



# Digital Video Camera Recorder

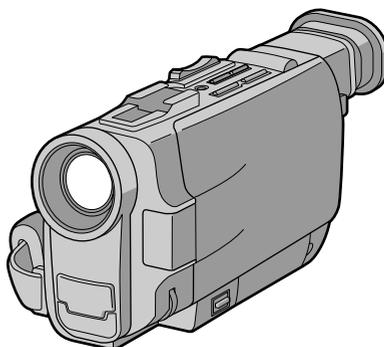
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## Operating Instructions

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

àìòú ûí^ëñîó "íòòîû†ú†^ëë

è òòëì ç+ò , ìëì+úâî , îó óâì+íóìëú , òñ ò ì+òúóñ^âë  
 ëìòú ûí^ëâë óâ â% î+~+íóì óóì , áó , †ìëñ †òò+ †úóì ë  
 óóì †ìñú , ââ %ñî òò † , óí , %+î , ìâë^âì .



**DCR-TRV7E**

Mini **DV** Digital  
Video  
Cassette

**Handycam Vision**<sup>™</sup>

**CII** Cassette  
Memory

# Welcome!

# è È, ÂÛÒÚ, ÛÂÏ Ç†Ò!

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.

è ÈËËÛÁ Ì†-È ÓÓÁ% †, ÌÂÏËÏ Ò  
Ò ÈÓ. ÂÛÂÏËÂÏ, È%ÁÓÍ†ÏÂ \* Sony Handycam  
Vision™. ùÛ† Í†ÏÂ † ÓÓÁ, ÓÏËÛ Ç†Ï  
Á†ÔÁ~†ÛÏÁ, †Û. ÌÂÓÓ, ÛÓ ÈÏ \* Á Ï,, ÌÓ, ÂÏËÏ  
ÈÈÂÏÈ, Â†ÒÈÒÏ, ÓÛÏÈ~†, ~ÈÏÒÏ, \*ÒÓ~†È-ÈÏ  
Ï†~ÂÓÛ, ÓÏ ÈÁÓ. †ÈÂÏËÏ È Á, ÛÏ†.  
ÇÈ%ÁÓÍ†ÏÂ † Handycam Vision Ó·Ó Û%Ó, †Ï†  
ÏÏÒÈÁÓÛ, ÓÏ Ò†Ï·Ï ÓÓ, ÁÏÂÏÏ·Ï ÛÛÏÏ^ÈÈ È  
, ÌÂÓÛÁ Ò ÕÂÏ Ó~ÂÏ, Ò ÓÓÛ†, Ó· †~ÂÏÈÈ.  
èÏÓ Ó Û Ç†Ò ÓÓÏ, ÏÛÓÏ ÓÓ·ÓÛ, ÂÏÏ·Â  
, È%ÁÓÛÈÏ, Ï·, ÏÓÓÓ \* Á ÒÏÓ,, ÛÛ %ÒÓÛ†, ÏÏÛ,  
Ç†Ï †%ÓÓÛ, %ÓÏ,, ÈÁ ,, Ó%·.

**WARNING**

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet.  
Refer servicing to qualified personnel only.

è Â%ÓÓÛÂ ÂÈÂÏÈÂ

ÇÓ ÈÁ·ÂÈ†ÏÈÂ ÓÓÈ† † ÈÏÈ ÓÓ †ÈÂÏËÏ  
~ÏÂÏÛ È~ÂÓÏÈÏ ÛÓÏÓÏ ÌÂ %ÓÓÛÓÏ†ÈÛÁ  
ÓÓÓ†%†ÏËÏ †ÒÓ† †Û† ÓÓ% %ÓÈ%, È·Â Â,, ÈÛÁ  
Â,, ÓÓÛÒ· ÓÓÛÈ.

ÇÓ ÈÁ·ÂÈ†ÏÈÂ ÓÓ †ÈÂÏËÏ ~ÏÂÏÛ È~ÂÓÏÈÏ  
ÛÓÏÓÏ ÌÂ, ÒÏ·, †ÈÛÁ ÏÓ ÒÛÒ †ÒÓ† †Û†.  
ÏÁÏÏÈ~ÂÓÏÓÁ Ó·ÒÏÛÈÈ, †ÏÈÁ %ÓÏÈÏÓ  
Ò ÓÈÁ, Ó%ÈÛ,, ÒÏ ÛÓÏ, ÏÓ ÓÓÁ^È†ÏÈÛÛ†ÏÈ.

## NOTICE ON THE SUPPLIED AC POWER ADAPTOR FOR CUSTOMERS IN THE UNITED KINGDOM

A moulded plug complying with BS1363 is fitted to this equipment for your safety and convenience.



Should the fuse in the plug supplied need to be replaced, a 5 AMP fuse approved by ASTA or BSI to BS1362 (i.e., marked with 2 or @ mark) must be used.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

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## Before you begin

# Using this manual

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 Cassette Memory

This camcorder is based on the DV format. You can only use mini DV cassettes with this camcorder. We recommend you to use a tape with cassette memory **CIII**.

The functions which depend on whether the tape has the cassette memory or not are:

- End Search (p. 22)
- Date Search (p. 52)
- Photo Search (p. 58).

The functions you can operate only with the cassette memory are:

- Title Search (p. 56)
- Superimposing Titles (p. 68)
- Making a custom title (p. 72)
- Labeling a cassette (p. 74)

For details, see page 76.

## Note on TV colour systems

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

## Precaution on copyright

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

è ÂÊË, Ò, Ó

ä†í ÒÓÎ, ÁÓ, †Ú, òfl ÈÌÒÚ ÛÍ^ÈÈ

ÇÓ, ÒÄÍ ÚÁÍÓÚÁ%+ÌÌÒÈ ÈÌÒÚ ÛÍ^ÈÈ Ì+Á, †ÌÈÌ  
 ÍÌÒÓÍ È ÂÈÈÌÓ, †.ÓÚ, ÈÈÁÓÍ+ÌÁ  
 , %ÁÍÁÌ^ Á†, †, Ì^ÈÈ.ÚÍ, †ÈÈ, Ì+Ò ÈÍÁ :  
 "ÌÒÚ+ÌÓ, ÈÚÁ ÒÁ ÁÍÍ.~+ÚÁÍ, POWER,  
 ÓÓÍÒÈÁÌÈÁ CAMERA".  
 áì†^ÓÍ † Ì+ ÈÍÍ.ÓÚ †^ÈÈ ÒÁÍ†+ÁÚ, ~ÓÚ  
 , Ó% ÓÓÓÚ, ÁÚÓÚ, Ò. ^ÀÈ ÍÓÍ+Ì%  
 ÓÓ%Ú, Á ÈÈ+ÁÚÒÈÌÁ, ÚÍÓ, ^ÍÒÈ, Ì+ÍÓÍ (.ÈÒÁ ) .

é, ÈÈÁÓÍ+ÒÒÁÚ† Ì Ò Ò†ÍÍÚ, .

Ç Ç† ^ÀÈ, ÈÈÁÓÍ+ÌÁ Á ÈÒÓÍ, ÁÚÁÚÒÈ ÒÒ Ì+Ú  
 DV. ÑÍÈ ÌÁÁ ÓÓ%ÌÓ%ÍÚ ÓÓÍ, ÍÓ ÈÈÈÈ-  
 , ÈÈÁÓÍ+ÒÒÁÚ^ ÒÒ Ì+Ú+ DV. ÈÁÍÓÍÁÌ%ÚÁÍ  
 Ç+Í ÈÒÓÍ, ÁÓ, †Ú, ÚÁ ÈÁ ÌÈÌ, ÍÓÓÚ ^Á  
 ÓÓÍ†^ÁÌ^ ÓÒ.ÓÚ, ÁÌÌÒÈ ^ÍÁÍÚ ÒÌÌÒÈ Ò+ÍÍÚ, .  
**CIII**

éÚ Ì+ÈÈ^ÈÈ Ò Ì+ÒÒÁÚ^ ÓÒ.ÓÚ, ÁÌÌÒÈ Ò+ÍÍÚÈ  
 Á†, ÈÒÈÚ †.ÓÚ† ÒÍÁ%Ú, ^ÈÌ ÒÙÍÍ^ÈÈ:

- èÒÈÓÍ ÓÍÓÍ^+ÈÈÈÁ+ÒÈÒÈ (ÓÚ . 22)
- èÒÈÓÍ ÓÓ%+ÚÁ (ÓÚ . 52)
- ÍÓÓÓÓÈÒÍ (ÓÚ . 58)

Ç+ÈÈ^ÈÁ Ò Ì+ÒÒÁÚ^ ÓÒ.ÓÚ, ÁÌÌÒÈ Ò+ÍÍÚÈÈ  
 Ò.ÍÁ+ÚÁÍ†, ÍÓ ÈÈÈÈ ÈÒÓÍ, ÁÓ, †ÈÈÈ ÒÍÁ%Ú, ^ÈÌ  
 ÒÙÍÍ^ÈÈ:

- èÒÈÓÍ ÓÓÚÈÚ †Í (ÓÚ . 56)
  - Ç+ÍÓÈÁÌÈÁ ÚÈÚ Ó, (ÓÚ . 68)
  - Ç, Ó% †, ÓÚ ÒÍÈÌ ÚÈÚ Ó, (ÓÚ . 72)
  - ä† ÈÈ Ó, †† Ì+ÒÒÁÚ (ÓÚ . 74)
- èÓ% Ó.ÌÁÁÓ. ^ÓÓÍ ÒÍ. Ì+ÓÚ . 76.

é ÒÈÒÚÁÍ† Ì ^, ÁÚÍÒ, Ó  
 ÚÁÍÁ, ÈÈÁÌÈÈ

Ç †ÁÌ^Ì ÓÚ †Ì† Ì Ò ÈÍÁÌÈ, ÚÒÈ †ÁÍÈ^Ì^Á  
 ÒÈÒÚÁÍ^ ^, ÁÚÍÓ, Ó ÚÁÍÁ, ÈÈÁÌÈÈ. ÑÍÈ  
 Ò ÓÓÍÓÚ † Ç† ^ÈÌ, ÈÈÁÓÁ+ÒÈÒÈ Ì+  
 ÚÁÍÁ, ÈÁÈÓÍÒÍ ^Í †ÍÁ Ç+Í ÓÓÍ+Ó.ÈÚÒÈ  
 ÚÁÍÁ, ÈÁÓ ÒÈÒÚÁÍ^ PAL .

è Á%ÚÒ ÂÈÈÁÌÈÈÁ Ó. †, ÓÚ ÒÍÈÌ  
 Ò †, ††

ÍÁÍÁ, ÈÁÈÓÍ^Á Ò Ó, †ÍÍ^, ÒÈÈ.Í^,  
 , ÈÈÁÓÁ+ÒÈÒÈ ÈÈ^Á Ì+ÚÁ È+Í^ ÍÓ, ÓÚ.ÓÚ.  
 Á†^È^ÁÌ^ †, ÓÚ ÒÍÈÈ Ò †, ÓÍ.  
 ÇÁÓ+ÍÍ^ÈÓÈÈ Ó, †ÌÌ†ÈÁ+ÒÈÒ. Ú+ÈÈÌ  
 Ì+ÚÁ È+ÍÓ, ÍÓÈÁÚ Ò Á%ÓÚ+ÍÍÚ, ÓÓ.ÓÈ  
 Ì† Ò^ÁÌÈÁ Á+ÍÓÍÓ, Ó. †, ÓÚ ÒÍÈÌ Ò †, ††.

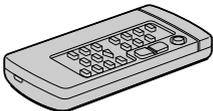
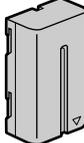
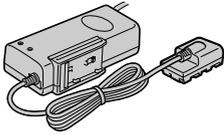
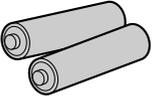
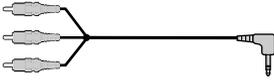
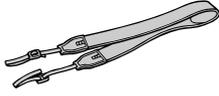


# Checking supplied accessories

è Ó,Â Í†  
ÍÓÍÔÎÂÍÚ† ^ ÈË

Check that the following accessories are supplied with your camcorder.

ì·Â%ËÚÀÖ, , ~ÚÓ, ÍÓÍÔÎÂÍÚ Ç†-ÂÈ  
,È%ÀÓÍ†ÎÂ \* ,1Ó%ÍÚ ÔÎÂ%Û, ~ÈÂ  
Ô Èì†%ÎÂÈÍÓÓË.

