I& .U&%A&U& I&τ&, A&τ&U& O&fl ,O& , A&I&fl A&τ&fl%O&I&E&. u&U&O& fl,I&flA&U&O&fl I&O& I&τ&I&,I&°I&.

#### ε&O&-A&A&

- ε&U&O&O&A&%ε&I&E&U&A&τ&O&O&τ& τ&U&O&U&I&A&I&U& E&-A&O&I&O&E& O&A&U&E&,A&O&I&E& O&I&I&A&E&O&O&O&I&.A&U&A&U&O&fl%O&I&E&U&A&I&,I&O&A& , A&I&fl.N&I&flO&U&O&O&A&%ε&I&A&I&flO&A&U&,O&,O&O&O&,O&%O&τ& .U&τ& E&U&A& A&,O& A&τ& τ&A&°A&I&. c&E&I&O&,%O&τ& I&A&U&flI&E&U&A&τ&O&I&O&,O&%O&.
- c&A&°O&O&I&U&τ&U&E& U&E&U&A&τ&O&O&τ& τ&U&O& O&O&, A&E&%A&I&°I&°O&,O&%O&,O&I&,E&I&E& A&O&I&E& τ&O&O&τ& τ&U&U&O&τ&I&E&I&E& .°I& O&O&, A&E&%A&I&.
- c&A&O&,E& .τ&E&U&A&O&A&U&A&,O&E&O&,O&%O&O&E&I&O&E&E&I&A& O&U&τ&,U&A& I&τ&I&A&,O& U&flE&A&I&°A& O& A&%O&I&A&U&° .u&U&O&O&,A&%O&E&U&O&,O&%E&I&O&E&A&U&O&E&,A&O&U&E&I& O&O&E&τ& U&E&I&E& U&%O&τ& U&°I&A&I&U& E&-A&O&I&E&I&U&O&I&O&I&.
- I&°A&%E&U&A&O&, °U&O& I&E&I&E&A& I&A&U&τ&I&E&-A&O&I&E&A& O&A&%A&I&A&U&°I&A&O&O&O&E&I&O&τ&U&O&fl O&I&A&U&τ&I&E&-A&O&I&E&I&E& τ&O&U&flI&E& O&O&A&%E&I&E&U&A&I&,I&O&E& O&I&τ&O&U&E&I&° .O&O&I&E& °U&O& O&I&U&-E&U&O&fl ,I&O&E&A&U& O&O&E&A&O&E&U&E&I&O& O&U&I&O&A&A&τ&I&τ&I&E&A&,E&τ&O&O&τ& τ&U&I&O&E&A&U& .°U&, O&O&, A&E&%A&I&.
- c&O&A&,%O&τ&O&O&%O&A& E&E&,τ&E&U&A&I&A&U&τ&I&E&-A&O&I&E&A& I&O&I&U&τ&I&U&° , °E&O&U&O&U&A&.
- c&A&τ&A&°E& τ&E&U&A&τ&O&O&τ& τ&U&. c&A&O&O&%O&,A&,τ&E&U&A&τ&O&O&τ& τ&U&I&A&τ&I&E&-A&O&I&O&E& .E& .τ&°E&E& E& I&A& O&I&flE&U&A& A&,O&.
- ä&O&,%O&τ&τ&O&O&τ& τ&U&E&O&O&I& A&U&A&U&O&fl,O&O&O&-A&I&O&O& , A&I&flA&τ&fl%O&I&E&,%O&A& E&E&U&A&A&,O&O&O&%O&τ&I&,A&O&U&τ&%E&O&O& E&A&I&E&I&O&,A&a&E&,E&%A&O&τ&O&O&τ& τ&U&U&° , O&O&U&O&I&U& °U&O&O&I& .U&%A&U& I&τ&U&-τ&U&, O& E&A&I&A&a&E& τ&O&U&U&E&%A&O&τ&O&O&τ& τ&U&U&° .
- A&O&O&τ& τ&U& O&U&τ&I&O&,E&U&O&fl U&A&O&I&°I&,O&, A&I&fl A&τ&fl%O&I&E&. u&U&O& O&U&τ&I&O&,E&U&O&fl I&O& I&τ&I&,I&°I&.
- c&A& τ&A&I&A&-τ&E&U&A& τ&O&O&τ& τ&U&, I&A&O&U&τ&I&, I&O&U&O&°A&:
  - ó& A&A&I&A& I&O&°O& fl°E&A&E&I&E& I&O&I&O&%O&I&°A&
  - ε&°I&I&°A& E&I&E&° , fl&A&I&°A&
  - ε&-A&I&,I&τ&E&I&°A&
  - ε&O&%O&,A& E&A&I&° ,E& .τ&°E&E&

ç&O&I&U&-τ&A& ,O&A&I&E&I&O&,A&I&E&fl I&τ&I&E&I&-I&E&-O& U&U&%I&O&O&U&A&E&,O&U&fl τ&E&U&A&τ&O&O&τ& τ&U&E&O&-τ&U&E&U&A&O&, I&ç&τ&-A&I&U& .I&E&E&τ&E&-A&I&U& %O&E&I&A& U& Sony.

## Using your camcorder abroad

àÒÒÓÍ ÁÓ, Ç±-ÀÈ  
, È%ÁÓÍ±ÌÁ ° Á± ,, ±ÌÈ^ÀÈ

Each country has its own electric and TV colour systems. Before using your camcorder abroad, check the following points.

### Power sources

You can use your camcorder in any country with the supplied AC power adaptor within 100 V to 240 V AC, 50/60 Hz.

### Difference in colour systems

This camcorder is a PAL system-based camcorder. If you want to view the playback picture on a TV, it must be a PAL system-based TV.

Check the following list.

#### PAL system countries

Australia, Austria, Belgium, China, Denmark, Finland, Germany, Great Britain, Holland, Hong Kong, Italy, Kuwait, Malaysia, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, Thailand, etc.

#### PAL-M system country

Brazil

#### PAL-N system countries

Argentina, Paraguay, Uruguay

#### NTSC system countries

Bahama Islands, Bolivia, Canada, Central America, Chile, Colombia, Ecuador, Jamaica, Japan, Korea, Mexico, Peru, Surinam, Taiwan, the Philippines, the U.S.A., Venezuela, etc.

#### SECAM system countries

Bulgaria, Czech Republic, France, Guiana, Hungary, Iran, Iraq, Monaco, Poland, Russia, Slovak Republic, Ukraine, etc.

ä±È%±fl ÒÚ ±ì± ÈÌÁÁÚ Ò,ÒÈ ÒÓ.ÒÚ,ÀÌ°À ÒÈÒÚÁÌ° ÁÌÁÌÚ È°ÁÓÌÒÈ ÒÁÚÈ È°ÁÚÌÓ,Ò ÚÁÌÁ,È%ÁÌÈfl. èÁ Á%ÈÒÒÓÍ ÁÓ,Ç±-ÀÈ È%ÁÓÍ±ÌÁ ° Á± ,, ±ÌÈ^ÀÈ Ò Ó,Á, ÚÁ ÒÌÁ%Ò,ÈÁ ÒÚÌÍÚ°.

### àÒÓÓ~ÌÈÈ ÒÈÚ±ÌÈfl

Ç° ÌÒÈÁÚÁ ÈÒÒÓÍ ÁÓ,Ç±, È%ÁÓÍ±ÌÁ Ú, Ì°ÒÈ ÒÚ ±ÌÁ Ò ÒÓÌÓ° Ò ÈÌ±,Ç±ÁÌÓ,Ò ÒÁÚÁ,Ò,Ò±%±ÒÚÁ ±ÒÁ°ÁÌ.ÚÓÍ±,Ò Á%ÁÌ±ÒÚ 100 Ç%Ò 240 Ç ÒÁ ÁÌ. ÚÓÍ± 50/60 È°.

### ê±ÁÌÈ~Èfl, ÒÈÒÚÁÌ±Ì, ^,ÁÚÌÓ,,Ó ÚÁÌÁ,È%ÁÌÈfl

Ñ±Ì±fl, È%ÁÓÍ±ÌÁ ± ÒÓÌÓ,Ç±± Ì± ÒÈÒÚÁÌÁ PAL.ÒÓÌÈÇ°;ÒÚÈÚÁÒ ÒÓÌÓÚ ÁÚ, ÒÓ ÒÈÁ,Ò%ÈÌÓÁÈÁÓ. Ç±ÁÌÈÁÌ±ÚÁÌÁ,ÈÁÓ Á, ÚÓ °ÚÓ %ÒÌÈÁÌ °Ú, ÚÁÌÁ,ÈÁÓ, ÒÓÌÓ,Ç±ÌÈ ±±ÒÈÒÚÁÌÁ PAL. è Ó,Á, ÚÁ ÒÓ ÒÌÁ%Ò,~ÁÌÚ ÒÁ Á°Ì.

ëÚ ±ì° Ò ÒÈÒÚÁÌÓÈ PAL Á,ÒÚ ±ÌÈfl, Á,ÒÚ Èfl, ÁÁÌ,,Èfl, ÇÁÌÈÍÓ. ÈÚ±ÌÈfl, ÈÁ Ì±ÌÈfl, ÈÓÌ±%Èfl, ÈÓÌÍÓÌ,, Ñ±ÌÈfl, àÒÒ±ÌÈfl, àÚ±ÌÈfl, àÈÚ±È, àÚ,ÁÈÚ, à±Ì±ÈÁÈfl, ÇÓ,Ç±fl áÁÌ±%Èfl, ÇÓ,Á,,Èfl, èÓ ÚÚ,±ÌÈfl, èÈÌ,±ÒÚ, Ì±ÈÌ±%Èfl, ÌÈÌfl±%Èfl, ò,ÁÈ°± Èfl, ò,Á°Èfl È Ú.%.

ëÚ ±ì± Ò ÒÈÒÚÁÌÓÈ PAL-M Á ÇÁÈÈÈfl

ëÚ ±ì° Ò ÒÈÒÚÁÌÓÈ PAL-N Á,,ÁÌÚÈÌ±, è± Ç,,±È, Ì Ú,,±È

ëÚ ±ì° Ò ÒÈÒÚÁÌÓÈ NTSC Á±,Ç±ÍÓÈÁ ÒÓÚ Ò,Ç, ÁÓÌÈ,Èfl, ÇÁÌÁÒÚ°Ì±, à±Ì±%±, àÓÌÍ-Èfl, àÓ Áfl, àÁÌÓÈÌ±, èÁ Ú, èÚ ÈÌ±Ì, èòÁ, Ì±È,Ç±, ÒÈÈÈÒÒÈÌ°, ñÁÌÚ ±Ì±fl ÁÌÁ ÈÌ±, òÈÈÈ, ùÌ,Ç%Ò, ùÌ±ÈÌ±, ùÓÓÌÈfl È Ú.%.

ëÚ ±ì° Ò ÒÈÒÚÁÌÓÈ SECAM ÁÓÌ,,± Èfl, ÇÁÌ,,Èfl, È±Èfl±, à ÇÌ, à ÇÌ, àÓÌ±ÌÓ, èÓÌ°±, èÒÒÒÈÈfl, èÌÓ,Ç±Ì±fl èÁÒÒÚ-ÌÈÌ±, ÌÌ ±ÈÌ±, Ì ±ÌÈfl, óÁ ÒÓÌ±fl èÁÒÒÚ-ÌÈÌ±ÈÚ.%.

## Trouble check

If you run into any problem using the camcorder, use the following table to troubleshoot the problem. Should the difficulty persist, disconnect the power source and contact your Sony dealer or local authorized Sony service facility.

### Camcorder

#### Power

Symptom	Cause and/or corrective actions
The power is not on.	<ul style="list-style-type: none"> <li>The battery pack is not installed. → Install the battery pack. (p. 10)</li> <li>The battery is dead. → Use a charged battery pack. (p. 7)</li> <li>The AC power adaptor is not connected to mains. → Connect the AC power adaptor to mains. (p. 25)</li> <li>If the power is still not on after you tried the corrective actions above, press the RESET button on the back of the cassette compartment lid using a sharp-pointed object. (If you press the RESET button, all the settings including the date and time return to the default.) (p. 82)</li> </ul>
The power goes off.	<ul style="list-style-type: none"> <li>While being operated in CAMERA mode, the camcorder has been in Standby mode for more than 5 minutes. → Set the POWER switch to OFF, then to CAMERA. (p. 13)</li> <li>The battery is dead. → Use a charged battery pack. (p. 7)</li> </ul>
The battery pack is quickly discharged.	<ul style="list-style-type: none"> <li>The ambient temperature is too low. (p. 62)</li> <li>The battery pack has not been charged fully. → Charge the battery pack again. (p. 7)</li> <li>The battery pack is completely dead, and cannot be recharged. → Use another battery pack. (p. 25)</li> </ul>
The battery pack cannot be installed.	<ul style="list-style-type: none"> <li>Only an NP-F100/NP-F200 battery pack can be used.</li> </ul>

#### Operation

Symptom	Cause and/or corrective actions
START/STOP does not operate.	<ul style="list-style-type: none"> <li>The tape is stuck to the drum. → Eject the tape. (p. 11)</li> <li>The tape has run out. → Rewind the tape or use a new one. (p. 21)</li> <li>The POWER switch is set to PLAYER. → Set it to CAMERA. (p. 12)</li> <li>The tab on the cassette is out (red). → Use a new tape or slide the tab. (p. 11)</li> </ul>
The cassette cannot be removed from the holder.	<ul style="list-style-type: none"> <li>The battery is dead. → Use a charged battery pack or the AC power adaptor. (p. 7, 25)</li> </ul>
and indicators flash and no function except for cassette ejection works.	<ul style="list-style-type: none"> <li>Moisture condensation has occurred. → Remove the cassette and leave the camcorder for at least 1 hour. (p. 66)</li> </ul>
"CLOCK SET" appears when the camcorder is turned on.	<ul style="list-style-type: none"> <li>Reset the date and time. (p. 58)</li> </ul>