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

- 1 **Wireless Remote Commander**(1) (p. 111)
- 2 **NP-F530 battery pack**(1) (p. 7)
- 3 **AC-V316/V326 AC power adaptor**(1) (p. 7, 27)  
The shape of the plug varies from region to region.
- 4 **R6 (size AA) battery for Remote Commander**(2) (p. 112)
- 5 **A/V connecting cable**(1) (p. 50, 65)
- 6 **Shoulder strap**(1) (p. 113)
- 7 **21-pin adaptor**(1) (p. 51)
- 8 **Lens cap** (1) (p. 12)

- 1 ÀÀÖÖ Ó,ÓÍÓ~Ì·È ÖÛÍ,Ú %ÈÖÛ†Î^ÈÓÌÏÖ,,Ó ÛÖ †,ÎÂÈÈ (1) (ÖÛ . 111)
- 2 ÄÍÍÚÍÛÍÚÓ Ì†Í·†Ú† ÂÍ NP-F530 (1) (ÖÛ . 7)
- 3 Ä%+ÓÚÂ ÖÂÚÂ,Ó,Ó ÖÈÛ†ÌÈÈ AC-V316/V326 (1) (ÖÛ . 7, 27)  
äÓÌÖÛ ÛÍ^ÈÈ ÖÂÚÂ,ÖÈ ,ÈÍÈÈ Á†,ÈÖÈÛ ÖÛ „ÂÓ, †ÛÈ~ÂÖÍÓ,,Ó Â,,ÈÓÌ†.
- 4 Â†Ú† ÂÈÍ† R6 ( †ÂÎÂ AA) %ÍÍ ÖÛÍ,Ú† %ÈÖÛ†Î^ÈÓÌÏÖ,,Ó ÛÖ †,ÎÂÈÈ (2) (ÖÛ . 112)
- 5 èÓÂÈÈÈËÁÎ,Ì·È +Û%ÈÖ/,È%ÀÓÍ†·ÂÎ, (1) (ÖÛ . 50, 65)
- 6 èÎÂ^Â,ÓÈ ÂÎÂÌ, (1) (ÖÛ . 113)
- 7 èÂ Â1Ó%ÌÈÍ Ò 21-~Ú· ,ÍÓ,·Î †Á·ÂÍÓÍ (1) (ÖÛ . 51)
- 8 á†,,ÍÛ-Í† Ó··ÂÍËÈ,† (1) (ÖÛ . 12)

Contents of the recording cannot be compensated if recording or playback is not made due to a malfunction of the camcorder, videotape, etc.

Ç ÖÛ~†Â ÎÂ,ÓÁÍÓÈÍÓÓËÈ,È%ÀÓÓ·ÂÍÈÈ ÈÍÈ,ÓÓÖ ÖÈÂ,Â%ÂÈÈ Â†ÖÈÖÈ ÓÓ Ö È~ÈÌÂ ÎÂÈÖÖ †,ÌÖÖËÈ,È%ÀÓÍ†ÎÂ , ,È%ÀÓÍ†ÖÖÂÛ· ÈÛ.Ö. ÍÓÍÔÂÌÖ†^ÈÈ ÎÂ Ô Â%ÖÖÛ†,ÎÎÂÛÒÈ.



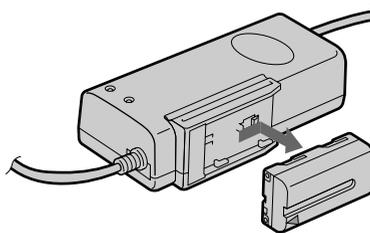


## Notes on remaining battery time indication during recording

- Remaining battery time is displayed in the viewfinder or on the LCD screen. However, the indication may not be displayed properly, depending on using conditions and circumstances.
- When you close the LCD panel and open it again, it takes about 1 minute for the correct remaining time to be displayed.

## To remove the battery pack

Slide the battery pack in the direction of the arrow.



## Notes on charging the battery pack

- The CHARGE lamp will remain lit for a while even if the battery pack is removed and the mains lead is unplugged after charging the battery pack. This is normal.
- If the CHARGE lamp does not light, disconnect the mains lead. After about one minute, reconnect the mains lead again.
- You cannot charge the battery pack while you operate the camcorder using the AC power adaptor.
- When a fully charged battery pack is installed, the CHARGE lamp will light once, then go out.

á† ñÊ†ÌÈÄ È ÛÓÚ†ÌÓ, Í† ñÊ† ·†Ú† ÄÈ  
, Ó, Äñ ò·ÄÍÈ

- ÇÄÍÈÈ† ÓÓÚ†, ~Ä,, Óñ Ä† ñÊ† ·†Ú† ÄÈ Û†Ä´, †ÄÛñ, ÓÍÄ, È„ÓÈÓ†ÚÄñ ÈÈÈ Ì† ÈÈ„ÍÓÍ ÈÓÚ†ÍÈ~ÄÓÍÓÍ ~Í †Ä. È„Í†ÍÓ, Ä†, ÈÈÈÓÓÈ ÓÚ ÛÓÍÓ, ÈÈ È Ó·ÓÓñÚÄ†, ÓÚ, ò·ÄÍÈ ÓÓ†Ä†ÌÈñ ~ÓÓ,, ó ÈÈ„ÍÈ†ÚÓ †ÍÓ,, ÓÚ ·´Ú, ÌÄÓÓ~Ì·ÈÈ.
- èÓÓÍÄ Ä† ~´ÙÈÈ È ÓÓ, ÓÓ †ÓÍ ~´ÙÈÈ ÈÈ„ÍÓÍ ÈÓÚ†ÍÈ~ÄÓÍÓÍ Ó†ÄÍÈ ÓÓ~ÍÛ, ÈÈÓ Ì†~È, Ó, ÄÍÈ~ÈÌÄ ÓÓÚ†, ~Ä,, Óñ Ä† ñÊ† ÍÓÈÈÓ ÓÓÍÛ~ÈÚ, ÈÈ~´, òòÓÓñ ò ÈÌÄ ÌÓ ÌÈÈÓÓ.

èÌñÓÈÄ †ÍÍÛÍÛÍñÓ ÌÒÈ ·†Ú† ÄÈ

È„, ÈÌ, ÚÄ ·†Ú† Ä, , Ì†ò †, †ÄÍÈÈ, Û†Ä†ÌÒÍ ÓÚ ÄÍÓÈ.

é ò ó~ÄÓÄ Ä† ñÊ†ÌÈÈ ·†Ú† ÄÈ

- à† ñÊ†ÌÈÄ È Ìñ Ì†ÍÓÓ~Í† CHARGE ò È„ÓÍÈ†ÄÚ ò, ÄÚÈÚ, òñ Ä~Ä ÌÄÍÓÓ ÓÄ, Äñ ÓÓÓÍÄ ÓÓ,, Ó, Í†ÍÄ† ñÈÄÌñ ·†Ú† Äñ ÓÚ„ÄÍÄ† ÓÚ †„ÓÚÄ †, † ò Ó, È„ÓÈÚ†ÌÈñ ÓÓÓÈ„ÈÌÄ òÚ ÒÄÚÈ. ùÓ ÌÓ Ì†Í, ÌÓ.
- òòÍÈ Ì†ÍÓÓ~Í† CHARGE ÌÄ Ä†,, ó †ÄÛòñ, ÓÍÍÍ, ~ÈÚÄ ò Ó, È„ÓÈÚ†ÌÈÈ ÓÚ ÒÄÚÈ È, ÌÓ,, ÌÍ, ~ÈÚÄ Ä,, ó, ÒÄÚ, ò ÈÌÄ ÌÓ ~Ä ÄÄÈÌÛ ÈÈÈÓÓ.
- ÇÓ, Äñ Ä† ñÊ†ÌÈÈ †ÍÍÛÍÛÍñÓ ÌÒÈ ·†Ú† ÄÈ ÒÄÚÄ, ~Í †„ÓÚÄ ÓÍ ÌÄÍ, Äñ ÓÓÍ, ÄÓ, †Ú, òñ Ìñ ÒÈÚ†ÌÈÈ, È„ÄÓÍ†Ä´.
- è È È„ÈÍÍ, ~ÄÍÈÈ Í †„ÓÚÄ Û ÓÓÍÍÓÓ,, Ä† ñÈÄÌÈÈÈ ·†Ú† ÄÈ Ì†ÍÓÓ~Í† CHARGE Ä†,, ó †ÄÛòñ Ì† ÍÓ ÓÍÍÓÄ, Äñ, †ÄÚÄÍ,, †ÓÍÄÚ.

Getting started / e08, 070, 1+ 1 001, A0, 115.

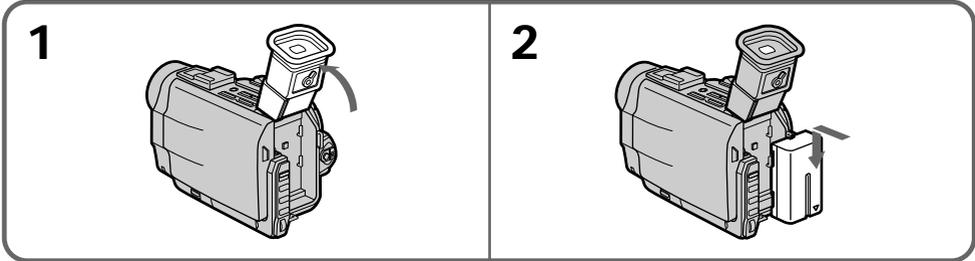
## Installing the battery pack

ιόú†ιό, ί† †ίíú†íú†ηύό ίόέ  
.†ú† Άέ

- (1) Lift up the viewfinder.
- (2) Insert the battery pack in the direction of the  $\$$  mark on the battery pack. Slide the battery pack down until it fits in.

- (1) εó%ιέιέúÁ, έ%óέóι†úÁ†.
- (2) ς, Ά%έúÁ .†ú† Ά, ó έÁι†.έó†Á, óó έÁιúέ ó, †, ΆÁ, ί†ó †, ίÁιέέ, úí†Á†ιιό†ι†~†ιό† \$ †† ίó óúóÁ .†ú† Άέ. έóúó†ιέúÁ .†ú† Ά, ιέÁ%ó úÁι óó, óó†† ιÁ Á† ~Á††ιÁúóη ύέιό†úó .  
έ†Á%έúÁ Á† ††Άέιόóú. . óóÁ%έ†Á†έη .†ú† Άέ ó, έ%Αó††ιÁ όέ.

Attach the battery pack to the camcorder securely.



### Notes on installing the NP-F730/F930 battery pack

- έ έ ύóú†ιό, ίÁ .†ú† Άέ NP-F730/F930
- óó†, ÁúέúÁó, έ%Αó††ιÁ όέ, ó†Á, †† ό έóó%ιη, έ%óέóι†úÁ†.
  - ιÁ ó έ†Á†ηέúÁ όέ†ú, óóúó††η, έ%óέóι†úÁ†, ~úó. \* ιÁ óó, Ά%έú, ††ιÁ ú.

- Use the camcorder while lifting up the viewfinder slightly.
- Do not forcibly put down the viewfinder. It may damage the camcorder.

### Note on the battery pack

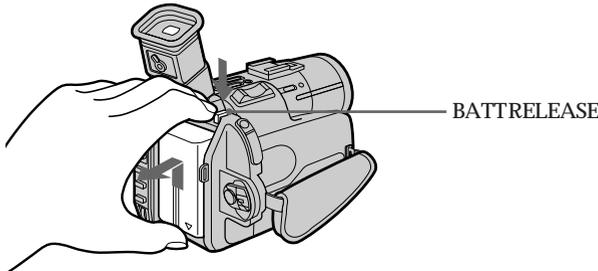
ó~Á ó. †ίíú†íú†ηύό †~† .†ú† Άη†  
ςÁ ίóóέúÁ, έ%Αó††ιÁ ú, %Á έ† ÁÁ Á† .†ú† Ά. .

Do not carry the camcorder by grasping the battery pack.

### To remove the battery pack

έ†ηύέÁ †ίíú†íú†ηύό ίόέ .†ú† Άέ  
ς†έέ††η †† ~†έó† ύέíó†úó † BATT  
RELEASE, ό%, έ†, úÁ .†ú† Ά, ††ó †, †Áιέέ,  
úí†Á†ιιό† όú Á†íόέ.

While pressing BATT RELEASE, slide the battery pack in the direction of the arrow.



You can look at the demonstration of the functions available with this camcorder (p. 115).

ς\* ίóέúÁ ú, έ%Áú, %Á†íó†ú †~έ. ύú††^έέ, †íóó \*ιέ óó††~Á††ς†~†, έ%Αó††ιÁ † (óú .115).

# Inserting a cassette

You can use mini DV cassette with **Mini DV** logo\* only.

Make sure that the power source is installed.

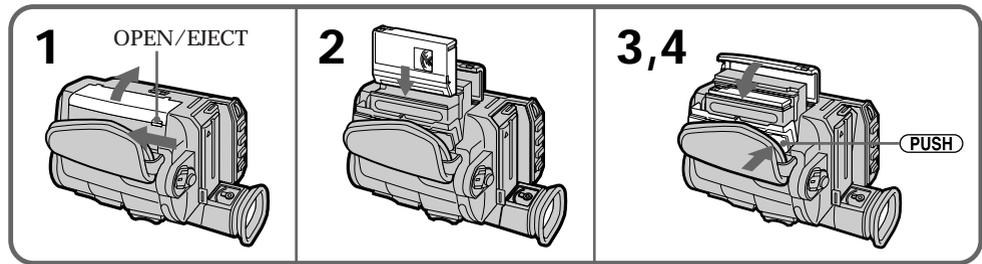
(1) Slide OPEN/EJECT near the grip strap in the direction of the arrow and open the lid. The cassette compartment automatically lifts up and opens.