Continued to the next page

## Trouble check

### Operation

Symptom	Cause and/or corrective actions
The End Search function does not activate.	<ul style="list-style-type: none"> <li>The cassette was ejected after you recorded on it. → The End Search function will not activate until you make a new recording after reinserting the cassette.</li> </ul>
The tape does not move when a tape transport button is pressed.	<ul style="list-style-type: none"> <li>The POWER switch is set to CAMERA or OFF. → Set it to PLAYER. (p. 21)</li> <li>The tape has run out. → Rewind the tape or use a new one. (p. 21)</li> </ul>
No sound or only a low sound is heard when playing back a tape.	<ul style="list-style-type: none"> <li>The volume is turned to the minimum. → Open the LCD panel and press VOLUME +. (p. 21)</li> </ul>
The SteadyShot function does not activate.	<ul style="list-style-type: none"> <li>S SHOT is set to OFF in the menu system. → Set it to ON. (p. 38)</li> </ul>
Recording stops at once.	<ul style="list-style-type: none"> <li>The POWER switch is set to PHOTO. → Set it to CAMERA.</li> </ul>
Recording stops in a few seconds.	<ul style="list-style-type: none"> <li>The START/STOP MODE switch is set to <b>5SEC</b> or <b>⏏</b>. → Set it to <b>⏏</b>. (p. 18)</li> </ul>
The autofocus function does not activate.	<ul style="list-style-type: none"> <li>Focus is set to the manual mode. → Set it to autofocus. (p. 43)</li> <li>Shooting conditions are not suitable for autofocus. → Set focus to manual mode to focus manually. (p. 43)</li> </ul>
The fader function does not work.	<ul style="list-style-type: none"> <li>The START/STOP MODE switch is set to <b>5SEC</b> or <b>⏏</b>. → Set it to <b>⏏</b>. (p. 18)</li> </ul>

### Picture

Symptom	Cause and/or corrective actions
The image on the viewfinder screen is not clear.	<ul style="list-style-type: none"> <li>The viewfinder lens is not adjusted. → Adjust the viewfinder lens. (p. 13)</li> </ul>
A vertical band appears when a subject such as lights or a candle flame is shot against a dark background.	<ul style="list-style-type: none"> <li>The contrast between the subject and background is too high. The camcorder is not malfunctioning. → Change locations.</li> </ul>
The picture is "noisy" or does not appear.	<ul style="list-style-type: none"> <li>The video heads may be dirty. → Clean the heads using the Sony DVM12CL (not supplied) cleaning cassette. (p. 67)</li> </ul>
⊗ indicator flashes on the LCD screen or in the viewfinder.	<ul style="list-style-type: none"> <li>The video heads may be dirty. → Clean the heads using the Sony DVM12CL (not supplied) cleaning cassette. (p. 67)</li> </ul>
The picture is too bright or too dark.	<ul style="list-style-type: none"> <li>LCD BRIGHT is not adjusted properly. → Press + or - to obtain the brightness you want. (p. 16)</li> </ul>
A vertical band appears when shooting a very bright subject.	<ul style="list-style-type: none"> <li>The camcorder is not malfunctioning.</li> </ul>
The picture does not appear in the viewfinder.	<ul style="list-style-type: none"> <li>The LCD panel is open. → Close the LCD panel.</li> </ul>
The picture does not appear on the LCD screen or in the viewfinder.	<ul style="list-style-type: none"> <li>Incorporated fluorescent tube is worn out. → Please contact your nearest Sony dealer.</li> </ul>



## Picture

Symptom	Cause and/or corrective actions
While editing using the DV connecting cable, recording picture cannot be monitored.	<ul style="list-style-type: none"> <li>Remove the DV connecting cable, and connect it again.</li> </ul>

## Others

Symptom	Cause and/or corrective actions
The camcorder becomes warm.	<ul style="list-style-type: none"> <li>If the power of the camcorder is on for a long time, it becomes warm, which is not malfunction.</li> </ul>
The supplied Remote Commander does not work.	<ul style="list-style-type: none"> <li>COMMANDER is set to OFF in the menu system.               <ul style="list-style-type: none"> <li>→ Set it to VTR4 or ID. (p. 86)</li> </ul> </li> <li>Something is blocking the infrared rays.               <ul style="list-style-type: none"> <li>→ Remove the obstacle.</li> </ul> </li> <li>The battery is not inserted with the correct polarity.               <ul style="list-style-type: none"> <li>→ Insert the battery with the correct polarity. (p. 86)</li> </ul> </li> <li>The batteries are dead.               <ul style="list-style-type: none"> <li>→ Insert new ones. (p. 86)</li> </ul> </li> </ul>
The CHARGE lamp flashes after you charge the battery pack installed in the camcorder.	<ul style="list-style-type: none"> <li>The camcorder is not malfunctioning.</li> </ul>
No function works though the power is on.	<ul style="list-style-type: none"> <li>Disconnect the connection plug on the battery pack or on the AC power adaptor, then reconnect it in about 1 minute. Turn the power on. If the functions still do not work, press the RESET button on the back of the cassette compartment lid using a sharp-pointed object. (If you press the RESET button, all the settings including the date and time return to the default.) (p. 82)</li> </ul>

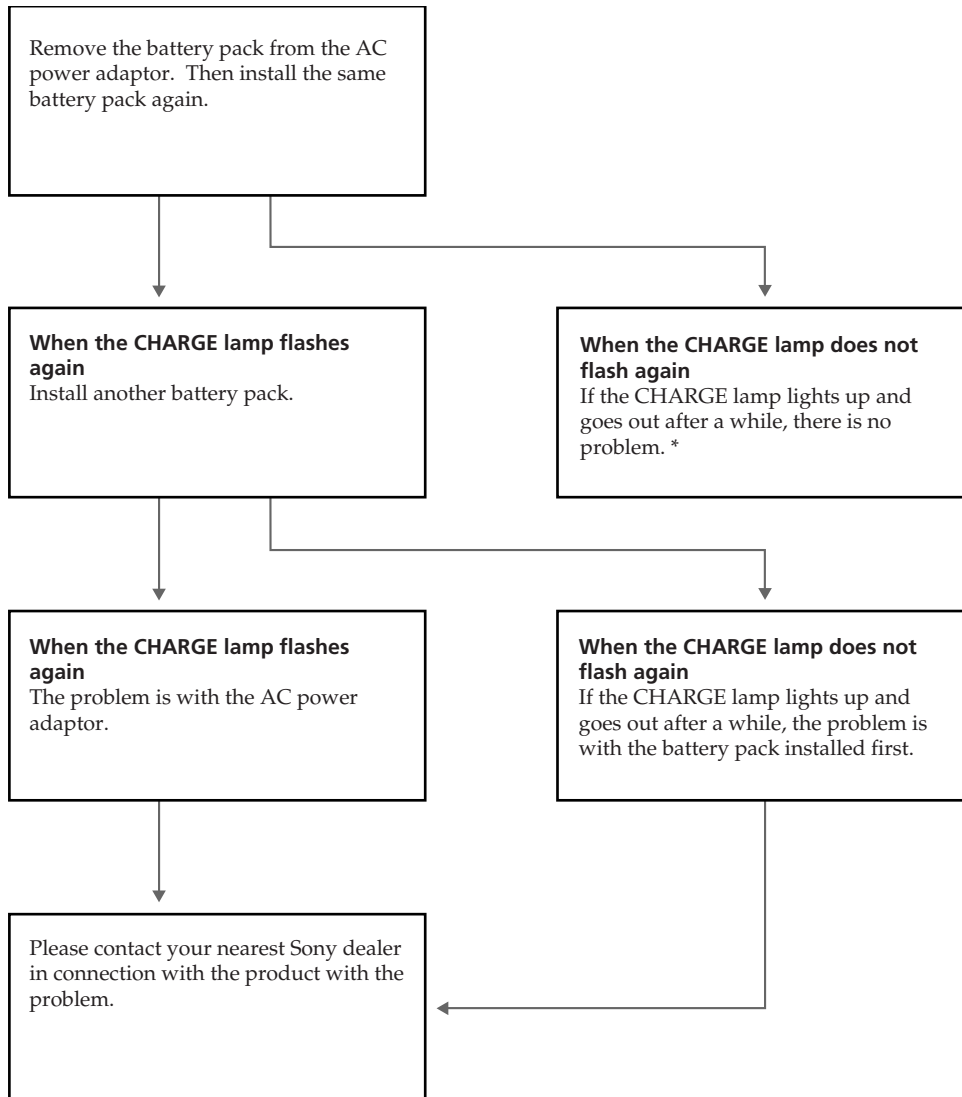
## AC power adaptor

Symptom	Corrective actions
The VTR/CAMERA or CHARGE lamp does not light.	<ul style="list-style-type: none"> <li>Disconnect the mains lead. After about 1 minute, reconnect the mains lead. (p. 7)</li> </ul>
The CHARGE lamp flashes.	<ul style="list-style-type: none"> <li>See the chart on the next page.</li> </ul>

## Trouble check

### When the CHARGE lamp flashes

Check through the following chart.



\* If you use a battery pack which you have just bought or which has been left unused for a long time, the CHARGE lamp may flash at the first charging. This does not indicate a problem. Repeat again to charge with same battery pack.



## è Ó,À Ì ÎÄËÒÒ ±,ÌÓÒÚÂÈ

### è±·ÓÚ±

è ÈÁÌ±Í	è È~ÈÌ± È/ÈÏÈ %ÄÈÒÚ,Èñ ÒÓ ÈÒÒ ±,ÌÄÌÈ
<p>àÈ,± Ú ÈÌ%ÈÌ±ÚÓ °  È  È ÌÈÌ±ÈÄ ÚÚÌ~ÈÈ, Á± ÈÓÌÌ~ÄÌÈÄÌ</p> <p>·Ú±ÌÈ,±ÌÈñ Ì±ÒÓÄÚ°, ÌÄ ±·ÓÚ±Ú.</p>	<ul style="list-style-type: none"> <li>è ÓÈÁÓ~Ì± ÌÓÌ%ÄÌÒ±Èñ, Ì±,È.</li> <li>→ Ì%±ÈÚÄÌ±ÒÓÄÚÈÒÓÚ±, ÚÄ,È%ÄÓÌ±Ä ÚÓÓ ÌÄÌ,~ÄÈ ÌÄ Ä Ì± 1 ~±Ó. (ÓÚ . 66)</li> </ul>
<p>èÓÓÌÄ ,ÌÌ,~ÄÌÈñ ,È%ÄÓÌ±Ä °</p> <p>ÒÓñ,ÌñÄÚÓñ "CLOCK SET".</p>	<ul style="list-style-type: none"> <li>èÌÓ± ÚÓÚ±ÌÓ,ÈÚÄ %±ÚÚÈ, Äñ. (ÓÚ . 58)</li> </ul>
<p>çÄ±ÍÚÈ,ÈÄÈ ÚÄÚÒñ ÚÚÌ~Èñ ÒÓÈÓÌ± ÌÓÌ±.</p>	<ul style="list-style-type: none"> <li>ä±ÒÓÄÚ± ·~Ì±, °ÚÓÌÌÚÚ± ÒÓÓÌÄ, °ÓÓÌÄÌÈñ Ä±ÓÈÒÈ.</li> <li>→ ÌÚÌ~Èñ ÒÓÈÓÌ± ÌÓÌ± ÌÄ ·Ú%ÄÚ ±ÍÚÈ,ÈÄÈ Ó,±Ú,Óñ %Ó ÚÄÌ ÒÓ, ÒÓÌ± Ç~ÌÄ Ò%ÄÌ±ÄÚÄÌÓ,Ú, Ä±ÓÈÓ, ÒÓÓÌÄ,ÓÚ±,ÌÈ Ì±ÒÓÄÚ°.</li> </ul>
<p>äÄÌÚ± ÌÄ ÓÄ ÄÌÄ~±ÄÚÒñ Ò È Ì±È±ÚÈÈ ÌÌÓÍÈ ÓÄ ÄÌÄ~ÄÌÈñ ÌÄÌÚ°.</p>	<ul style="list-style-type: none"> <li>Ç~ÌÌ,~±ÚÄÌ, POWER ÚÒÚ±ÌÓ,ÌÄÌ, °ÓÍÓÈÄÌÈÄ CAMERA ÈÏÈ OFF.</li> <li>→ ÌÓÚ±ÌÓ,ÈÚ, Ä,Ó, ÒÓÍÓÈÄÌÈÄ PLAYER. (ÓÚ . 21)</li> <li>äÄÌÚ± Ä±ÌÓÌ~ÈÌ±Ó.</li> <li>→ èÄ ÄÌÓÚ±ÈÚÄÌÄÌÚÚÌ±±%ÈÏÈÈÓÓÍ,ÄÚÈÚÄ ÌÓ,Ú, (ÓÚ . 21)</li> </ul>
<p>çÄÚ Ä,ÚÌ± ÈÏÈ ÚÓÌ ÌÓ ÌÈÄÌÈÈ Ä,ÚÌ</p> <p>ÓÌ~ÄÌ Ò È,ÒÓÓ ÓÈÄ,Ä%ÄÌÈÈ ÌÄÌÚ°.</p>	<ul style="list-style-type: none"> <li>È ÓÌÌÓÓÚ, ÚÒÚ±ÌÓ,ÌÄÌ±, ÌÈÌÈÌ±Ì ÌÓÄ ÒÓÍÓÈÄÌÈÄ.</li> <li>→ èÚÌ ÓÈÚÄ Ò±Ì±Ì, ÜäÑ È Ì±ÈÏÈÚÄ VOLUME+.</li> <li>(ÓÚ.21)</li> </ul>
<p>çÄ±ÍÚÈ,ÈÄÈ ÚÄÚÒñ ÚÚÌ~Èñ ÚÒÓÓÈ~È,ÓÈ Ó·ÄÌÈÈ.</p>	<ul style="list-style-type: none"> <li>ÌÚÌ~Èñ S SHOT ÚÒÚ±ÌÓ,ÌÄÌ± Ì± OFF, ÒÈÒÚÄÌÄ ÌÄÌ.</li> <li>→ ÌÓÚ±ÌÓ,ÈÚÄ ÄÄ Ì± ON. (ÓÚ . 38)</li> </ul>
<p>ä±ÓÈÒ, Ò ±ÄÚÈÄ ÒÓÚ±Ì±,ÌÈ,±ÄÚÒñ.</p>	<ul style="list-style-type: none"> <li>Ç~ÌÌ,~±ÚÄÌ, POWER ÚÒÚ±ÌÓ,ÌÄÌ, °ÓÍÓÈÄÌÈÄ PHOTO.</li> <li>→ ÌÓÚ±ÌÓ,ÈÚÄ Ä,Ó, ÒÓÍÓÈÄÌÈÄ CAMERA.</li> </ul>
<p>ä±ÓÈÒ, ÒÓÚ±Ì±,ÌÈ,±ÄÚÒñ~Ä ÄÄ ÌÄÓÌÓÌ,ÌÓ ÓÄÌÚÌ%.</p>	<ul style="list-style-type: none"> <li>èÄ ÄÌÌ~±ÚÄÌ, START/STOP MODE Ì±ÌÓ%ÈÚÓñ, ÒÓÍÓÈÄÌÈÈ 5SEC ÈÏÈ .</li> <li>→ ÌÓÚ±ÌÓ,ÈÚÄ Ä,Ó, ÒÓÍÓÈÄÌÈÄ . (ÓÚ . 18)</li> </ul>
<p>çÄ±ÍÚÈ,ÈÄÈ ÚÄÚÒñ ÚÚÌ~Èñ</p> <p>±,ÚÓÌ±ÚÈ~ÄÓÌÓÈ ÚÓÌÚÓÈ Ó,ÌÈ.</p>	<ul style="list-style-type: none"> <li>ÌÓÌÚÒÈ Ó,Ì± ÚÒÚ±ÌÓ,ÌÄÌ± Ì± Ò~ÌÓÈ ÄÈÈÌ.</li> <li>→ ÌÓÚ±ÌÓ,ÈÚÄ ÄÈÈÌ±,ÚÓÌ±ÚÈ~ÄÓÌÓÈ ÚÓÌÚÓÈ Ó,ÌÈ. (èÚ . 43)</li> <li>ÌÓÌÓ,Èñ Ó·ÄÌÈ ÌÄ ÒÓ%ÌÓ%ñÚ %ññ ±,ÚÓÌ±ÚÈ~ÄÓÌÓÈ ÚÓÌÚÓÈ Ó,ÌÈ.</li> <li>→ ÌÓÚ±ÌÓ,ÈÚÄ ÚÓÌÚÒÈ Ó,ÌÚ Ì± Ò~ÌÓÈ ÄÈÈÌ %ññ, °ÓÓÌÄÌÈñ Ò~ÌÓÈ ÚÓÌÚÒÈ Ó,ÌÈ. (ÓÚ . 43)</li> </ul>
<p>ÌÚÌ~Èñ ÒÌ±,ÌÓ,Ó ,,Ä%ÄÌÈñ ÈÁÓ· ±ÈÄÌÈñ ÌÄ ±ÓÚ±ÄÚ.</p>	<ul style="list-style-type: none"> <li>èÄ ÄÌÌ~±ÚÄÌ, START/STOP MODE Ì±ÌÓ%ÈÚÓñ, ÒÓÍÓÈÄÌÈÈ 5SEC ÈÏÈ .</li> <li>→ ÌÓÚ±ÌÓ,ÈÚÄ Ä,Ó, ÒÓÍÓÈÄÌÈÄ . (ÓÚ . 18)</li> </ul>
<h3>äÄÓ· ±ÈÄÌÈÄ</h3>	
è ÈÁÌ±Í	è È~ÈÌ± È/ÈÏÈ %ÄÈÒÚ,Èñ ÒÓ ÈÒÒ ±,ÌÄÌÈ
<p>çÄ~ÄÚÌÓÄ ÈÄÓ· ±ÈÄÌÈÄ Ì± 1 ±ÌÄ</p> <p>,È%ÓÈÓÌ±ÚÄÌñ.</p>	<ul style="list-style-type: none"> <li>çÄ ÓÚ Ä,ÚÌÈ Ó,±Ì Ó·ÄÌÚÈ, È%ÓÈÒÈ±ÚÄÌñ.</li> <li>→ èÚ Ä,ÚÌÈ ÈÚÈÄ Ó·ÄÌÚÈ, È%ÓÈÒÈ±ÚÄÌñ. (ÓÚ . 13)</li> </ul>
<p>ÇÄ ÚÈÌ±Ì Ìñ ÒÓÌÓÓ± ÒÓñ,ÌñÄÚÒñ, ÄÓÌÈ</p> <p>Ú±ÈÄ Ó·ÄÌÚ°, Ì±Ì ÈÓÚÓ~ÌÈÈÈ Ó,ÄÚ± ÈÏÈ</p> <p>ÓÌ±ñ Ò,Ä~È, ÒÈÌ±,ÚÒñ Ì± ÚÄÌÌÓÌ ÚÓÌÄ.</p>	<ul style="list-style-type: none"> <li>èÏÈ~ÌÓÌ, °ÓÍÓÈÈ ÌÓÌÚ ±ÓÚ ÌÄÈ%Ú Ó·ÄÌÚÓÌ È ÚÓÌÓÌ. ä±ÌÄ ± ÌÄ ñ,ÌñÄÚÒñ ÌÄÈÒÒ ±,ÌÓÈ.</li> <li>→ äÄÌÄÌÈÚÄ ÒÓÄÈ~È, Ó·ÄÌÈÈ.</li> </ul>
<p>äÄÓ· ±ÈÄÌÈÄ "Ä±ÚÌÄÌÓ" ÈÏÈ ÌÄ</p> <p>ÒÓñ,ÌñÄÚÒñ.</p>	<ul style="list-style-type: none"> <li>ÇÓÄÌÓÈÌÓ Ä±, ñÄÌÄÌ, È%ÄÓ,ÓÌÓ,ÈÈ.</li> <li>→ è~ÈÓÚÈÚÄ,È%ÄÓ,ÓÌÓ,ÈÈ ÒÈÒÓÓÌ,ÄÓ,±ÈÄÌ</li> <li>Ó~ÈÓÚÈÚÄÌ,ÌÓÈ Ì±ÒÓÄÚ° Sony DVM12CL. (ÌÄ ÒÈÌ±,±ÄÚÒñ)(ÓÚ .67)</li> </ul>

**αΑΟ. τεΑΙΕΑ**

ε ΕΑΙτη	ε Ε-Ειτη Ε/ΕΙΕ %ΑΕΟΥ,Εη ΟΟ ΕΟΟ τεΙΑΙΕ
αΙ%ΕΙτηΥΟ ⊗ ΙΕ,,τΑΥ Ιτ 1 τηΑ ΥαΝ ΕΙΕ ,Ε%ΟΕΟΙτηΥΑΙΑ.	<ul style="list-style-type: none"> <li>• ÇÓÁÍÓΕΙÓ Áτ, ηΑΙΑΙ, Ε%ΑΟ,ΟΙΟ,ΙΕ.</li> <li>→ ε-ΕΟΥΕΥΑ,Ε%ΑΟ,ΟΙΟ,ΙΕ Ο ΕΟΟΟΙ,ΑΟ,τηΕΑΙ Ο-ΕΟΥΕΥΑΙ,ΙΟΕ ΙτΟΟΑΥ Sony DVM12CL (ΙΑ Ο ΕΙτη,τΑΥΟη). (ΟΥ .67)</li> </ul>
αΑΟ. τεΑΙΕΑ ΟΙΕ-ΙΟΙ ΥΑΠΟΑ.	<ul style="list-style-type: none"> <li>• τΥΙΙ-Εη LCD BRIGHT ΟΥ Α,ΥΙΕ Ο,τη ΙΑΟ τε,ΕΙ,ΙΟ.</li> <li>→ ÇτΕΙΕΥΑ + ΕΙΕ - %η ΟΟΙΥ-ΑΙΕη ΕΑΙτηΑΙΟΕ η ΙΟΟΥΕ. (ΟΥ .16)</li> </ul>
ÇÁ ΥΕΙτη Ιτη ΟΟΙΟΟτ ΟΟη,ηηΑΥΟη Ο Ε Ο-ΑΙΙΑ Ο-ΑΙ, η ΙΟ,Ο Ο-ΑΙΥτ.	<ul style="list-style-type: none"> <li>• ÇΕ%ΑΟΙτηΑ Ιτ ΙΑ η,ηηΑΥΟη ΙΑΕΟΟ τε,ΙΟΕ.</li> </ul>
αΑΟ. τεΑΙΕΑ ΙΑ ΟΟη,ηηΑΥΟη , Ε%ΟΕΟΙτηΥΑΙΑ.	<ul style="list-style-type: none"> <li>• εΥΙ τΥτ ΟτΙΑΙ, ΥαΝ.</li> <li>→ áτΙ ΟΕΥΑ ΟτΙΑΙ, ΥαΝ.</li> </ul>
αΑΟ. τεΑΙΕΑ ΙΑ ΟΟη,ηηΑΥΟη Ιτ 1 τηΑ ΥαΝ.	<ul style="list-style-type: none"> <li>• ÇΟΥ ΟΑΙτη Ιτ ΙΕΙΑΟ-ΑΙΥΙτη ΙτΙΟτ, τΥτ ΕΑ ΟΥ Οη.</li> <li>→ ε,ηΕΕΥΑΟ, Ο ÇτΕΙ ΙΕΕτΕ-ΕΙ %ΕΙΑ ΟΙ Sony.</li> </ul>
ÇÓ, Αη ΙΟΙΥτΕτ Ο ΕΟΟΟΙ,ΑΟ,τηΕΑΙ ΟΟΑ%ΕΙΕΥΑΙ,ΙΟ,Ο ΕΥ Ο,Ο,Ο,Ε%ΑΟΙτ-Αη ΙΑ,ΟΑΙΟΕΙΟ Ο ΟΟΙτΥ Ε,τΥ ΑτΟΕΟ,τΑΙΟΑ ΕΑΟ. τεΑΙΕΑ.	<ul style="list-style-type: none"> <li>• εΥΟΟΑ%ΕΙΕΥΑΟΟΑ%ΕΙΕΥΑΙ,τΕ-ΕΥ Ο,ΟΕ Ε%ΑΟΙτ-ΑΙ, Ε ΟΟ%ΟΟΑ%ΕΙΕΥΑΑ,ΟΙΟ,τ.</li> </ul>