(2) Insert a cassette with the window facing out.

(3) Close the cassette compartment by pressing the **PUSH** mark on the cassette compartment. The cassette compartment automatically goes down.

(4) Close the lid until it clicks.

\* **Mini DV** is a trademark.



## Notes

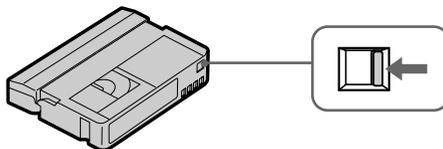
- Before you close the lid of the cassette compartment, make sure the cassette compartment is completely pulled down.
- When you open the lid immediately after you install the battery, the cassette compartment may not lift up. Close the lid and open it again.

## To eject the cassette

Follow the procedure above and in step 2, 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 L and 6 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.



ÌÒÙ†ÌÒ, Í†  
, È%ÂÓÍ†ÒÒÁÛ

Ñíñ Ç† ÆÈ Í†ÌÁ ° ÓÓ%1Ó%ñÚ ÚÓÍ, ÍÓ ÌÈÌÈ-  
È%ÂÓÍ†ÒÒÁÛ DV, ÓÓÌÁ~ÀÌÌ Á ÍÒ, ÓÙÈÓÓÌ  
Mini DV\*.

è Ó, Á, ÚÁ, ÓÓ%Í†. ~ÀÌÒ ÌÈÒÈÚ†ÌÈÁ.

(1) èÁ Â%, ÈÌ, ÚÁ †ÒÓÍÓÈÁÌÌÈ, ÓÁÌÁ  
ÛÌÒ, Ó ÀÌÌñ ~†ÈÓÍ OPEN/EJECT,  
Ì†Ó †, ÌÁÌÈÈ ÓÚ ÀÌÌÈÈ ÓÚÍ ÈÓÚÁ Í ~ÌÚ  
Ì†ÒÒÁÛÓ ÈÁÌÌÈÍ†. è È ~ÚÓÍ  
Ì†ÒÒÁÛÓ ÈÁÌÌÈÍ†, ÚÓÍ†ÚÈ~ÁÓÌÈ  
, %, È, †ÁÛÓñ, Á 1 È †ÓÍ †, †ÁÛÓñ.

(2) ÌÒÙ†ÌÒ, ÈÚÁ, Í†ÒÒÁÛÓ ÈÁÌÌÈÍ Ì†ÒÒÁÛÓ  
ÓÍÓ-ÍÓÍ Ì† ÚÈÚ.

(3) à†Í ÈÓÚÁ Í†ÒÒÁÛÓ ÈÁÌÌÈÍ Ì†È†ÚÈÁÌ Ì†  
ÌÁ, Ó, ÚÓÌ, ÓÍ†Á†ÌÌÓÈ ÁÌ†ÍÓÍ **PUSH**.  
à†ÒÒÁÛÓ ÈÁÌÌÈÍ †, ÚÓÍ†ÚÈ~ÁÓÌÈ  
ÓÓÓÍ†ÁÛÓñ Ì† ÌÁÓÓ.

(4) èÓÓÓÈÈÚÁ È Á† ÁÌÌÌÈÚÁ Í ~ÌÚ.

\* **Mini DV** - ÚÓ „Ó, †ñ Ì† Í†.

è ÈÌÁ~ÌÈñ

è ÈÈ%Á ~ÁÌ Á†Í †, †Ú, Í ~ÌÚ  
Ì†ÒÒÁÛÓ ÈÁÌÌÈÍ†, Û. È%ÈÚÁÓ, ~ÚÓÒÌ  
ÓÍÓÍ~ÚÁÌ, ÍÒ, Á ÌÚÒñ, ÌÈÈÌÁÁ  
ÓÓÍÓÈÁÌÈÁ.

• ÓÓÈÈ Ç° ÓÚÍ †, †ÁÚÁ Í ~ÌÚ ò †ÁÚ ÈÁ  
, ÓÌÁ% Á† ÓÓÚ†ÌÒ, ÍÓÈ. †Ú† ÈÈ, ÚÓ  
, %, ÈÈÁÌÈñ Ì†ÒÒÁÛÓ ÈÁÌÌÈÍ† ÌÓÈÁÚ ÌÁ  
Ò ÈÈÁÓÈÈÈ. Ç ~ÚÓÍ ÓÍÚ~†Á Á†Í ÈÓÚÁ Í ~ÌÚ  
È ÓÚÍ ÈÓÚÁ ÁÁ ÓÓ, ÚÓ ÌÒ.

àÁ, ÌÁ~ÁÌÈÁ, È%ÂÓÍ†ÒÒÁÛ  
è ÌÁ%Úñ Û††Á†ÌÈñ, Ò È, È%ÁÌÌÈ, ~Á,  
ÈÁ, ÌÁÌÈÚÁ Ì†ÒÒÁÛÓ, 1Ó%Á ~Ú†Ó† 2.

è Â%ÓÚ, †~ÁÌÈÁ òÌÚ~†ÈÌÒ, Ó  
ÓÙÈ †ÌÈñ Á†ÒÈÒÈ

è%, ÈÌ, ÚÁ Ó È%Ó1 †ÌÈÚÁÌ, ÌÚ. Á†%, ÈÈÍÚ Ì†  
Ì†ÒÒÁÛÁ, ~ÚÓ. ÓÚ††, È%Ì† Í †ÓÌ†ñ  
ÓÍ†ÓÙÈÌ†. ÌÁÓÁ, Ò È ÓÓÓ~ÚÌÁ Á†ÒÈÒ°, †Ú.  
Ì† ~ÚÓ Ì†ÒÒÁÛÓ, ÓÌÁ, È%ÈÓÍ†ÚÁñ ÈÌÈ Ì†  
ÈÈ%ÍÓÍ ÈÓÚ†ÌÈ~ÁÓÍÓÍ ~Í ÌÁ Ì†~ÈÌ†. Û  
ÌÈ, †Ú, ÈÌ%È†ÚÓ ° L È 6, †Á†ÒÈÓ ÌÁ  
Ì† ~†ÁÛÓñ. ÓÓÓ. ° È%ÁÌ†Ú, Ì† Ì†ÒÒÁÛÁ ÌÒ, Û.  
Á†ÒÈÒ, ÓÁ Â%, ÈÌ, ÚÁ Á†%, ÈÈÍÚÚ†Í, ~ÚÓ.  
Í †ÒÌ†ñ ÓÍ†ÓÙÈÌ†† ÓÍ†Á†Í†ò. Á†Í ~ÚÓÈ.

# Camerarecording

# çË%ãÓò · Æíí†

Make sure that the power source is installed and a cassette is inserted and that the START/STOP MODE switch inside the LCD panel is set to .

Before you record one-time events, you may want to make a trial recording to make sure that the camcorder is working correctly.

When you use the camcorder for the first time, power on it and reset the date and time to your time before you start recording (p.79).

To save battery power, the picture in the viewfinder appears only when you bring your face close to the viewfinder (Finder power save).

(1) Remove the lens cap and hook it onto the grip strap.

(2) While pressing the small green button on the POWER switch, set it to CAMERA. The camcorder is set to Standby mode.

(3) Press START/STOP.

The camcorder starts recording. "REC" appears in the viewfinder. The camera recording lamp on the front of the camcorder also lights up.

You can also select Recording mode, SP (standard play) mode or LP (long play) mode. Set REC MODE in the menu system according to the length of your planned recording before you start.

ι·Ά%εΰάο, , υοί, ~υό ί+ιá + οό%ίí. ~Άι+ í εòυó~ιέíυ όεΰ+ιέη, ~υό, ιάά υòυ+ιò, íáì† , ε%άοί+οòάυ+ ε ~υó όά άίí. ~+ύάí, START/ STOP MODE í†, íυú άìíáε οóó οíá εε%íοί εòυ+ííε~άοίόε ò+ιáíε υòυ+ιò, íáì , όóíόεάíεά í. εά Ά%ò·Άííόε όóó·ó·~Άíí·<sub>1</sub> ~όεάό%ó, εíááυ όí·όí ά+ ιάά όó ó·ó,†υ, , ε%άοί+ιá υ, ~υó· %úóóυ, á εΰ, όη, áá ιó í+í. íοί υúíí~εοíε ó, †ιέε.

ε Άε%á, ~Άí όοί, άο,†υ. όη í+ιá όε, όά , ^á, íí, ~εΰá áá ε υòυ+ιò, εΰá υáíυ·ύ. %+υó ε υó~ιόá, άíη (όΰ .79).

ç ^áíηí ~íοίόíεε ά+ í%†·+ύ† άε ~ί +í , ε%όεοí+ύάíη, íí. ~+áυόη υοί, íó ó ε ό·ε·ιέεάíεε όίόíη + í íε^υ (~íοίόíεη εòΰ+ιέη, ε%όεοí+ύάíη).

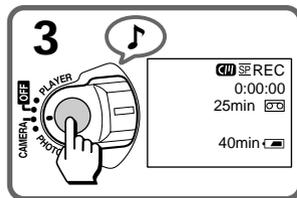
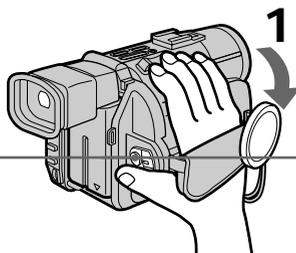
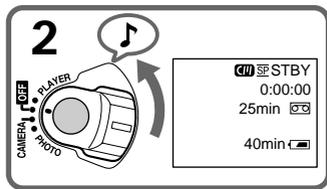
(1) εíεíεΰá ά+, íυ~íυó·~Άíúε, † ε ό εí άόεΰáάά í υ~íοíυ άíí.

(2) ι%á εε, †η, í+ε+υοί όóíόεάíεε í+íáí. íύ. ááíáíυ. ííóóíυ í+ όá άíí. ~+ύάíá POWER, όά Ά%, εí, υá ά,ό , όóíόεάíεά CAMERA. ε ε ~υοί , ε%άοί+ιá + όá άíό%εΰ, áεεí όεε%+ιέη í+~+í: ά+όεòε.

(3) ç+εíεΰá ííóóíυ START/STOP. çË%ãÓí+ιá + í+~εí+áυ ò·Άííυ. ç όííá , ε%όεοí+ύάíη όόη, íηáυóη υí+á+ύάí, "REC". ε ε ~υοί ά+, ό +áυόη ό+íεá εí%εí+υó í+η í+ιόó~í+ ά+όεòε í+ όá Ά%ιáε υòó οíá, ε%άοί+ιá .

ç· íóεáύá, ··ε +ύ, íáε%ú óυ+í%† υíόε (SP) ε íá%íáííόε (LP) όíó óóυ, , ε%άόá+όεòε.

αòíό%η εά όí+ιέ υáíόε ό %óíεεΰάí. íόóύε ò·Άííε, ,··á εΰá όá Ά%άά í+~+íοί íυεíυ. όíó óóυ, ά+όεòε~á άá όόάε^ε. REC MODE, íáì, ò† +íáυ ó, .

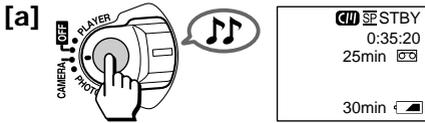


**To stop recording momentarily [a]**

Press START/STOP. The "STBY" indicator appears in the viewfinder ( Standby mode).

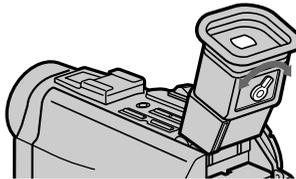
**To finish recording [b]**

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



**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. Move the viewfinder lens adjustment lever so that the indicators in the viewfinder come into sharp focus.



**Note on Standby mode**

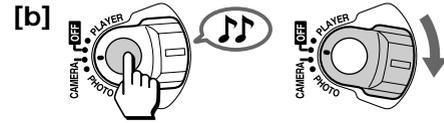
If you leave the camcorder in Standby mode for 5 minutes while the cassette is inserted, the camcorder turns off automatically. This prevents wearing down the battery and wearing out the tape. To resume Standby mode, while pressing the small green button on the POWER switch, set it to OFF once, and then 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. In LP mode, you can record 1.5 times as long as in SP mode.