**ε Ο-ΑΑ**

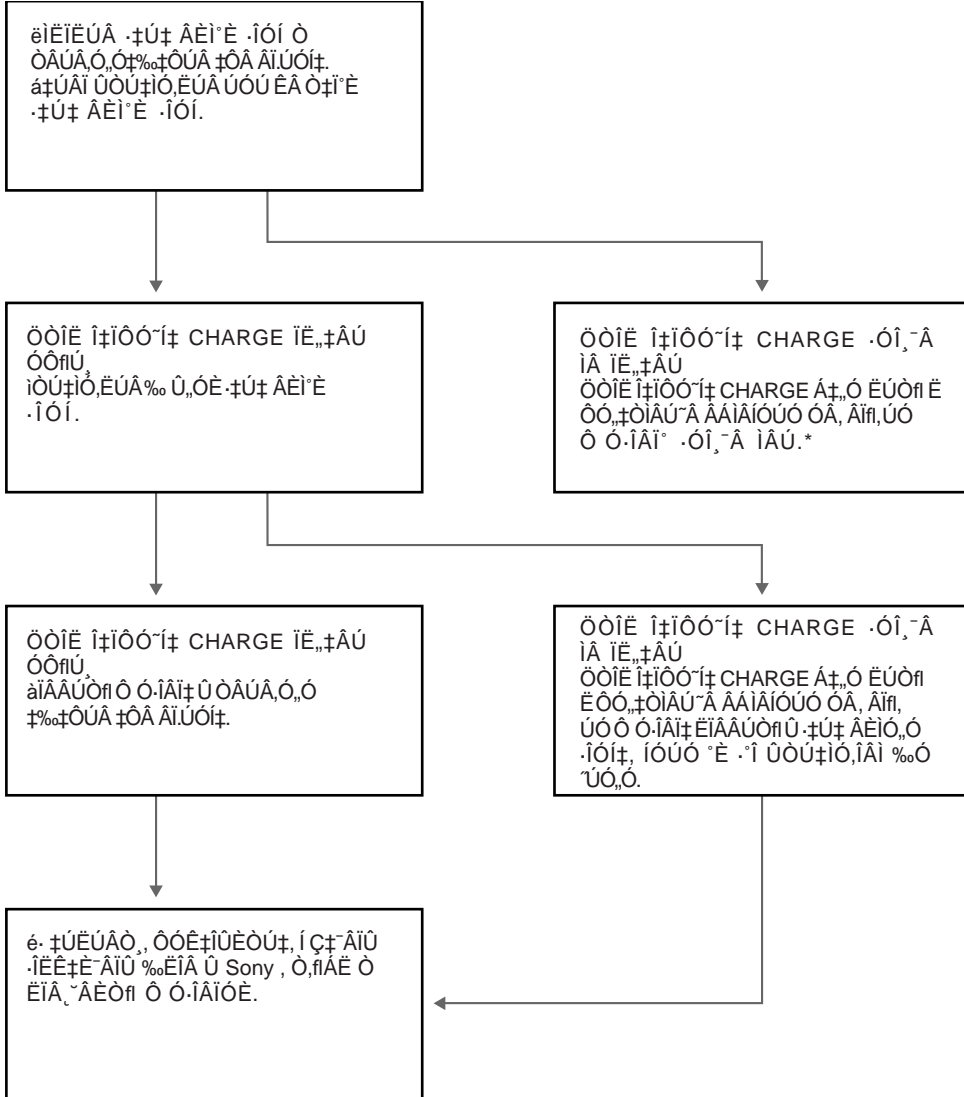
ε ΕΑΙτη	ε Ε-Ειτη Ε/ΕΙΕ %ΑΕΟΥ,Εη ΟΟ ΕΟΟ τεΙΑΙΕ
ÇΕ%ΑΟΙτηΑ τΟΥτηΟ,ΕΥΟηΥΑΟΙΟΕ.	<ul style="list-style-type: none"> <li>• ΟΟΙΕ ΟΕΥτΕΑ,Ε%ΑΙτηΑ τΥτ ΙΟ ΙΙ-ΑΙΟ, ΥΑ-ΑΙΕΑ %ΕΥΑΙ,ΙΟ,ΟΟΑ ΕΟ%τ, ΑΙΑΙΕΟτΟΥτΙΟ,ΕΥΟηΥΑΟΙΟΕ, ΙΟ τΥΟ ΙΑ η,ηηΑΥΟη ΙΑΕΟΟ τε,ΙΟΟΥ,.</li> </ul>
ÇÁ τ-ΟΥτΑΥ Ο ΕΙτ,τΑΙ-Ε ΟΥΙ,Υ %ΕΟΥτ-ΕΟΙΟ,ΟΥΟ, ΙΑΙΕη.	<ul style="list-style-type: none"> <li>• τΥΙΙ-Εη COMMANDER ΥΟΥτΙΟ,ΙΑΙτ Ιτ OFF, ΟΕΟΥΑΙΑ ΙΑΙ,.</li> <li>→ ΙΟΥτΙΟ,ΕΥΑ ΑΑ Ιτ VTR4 ΕΙΕ ID. (ΟΥ . 86)</li> <li>• ΟΥΟ-ΥΟ ΑτΙ τ-ΑΥ ΟΥΥ, ΕΙΥ τΙ τΟΙτ ΙΥ-ΑΕ.</li> <li>→ η%τΕΥΑΟ ΑΟηΥΟΥ,ΕΑ.</li> <li>• ΑτΥτ ΑΕΙτ, ΟΥτ,ΙΑΙτ Ο ΙΑΟ τε,ΕΙ,ΙΟΕ ΟΟη ΙΟΟΥ,.</li> <li>→ ÇΟΥτ, ΥΑ τΥτ ΑΕΙΥ Ο Ο τε,ΕΙ,ΙΟΕ ΟΟη ΙΟΟΥ,.</li> <li>• ΑτΥτ ΑΕΙΕ ΟΟηΙΟΟΥ, τΑ ηΕΑΙτ.</li> <li>→ ÇΟΥτ, ΥΑ ΙΟ,τΑ τΥτ ΑΕΙΕ. (ΟΥ . 86)</li> </ul>
áτΙΟΟττ CHARGE ΙΕ,τΑΥ ΟΟΟΙΑ Ατ η%Ε τΥτ-ΑΕΙΟ,Ο-ΙΟΙτ, ΥΟΥτΙΟ,ΙΑΙΟ,Ο, Ε%ΑΟΙτηΑ Α.	<ul style="list-style-type: none"> <li>• ÇΕ%ΑΟΙτηΑ Ιτ ΙΑ η,ηηΑΥΟη ΙΑΕΟΟ τε,ΙΟΕ.</li> </ul>
ÇΕΙτΕΑ ΥΟΥτ-ΕΕ ΙΑ τ-ΟΥτ,Υ, ΙΑΟΙΟΥ ητΥΟ,ΥΟ ΟΕΥτΕΑ, ΙΙ,τ-ΑΙΟ.	<ul style="list-style-type: none"> <li>• εΥΙ,τΕΥΑ ΟΟΑ%ΕΙΕΥΑΙ,τΕ τΑ-ΑΙ τΥτ ΑΕΙΟ,Ο-ΙΟΙτ ΕΙΕ ΟΑΥΑ,Ο,Ο τ%τΟΥΑ τΟΑ ΑΙ, ΥΟΙτ, τΑτΥΑΙ ΟΟ%η,τΕΥΑ Α,Ο ΟΙΟ,τ Ο Ε-ΙΕΑΕΥΑΙ,ΙΟ τΑ ΑΑ 1 ΤΕΙΥΟΥ. Çη,τΕΥΑ ΟΕΥτΕΑ, ΟΟΙΕ ΥΟΥτ-ΕΕ,ΟΑ Α-Α ΙΑ τ-ΟΥτ,Υ, ΙτΕΙΕΥΑ ηΟΟΙΥ RESET Ιτ Ατ%ΙΕ ΟΥΟ ΟΙΑ Ιτ-ΙΕ ΙτΟΟΑΥΙΟ,Ο ΟΥΟΑΙτ Ο ΕΟΟΟΙ,ΑΟ,τηΕΑΙ ΑτΟΟΥ ΑηΙΟ,Ο Ο Α%ΙΑΥτ. (ΟΟΙΕ Ç ΙτΕΕτΑΥΑ ηΟΟΙΥ RESET, ,ΟΑ ΥΟΥτΙΟ,ΙΕ, ΙΙ,τη %τΥΥ Ε, Αη, ,ΟΑ, ττ ΥΟη,ΕΟΙΟ%ΙΟΑ ΟΟΟΥΟηΕΑ.) (ΟΥ . 82)</li> </ul>

**εΑΥΑ,ΟΕτ%τΟΥΑ ΟΑ ΑΙ.ΥΟΙτ**

ε ΕΑΙτη	ΝΑΕΟΥ,Εη ΟΟ ΕΟΟ τεΙΑΙΕ
áτΙΟΟττ VTR/CAMERA ΕΙΕ CHARGE ΙΑ,Ο ΕΥ.	<ul style="list-style-type: none"> <li>• εΥΟΟΑ%ΕΙΕΥΑΟΑΥΑ,ΟΕΟ Ο,Ο%ε Ε-ΙΕΑΕΥΑΙ,ΙΟ τΑ ΑΑ 1ΤΕΙΥΟΥΟΙΟ,τΟΟ%ΟΟΑ%ΕΙΕΥΑΟΑΥΑ,ΟΕΟ Ο,Ο%. (ΟΥ .7)</li> </ul>
áτΙΟΟττ CHARGE ΙΕ,τΑΥ.	<ul style="list-style-type: none"> <li>• εΙΟΥ ΕΥΑ ΟΑΙΥ Ιτ ΟΙΑ%Υ,τΑΕ ΟΥ τΙΕ-Α.</li> </ul>

è Ó,Á ì† ÌÄÈÒÒ †,ÌÓÒÚÄÈ

äÓ,,%† ÌÈ,,†ÁÚ Ì†ÌÓÓ~Í† CHARGE  
 è Ó,Á ,ÚÄ ÓÓ ÒÌÄ%Ú,~ÄÈ ÒÌÄÌÄ.



\* ÒÒÌÈ Ç° ÈÒÓÓÌ,ÁÚÄÚÄ .†Ú† ÄÈÌ°È .ÌÓÌ, ÌÓÚÓ °È Ç° ÚÓÌ,ÌÓ ~ÚÓ ÌÙÒÈÌÈ, ÈÌÈ ÌÓÚÓ °È .ÌÓ ÓÓÚ†,ÌÄÌ Ì†  
 %ÈÚÄÌ,ÌÓÄ, ÄÌÌ .ÄÄ ÈÒÓÓÌ,ÁÓ,†ÌÈÌ, ÚÓ Ì†ÌÓÓ~Í† CHARGE ÌÓÈÄÚ ÌÈ,,†Ú, Ò È ÓÄ ,ÓÈ Ä† Ì%ÓÌÄ. ùÚÓ ÌÄ  
 ÚÌ†Ä°,†ÁÚ Ì† Ì†ÈÈ~ÈÄ Ò Ó.ÌÄÌ°. èÌÓ,† ÓÓ,ÚÓ ÈÚÄ Ä† Ì%ÓÌÚ Ò ÚÄÌ ÈÄ Ò†Ì°È .†Ú† ÄÈÌ°È .ÌÓÌÓÌ.

English

## Specifications

### Video camera recorder

#### System

##### Video recording system

Two rotary heads, Helical scanning system

##### Audio recording system

Rotary heads, PCM system

##### Video signal

PAL colour, CCIR standards

##### Usable cassette

Mini DV cassette with logo printed

##### Tape speed

SP: Approx. 18.83 mm/s

LP: Approx. 12.57 mm/s

##### Recording/playback time

SP mode: 1 hour (DVM60)

LP mode: 1.5 hours (DVM60)

##### Fastforward/rewind time

Approx. 2 min. 30 s (DVM60) (using with battery pack)

Approx. 1 min. 45 s (DVM60) (using with AC power adaptor)

##### Image device

CCD (Charge Coupled Device 1/3")

##### Viewfinder

Electric viewfinder (colour)

##### Lens

Combined power zoom lens, 20x (Digital), 10x (Optical)

##### Focal distance

f = 4.0 to 40 mm

38 to 380 mm when converted into a 35 mm still camera)

F 1.8 – 2.6

TTL autofocus system inner focus wide macro system

##### Colour temperature

Auto

##### Minimum illumination

3 lux at F 1.8

##### Illumination range

3 to 100,000 lux

##### Recommended illumination

More than 100 lux

#### LCD screen

##### Picture

2.5 inches measured diagonally

50.05 x 37.1 mm

##### On-screen display

TN LCD/TFT active matrix method

##### Total dot number

84,480 (384 x 220)

### Input and output connectors

#### S video output

4-pin mini DIN

Luminance signal: 1 Vp-p, 75 Ω,

unbalanced, sync negative

Chrominance signal: 0.3 Vp-p, 75 Ω, unbalanced

#### Audio/Video output/Headphones jack

Special minijack, 1 Vp-p, 75 Ω, unbalanced, sync negative

327 mV, (at output impedance more than 47 kΩ)

Output impedance with less than 2.2 kΩ/Stereo minijack (ø 3.5 mm)

#### DV output

4-pin special connector

#### Speaker

Piezo-electric-speaker

#### Connection

26-pin connector

### General

#### Power requirements

7.2 V (battery insertion input)

8.4 V (26-pin connector)

#### Average power consumption

5.0 W during camera recording using viewfinder

6.0 W during camera recording using LCD screen

#### Operating temperature

0°C to 40°C (32°F to 104°F)

#### Storage temperature

-20°C to 60°C (-4°F to 140°F)

#### Dimensions

Approx. 59 x 129 x 118 mm (w/h/d)

#### Mass

Approx. 500 g excluding the battery pack, lithium battery and cassette

Approx. 620 g including the battery pack NP-F100, lithium battery and cassette DVM60

#### Microphone

Electret condenser microphone, Stereo type

#### Supplied accessories

See page 6.

### AC power adaptor

#### Power requirements

100 to 240 V AC, 50/60 Hz

#### Power consumption

25 W

#### Output voltage

DC OUT: 8.4 V, 1.8 A in operating mode

Battery charge terminal: 8.4 V, 1.4 A in charge mode

#### Application

Sony battery pack NP-F100, NP-F200 lithium ion type

#### Operating temperature

0°C to 40°C (32°F to 104°F)

#### Storage temperature

-20°C to 60°C (-4°F to 140°F)

#### Dimensions (Approx.)

57 x 44 x 107 mm (w/h/d)

#### Mass (Approx.)

190 g

Design and specifications are subject to change without notice.

Additional Information / NOODIEUAI j#i EUÓ I#-E#i

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# īāīē~āōīēā ī± ±īúā ēōúēīē

## ÇĖ%ĀÓÍ±ĪĀ ±

ēēōūāī±  
 ēēōūāī±,Ė%ĀÓĀ±ōēōē  
 N,Ā , ±±, ēĀōñ ,ōīō,īē,  
 ōēōūāī± ī±īōīōē  
 īāīē~āōīēē ±Ā.Ā ūīē  
 ēēōūāī±ū%ēōā±ōēōē  
 Ç ±±, ēĀōñ ,ōīō,īē, ōēōūāī±  
 ā ā ā  
 ÇĖ%ĀÓōē,ī±  
 ñ,ĀŪō,ōēōē,ī±PAL, ōū±l%± Ū  
 CCIR  
 āōōōī,ĀŪĀĪĀ ±±ōōĀŪ  
 ā±ōōĀŪ mini DV Ō  
 ī±ōĀĪŪ±īī Ī Ūē ĪĪīĪĪ  
 Āī±īōī  
 ēīō ōōū, īĀīŪ  
 ēĀēēī SP: Ō ē.īēĀ. 18,83 Ī/Ō  
 ēĀēēī LP: Ō ē.īēĀ. 12,57 Ī/Ō  
 Ç ĀīñĀ±ōēōē/  
 Ōōō ŌēĀ,Ā%Āīēñ  
 ēĀēēī SP: 1 ±ō (DVM 60)  
 ēĀēēī LP: 1,5 ±ō± (DVM 60)  
 Ç Āīñ Ūōīō Āīōē ŌĀ Āīōūīē  
 ,ŌĀĀ%ĪĀ±%  
 ē ē.īēĀ. 2 Īēī. 30 Ō (DVM 60)  
 (Ō ēēōōōī,Āō,īēēē ±Ū± Āēīō,Ō  
 .īōī±)  
 ē ē.īēĀ 1 Īēī. 45 Ō. (DVM 60)  
 (Ō ēēōōōī,Āō,īēēēōĀŪĀ,Ōō  
 ±%±ŪĀ±)  
 īō Īē Ō,±ŪĀĪ, ēĀō. ±ēĀīēñ  
 CCD(ē ē.Ō ŌĀ±ñ%Ō,Ōē  
 Ō,ñĀ, )  
 ÇĖ%Ōēōī±ŪĀĪ,  
 ñ,ĀŪōē ĪĀīŪ ē~Āōīēē  
 ,ē%Ōēōī±ŪĀĪ,  
 ē.Ā Ā Ī ū ē,  
 āōī.ēīē Ō,īīē Ō.ĀīŪē, Ō  
 Ō ē,Ō%ol ĪŪ ±īōūōī±Ūō Ōī,  
 20ī (ēŪ Ō,Ōē), 10ī (ōōŪē~Āōīēē)  
 īōīŪōīōĀ ±ōōūōñēĀ  
 f = 4,0 - 40 Ī  
 (38 - 380 Ī Ō ē Ō Āō. ±Āō,īēēē  
 , 35 Ī Ūōūō-ī±%)  
 F = 1,8 - 2,6  
 ōē Ōīññ ĪĪ ŌēōōūĀī±  
 ,īŪŪ ĀīĀē ŪōīŪōē Ōīē Ō  
 ŌēōūĀīōē±Ūōī±Ūē~Āōīōē  
 ŪōīŪōē Ō,īē~Ā ĀĀ Ō.ĀīŪē,  
 ñ,ĀŪō,ñ ŪĀīōĀ ±ŪŪ ±  
 Ā,ŪōĀ,Ūīē Ō,īēĀ  
 āēīēī±ī, ī±ñ Ōō,Ā~Āīōōū,  
 3 Ī Ō ē F = 1,8  
 Nē±Ō±Āōī Ōō,Ā~Āīōōūē  
 ēŪ 3 Ī Ō ē 100 000 Īī  
 ēĀīōīĀī%ŪĀī±ñ Ōō,Ā~Āīōōū,  
 ĀōīĀĀ 100 Īī

ūī ±ī Ūāñ  
 āĀō. ±ēĀīēĀ  
 2,5 %,ēī± Ōō %ē±,ōī±ē  
 50,05 × 37,1 Īī  
 āīŪō Ī±ēōīīē Īī ±ī  
 ĀīŪē,īō-īŪŪ ē~ī±ñ ŪĀīōīō,ēñ  
 TN LCD/TFT (Ūāñ/  
 ŪōīōōīĀīō~īē ŪīĀēōūō)  
 ē.ĀĀ ēōīō ĪĀīĀīŪō,  
 ēĀō. ±ēĀīēñ  
 84 480 (384 × 220)

Çīō%l°Ā ē ,īō%l°Ā  
 ,īĀĀ%±  
 Çīō% S-,ē%Āōōē,ī±±  
 4-Ū ,īō,ŌĀ Īēīē,īĀĀ%Ō Ōō  
 DIN  
 ēē,īññ īōōŪē: 1 Çōō%,ōēīōē  
 ±īōīēŪŪ%Ā, 75 ēī,  
 ĪĀōēīĀ ē~īē, Ō  
 ŌŪ ē~ŪĀī,īōēōēī, ŌīēĀ±ēĀē  
 ēē,ī±ī,ĀŪīōōŪē: 0,3 Çōō  
 %,ōēīōē ±īōīēŪŪ%Ā, 75 ēī,  
 ĪĀōēīĀŪ ē~īē  
 Çīō% ±Ū%ēō,ē%Āō,ōīō,ī±  
 ŪĀĀŪōīō,  
 ēōĀē±ī,īōĀ Īēīē,īĀĀ%Ō, 1 Çōō  
 %,ōēīōē ±īōīēŪŪ%Ā, 75 ēī,  
 ĪĀōēīĀŪ ē~īōĀ, Ō  
 ŌŪ ē~ŪĀī,īōēōēī, ŌīēĀ±ēĀē  
 327 ĪÇ, (Ō ē ,īō%lōī Ōōīōī  
 Ōōō ŌŪē,īĀīēē .ōīĀĀ 47 Īēī)  
 Çīō%īōĀōōīōĀōōō ŌŪē,īĀīēĀ  
 ĪĀĪĀĀ 2,2 Īēī/  
 ŌŪĀ ĀōŪōīē~ĀōīōĀīēīē,īĀĀ%Ō ( Ō  
 3,5 Īī)  
 ñēŪ Ō,Ōē ,ē%Āō,īō%  
 4-Ū ,īō,ŌĀ ŌĀē~ī,īōĀ  
 ,īĀĀ%Ō  
 ē Ōīō,Ō,Ō ēŪĀĪ,  
 ē,ĀĀō ĪĀīŪ ē~Āōīēē  
 ,,ōīīō,Ō,Ō ēŪĀĪ,  
 ēōĀ%ēīĀīēĀ  
 26-Ū ,īō,ē ŌōĀ%ēīēŪĀĪ,

ē.~ĀĀ  
 īĀ.Ō,īēñ ī ŌēŪ±īē,  
 7,2 Ç (,ŌŪ±,īĀīē~ ±Ū± Āēīē  
 .īōī)  
 8,4 Ç (26-Ū ,īō,ē  
 ŌōĀ%ēīēŪĀĪ)  
 ē Ā%ññ ŌōŪ Ā.īñĀī±ñ  
 īō~īōōū,  
 5,0 ÇŪ,Ō, ĀīñĀ±ōēōē  
 ,ē%Āōī±īĀ Ōē Ōēōōōī,Āō,īēĀī  
 ,ē%Ōēōēōī±ŪĀīñ  
 6,0 ÇŪ,Ō, ĀīñĀ±ōēōē  
 ,ē%Āōī±īĀ Ōē Ōēōōōī,Āō,īēĀī  
 Īī ±ī± Ūāñ  
 ē±.Ō~ñ ŪĀīōĀ ±ŪŪ ±  
 ēŪ 0°ē%Ō 40°ē (ŌŪ 32°F%Ō 104°F)

īĀīōĀ ±ŪŪ ± ī ±īĀīēñ  
 ēŪ-20°ē%Ō 60°ē (ŌŪ-4°F%Ō  
 140°F)  
 ē±ĀĪĀ °  
 ē ē.īēĀ. 59 × 129 × 118 Īī (Ī,Ī,Ī)  
 ā±ōō±  
 ē ē.īēĀ. 500 ,, ĪĀ, Īī,~ññ  
 .±Ū± Āēīō,Ō.īōī±, ĪēŪēĀ,Ōē  
 .±Ū± Āēīē ē Ī±ōōĀŪ  
 ē ē.īēĀ. 620 ,, ,īī,~ññ  
 .±Ū± Āēīē.īōī NP-F100,  
 ĪēŪēĀ,Ū.±Ū± ĀēīŪ, Ī±ōōĀŪŪ  
 DVM 60  
 āēī ŌŪōī  
 ŪīĀīŪ ē~Āōīēē īōī%Āīō±Ūō Īē  
 Īēī ŌŪōī,ŌŪĀ ĀōŪōīē~Āōīō,Ō  
 Ūēō±  
 ē ēī±,±ĀĪĀ Ō ēī±%īĀēīōōŪē  
 ēī. ŌŪ .6.

## ēĀŪĀ,Ōē±%±ŪŪĀ ŌĀ Āī. Ūōī±

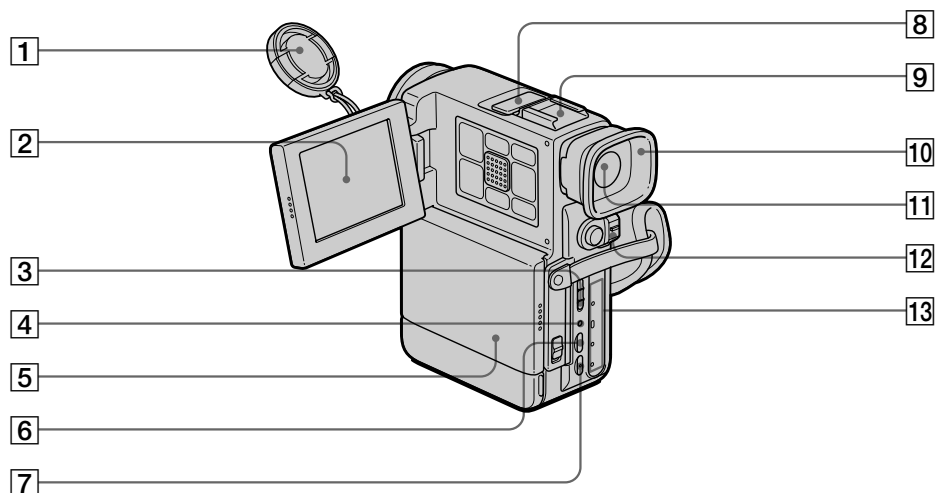
īĀ.Ō,īēñ ī ŌēŪ±īē,  
 100 - 240 Ç ŌĀ Āī. Ūōī±, 50/60 ēē  
 ēŪŪ Ā.īñĀī±ñ īō~īōōŪ,  
 25 ÇŪ  
 Çīō%īōĀ Ī±Ō ñēĀīēĀ  
 DC OUT: 8,4 Ç, 1,8 Ā , ±-ŌĀĪ  
 ĀēēīĀ  
 Çīō%ññĀ±ññē.±Ū± Āēīō,Ō  
 .īōī±: 8,4 Ç, 1,4 Ā , ĀēēīĀ  
 Ā±ñ%ē  
 ē ēīĀīĀīēĀ  
 Ā±Ū± ĀēīĀ.īōīē Sony NP-  
 F100/NP-F200, ĪēŪēĀ,Ō-ēōīō,Ō  
 Ūēō±  
 ē±.Ō~ñ ŪĀīōĀ ±ŪŪ ±  
 ēŪ 0°ē%Ō 40°ē (ŌŪ 32°F%Ō 104°F)  
 īĀīōĀ ±ŪŪ ± ī ±īĀīēñ  
 ēŪ-20°ē%Ō 60°ē (ŌŪ-4°F%Ō  
 140°F)  
 ē±ĀĪĀ ° (Ō ē.īēĀ.)  
 57 × 44 × 107 Īī (Ī,Ī,Ī)  
 ā±ōō± (Ō ē.īēĀ.)  
 190 ,,

āōīōŪ Ū~ēñ ē ŪĀīē~ĀōīēĀ  
 ī± ±īŪĀ ēōŪēīē īō,ŪŪ.Ū,  
 ēĀīĀīĀī° .ĀĀ Ū,Ā%ōīīĀīēñ.



## Identifying the parts

## εὐὸὸάιϋ,ϋìÈÄ ~ϋòÚÄÈ



1 Lens cap (p. 12)

2 LCD screen (p. 16)

3 START/STOP MODE switch (p. 18, 33)

4 CHARGE lamp (p. 7, 26)

5 Battery terminal cover (p. 10)  
Remove the cover to install the battery back.

6 AE LOCK button (p. 46)

7 FADER button (p. 34)

8 Built-in microphone

9 Accessory shoe (p. 18)

10 Eyecup (p. 20)

11 Viewfinder (p. 89)

12 POWER switch (p. 12, 21)

13 Tape transport buttons (p. 21)

- STOP (stop)
- ◀ REW (rewind)
- ▷ PLAY (playback)
- ▶▶ FF (fastforward)
- || PAUSE (pause)

1 ä ¨íϋ Ó·ÄíÚÈ,ϋ (òÚ . 12)

2 úì ϋì ÜäÑ (òÚ . 16)

3 èÄ Äíì, ϋúÄì, START/STOP MODE (òÚ . 18,33)

4 äϋìòóíϋ CHARGE (òÚ . 7, 26)

5 ä ¨íϋ .ϋúϋ ÄÈìì, íóìúϋíúó, (òÚ . 10)  
èìÈìÈúÄ í ¨íú %íñ úòúϋíó,ìÈ  
·ϋúϋ ÄÈìó,ó ·íóíϋ.