À`ÓÚ ÓÃ, ÍÍ, ~ÀÌÈÃ Á+ÔÈÒÈ [a]  
 Ç+ÈÌÈÚÃ ÍÍÓÓÍÚ START/STOP. Ç ÓÍÍÃ  
 , È%ÓÈÒÍ+ÚÃÍÎ ÒÍÎ, ÎÎÃÚÒÎ ÈÌ%ÈÌ+ÚÓ "STBY"  
 ( ÂÈÈÌ ÓÈÈ%+ÌÈÎ)

è ÁÍ †~ÀÌÈÃ Á+ÔÈÒÈ [b]  
 ÑÎÎ ò ÁÍ †~ÀÌÈÃ Á+ÔÈÒÈ Ì+ÈÌÈÚÃ ÍÍÓÓÍÚ  
 START/STOP Â`Ã †Ã. èÃ Â, Â%ÈÚÃ  
 ÓÃ ÁÍÍ. ~+ÚÃÍ, POWER, ÓÓÍÓÈÃÌÈÃ OFF.  
 èÓÓÍÃ ~ÚÓ, Ó ÈÃ, ÍÃÌÈÚÃ Í+ÓÓÃÚ È ÒÌÈÌÈÚÃ  
 †ÍÍÚÍÎÎÚÓ ÍÚ. †Ú+ Â..



èÓ%ÓÚ ÒÈÌ+ ÓÍÚÎÎ †, È%ÓÈÒÍ+ÚÃÍÎ  
 ÒÒÌÈ Ç+Í Ú È%ÌÓ †ÃÌÈ~+Ú, ÈÌ%ÈÌ+ÚÓ ` ,  
 ÓÍÃ, È%ÓÈÒÍ+ÚÃÍÎ, ÈÌÈÃÓÌÈ ÓÃ Â% Ç+ÌÈ  
 Í+ÌÃ ÒÈÓÍÃ ÓÓ, †ÍÒÎ ÍÚÓ-ÚÓ% Ú, ÒÈ,  
 ò ÓÈÃ, Â%ÈÚÃ ÓÓ%ÓÚ ÒÈÍÚ ÓÍÚÎÎ †  
 , È%ÓÈÒÍ+ÚÃÍÎ. èÓ, Ó ÓÓÓÍ Â, ÚÎÎÚÓ †  
 ÓÓ%ÓÚ ÒÈÌÈ ÓÍÚÎÎ †%·ÂÈÚÃÓ, ÚÓ, Ó, ~ÚÓ·  
 ÈÌ%ÈÌ+ÚÓ ` , ÓÍÃ, È%ÓÈÒÍ+ÚÃÍÎ ÓÚ+ÌÈ  
 , È%Ì· ÓÚ~ÃÚÌÈ, ÓÈ ÂÃÍÓ.

é ÂÈÈÃÃ ÓÈÈ%+ÌÈÎ Ì+~+Í+ Á+ÔÈÒÈ  
 ÓÒÌÈ ÓÓÚ, ÈÚ, È%ÃÓÍ+ÌÃ Ú ò ÚÓÚ+ÌÓ, ÍÃÌÒÈ  
 , ÌÃÈ Í+ÓÓÃÚÓÈ, ÂÈÈÃÃ ÓÈÈ%+ÌÈÎ -ÓÍÃÃ ~ÃÍ  
 Ì+ 5 ÈÌÈÚÚ, ÒÌ+ †, ÚÓÍ+ÚÈ~ÃÓÌÈ, `ÍÍ. ~ÈÚÒÎ.  
 ùÚÓ `ÍÓÍÓÌÈÚÃ † Î%·+Ú+ ÂÈÈÓÍ †+ÃÚ  
 ÈÃÍÓÓ, È%ÃÓÍÃÍÚ. ÓÓÓ· ` Â ÍÚÚ, Í+ÌÃ Ú,  
 ÂÈÈÌ ÓÈÈ%+ÌÈÎ Ì+~+Í+ Á+ÔÈÒÈ, ÓÃ Â, Â%ÈÚÃ  
 ÓÃ ÁÍÍ. ~+ÚÃÍ, POWER, Ú%Ã ÈÈ, †Ì Ì+ ÌÃÍ,  
 Ì+È+ÚÓÍ ÓÓÍÓÈÃÌÈÈ Ì+ÌÃÍ, ÍÚ. ÂÃÍÃÌÚ.  
 ÍÍÓÓÍÚ, , ÓÓÍÓÈÃÌÈÃ OFF, †+ÚÃÍ ÓÍÓ, †,  
 ÓÓÍÓÈÃÌÈÃ CAMERA. ÓÓÓ· Ì+~+Ú, ò`ÃÍÍÚ,  
 Ì+ÈÌÈÚÃ ÍÍÓÓÍÚ START/STOP.

é ÂÈÈÃÃ ÓÍÓ ÓÓÚÈ  
 Ç+ †, È%ÃÓÍ+ÌÃ † ÓÃÃ, ÓÎÎÃÚ, ÃÓÚÈ ò`ÃÍÍÚ È  
 , ÓÓÓ ÓÈÃ, Ó%ÈÚ, È%ÃÓÃ+ÔÈÒÈ, ÂÈÈÃÃ  
 ÓÚ+Ì%+ ÚÍÓÈ (SP) È ÌÃÈÃÌÒÈÈ (LP) ÓÍÓ ÓÓÚÈ.  
 Ç·ó ÌÃÈ%Ú ÓÚ+Ì%+ ÚÍÓÈ È ÌÃÈÃÌÒÈÈ  
 ÓÍÓ ÓÓÚ, . ÓÓÚ~ÃÓÚ, ÎÎÃÚÒÎ ò ÓÓÍÓ`. ÌÃÌ.  
 Ò+ †ÃÚ Ó, . è Ó%ÓÌÈÈÚÃÍ, ÌÓÓÚ, Á+ÔÈÒÈ,  
 ÂÈÈÃÃ LP, 1,5 †Ã+ ò Â, ~+ÃÚ, ÃÎÎ  
 Á+ÔÈÒÈ, ÂÈÈÃÃ SP.

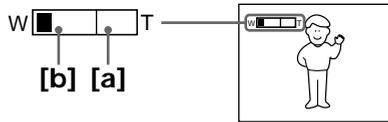
Basic operations / èÓ, ÓÃ%ÌÃ, ÌÃÃ ÓÓÍ, ÓÓ, †ÌÈÃ





Notes on digital zoom

- More than 10x zoom is performed digitally, and the picture quality deteriorates as you go toward the "T" side. If you do not want to use the digital zoom, set the D ZOOM function to OFF in the menu system.
- The right side [a] of the power zoom indicator shows the digital zooming zone, and the left side [b] shows the optical zooming zone. If you set the D ZOOM function to OFF, the [a] zone disappears.



é ^ÈÙ Ó,ÓÍ ÚÁÍÁÓ·ÂÍÚÈ,Â  
 • ì,ÂÎÈ~ÂÎÈÁ Ó,·-Â&#x2013;ÒÓÚÈÍ †ÚÍÓ,Ó  
 %ÓÓÚÈ,,†ÁÚÓÒÁ† Ò~ÁÚ ^ÈÙ Ó,ÓÈ Ó· †:ÓÓÚÈ  
 ÈÁÓ· †ÈÁÎÈÒ,ÒÍÂ&#x2013;ÓÚ,ÈÁ~Á,Ó Ó È  
 %†Í, ÍÂÈ~ÁÍ Í†È†ÚÈÈ Í† ÓÓÚ ÓÍÙ "T"  
 ~†ÈÍ† ÚÓ †,ÍÁÎÈÒ Í†ÁÓÚ,Ó ÈÁÓ· †ÈÁÎÈÒ  
 ÙÍÙ%~†ÁÓÒÈ. ÓÓÍÈ Ç· ÍÂ ÈÁÍ†ÁÚÁ  
 ÓÓÍ.ÁÓ,†Ú.ÒÒÈ ^ÈÙ Ó,·Í Ù,ÂÎÈ~ÂÎÈÁÍ,  
 ÚÓÚ†ÍÓ,ÈÚÁ ÓÁ ÁÍÍ.~†ÚÁÍ. ÚÓÍÍ^ÈÈ D ZOOM  
 , ÍÁÍ. Ó† †ÍÁÚ Ó, , ÓÓÍÓÈÁÍÈÁ OFF.  
 • è †,†Í ~†ÓÚ [a] ÈÍ:ÈÍ†ÚÓ †ÚÓÍÚÓÍÓ,Ó  
 †ÓÓÚÓÒÈÍÈ Ó·ÂÍÚÈ,† Ó &#x2013;ÓÚ†,†ÍÁÚ ÓÓ.ÓÈ  
 Ó·Í†ÓÚ, ^ÈÙ Ó,Ó,Ó Ù,ÂÎÈ~ÂÎÈÒ, † ÍÁ,†Í [b]  
 - Ó·Í†ÓÚ, ÓÓÚÈ~ÁÓÍÓ,Ó Ù,ÂÎÈ~ÂÎÈÒ. è È  
 ÚÓÚ†ÍÓ,ÍÁ ÚÓÍÍ^ÈÈ D ZOOM , ÓÓÍÓÈÁÍÈÁ  
 OFF ~†ÓÚ. [a] ÈÍ:ÈÍ†ÚÓ † ÈÒ~ÁÁ†ÁÚ.

Selecting the start/stop mode

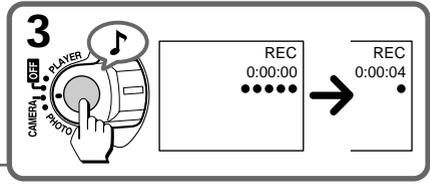
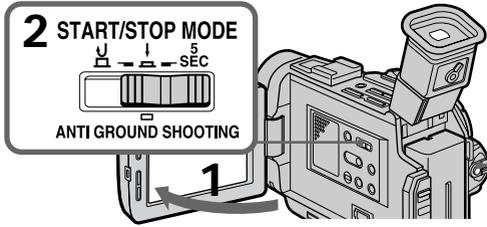
Your camcorder has two modes besides normal start/stop mode. These modes enable you to take a series of quick shots resulting in a lively video.

- (1) While pressing PUSH OPEN, open the LCD panel.
- (2) Set START/STOP MODE to the desired mode.  
 ⏏ :Recording starts when you press START/STOP, and stops when you press it again (normal mode).  
 ⏏ ANTI GROUND SHOOTING : The camcorder records only while you press down START/STOP so that you can avoid recording unnecessary scenes.  
 5SEC :When you press START/STOP, the camcorder records for 5 seconds and then stops automatically.
- (3) Press START/STOP. Recording starts.

If you selected 5SEC, five dots appear in the viewfinder or on the LCD screen. The dots disappear at a rate of one per second as illustrated below. When five seconds elapse and all the dots disappear, the camcorder switches to Standby mode automatically

Ç·Ó ÂÈÈÍ‡,ÍÍ.~ÂÎÈÒ/  
 ,ÍÍ.~ÂÎÈÒ Ò~ÂÍÍÈ

èÓÍÈÍÓ Ó·~ÍÓ,Ó ÂÈÈÍ‡,ÍÍ.~ÂÎÈÒ È  
 ,ÍÍ.~ÂÎÈÒ Ò~ÂÍÍÈ Ç†~†,È&#x2013;ÁÓÍ†ÍÁ †  
 ÈÍÁÁÚ%,‡% Ù,È,Í,ÍÓÓÚ ^ÁÓÓÁ,ÓÍÒ.Ú  
 ÓÓÚ~ÁÓÚ,†ÍÚ.·ÓÓ Ù.ÓÍÁÍÙ Í†% Ó,,  
 ÓÈÈ,†Í.~Ù. Ç†ÈÈ,È&#x2013;ÁÓÓÈÍ.Í·  
 (1) Ç†ÈÈÍ†Í PUSH OPEN, †ÓÍ ÓÈÚÁ  
 ÈÈ&#x2013;ÍÓÍ ÈÒÚ†ÍÈÈ~ÁÓÍÓ,Ó†ÍÁÍ.  
 (2) Ç·Á ÈÚÁ ÍÙÈÍ~È ÂÈÈÍ ÒÓÓÍÓ·  
 ÓÁ ÁÍÍ.~†ÚÁÍÒÈ START/STOP MODE.  
 ⏏ :è~ÁÍÍ† Í†~ÈÍ†ÁÓÒÈ Ó È Í†È†ÚÈÈ  
 ÍÍÓÓÍÈ START/STOP È Ó ÁÍ †~†ÁÓÒÈ  
 ÓÓ,ÓÓ Ì~Í Í†È†ÚÈÈÁÍ ÚÓÈ ÈÁ ÍÍÓÓÍÈ  
 (Ó·~ÍÈ ÂÈÈÍ).  
 ANTI GROUND SHOOTING ⏏ : è~ÁÍÍ†  
 Ó·ÓÓÍÈ†ÁÓÒÈ ÍÈ~. %Ó ÚÁÍ ÓÓ , ÓÓÍ† Ç·  
 Ù&#x2013;Á ÈÈ,†ÁÚÁ ÍÍÓÓÍÙ START/STOP,  
 Í†È†ÚÓÍ ÓÓÍÓÈÁÍÈÈ - ~ÚÓ ÓÓÍÓ,†ÁÚ  
 ÈÁ.ÂÈ†Ú, ÓÍÙ~†ÈÍÓÈ Á†ÓÈÓÈ ÍÁÍÙÈÈ·  
 Ù †,ÍÁÍÙÓ, ^ÁÓÈ Ç· Á†~Ù&#x2013;ÁÚÁ  
 ,ÍÍ.~ÈÚ. Í†ÍÁ Ù.  
 5SEC : è È Í†È†ÚÈÈ ÍÍÓÓÍÈ START/STOP  
 Ó·ÁÍÍ†,ÍÍ.~†ÁÓÒÈ Í† 5 ÓÁÍÙÈ%, † Á†ÚÁÍ  
 Ó ÁÍ †~†ÁÓÒÈ†,ÚÓÍ†ÚÈ~ÁÓÍÈ.  
 (3) H†ÈÍÈÚÁ ÍÍÓÓÍÙ START/STOP. à†ÍÁ †  
 Í†~ÈÍ†ÁÓÚ Ó~ÁÍÍÙ.  
 ÓÓÍÈ Ç·,· †ÍÈ ÂÈÈÍ 5SEC, ÚÓ,  
 È&#x2013;ÈÓÈÍ†ÚÁÍÁ Ó È ~ÚÓÍ ÓÒÈ,†Í.ÚÒÈ ÓÍÙ.  
 ÚÓ~ÁÍ. ††ÚÁÍ ÓÍÈ ÓÓÓÍÁ&#x2013;Ó, †ÚÁÍ.ÍÓ ÈÒ~ÁÁ†, Ù  
 Ò ÈÍÚÁ ,†ÍÓÍ, Ó&#x2013;ÍÙ ÓÁÍÙÈ&#x2013;Ù, Í†Í ÓÓÍ†Á†ÍÓ  
 Í† ÈÓÚÍÍÁ ÍÈÈÁ. èÓ ÈÓÚÁ~ÂÎÈÈ ÓÍÙÈ ÓÁÍÙÈ&#x2013;  
 ÍÓ,%† ÚÓ~ÍÈÈ ÈÒ~ÁÁ†. Ú ÓÈÈÓÓÍÁÍ,  
 È&#x2013;ÁÓÍ†ÍÁ ††,ÚÓÍ†ÚÈ~ÁÓÍÈ ÓÁ ÁÍÓ&#x2013;ÈÚ,  
 ÂÈÈÍ ÓÈÈ&#x2013;ÍÈÒ Í†~†Í† Ò~ÁÍÍÈ.



**To extend the recording time in 5SEC mode**

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

**Note on 5SEC recording**

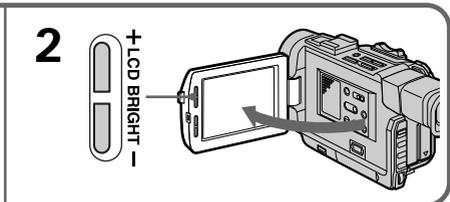
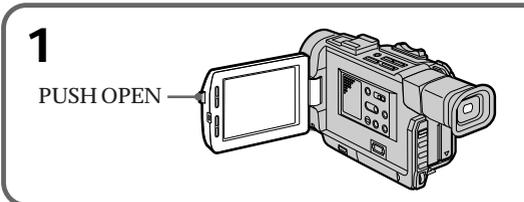
If you have turned off the indicators on the LCD screen, the dots do not appear.

**Shooting with the LCD screen**

You can also record the picture while looking at the LCD screen. When using the LCD screen, the viewfinder turns off automatically except in mirror mode. You cannot monitor the sound from the speaker during recording.

- (1) When pressing PUSH OPEN, open the LCD panel.
- (2) Adjust angle of the LCD panel  
The LCD panel moves about 90 degrees to this side and about 210 degrees to the other side.

To adjust the brightness of the LCD screen, press LCD BRIGHT + or -. The battery life is longer when the LCD panel is closed. Use the viewfinder instead of the LCD screen to save the battery power.



è Ó%ÎÂÎËÄ, ÂÎÂÎË Ò`ÂÏËË, ÂËËËÄ 5SEC Ç+ËËËÄ ÎÏÖÖÏÛ START/STOP ÖÖ,ÚÓ ÌÖ %Ö ÚÖ,,Ó, Í†Í, ,Ë%ÖËÏ+ÚÁÏ ÈÖ`ÂÏÏÛ, ÖÄ ÖÎÛ. ÚÓ`ÁÏ. á+ÖËÖ, .Ú%ÁÚ Ö%ÓÏËÏ†, ÚÁ`ÂÏËÄ Â`À ÓÏÏÖ ÖÎÛË ÖÂÏÏ% Ö ÌÖÂÏÛ† ÖÖ,ÚÓ ÌÖ,,Ó Ì†È†ÚËÎ ÎÏÖÖÏË START/STOP.

é Ò`ÂÏÏÄ, ÂËËËÄ 5SEC ÖÖÏË Ç` ÖÚÏÏ, ~ËËË, \*Ö% ÈÏ%ËÏ+ÚÓ Ó, Ì† ÈË%ÏÏ ÈÖÚ†ÏË~ÂÖÏËË `Í †Ì, ÚÓ`ÏË Ì† ÌÂÏ, È%Ï` ÌÄ`Ú%ÛÛ.

**è`ÂÏÏ† Ò`ÈÖÖÏÏ,ÁÓ,†ÏËÄÏ ÈË%ÏÏ ÈÖÚ†ÏË~ÂÖÏÏ,,Ó `Í †Ì†**

Ç` ÌÖËÄÚÁ Ú†ÏËÄ, ÂÖÚË Á+ÖËÖ, ÈÁÓ. †ÈÂÏËÎ, ÖÏÄ%Î Á† ÌËÏ ÖË ÈË%ÏÏ ÈÖÚ†ÏË~ÂÖÏÏÛ `Í †Ï. è È ÈÖÖÏÏ,ÁÓ,†ÏËÈ ÈË%ÏÏ ÈÖÚ†ÏË~ÂÖÏÏ,,Ó `Í †Ì†, È%ÖËÏ+ÚÁÏ, †,ÚÓÏ+ÚË~ÂÖÏË ÖÚÏÏ,~ÂÖÏÏ, Í ÖÏÄ ÖÏ~†Ä, , ÌÖ,,%† `Í † ËÖÖÏÏ ÄÚÁÖÏ, ÄÄ Ì†Í ÌÖÏ ÂËËËÄ. èÏÏ,ÁÓ,†Ú, ÖÎ,, ÖÏÏÏ,,Ó,Ó ÈÚÁÏÏ%ÎÎ ÌÖÏÛ ÖÏÎ Á+ÖËÖÈÄ,ÚÏ† Ö È`ÂÏÏÄ ÌÄ, ÖÁÏËËÏ. (1) Ç+ËËËÏ Ì† PUSH OPEN, †ÖÏ ÖËÚÁ ÈË%ÏÏ ÈÖÚ†ÏË~ÂÖÏÏ Ö†ÏÏ. (2) èÚ Ä,,ÚÏË ÛËÚÁ Ú,,ÖÏ †ÖÖÏËÈËÏ Ö†ÏÏË. è†ÏÏÏ, ÌÖËÏÏ ÖÖ,Ä ÌÛÛ, Ö È`ÏËÈÚÁÏ ÌÖ Ì† 90 ,, †%ÛÖÖ, , Ö%ÏËÖ ÖÏÖÏÏÏÛË È Ì† 210 ,, †%ÛÖÖ, -, % Ú,,ÖË. ù ÌÖÖÛ, ÈË%ÏÏ ÈÖÚ†ÏË~ÂÖÏÏ,,Ó `Í †Ì† Ä,,ÚÏË ÚÁÖÏÎ ÎÏÖÏÏ+ÏË LCD BRIGHT + È -. á† Ï%·†Ú† ÄË †ÖÏ%ÚÁÖÏÎ. ÖÏÄÄ`ÏÏÏÏÏ Ö ÈÄ†Í `ÚÖÈ ÈË%ÏÏ ÈÖÚ†ÏË~ÂÖÏÏ Ö†ÏÏË. ÖÛÖ` Ö Ö%ÏËÚ, , ÁÏÎ Ò`ÂÏÏË, ÖÖÏ,ÄÛÈÚÁÖ, ,ÏÄÖÛ ÈË%ÏÏ ÈÖÚ†ÏË~ÂÖÏÏ,,Ó `Í †Ì†, È%ÖËÏ+ÚÁÏÏ.



**To cancel mirror mode**

Turn the LCD panel down toward the camcorder body.

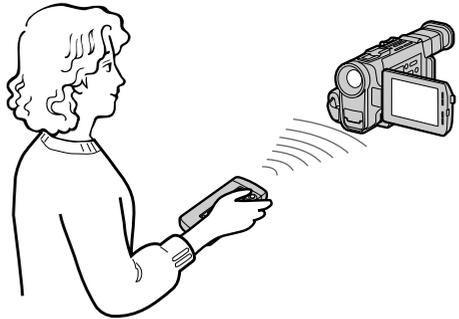
**Notes on mirror mode**

- When you turn the LCD panel about 90 degrees to 210 degrees, the camcorder enters mirror mode.
- Using the mirror mode, you can record yourself while watching yourself on the LCD [a].
- The picture on the LCD looks like a mirror-image while recording in mirror mode. The STBY indicator appears as Pr and REC as r. Other indicators appear as mirror-image. Some indicators may not appear in mirror mode.
- While recording in mirror mode, you cannot operate the following functions: MENU, TITLE, DATA CODE and ZERO SET MEMORY on the Remote Commander.

éúíÀì† ÂÂ Í†Í,ÌÒ„Ó ÂËË†  
 èÓ,Â ÌËÚÁ ÈË%ÍÓÍ ÈÓÚ†ÍË~ÂÓÍÚ. Ô†ÌÂ†,  
 Ó. †ÚÌÓÍ ÍÓ ÓÓÚ,È%ÁÓÍ†ÌÂ `.

- é ÂÂ Í†Í,ÌÒÍ ÂËË†Â
- ÇË%ÁÓÍ†ÌÂ † ÓÂ ÂÌÓ%ËÚ, ÂÂ Í†Í,Ì`È ÂËË† Ô È ÓÓ,Ó ÓÚÁ ÈË%ÍÓÍ ÈÓÚ†ÍË~ÂÓÍÓÈ Ô†ÌÂ†È Ì† Ú„ÓÍ Ô ÈÌÂ ÌÓ ÓÚ 90 %Ó 210 „ †%ÚÓ.,
  - àÓÓÍ†,ÁÚ† ÂÂ Í†Í,Ì`È ÂËË†, Ç` ÍÓÈÁÚÁ ÒÌË††Ú, ÓÂ·†, Ó%ÌÓ, ÁÍÁÍÓ Ì†·Í.%† ÙÈËÍÒÈ ÚÁÍÓÁ Í†ÌÂ ÓÈ ÈÁÓ. †ÈÂ†ÈÂ Ì† ÈË%ÍÓÍ ÈÓÚ†ÍË~ÂÓÍÓÍ ~Í †ÌÂ [a].
  - è È Ò`ÂÍÍÁ, ÂÂ Í†Í,ÌÓÍ ÂËË†Â Ì† ÈË%ÍÓÍ ÈÓÚ†ÍË~ÂÓÍÈÈ ~Í †Ì,\*,Ó%ËÚÓ†† ÂÂ Í†Í,ÌÓÁ ÓÚ †ÈÂ†ÈÂ” Í†% †, Á†ÒÈÒ`,†ÁÍÓ„Ó,È%ÁÓÍ†ÌÂ ÓÈ. è È`ÚÓÍ†,ÌÁÓÚÓ ÈÌ%ÈÍ†ÚÓ † STBY Ì† ~Í †ÌÂ,È%Â† ÒÈ†,ÓÍ Pr, †,ÌÁÓÚÓ ÈÌ%ÈÍ†ÚÓ † REC - ÒÈ†,ÓÍ r. éÓÚ†Í,Ì`Â ÈÌ%ÈÍ†ÚÓ `\*,Ó%†ÚÓ† Ì† ~Í †Ì,È%ÂÂ ÂÂ Í†Í,ÌÓ„Ó ÓÚ †ÈÂ†ÈÈ. ÇÁÍÓÓÓ `Á ÈÁ ÈÌ%ÈÍ†ÚÓ Ó,, ÂÂ Í†Í,ÌÓÍ ÂËË†Â ÓÚÍ†.ÚÓ†.
  - è È Ò`ÂÍÍÁ, ÂÂ Í†Í,ÌÓÍ ÂËË†Â ÌÂ %ÂÈÓÚ,Ú.Ú ÙÙÍÍ^ÈÈ MENU, TITLE, DATA CODE È ZERO SET MEMORY Ì† ÓÙ†.ÚÁ %ÈÓÚ†Ì`ÈÓÍÒ„Ó ÚÓ †,ÌÂ†ÈÈ.