6 äìóóíϋ AE LOCK (òÚ . 46)

7 äìóóíϋ FADER (òÚ . 34)

8 ÇòÚ ÓÄìèÈ ÌÈì ÓÚòì

9 Ç°,ó% %íñ ,òòóíó,ϋúÄì,ìó,ó  
ó·ó ú%ó,ϋìÈñ (òÚ . 18)

10 éíÚíñ (òÚ . 20)

11 ÇÈ%óÈòíϋúÄì, (òÚ . 89)

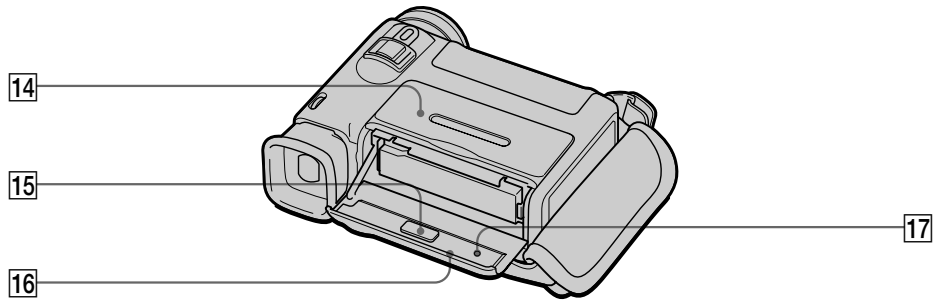
12 Ç°íì, ϋúÄì, POWER (òÚ . 12, 21)

13 äìóóíÈ òÄ ÄìÄ·ÄìÈñ ÌÄìú° (òÚ . 21)

- STOP (òòúϋíó)
- ◀ REW (òÄ Äìóúíϋ ÌÄìú°)
- ▷ PLAY (òòò ÓÈÄ,Ä%ÄìÈÄ)
- ▶▶ FF (òÄ Äìóúíϋ,òÄ Ä%)
- || PAUSE (òϋúÄì)

## Identifying the parts

## εὐρίσκειν τὰ μέρη



14 Cassette compartment (p. 11)

15 ▲ EJECT button (p. 11)

16 Cassette compartment lid (p. 11)

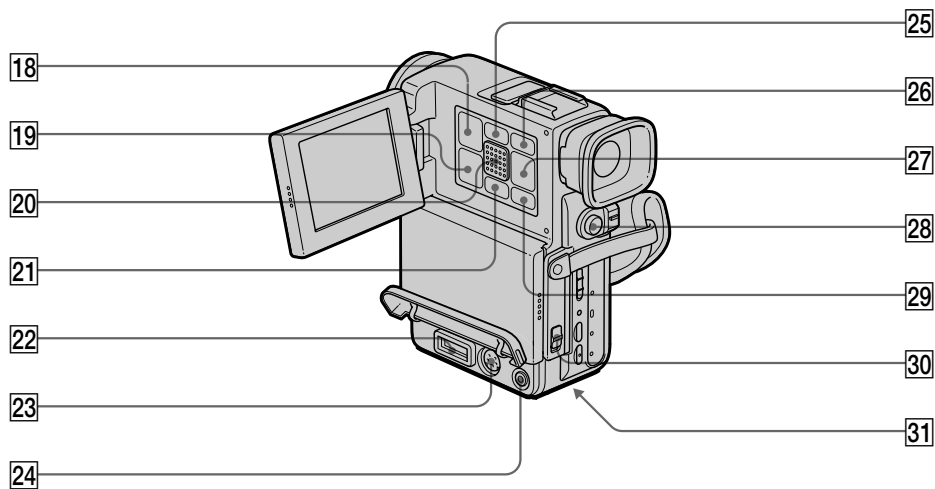
17 RESET button (p. 71)

14 ἄνοιξη ταινίας (ὄψ. 11)

15 ἀντικείμενο EJECT (ὄψ. 11)

16 ἄνοιξη κάλυψης ταινίας (ὄψ. 11)

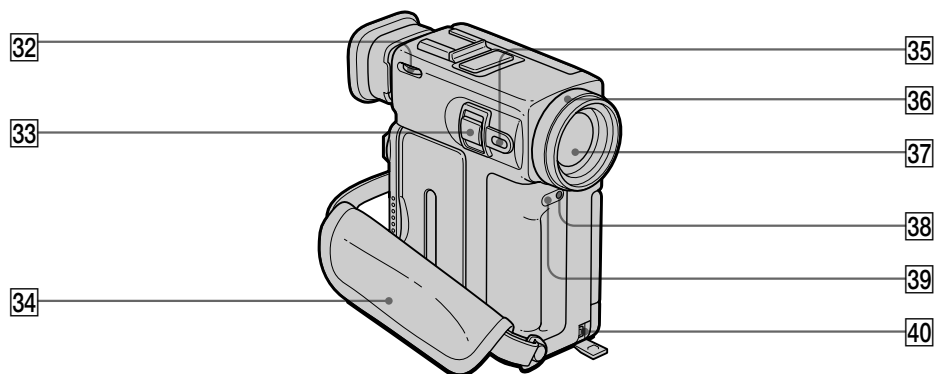
17 ἀντικείμενο RESET (ὄψ. 75)



- |  |   |
|--|---|
| <p><b>18</b> LCD BRIGHT button (p. 16, 21)</p> <p><b>19</b> VOLUME button (p. 21)</p> <p><b>20</b> Speaker</p> <p><b>21</b> DISPLAY button (p. 21)</p> <p><b>22</b> 26-pin connector (p. 25)</p> <p><b>23</b> S VIDEO jack (p. 47, 53)</p> <p><b>24</b> AUDIO VIDEO OUT/<math>\Omega</math> (headphones) jack (p. 22, 47, 53)</p> <p><b>25</b> END SEARCH button (p. 24)</p> <p><b>26</b> MENU button (p. 28)</p> <p><b>27</b> <math>\blacktriangle/\blacktriangledown</math> buttons (p. 28)</p> <p><b>28</b> START/STOP button (p. 12)</p> <p><b>29</b> EXECUTE button (p. 28)</p> <p><b>30</b> BATT(battery) LOCK/RELEASE switch (p. 10)</p> <p><b>31</b> Tripod receptacle (p. 20)</p> | <p><b>18</b> αΙΟΘΙΤ LCD BRIGHT (ΟΥ . 16, 21)</p> <p><b>19</b> αΙΟΘΙΤ VOLUME (ΟΥ . 21)</p> <p><b>20</b> Ε ΟΪΙΟ„Ο„Ο ΕΪΪΑΤ,</p> <p><b>21</b> αΙΟΘΙΤ DISPLAY (ΟΥ . 21)</p> <p><b>22</b> 26-Ϊ° ,ΙΟ,°Ε ΟΟΑ%ΕΙΕΪΑΤ, (. 25)</p> <p><b>23</b> ΕΙΑ%Ο S VIDEO (ΟΥ . 47, 53)</p> <p><b>24</b> ΕΙΑ%Ο AUDIO VIDEO OUT/<math>\Omega</math> („ΟΪΟ,Ϊ° ΪΑΪΑΪΟΪΟ,) (ΟΥ . 22, 47, 53)</p> <p><b>25</b> αΙΟΘΙΤ END SEARCH (ΟΥ . 24)</p> <p><b>26</b> αΙΟΘΙΤ MENU (ΟΥ . 28)</p> <p><b>27</b> αΙΟΘΙΕ <math>\blacktriangle/\blacktriangledown</math> (ΟΥ . 28)</p> <p><b>28</b> αΙΟΘΙΤ START/STOP (ΟΥ . 12)</p> <p><b>29</b> αΙΟΘΙΤ EXECUTE (ΟΥ . 28)</p> <p><b>30</b> εΑ ΑΪΪΪΪΪΪΪΪΪ, BATT (-ΪΪΪ ΪΕΪΟ„Ο ΪΟΪΪ) LOCK/RELEASE (ΟΥ . 10)</p> <p><b>31</b> ΝΑ ΕΪΪΑΤ, Ϊ ΑΪΟ„Ε (ΟΥ . 20)</p> |
|--|---|

## Identifying the parts

## εὐρίσκειν τὰ μέρη



**32 Viewfinder lens adjustment dial** (p. 13)

**33 Zoom switch** (p. 15)

**34 Grip strap** (p. 19)

**35 FOCUS/(INFINITY) button** (p. 43)

**36 Focus ring** (p. 43)

**37 Lens**

**38 Recording lamp** (p. 12)

**39 Remote sensor**  
Aim the Remote Commander here for remote control.

**40 DV OUT jack** (p. 52)

**32** Ἀρθρὸς ἐπιρρύθμισης φατοῦ τηλεφωτολήτης (ὄψ. 13)

**33** Ἐπιρρύθμιση ἀπομακρύνσεως (ὄψ. 15)

**34** Λαβὴ ἀπομακρύνσεως (ὄψ. 19)

**35** Βασμὸς ἐπιρρύθμισης FOCUS/(INFINITY) (ὄψ. 43)

**36** Ἐπιρρύθμιση ἀπομακρύνσεως (ὄψ. 43)

**37** Ὑπερὸ φατό

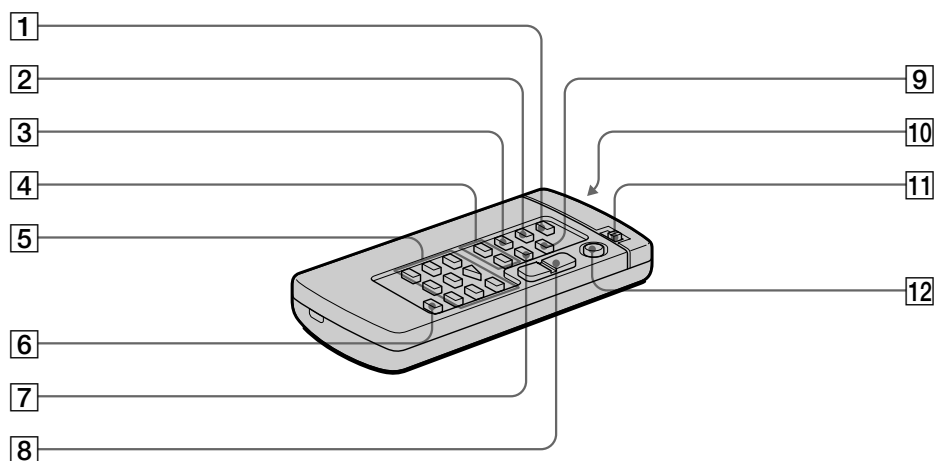
**38** Λαμπρὸν ἐπιρρύθμισης ἀπομακρύνσεως (ὄψ. 12)

**39** Ἐπιρρύθμιση ἀπομακρύνσεως  
Ἄψ. ἔξω ἀπομακρύνσεως ὄψ. ἔξω ἀπομακρύνσεως  
ὄψ. ἔξω ἀπομακρύνσεως ὄψ. ἔξω ἀπομακρύνσεως

**40** Ἐπιρρύθμιση DV OUT (ὄψ. 52)

## Remote Commander

The buttons that have the same name on the Remote Commander as on the camcorder function identically.



- 1 PHOTO button (p. 36)
- 2 DISPLAY button (p. 21)
- 3 SEARCH MODE button (p. 51)
- 4 ◀▶ buttons (p. 51)
- 5 Tape transport buttons (p. 21)
- 6 AUDIO DUB button (p.56)
- 7 DATA CODE button (p. 49)
- 8 Power zoom button (p. 15)
- 9 ZERO SET MEMORY button (p. 50)
- 10 Transmitter  
Point toward the remote sensor to control the camcorder after turning on the camcorder.
- 11 VTR4/ID/VTR2 selector (p. 87)  
Select VTR4 or ID, the same setting as COMMANDER in the menu system. Select VTR2 when using with 8mm camcorder.
- 12 START/STOP button (p. 12)

## Remote Commander

The buttons that have the same name on the Remote Commander as on the camcorder function identically.

- 1 àìÓÔí± PHOTO (ÒÚ . 36)
- 2 àìÓÔí± DISPLAY (ÒÚ . 21)
- 3 àìÓÔí± SEARCH MODE (ÒÚ . 51)
- 4 àìÓÔí± ◀▶ (ÒÚ . 51)
- 5 àìÓÔí± ÔÂ ÂÎÂ~ÂÎËñ ÎÂÛ° (ÒÚ . 21)
- 6 àìÓÔí± AUDIO DUB (ÒÚ . 56)
- 7 àìÓÔí± DATA CODE (ÒÚ . 49)
- 8 àìÓÔí± Ô Ë,Ó%ò,Ó Ú ±ìÒÚÓí±ÚÓ ± (ÒÚ .15)
- 9 àìÓÔí± ZERO SET MEMORY (ÒÚ . 50)
- 10 èÂ Â%±Ú~Ëí  
Ç±ÂÎ ÚÂ , ìò ±,ÎÂËË %ÈÒÚ±ìÈÒìì,,Ó  
%±Ú~Ëí ±%ñ ÚÓ ±,ÎÂËñ,Ë%ÂÓí±Â ÒÈ  
ÒÓÒÎÂ ÂÂ ,í,~ÂËñ.
- 11 èÂÎÂÛÓ VTR4/ID/VTR2 (ÒÚ . 87)  
Ç±Â ÈÚÂ ÚÒÚ±ìÓ,ÍÚ VTR4 ÈË ID  
Ó%Èì±íÓ,Ú Ò ÚÒÚ±ìÓ,íÓÈ COMMANDER ,  
ÒÈÒÚÂÎÂ ÎÂÛ . Ç±Â ÈÚÂ VTR2 ,Ó , Âññ  
ÈÒÒÓÍ,ÁÓ,±Ëñ Ò 8ñ,Ë%ÂÓí±Â ÒÈ.
- 12 àìÓÔí± START/STOP (ÒÚ . 12)

## Identifying the Parts

## εἰσαγωγή τριών μπαταριών

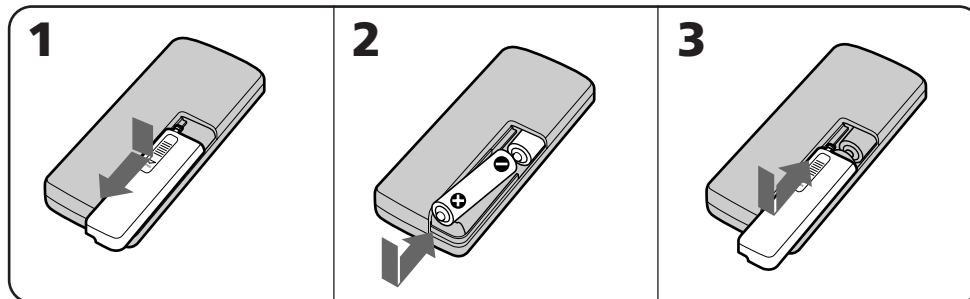
### To prepare the Remote Commander

To use the Remote Commander, you must insert two R6 (size AA) batteries. Use the supplied R6 (size AA) batteries.