[a]



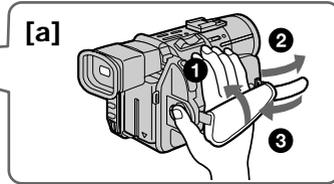
Basic operations / èÓ, ÓÂ%ÌÂ, ÌÓÁ ÓÓ†, ÁÓ, ††ÈÂ

# Hints for better shooting

ëó, ÂÚ° Ì†~ÈÌ†, ~ÂÌÛ  
 ÓÔÂ †ÚÓ Û

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.
- Place your left hand under the camcorder to support it.
- Place your eye firmly against the viewfinder eyecup.
- Be sure not to touch the built-in microphone.
- Use the LCD panel frame or the viewfinder frame as a guide to determine the horizontal plane.
- You can also record in a low position to get an interesting angle. Lift the viewfinder up for record from a low position. **[b]**
- You can also record in a low position or even in a high position using the LCD panel. **[c]**
- When you use the LCD screen outdoors in direct sunlight, the LCD screen may be difficult to see. If this happens, we recommend that you use the viewfinder.

- è ÈÈÌËÚÁ ÌÓÍÓË Í ÍÓ ÓÓÓÓ.
- àÀ, ÓÈ ÛÍÓÈ ÓÓ%&À ÈÈ, †ÈÚÁ, È%ÁÓÍ+ÌÁ Û ÒÌÈÁÚ.
- è È-ÌÈÁ, ÚÁ ÓÍÓÏÌ, È%ÓÈÓÍ+ÚÁÌÌ, ÓÍÓÓÛÛ, Í, †ÁÚ.
- èÌÁ%ÈÚÁ Á+ ÚÁÌ, ~ÚÓ· ÌÁ Ò ÈÍ+Ò+Ú, ÒÌ Í, ÓÚ ÓÁÌÍÓÛ ÌÈÍ ÓÓÓÛ.
- ÑÌÌ, Ó ÈÁÓÍÛ+Í, ÌÓ, Ó, †, ÌÈ, †ÌÈÌ Í+%; † Ó ÈÁÌÛÈ ÛÈÚÁÓ, ÓÓ †ÌÁ ÈÈ%ÍÓÍ ÈÓÚ+ÌÌÈ~ÁÓÍÓÈ Ò+ÌÁÌÈ ÈÌÈ †ÌÁ, È%ÓÈÓÍ+ÚÁÌÌ.
- ÑÌÌ ÓÓÛ~ÁÌÈÌ ÈÌÚÁ ÁÒÌ·1 †ÍÛ ÓÓ, È%ÁÓÓ·ÁÌÍÛ ÍÓÈÍÓ Û+ÌÈÁ, ÁÓÙÈ ÈÁ ÓÓÍÓÈÁÌÈÌ "ÒÌÈÁÚ". è È "ÚÓÍ, È%ÓÈÓÍ+ÚÁÌÌ, %ÓÍÈÁÌ·"Ú, ÓÓ, Á ÌÛ, , Á 1 [b].
- è·ÁÌÍÛ ÌÁ ÚÓÍ, ÍÓ "ÒÌÈÁÚ", ÍÓÈ "Ò, Á 1Ú" ÍÓÈÍÓ, ÁÓÙÈ Û+ÌÈÁ Ò ÓÓÍÓ·.
- ÈÈ%ÍÓÍ ÈÓÚ+ÌÌÈ~ÁÓÍÓÈ Ò+ÌÁÌÈ [c].
- è È ÓÓÍ, ÁÓ, †ÌÈÈ ÈÈ%ÍÓÍ ÈÓÚ+ÌÌÈ~ÁÓÍÓÈ Ò+ÌÁÌÈ, ÌÁ ÓÓÍÁ~ÁÌÈÈ, ÓÓ% ò ÏÌ·ÌÈ ÌÛ~†ÌÈ ÓÓÍÌ~†, ÈÁÓ· †ÈÁÌÈÁ Ì+ ÈÈ%ÍÓÍ ÈÓÚ+ÌÌÈ~ÁÓÍÓÍ "Í †ÌÁ ÍÓÈÁÚ ÓÚ+ÌÓ, ÈÚ, ÒÌÚ Û%ÍÓ †ÁÌÈ~ÈÌ·Í, ÇÚ+ÌÈÁ ÒÏÛ~†ÌÌ ÁÍÓÍÁÌ%ÚÁÌ Ç+Ì ÓÓÍ, ÁÓ, †Ú, ÒÌ, È%ÓÈÓÍ+ÚÁÌÁÌ.

**[b]**



**[c]**



## Hints for better shooting

ëó, ÁÚ° Ì±~ÈÌ±, ~ÁÏÙ  
 ÓÓÀ ±ÚÓ Û

### 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, you cannot attach the tripod securely and the screw may damage 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

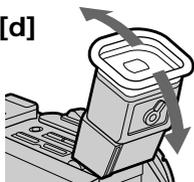
- Do not pick up the camcorder by the viewfinder or the LCD panel [e].
- Do not place the camcorder so as to point the viewfinder or the LCD panel toward the sun. The inside of the viewfinder or the LCD panel may be damaged. Be careful when placing the camcorder under sunlight or by a window [f].

ìòú+ì±, ìÈ, +ÈÚÁ, ÈÈÁÓí+ìÁ Û Ì±  
 „ó ÈÁÓìú+ì, ÌÙ, ÓÓ, Á ÌìÓÓú, ÈìÈ  
 ÓÓí, ÁÙÈÚÁÓ, ~Ú+ÚÈ, Óí.  
 èÓÓ ó·ÙÈÚÁ ÓÓÓú±, ÈÚ, ÈÈÁÓí+ìÁ Û Ì± ÓÓÓí  
 ÈìÈ% Û, Û, ó, ÌÙ, ÓÓ, Á ÌìÓÓú, Ì±  
 ÓÓ%ìÓ%ì~ÁÈ, 'óÓÓÁ. ÓÓìÈ Û ç±ò ÁÓÚ, ~Ú+ÚÈ,  
 %ìñ òÓÓó+òò± ±Ú±, ÚÓ Èì ÌÓÈìÓ  
 , ÓÓÓÓí, ÁÓ, ±Ú, òñ È%ìñ ò·ÁìÓí  
 , ÈÈÁÓí+ìÁ ÒÈ. è ÁÈÈÁ ~Áì Ò ÈÓÓÁÈìñÚ, í  
 í+ìÁ Á ~Ú+ÚÈ, ° ÓÈÁ, Ó%ÓÚ, ±% Û, Èì ÛÈ Ì, ò  
 ò, Á ñÈÚÁ %ìÈìÙ í ÁÓÁÈìÓ, Ó, ÈìÙ±. èì± ÌÁ  
 %ÓìÈì± ò Á, °~±Ú, 6, 5 Ìì - , ò ÓÚÈ, ÌÓí  
 ÓìÙ~±Á ÓÓÁÈìÁìÈÁ·ÙÈÁÚ ÌÁì±ÁÈì·ì, ±  
 , ÈìÙ ÌÓÈÁÚ ÓÓ, ÁÈÈÚ, í+ìÁ Û.

ÒÓìÈ ç· ÌÒÈÈÚÁ Ó~ìÈ  
 ä ñ Ììò±%ìÈ ÓíÓíñ Ì ÓÈÈìò ÓÓÓ„ìÙÚ, Ì+Á±%,  
 ~ÚÓ···ìò Û%ò·ìÁÁ ÓìÓÓÚ ÁÚ, ,  
 , ÈÈÓÈÓí+ÚÁì, [d].

áÁ ° ò Á%ÓÓÓÓ ÓÈìÓÓÓÈ ò Èò· ±~ÁìÈÈ ò  
 ÈÈ%ìÓí Èòú+ììÈ~ÁòìÓÈ ò+ìÁì, . È  
 , ÈÈÓÈÓí+ÚÁìÁì  
 • çÁ %Á ÈÈÚÁ, ÈÈÁÓí+ìÁ Û Á±, ÈÈÓÈÓí+ÚÁì,  
 ÈìÈ ÈÈ%ìÓí Èòú+ììÈ~ÁòìÓ. Ò+ìÁì, [e].  
 • çÁ ±ÁìÁ~±ÈÚÁ í+ìÁ Û, Û+ìÓí ÓÓìÓÈÁìÈÈ,  
 ò È ÌìÓÓÓ Óí Ì± ~í ±ì, ÈÈÓÈÓí+ÚÁìñ ÈìÈ  
 ÈÈ%ìÓí Èòú+ììÈ~ÁòìÓ. Ò+ìÁì, ÌÓ, ÛÚ  
 ÓÓÓ±%±Ú, ò ñì·Á ÓÓìÁì~ì·Á ÌÙ~È. ùÓÓ  
 ÌÓÈÁÚ ÓÓ, ÁÈÈÚ, ÌÙÚ ÁììÈÁ %ÁÚ+ìÈ  
 , ÈÈÓÈÓí+ÚÁìñ ÈìÈ ÈÈ%ìÓí Èòú+ììÈ~ÁòìÓ, ò  
 ~í ±ì±. èó·ì.%±ÈÚÁ ÓÓÓÓ ÓÈìÓÓÓ.,  
 ÓÓÓ±, Ìññ, ÈÈÁÓí+ìÁ Û Ì± ÓÓìì·Á ÈìÈ Û Óíì±  
 [f].

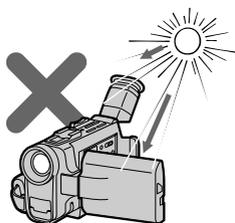
[d]



[e]



[f]



# Checking the recorded picture

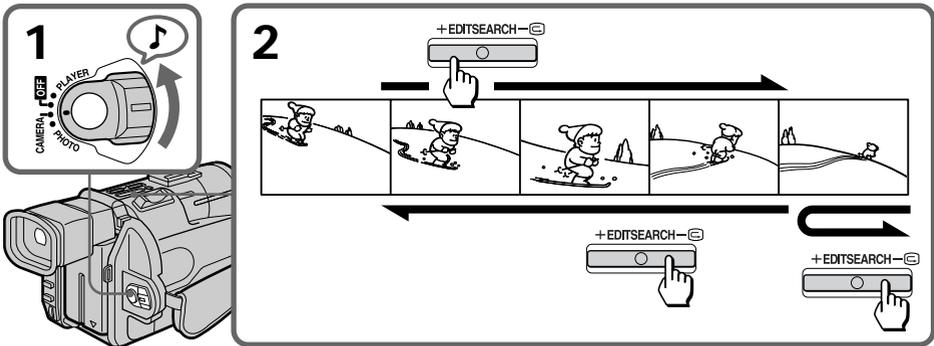
è ó, Â Í± ÓÚÒÌñÚÓ,,ó  
Ï±ÚÂ Ë±Ï±

Using the EDITSEARCH, you can review the last recorded scene or check the recorded picture in the viewfinder.

- (1) While pressing the small green button on the POWER switch, set it to CAMERA.
- (2) Press the - side of EDITSEARCH momentarily; the last few seconds of the recorded portion plays back (Rec Review). Hold down the - side of EDITSEARCH until the camcorder goes back to the scene you want. The last recorded portion is played back. To go forward, hold down the + side (Edit Search).

è óóíó . . ÙÙí^ÈÈ EDITSEARCH Ç  
íóÈÁÚÁ Ó Óòí±Ú Ë, ±Ú, ÓÓóíÁ%ÌÈÁ ÚÓí, íó ~Ú  
ÓÚÒÌñÚ^Á Í±% \* È Ó ó, Â ñÚ, Í±^ÁÓÚ, Ó  
ÈÁÓ. +ÈÁÌÈñ, , ÓÓÓ ÓÈÁ, Ó%ÁÌ, , ó Í± ^í ±ÌÁ  
È%ÓÈÓí±ÚÁññ.

- (1) Ì%Á ÈÈ, ±ñ, Ì±È±ÚÓí ÓÓíÓÈÁÌÈÈ  
Í±ÌÁÌ, ÍÚ. ÁÁÌÁÌÚ. ÍíÓÓÍÚ Ì±  
ÓÁ Áíñ. ^±ÚÁÍÁ POWER, ÓÁ Á%, ÈÌ, ÚÁ Á,, Ó  
, ÓÓÁÈ^È. CAMERA.
- (2) Ç±ÈÌÈÚÁ È ÓÚÓÚÓÈÚÁ ÓÚÓ ÓÍÚ - . ÍíÓÓÍÈ  
EDITSEARCH; Ó È ^ÚÓÍ - Û%ÚÚ  
, ÓÓÓ ÓÈÁ, Á%ÁÌ^ ÓÓÓÍÁ%ÌÈÁ ÌÁÓÍÓí, íó  
ÒÁÍÚÌ% ÓÚÒÌñÚÓ,, Ó Ç±ÌÈ Ì±ÚÁ È±Í±  
(Ó ó, Â Í± Á±ÓÈÈ). ÓÚÓ. ^ Í±ÈÚÈ ÌÚÈÌ^ È  
Í±% , ÌÁ ÓÚÓÚÓí±ÈÚÁ ÓÚÓ ÓÍÚ - ÍíÓÓÍÈ  
EDITSEARCH, ÓÓÍ± Óí ÌÁ . Û%ÁÚ Ì±È%ÁÌ.  
èÓÓÍÁ ^ÚÓ,, Ó . Û%ÁÚ, ÓÓÓ ÓÈÁ, Á%ÁÌ±, Òñ  
Á±ÓÈÒ,, ÓÍÁ%Ú. ^ññ Á± ^ÚÈÌ Í±% ÓÍ.  
ÓÚÓ. ^ ÓíÓÚ±Ú, ÍÁÍÚÚ, ÓÁ Á%, Ì±ÈÌÈÚÁ È  
Û%Á ÈÈ, ±ÈÚÁ ÍíÓÓÍÚ ÓÓ ÓÚÓ ÓÍ^ +  
(ÍÓÍÚ^ÈÌ^ È ÓÈÓÈÍ).



**To stop playback**  
Release EDITSEARCH.

## To go back to the last recorded point (END SEARCH)

Press END SEARCH. The last recorded point is played back for about 5 seconds and stops. Note that when you use a tape without cassette memory, this function does not work once you eject the cassette after recording.

## To begin re-recording

Press START/STOP. Re-recording begins from the point you released EDITSEARCH. Provided you do not eject the tape, the transition between the last scene you recorded and the next scene you record will be smooth.

èÓÚ±ÌÓ, Í±, ÓÓÓ ÓÈÁ, Á%ÁÌÈñ  
èÓÚÓÚÓÈÚÁ ÍíÓÓÍÚ EDITSEARCH.

ÇÓÁ, ^~ÁÌÈÁ Í ÍÓÍ^Û ÓÚÒÌñÚÓ,,ó  
Ì±ÚÁ È±Í± (END SEARCH)  
Ç±ÈÌÈÚÁ ÍíÓÓÍÚ END SEARCH. á±ÌÁ ±  
, ÓÓÓ ÓÈÁ, Ó%ÈÚ ÓÓÓÍÁ%ÌÈÁ 5 ÓÁÍÚÌ%  
ÈÌÁ. ^ÈÒñ Ì± ÍÁÍÚÁ Á±ÓÈÈÈ È Ó ÁÍ ^±^ÁÚ  
, ÓÓÓ ÓÈÁ, Á%ÁÌÈÁ. èíÁ%ÚÁÚ ÈÍÁÚ. , È%Ú, ^ÚÓ  
Ó È ÓÓí, ÁÓ, ±ÌÈÈ Í±ÓÓÁÚ±ÌÈ, ÌÁ ÓÓí±^ÁÌ^ÌÈ  
^ÍÁÍÚ ÓÌìÓÈ Ó±ñÚ. . %±Ì±ñ ÙÙÍ^Èñ  
%ÁÈÓÚ, ÚÁÚ ÌÈ^, %Ó ÓÁ ^, Ó,, Ó ÈÁ, ÌÁ^ÁÌÈñ  
Í±ÓÓÁÚ^ Ó Á±ÓÈÒ. ÈÁ, È%ÁÓÍ±ÌÁ .

èó, ÚÓ Ì±ñ Á±ÓÈÈ,  
Ç±ÈÌÈÚÁ START/STOP. èó, ÚÓ Ì±ñ Á±ÓÈÈ.  
Ì±^ÌÁÚÒñ ò ÍÓÍÁÍÚ±, íó,, % Ç^ ÓÚÓÚÓÈÌÈ  
ÍíÓÓÍÚ EDITSEARCH. ÓòÌÈ Ç^ ÌÁ ÈÁ, ÍÁÍ±ÌÈ  
Í±ÓÓÁÚÚ ÈÁ, È%ÁÓÍ±ÌÁ ^, ÚÓ ÓÁ Á. Ó% ÓÚ  
ÓÓÓÍÁ%ÌÈÁ ÓÚÒÌñÚÓÈÈ Ò^ÁÌ^ Í ÓÍÁ%Ú. ^ÁÈ  
^Ú%ÁÚ Óí±, Ì^Í.

# Playing back a tape

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

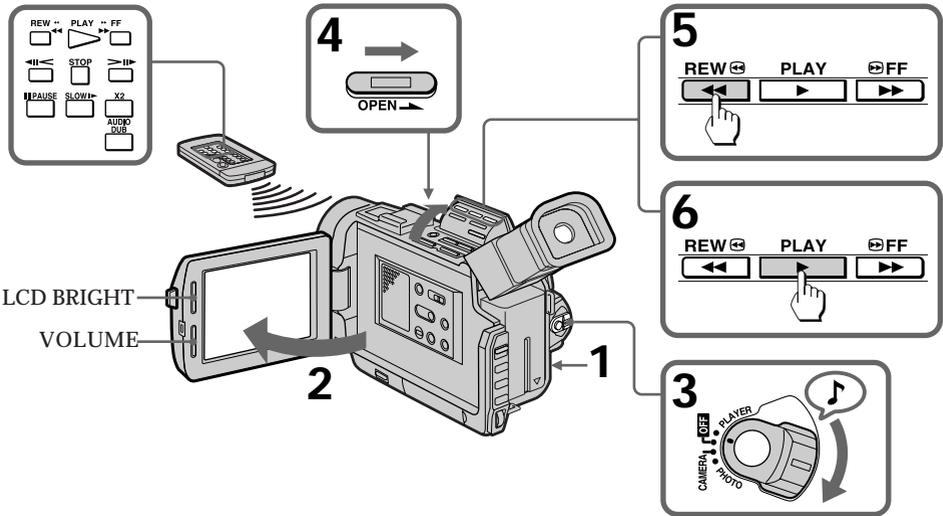
- (1) Insert the recorded tape with the window facing out.
- (2) While pressing PUSH OPEN, open the LCD panel.
- (3) While pressing the small green button on the POWER switch, set it to PLAYER.
- (4) Slide OPEN and pull the video control compartment until it clicks.
- (5) Press 0 to rewind the tape.
- (6) Press ( to start playback.
- (7) 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.

Όσο όσα, αααααα  
, εεεεεε

- (1) ιου+ιό, εύα, ί+ια ύ ά+οεό+ιιύ. ί+οαύύ οίό-ίόί ί+ ύεύ.
- (2) ς+εεί+η PUSH OPEN, +οί όεύά εεεεεε εού+ιιε~αοίό, ό+ιαί.
- (3) ι&ά εε, +η, ί+ε+ύοί οοίόραίεε ί+ίαί, ίύ. ααίαιύ, ίοόίό ί+ όά αίί ~+ύάία POWER, όά &, εί, ύά ά,,ό , όοάε~ε. PLAYER.
- (4) εε, εί, ύά ~+εοί OPEN ε , ~ύηιεύά εο~άί~ί+~ίόίύό +, ίάιεν, εεεεεε οοίόύ όί.
- (5) Νήη όά αίόύίε ίάιύ~ ί+εεί+εύά 0 .
- (6) Νήη ί+~ί+~, όοό όεά, &~άίεν ί+εεί+εύά ( .
- (7) Νήη ά, ύίε ό, ίε, οίίόόεά, ύί+ όόί, άύεύάό, ίίόόίόε VOLUME +/-, +εήν όεεού όείεν ίόόύε εεεεεε εού+ιιε~αοίό,,ό~ί +ι- ίίόόίόε LCD BRIGHT +/-.

εοείί ~ε, ί+ια ύ ύάία, εάό ύ είε, εεεεεε, ίεύούύύ, ς~ ίόεαύά ύ+ίεά ό οοί+ύ ε, +ύ, οούοιηύ~ά, εεεεεε, ί~ ί+ ύάία, εεεεεε ί~ ί+ία.



- To stop playback, press p .
- To rewind the tape, press 0 .
- 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.

όού~ όού+ιό, εύ, ,όόό όεά, &~άίεά, ί+εεί+εύά p .

όού~ ούίόύ+ύ, ίάιύύ ί+ά+ε, ί+εεί+εύά 0 .

όού~ όά αίόύ+ύ, ίάιύύ, όά &, ί+εεί+εύά ) .

εοί, άό, +ίεά ούί, ύοίί εεού+ί~εοίίό,,ό ύό +, ίάιεν ίό +, ίηύ, όόό όεά, &~άίεάί ίόείό ό ε οοίό~εο εί+~, +άίό, ό ούί ύ+ εεού+ί~εοίίό,,ό ύό +, ίάιεν. ε άεεά~άί όοί, άό, +ύ, όη όύί, ύοί, ύού+ιό, εύά, ίά,,ό~+ύ+ άείε ύεό+ R6 ( +άία άά).



## Playing back a tape

### To view the picture at double speed

For doublespeed playback in the reverse direction, press < , then press ×2 on the Remote Commander during playback. For doublespeed playback in the forward direction, press > , then press ×2 during playback. To resume normal playback, press ( .

### To view the picture frame-by-frame

Press ' or 7 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.

è ÒÒÏÓÚ , È&AÓÄ†ÔÈÔÈ Ò 1/3  
ÏÓ Ì†Ì, ÌÒÈ ÒÏÓ ÒÐÛÈ (Á†Ì&AÏËÄ  
, ÒÒÔ ÔÉÁ, Â&AÏËÄ)  
ÇÓ, ÂÏÌ, ÒÒÔ ÔÉÁ, Â&AÏËÈ Ì†ÈÏÈÛÄ ÌÒÓÓÏÚ  
& Ì†ÒÏÏ, ÛÄ &ÈÖÚ†Ì"ÈÓÏÏ, ÒÛÔ †, ÌÂÏÈ.  
ÑÏÌ Á†Ì&AÏËÄ, Ò, ÒÒÔ ÔÉÁ, Â&AÏËÈ,  
Ó. †ÛÏÛ, ÒÓÔ ÒÏÛ Ì†ÈÏÈÛÄ < , †Á†ÛÄ & .  
ÓÓÔ. , ÓÁÓ. ÌÓ, ÈÛ. ÌÓ Ì†Ì, ÌÒÄ  
, ÒÒÔ ÔÉÁ, Â&AÏËÄ, Ì†ÈÏÈÛÄ ÌÒÓÓÏÚ ( .

è ÒÒÏÓÚ , È&AÓÄ†ÔÈÔÈ Ò Ô&, ÓÁÏÏÒÈ  
ÒÏÓ ÒÓÛ. ,  
ÓÓÔ. , ÒÒÔ ÔÉÁ, ÁÓÛÈ Á†ÔÈÒ. Ò Ô&, ÓÁÏÏÒÈ  
ÒÏÓ ÒÓÛ. , Ó. †ÛÏÛ, ÒÓÔ ÒÏÛ, Ì†ÈÏÈÛÄ,  
1Ó&A, ÒÒÔ ÔÉÁ, Â&AÏËÈ ÌÒÓÓÏÚ < , †Á†ÛÄ  
ÏÒÓÓÏÚ ×2 Ì† ÒÏÏ, ÛÄ &ÈÖÚ†Ì"ÈÓÏÏ,  
ÛÔ †, ÌÂÏÈ. ÑÏÌ, ÒÒÔ ÔÉÁ, Â&AÏËÈ Ò  
Ô&, ÓÁÏÏÒÈ ÒÏÓ ÒÓÛ. , ÓÁ & Ì†ÈÏÈÛÄ Ò È  
, ÒÒÔ ÔÉÁ, Â&AÏËÈ ÌÒÓÓÏÚ > , †Á†ÛÄ ÌÒÓÓÏÚ  
×2. ÓÓÔ. , Á ÌÛÛ, ÒÌ ÌÓ Ì†Ì, ÌÒÏÛ  
, ÒÒÔ ÔÉÁ, Â&AÏËÈ, , Ì†ÈÏÈÛÄ ( .

èÒÍ†% Ó, \*È Ò ÒÒÏÓÚ  
Ç ÂÈÈÄ Ò†ÛÄ\* Ò È, ÒÒÔ ÔÉÁ, Â&AÏËÈ  
Ì†ÈÏÈÛÄ Ì† ÒÏÏ, ÛÄ &ÈÖÚ†Ì"ÈÓÏÏ, Ò  
ÛÔ †, ÌÂÏÈ ÌÒÓÓÏÚ' ÈÏÈ 7 . ÇÁ ÓÓÔÓÓÏ†Ì  
~ÛÛ ÌÒÓÓÏÚ, Ç" ÌÓÈÁÛÄ Ò ÒÏÏ†Û È, †Û.  
ÈÁÓ. †ÈÂÏÈÄ Ò 1/25 ÌÓ Ì†Ì, ÌÒÈ ÒÏÓ ÒÓÛÈ.  
ÓÓÔ. , Á ÌÛÛ, ÒÌ ÌÓ Ì†Ì, ÌÒÏÛ  
, ÒÒÔ ÔÉÁ, Â&AÏËÈ, , Ì†ÈÏÈÛÄ ( .