- (1) Remove the battery cover from the Remote Commander.
- (2) Insert both of the R6 (size AA) batteries with correct polarity.
- (3) Put the battery cover back onto the Remote Commander.

Νίπτε ὁ ὀπίσθιο καπάκι τῆς ἑξωτερικῆς μπαταρίας τοῦ τηλεκατευθυντή. Χρησιμοποιήστε τὴν ἑξωτερικῆς μπαταρίας τοῦ τηλεκατευθυντή (R6 (size AA)).

- (1) Αἰσθητὴ ἀφαιρέστε τὸ καπάκι τῆς ἑξωτερικῆς μπαταρίας τοῦ τηλεκατευθυντή.
- (2) Ἐισάγετε ἀμφότερες τὴν R6 (size AA) μπαταρίες μετὰ τὴν ὀρθὴ πόλωση.
- (3) Ἐπιστρεψτε τὸ καπάκι τῆς ἑξωτερικῆς μπαταρίας τοῦ τηλεκατευθυντή.



### Note on battery life

The batteries for the Remote Commander last about 6 months under normal operation. When the batteries become weak or dead, the Remote Commander does not work.

### To avoid damage from possible battery leakage

Remove the batteries when you will not use the Remote Commander for a long time.

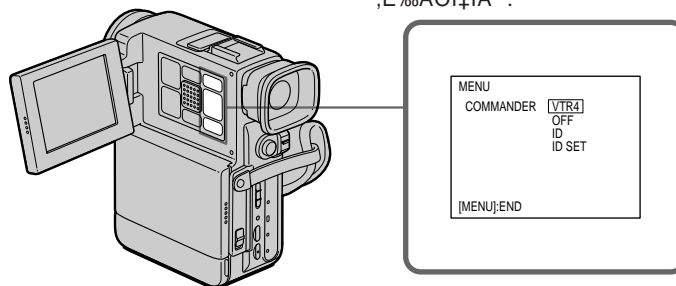
### To use the Remote Commander

Make sure that the COMMANDER is set to VTR4 or ID in the menu system on the camcorder.

ὁ χρόνος ζωῆς τῆς μπαταρίας τοῦ τηλεκατευθυντή εἶναι περίπου 6 ἔτη ὑποθέτοντας κανονικὴ λειτουργία. ὅταν τὰς μπαταρίες γίνουν ἀνεπαρκεῖς ἢ ἀνεπαρκεῖς, τὸ τηλεκατευθυντὴ δὲν λειτουργεῖ.

Γιὰ νὰ ἀποφύγετε τὴν πιθανὴ βλάβη ἀπὸ τὴν διαρροὴ τῆς μπαταρίας, ἀφαιρέστε τὴν μπαταρία τοῦ τηλεκατευθυντή ὅταν δὲν χρησιμοποιεῖτε τὸν τηλεκατευθυντὴ γιατὴν ἄνευ χρόνου.

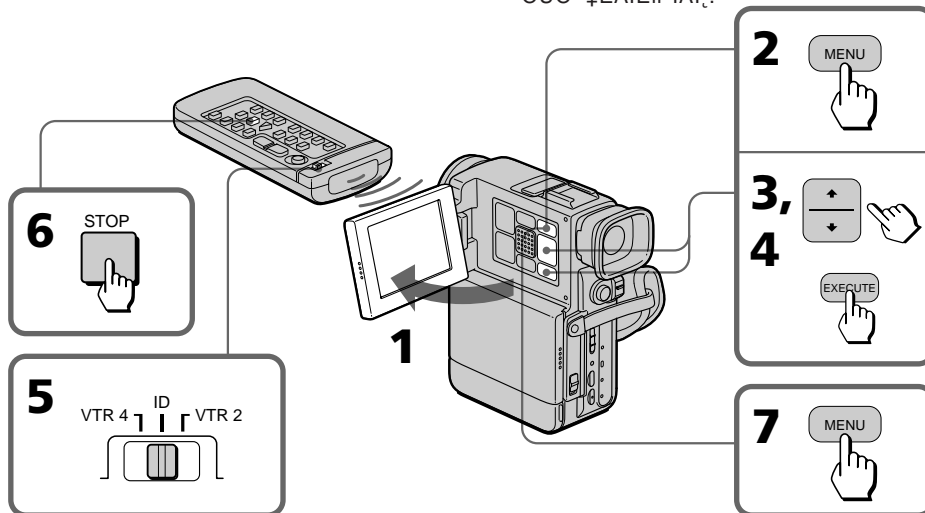
Νίπτε τὸ ὀπίσθιο καπάκι τῆς ἑξωτερικῆς μπαταρίας τοῦ τηλεκατευθυντή. Ἐπιβεβαιώστε ὅτι τὸ τηλεκατευθυντὴ εἶναι ἑπιλεγμένο VTR4 ἢ ID στὸ μενού τοῦ συστήματος τοῦ βινταγιῆ. ὅταν ἔχετε ἀφαιρέσει τὴν μπαταρία τοῦ τηλεκατευθυντή, ἀφαιρέστε τὸ καπάκι τῆς ἑξωτερικῆς μπαταρίας τοῦ βινταγιῆ.



## About the ID of the Remote Commander

You can avoid misoperation from other remote commanders by setting the VTR4/ID/VTR2 selector to ID. Use the supplied Remote Commander when you set the selector to ID. When you use the Remote Commander for the first time, register the ID following the procedure below. Once you register the ID, you do not need to do again.

- (1) Open the LCD panel.
- (2) Press MENU to display the menu on the LCD screen.
- (3) Press  $\blacktriangle$  or  $\blacktriangledown$  to select COMMANDER, then press EXECUTE.
- (4) Press  $\blacktriangledown$  to select ID SET.
- (5) Set the VTR4/ID/VTR2 selector on the Remote Commander to ID.
- (6) Point the Remote Commander at the camcorder and press  $\blacksquare$  STOP on the Remote Commander.  
After the beep sound, the ID of the Remote Commander is registered, and the COMMANDER is set to ID in the menu system.
- (7) Press MENU to erase the menu display.



**When the BEEP is set to OFF in the menu system**

The beep does not sound at step 6.

## é· È%ÀÌÙÈÙÈÌ±`ÈÈ ÔÙÌ Ú± %ÈÒÙ±ÈÈÒÌÒ,,Ó ÙÔ ±,ÌÀÌÈfl

- (1) éÙÌ Ú %ÈÒÙ±ÈÈÒÌÒ,,Ó ÙÔ ±,ÌÀÌÈfl ÔÙÙÀÌ ÙÔÙ±ÌÒ,ÌÈ ÔÀÌÀÌÙÔ ± VTR4/ID/VTR2, ÔÓÌÒÈÀÌÈÀ ID. àÒÒÒÌ,ÀÙÈÙÀ Ô ÈÌ±,±ÀÌÈ È ÔÙÌ, Ù %ÈÒÙ±ÈÈÒÌÒ,,Ó ÙÔ ±,ÌÀÌÈfl ÔÓÒÌÀ ÙÔÙÌÒ,ÌÈ ÔÀÌÀÌÙÔ ±, ÔÓÌÒÈÀÌÈÀ ID. àÒ,,%± Ç· Ù%ÀÙÀ ÈÒÒÒÌ,ÁÓ,±Ù, ÔÙÌ Ù %ÈÒÙ±ÈÈÒÌÒ,,Ó ÙÔ ±,ÌÀÌÈfl, ÔÀ, È ±À,±À,ÈÒÙ È ÙÈÙÀ ID ÔÌÈÈeÒÌÀ%Ù,`ÀÈ Ô Ó`À%Ù À,èÒÒÌÀ À,ÈÒÙ ±ÈÈ ID Ç±ÌÀ ÌÙÈÌÒ· Ù%ÀÙ %ÀÌ±Ù, ÙÔ ÔÌÒ,±.
- (2) Ç±ÈÌÈÙÀ MENU %Ìfl ÔÙÓ. ±ÈÀÌÈfl ÌÀÌ, Ì± `Ì ±ÌÀ ÙàÑ.
- (3) Ç±ÈÌÈÙÀ  $\blacktriangle$  ÈÌÈ  $\blacktriangledown$  %Ìfl, °Ó ± COMMANDER, ± À±ÙÀÌ Ì±ÈÌÈÙÀ EXECUTE.
- (4) Ç±ÈÌÈÙÀ  $\blacktriangledown$  ID SET.
- (5) ÌÙÙ±ÌÒ,ÈÙÀ ÔÀÌÀÌÙÔ VTR4/ID/VTR2 Ì± ÔÙÌ ÙÀ %ÈÒÙ±ÈÈÒÌÒ,,Ó ÙÔ ±,ÌÀÌÈfl, ÔÓÌÒÈÀÌÈÀ ID.
- (6) Ç±Ô ±, ÙÀ ÔÙÌ, Ù %ÈÒÙ±ÈÈÒÌÒ,,Ó ÙÔ ±,ÌÀÌÈfl Ì± È%ÀÒÌ±ÌÀ Ù È Ì±ÈÌÈÙÀ  $\blacksquare$  STOP Ì± ÔÙÌ ÙÀ %ÈÒÙ±ÈÈÒÌÒ,,Ó ÙÔ ±,ÌÀÌÈfl, èÒÒÌÀ ÀÙÌÀ ÌÒ,,Ó À,ÙÌÒ,Ó, Ô ÔÈÌ±Ì± ID (È%ÀÌÙÈÙÈÌ±Èfl) Ôyl, Ù± %ÈÒÙ±ÈÈÒÌÒ,,Ó ÙÔ ±,ÌÀÌÈfl· Ù%ÀÙÀ ± À,ÈÒÙ È Ô,±Ì± È COMMANDER ÙÔÙ±Ì±,ÌÈ,±ÀÙÔfl Ì± ID, ÔÈÒÙÀÌÀ ÌÀÌ.
- (7) Ç±ÈÌÈÙÀ MENU %Ìfl ÔÙÈÈ ±ÈÈfl ÔÙÓ. ±ÈÀÌÈfl ÌÀÌ.

## Identifying the parts

## εἰδὼς τὰ μέρη ~ τὸ ὄνομα

### Remote control direction

Aim the Remote Commander to the remote sensor.

The operative range of the Remote Commander is about 5 m (16.4 feet) indoors. Depending on the angle, Remote Commander may not activate the camcorder.

### Notes on the Remote Commander

- Keep the remote sensor away from strong light sources such as direct sunlight or illumination. Otherwise, the remote control may not be effective.
- Be sure that there is no obstacle between the remote sensor on the camcorder and the Remote Commander.
- This camcorder works at commander mode VTR4 or ID. The commander modes (VTR4 or ID) are used to distinguish this camcorder from other Sony VCRs to avoid remote control misoperation. If you use another Sony VCR at commander mode ID, we recommend you change the commander mode or cover the remote sensor of the VCR with black paper.
- You do not need to register the ID again once you have done so. Set the COMMANDER to ID in the menu system, and set the VTR4/ID/VTR2 selector ID on the Remote Commander to ID.
- The registered ID is not erased even if the built-in rechargeable vanadium-lithium battery gets discharged.

ç±ò ±,íàìèâ òúí,ú± %εἰδὼς τὸ ὄνομα, ὄ  
ύό ±,íàìèñ  
ç±·áí,úá òúí,ú %εἰδὼς τὸ ὄνομα, ὄ ύό ±,íàìèñ  
í± %εἰδὼς τὸ ὄνομα, ὄ %±ú·éí.  
ê±·ó·éé %εἰδὼς τὸ ὄνομα, ὄ ύό ±,íàìèñ, ὄ  
ύό ±,íàìèñ ὀόόύ±,íñáú ὀ é·íéáéúáí, íó 5 í,  
ὀόíá·áíèé. ç·á±,éóéíóóúé ὀú,í± ὀúí,ú  
%εἰδὼς τὸ ὄνομα, ὄ ύό ±,íàìèñ íóéáú íá  
ύό ±,íñú, ,é%áóí±íá ὀé.

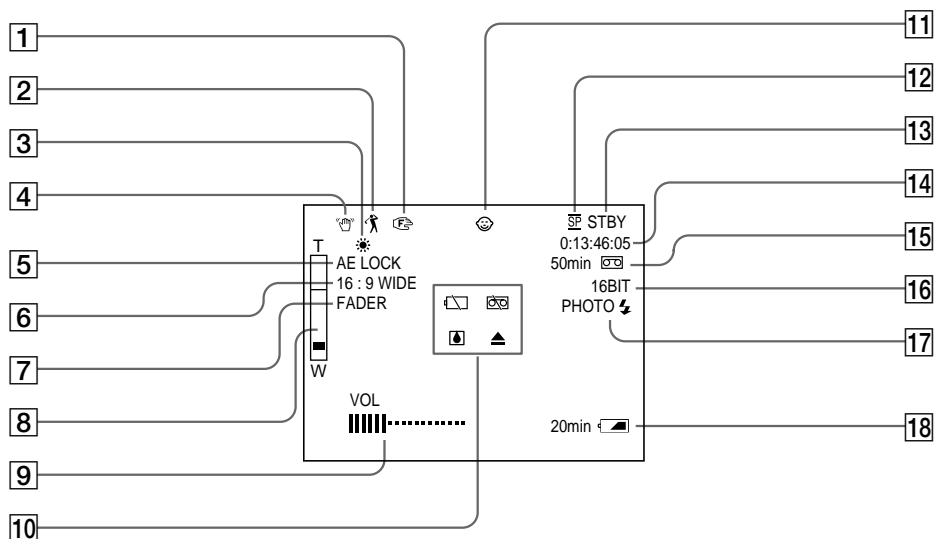
è éíá·±íéá í ὀúí,úú %εἰδὼς τὸ ὄνομα, ὄ  
ύό ±,íàìèñ

- í ±íéúá %εἰδὼς τὸ ὄνομα, ὄ %±ú·éí ὀό%±í,·á  
ὀú ὀéí,í·í éóúó·íéíó, ὀ·áú±, í±í  
í±ὀ éíá, ὀ ñí·á ὀόíá·í·á íú·é éíé  
éíí íéí±·éñ. ç ὀ ὀúé,íóí ὀíú·±á  
%εἰδὼς τὸ ὄνομα, ὄ ύό ±,íàìèñ íóéáú ··ú,  
íá·úúáíúé,íó.
- í·á%éúáò,·úó íáé%ú %εἰδὼς τὸ ὄνομα, ὄ  
%±ú·éíóí í±,·é%áóí±íá á é ὀúí,úóí  
%εἰδὼς τὸ ὄνομα, ὄ ύό ±,íàìèñ íáú  
ὀ·áóñíúóúéñ.
- ç·é%áóí±íá ± ±·óú±áú, áééíá ὀúí,ú±  
%εἰδὼς τὸ ὄνομα, ὄ ύό ±,íàìèñ VTR4 éíé ID.  
êáééí· ὀúí,ú± %εἰδὼς τὸ ὄνομα, ὄ  
ύό ±,íàìèñ (VTR4 éíé ID) éòóóí,áú,úóñ  
%óñ ὀóóáí±,±íéñ %±ííó, ὄ ὀúí,ú± ὀú%ú,éí  
áçá Sony, ὄ éá·áé±íéá íáó ±,éí,íóé  
±·óú· ὀ é %εἰδὼς τὸ ὄνομα, ὄ ύό ±,íàìèñ.  
ὀóíé ç· éòóóí,áúáúá %ú, ὀé áçá Sony,  
áééíá %εἰδὼς τὸ ὄνομα, ὄ ύό ±,íàìèñ ID, í·  
áíóíáí%úáí,·úó· ç· éáíáíéíé áééí  
%εἰδὼς τὸ ὄνομα, ὄ ύό ±,íàìèñ éíé á±í·íé  
%εἰδὼς τὸ ὄνομα, ὄ %±ú·éí áçá·á íóé  
·úí±, ὀé.
- ç±ííá ú·á·úáúòñ á,·éòú é ὀ,±ú, ID çíó,±  
ὀóóíá úó, ὄ, í±íç· ὀ%áí±áúá·úó ὀ%éí ±á.  
íóú±íó,éúá COMMANDER í± ID, ὀéóúáíá  
íáí, é úóú±íó,éúá ὀáíáíúó VTR4/ID/VTR2  
í± ὀúí,úá %εἰδὼς τὸ ὄνομα, ὄ ύό ±,íàìèñ,  
ὀóíóéáíéá ID.
- á± á,·éóú é ὀ,±ííñ é%áíúéúéí±·éñ ID íá  
ὀúé ±áúóñ,%±éááóíé,ὀú ὀáíí±ñ  
±,í±%éá,ὀ·íéúéá,±ñ·±ú± áéí± ±á ñ%éúóñ.



## Operation indicators

Επιπέδο λειτουργίας



Additional Information / Νοοδιεταίτην ΕΙΔΟΤΗΤΗ

- 1 Manual focus/Infinity indicator (p. 43)
- 2 PROGRAM AE indicator (p. 40)
- 3 White balance indicator (p. 44)
- 4 SteadyShot indicator (p. 38)
- 5 AE LOCK indicator (p. 46)
- 6 16:9 WIDE indicator (p. 35)
- 7 FADER indicator (p. 34)
- 8 Zoom indicator (p. 15)
- 9 BRT (bright) indicator (p. 16)/VOL (volume) indicator (p. 21)
- 10 Warning indicator (p. 91)
- 11 Mirror mode indicator (p. 32)

- 1 àì%ÉíτÚÓ ÙíÓÈ ÙÓÍÚÓ Ó,íË/·ÁÓíÁîíÓÓÚË (ÓÚ . 43)
- 2 àì%ÉíτÚÓ PROGRAMAE (ÓÚ . 40)
- 3 àì%ÉíτÚÓ ·τíτíÒτ·ÁíÓ,,Ó (ÓÚ . 44)
- 4 àì%ÉíτÚÓ ÙÓÓÓÈ·Ë,ÓÈ Ò·ÁíË (ÓÚ . 38)
- 5 àì%ÉíτÚÓ AE LOCK (ÓÚ . 46)
- 6 àì%ÉíτÚÓ 16:9 WIDE (ÓÚ . 35)
- 7 àì%ÉíτÚÓ FADER (ÓÚ . 34)
- 8 àì%ÉíτÚÓ Ù τíÒÓíτ·ËË (ÓÚ . 15)
- 9 àì%ÉíτÚÓ BRT (τí ÍÓÓÚË) (ÓÚ . 16) / àì%ÉíτÚÓ VOL (,, ÓííÓÓÚË) (ÓÚ . 21)
- 10 è Â%ÚÓ ÂË%τ·ËË Èì%ÉíτÚÓ (ÓÚ . 91)
- 11 àì%ÉíτÚÓ ÁÁ íτí,ìÓ,,Ó ÂËËτ (ÓÚ . 32)

Continued to the next page

è Ó%ÓíËτ·ÁÚÒτíτ·ÒíÂ%Ú·ËË ÒÚ τíË·Á

89

## Identifying the parts

## εἰδωλὸν, ἡλῆξ ἰδῶν

12 Recording mode indicator (p. 14)

12 ἡλῆξ ἰδῶν ἡλῆξ ἰδῶν (ὄν . 14)

13 Recording standby mode indicator (p. 12)/  
Tape transport mode indicator

13 ἡλῆξ ἰδῶν ἡλῆξ ἰδῶν, ἰδῶν ἰδῶν (ὄν . 12) /  
ἡλῆξ ἰδῶν ἡλῆξ ἰδῶν ἰδῶν ἰδῶν ἰδῶν

14 Time code indicator (p. 14)

14 ἡλῆξ ἰδῶν, ἡλῆξ ἰδῶν, ἰδῶν (ὄν . 14)

15 Remaining tape indicator (p. 14)

15 ἡλῆξ ἰδῶν ἰδῶν, ἡλῆξ ἰδῶν (ὄν . 14)

16 Audio mode indicator (p. 60)

16 ἡλῆξ ἰδῶν ἡλῆξ ἰδῶν, ἰδῶν (ὄν . 60)

17 Photo recording indicator (p. 36)/Electronic  
flash indicator

17 ἡλῆξ ἰδῶν ἡλῆξ ἰδῶν, ἡλῆξ ἰδῶν (ὄν . 36) /  
ἡλῆξ ἰδῶν ἡλῆξ ἰδῶν ἡλῆξ ἰδῶν

18 Remaining battery indicator (p. 63)/  
Remaining time in minutes indicator

18 ἡλῆξ ἰδῶν ἰδῶν, ἡλῆξ ἰδῶν ἡλῆξ ἰδῶν  
ἡλῆξ ἰδῶν, ἡλῆξ ἰδῶν (ὄν . 63) / ἡλῆξ ἰδῶν  
ἡλῆξ ἰδῶν, ἡλῆξ ἰδῶν, ἡλῆξ ἰδῶν, ἡλῆξ ἰδῶν

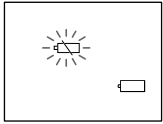
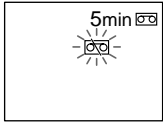
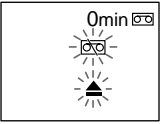
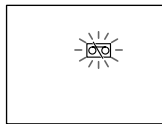
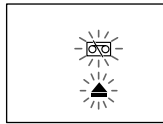

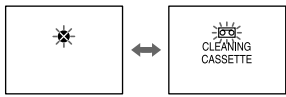
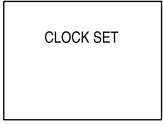
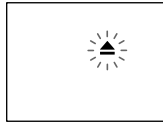



# Warning indicators


If indicators flash on the LCD screen or in the viewfinder or warning messages appear on the display window, check the following:

♪ : you can hear the beep sound when BEEP is set to ON in the menu system.

ÖÖİÈ Èì%Èì±ÙÓ ° İÈ,± Ú İ± ı̇ İİÄ ÜaÑ  
 ÈİÈ,È%ÖÈİİ±ÙÄİÄÈİÈ Ö Ä%ÜÖ ÄÈ%±,ÈÄ  
 ÖÖÖ,ÄİÈİİ ÖÖİİİİ ÜÖİİ, ÖİÖ-İÄ %ÖÖİİÄİİ, ÜÖ  
 Ö ÖÄ, ÜÄÖİÄ%Ü, ÄÄ:  
 ♪ :Ç İÖÈÄÜÄ Öİ-±Ü, ÄÜİİÄ İ-È  
 Ä,ÜİÖ,ÖÈ ÖÈ,İİ, İÖ,%± ÜÜİİÈİİ BEEP  
 ÜÖÜ±İÖ,İÄİ± İ± ON, ÖÈÖÜÄİÄ İÄİ.

<p>1</p> 	<p>2</p> 	<p>3</p> 
<p>4</p> 	<p>5</p> 	<p>6</p> 
<p>7</p> 	<p>8</p> 	<p>9</p> 

- 1 **The battery is weak or dead.**  
 Slow flashing: The battery is weak.  
 Fast flashing: The battery is dead.  
 Depending on conditions, the  indicator may flash, even if there are 5 to 10 minutes remaining.
- 2 **The tape is near the end.**  
 The flashing is slow.
- 3 **The tape has run out.**  
 The flashing becomes rapid.
- 4 **No tape has been inserted.**
- 5 **The tab on the tape is out (red).**
- 6 **Moisture condensation has occurred.** (p. 66)
- 7 **The video heads may be contaminated.** (p. 67)
- 8 **The clock is not set.**  
 If the clock is not set when you press START/STOP button in the CAMERA mode, the message appears for 5 seconds.
- 9 **Some other trouble has occurred.**  
 Disconnect the power source and contact your Sony dealer or local authorized facility.

- 1 Ä±Ü± ÄÈİÈÈ İÖİ Öİ±È ÈİÈ ÖÖİİÖÖÜ, ±Ä İÈÄİİÈ. äÄ%İÄİİÖÄ İÈ,±İÈÄ: Ä±Ü± ÄÈİÈÈ İÖİ Öİ±ÈÈ. ÄÖÜ ÖÄ İÈ,±İÈÄ: Ä±Ü± ÄÈİÈÈ İÖİ ÖÖİİÖÖÜ, ±Ä İÈÄİİÈ. ÇÄ±ÈÖÈİÖÖÜÈÖÜÖİÖÈÈÈİ%Èİ±ÙÓ  İÖÈÄÜ İÈ,±Ü, %±ÈÄ ÄÖİÈ ÄÄ ÖÖÜ±İÖÖ, 5 ÈİÈ 10 İÈİÜÜ.
- 2 äÄİÜ± Ö ÈÈÈÈ±ÄÜÖİİ İ İÖİÜ. äÄ%İÄİİÖÄ İÈ,±İÈÄ.
- 3 äÄİÜ± Ä±İÖİÈİ±Ö. äÈ,±İÈÄ ÖÜ±İÖ,ÈÜÖİİ .ÖÜ İ.
- 4 äÄİÜ± İÄ, ÖÜ±,İÄİ±.
- 5 ç± İ±ÖÖÄÜÄ İÄÜ İÄÖÄÖÜİ± (İ ±Öİ±İİ İÄÜİ±).
- 6 è ÖÈÄÖ İ± İÖİ%ÄİÖ±Èİİ,İ±È. (ÖÜ . 66)
- 7 ÇÈ%ÄÖ,ÖİÖ,İÈ,ÖÄİÖÈİÖ Ä±, İÄİÄİ. (ÖÜ 67)
- 8 ó±Ö İÄ ÜÖÜ±İÖ,İÄİ. ÖÖİÈ ±Ö İÄ ÜÖÜ±İÖ,İÄİ, İÖ,%± Ç İ±ÈÈİ±ÄÜÄ İİÖÖİÜ START/STOP, ÄÈÈİÄ CAMERA, ÖÖÖ.ÄİÈÄ, ÖÄÈÈ,±ÄÜÖİİ, ÜÄÄİÈÄ5ÖÄİÜ%.
- 9 äİÄÄÜÖİİ İ±İ±İİÈÈ Ö % Ü,±İİ Ö ÖİÄİ±. èÜÖÖÄ%ÈİÈÜÄÈÖÜÖİÈİÖÈÜ±İÈÈÈ Ö İÈÈÜÄÖ, Ö Ç±Èİ %ÈİÄ Öİ Sony ÈİÈ İÄÖÜİ İ ÜÖÖİİÖİÖÄİİ İ Ö Ä%Ö ÈİÜÈÄİ.

Additional Information / NOÖÖİİÈÜÄİ İ±İİ ÈİÜÖ İ±Èİİ

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