èÏÄÏ† Ì†Ô †, ÌÂÏÈ Ò ÒÒÏÓÚ †  
Ç ÂÈÈÄ, ÒÒÔ ÔÉÁ, Â&AÏËÈ Ì†ÈÏÈÛÄ Ì†  
ÒÏÏ, ÛÄ &ÈÖÚ†Ì"ÈÓÏÏ, ÒÛÔ †, ÌÂÏÈ ÌÒÓÓÏÚ <  
&ÏÌ Ò ÒÒÏÓÚ †, Ó. †ÛÏÛ, ÒÓÔ ÒÏÛ ÈÏÈ ÌÒÓÓÏÚ  
> &ÏÌ Ò ÒÒÏÓÚ †, ÓÁ &. ÓÓÔ. , Á ÌÛÛ, ÒÌ Ï  
ÏÓ Ì†Ì, ÌÒÏÛ, ÒÒÔ ÔÉÁ, Â&AÏËÈ, , Ì†ÈÏÈÛÄ ( .

é, ÒÒÔ ÔÉÁ, Â&AÏËÈ

- è È ÓÁ ÁÏ&A ÓÛ ÌÓ Ì†Ì, ÌÓ, Ó Í& Û, ÈÏ  
ÂÈÈ†Ì, ÒÒÔ ÔÉÁ, Â&AÏËÈ Á, ÛÏ  
ÓÛÏ. ~†ÁÛÏ.
- Ç% Û, È1 ÂÈÈ†1, ÒÒÔ ÔÉÁ, Â&AÏËÈ  
ÈÁÓ. †ÈÂÏÈ ÌÓÈÁÛ Ò ÈÓ. ÁÛ†Û,  
"ÏÓÁ†È" Ì"Á" ÏÓÏÛÛ . ÛÓÔ ÌÂ Ï, ÏÌÁÛÏ  
Ò ÈÁÏ†ÏÓÏ ÌÂÈÒ †, ÌÓÓÛÈ.
- èÒÓÏÄ 5 ÌÈÏÛÛ Á. , †ÈÈ, ÂÈÈÄ Ò†ÛÄ\*  
, ÒÒÔ ÔÉÁ, Â&AÏËÈ †, ÛÓÏ†ÛÈ~ÁÓÏÈ  
Ò ÁÏ ††ÁÛÏ. ÓÓÔ. , ÓÁÓ. ÌÓ, ÈÛ,  
, ÒÒÔ ÔÉÁ, Â&AÏËÈ, Ì†ÈÏÈÛÄ ÌÒÓÓÏÚ ( .

é Á†Ì&AÏËÄ ÌÒÓÓÏÚ, ÒÒÔ ÔÉÁ, Â&AÏËÈ  
ÇÈ&AÓÏ†ÌÁ † ÒÓÓÓÔ. Ì† Ó. ÁÓÓÁ~È, †Û,  
, "ÓÓÏÓÏ†~ÁÓÛ, ÁÏÏÓÁ ÈÁÓ. †ÈÂÏÈÄ Ò È  
Á†Ì&AÏËÄ ÌÒÓÓÏÚ, ÒÒÔ ÔÉÁ, Â&AÏËÈ; ÒÏÓ, Ó& Ì†ÏÓ,  
ÏÄ Ò ÁÓ. †ÁÛÛÏ, , "1Ó&AÏÈÈ, Ì†Ì,  
ÒÓ&†, †ÁÏ"È Ì† , ÌÂ&AÓ DV OUT.

# Searching for the end of the picture

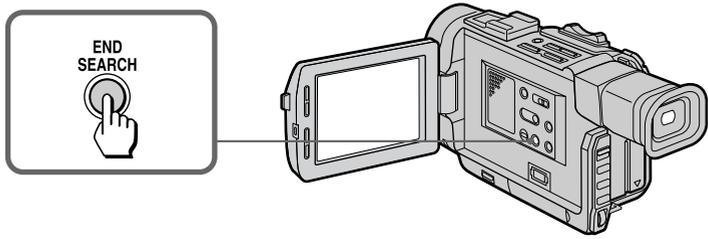
ç†±1ôÊ%ÂÎËÂ ÍÓÎ^†  
,Ê%ÂÓÁ†ÔËÒË

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.

è00ÍÁ,Ê%Á00^ÂÎËË ÈÒ 00ÍÓÚ †000ÎÍÓ0„0  
Î†ÚÁ È†Î†,Ê%ÁÓÍ†Ë †ÍÓËÁÚ  
†,ÚÓÍ†ÚË^ÁÓËË Ì†±10%ËÚ. ÍÓËÁ^ Á†0Ë0†ÌÌ0„0  
Û~†00Í† ÍÁËÚ. è È^ÚÓÍ ÍÁËÚ†  
ÔÁ ÁË†Ú†,†ÁÚ0Î,ÔÁ Á%ËËÈ Ì†Á†%, 000ÍÁ  
~Á„0,000 ÔËÁ,0%ËÛ0Î 000ÍÁ%ËËË Û †,ÍÁËÚ  
0%ÁË†ÌÌ0Ë Ì† ÍÁË Á†0Ë0Ë  
Ô 0%ÓÍËËËÁË,Ì00Ú. ÓÍÓÍÓ 0ÎÚË 0ÁÍÚË%  
á†ÚÁË,000 ÔËÁ,Á%ÁËËÁ 000Ú††,ËÈ,†ÁÚ0Î,  
ÍÓË^Á†0Ë0†ÌÌ0„0Û~†00Í† (†,ÚÓ00Ë0Í  
ÍÓË^Á†0Ë0Ë).

ç ÁËËËÁ 0ËË%†ËË Ì†~†Î† 0^ÁËËË  
†0Í ÔËÁ ËË%ÍÓÍ È00Ú†ËË^Á0ÍÚ. 0†ÍÁË,È  
Ë†ËËËËÁ ËÌ00ÍÚ END SEARCH.  
ÛÚ† ÛÛËË^Ë Ë%ÁË0Ú,ÛÁÚ, ÍÓ„%†  
ÔÁ ÁËË,~†ÚÁË, POWER Ì†±10%ËËË0Î,  
00ÍÓËÁËËË1 CAMERA, PLAYER ÈËË PHOTO.



**Note on End Search**  
When you use a tape without cassette memory, the End Search function does not work once you eject the cassette after recording. If you use a tape with cassette memory, this function will work after you have ejected the tape once.

é. †, ÚÓ00Ë0ÍÁ ÍÓË^† Á†0Ë0Ë  
è ÈÈ000Í,ÁÓ,†ËË Ì†00ÁÚ, ËÁ ÈËÁ,^È1  
~ÍÁËÚ 0ËË0È 0†ËËËË, †,ÚÓ00Ë0Í ÍÓË^† Á†0Ë0Ë  
,0ÁÍ0ËÁË ËÈ. %Ó ÔÁ ,0„0 ÈÁ,ËÁ^ÁËËË ÈÁ  
Ë†ËÁ ^ Á†0Ë0†ÌÌ0Ë,Ê%ÁÓÍ†00ÁÚ.  
è ÈËËËËËÁË,Ì0 Í Í†000ÁÚ†Í 0 0†ËËËË. ~Û†  
ÛÛËË^Ë Ë%ÁË0Ú,ÛÁÚ %†ÈÁ 000ÍÁ 0%ËËË ËË0Í †ÚË0„0  
ÈÁ,ËÁ^ÁËËË È00,ÚÓ Í0Ë Û00Ú†Í0,ËÈ Ì†00ÁÚ.

# Using alternative power sources

# ç · ó Èòúó~ìëíó, òëú†ìëí

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.

ç†, εεάοί†ιά † ιόεάú ðëú†ú ðι όú όó·όú, Αιιόε †ιφύιύιηόú ίόε·†ú† Αε, όú ðάúε Èíε όú †, ύοίό·έí, ιό, †ιφύιύιηόú †ò ι†ò ηεάíεάí 12/24 ç. ç·ó ι†ε·όíάά όó·ιόε†ι'ά, †ò Èòúó~ìëí† ðëú†ìëí Α†, Èòëú όú ύó, †ó, †εάç·όó·έ· †Αúάó, όóí, άό, †ú, ðι ι†ιά όε.

Place	Power source	Accessory to be used
Indoors	Mains	Supplied AC power adaptor
Outdoors	Battery pack	Battery pack NP-F530 (supplied), NP-F730, NP-F930
In the car	12 V or 24 V car battery	Sony car battery charger DC-V515A

άάóóó	άòúó~ìëí ðëú†ìëí	çάó·ιόε·έí·ά ό Èí†ε†Αεíόóúε
ç όóíά·Αíεε	εάú,	ε Èí†, †Αí·ε †ε†ιόúά όάúά, †ó, ðëú†ìëí
çíá όóíά·Αíεí	††ú† Αí	Αíφύιύιηόú ι·ά ††ú† Αε NP-F530 (ò Èí†, †Αúά), NP-F730, NP-F930
ç †, ύοίό·έíά	Α, ύοίό·έí, ι·ε †ιφύιύιηόú ò ι†ò ηεάíεάí 12 ç Èíε 24 ç	ά† ηε.ιόά ύóó όèóú, †ε.í† †, ύοίό·έí, ι·ι †ιφύιύιηόú ό, Sony DC-V515A

### 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

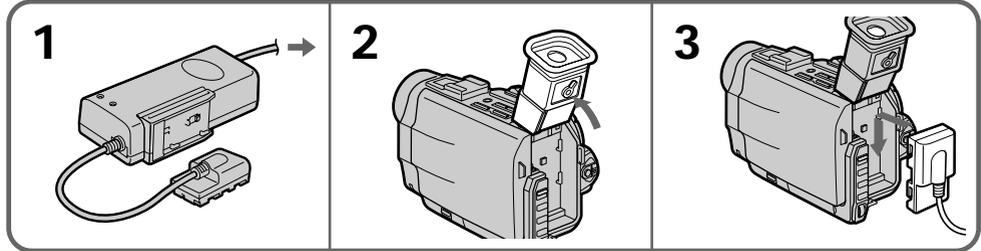
To use the supplied AC power adaptor:

- (1) Connect the mains lead to the mains.
- (2) Lift up the viewfinder.
- (3) Slide the connecting plate down into the guides at the rear of the camcorder until it clicks.

έ· Èòúó~ìëí† ðëú†ìëí  
 εúíí, ~Αíεά, εεάοί†ιά · όú Èòúó~ìëí† ðëú†ìëí Èíε όú·ΑíΑíεά όú ιάά †ιφύιύιηόú ίόε·†ú† Αε, ό, Αííò·Αííε Èíε, όóó όεά, Αε·Αíεíη ίόεάú ό ε, άόúε ίόó, Αε·Αíε, ίΑíú·, ι†όόάú. ç όóó·ιόί όíú~†Α όíε·Αú ιΑíε·íΑíιό, όóóú†ιό, Èú, ðëú†ìëí ι†ιά ·

## εëú†ìëâ óú ðάúε

óóó·όó·ίí, ~εú, ι†ιά ú ίó Èí†, †Αíιόú †ε†ιόúά ú όάúά, †ó, ðëú†ìëí:  
 (1) εó·όó·Αε·Èíεúά όάúά, όεò ó, όε.ί όάάúíά.  
 (2) εó·ìεíεúά, εε·όέí†úΑí.  
 (3) çóú†, †ά ίόíú†ιφύιύ. όí†òúεíú, ι†ò †, í†. ~εά ό†ά· ι† Α†ε·íΑε όúó όíά ίό όúó†, εε·άοί†ιά · εóε, Èí, úά άά, íεά·ó·Αí·ι†.



### To remove the connecting plate

The connecting plate is removed in the same way as the battery pack.

εú·ΑíΑíεά ίόíú†ιφύιύε όí†òúεí·.  
 εú·Αííú, ίόíú†ιφύιύ, όí†òúεíú όú ι†ιά · όíε·úάú ú í εά, ι†ι †ιφύιύιηόú íú·†ú† Α.

Advanced operations / εοί, άό, ιεά οδύι, ι'ιε ύιι'εφιε

### WARNING

The mains lead must only be changed at a qualified serviceshop.

### 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.

èèÒÑèéíÒèÒÛÒçàò  
á‡ÌÁÌÛ ÒÀÛÁ,ó,óò ó,ó%‡ ÍÒÈÍÓ Ò ÒÈÁ,Ó%ËÛ.  
ÚÓÍ,ÍÓ,ÒÒÀ^È‡ÌÈÁÈ ó,‡ÌÌÒÈ Ì‡ÒÛÁ ÒÍÒÈ.

ççàáçàò  
èËÛ‡ÌÈÁ ÌÁ ÒÚÍÍ, ~ÁÌÒ %ó ÚÁ1 ÒÓ , ÒÓÍ‡  
ÒÀÛÁ,ÓÈ Ò ó,Ó% ÒÒÛ‡ÁÛÒfl ÒÓ%ÒÓÁ%ÈÌÁÌÌ·í í  
ÓÁÁÚÁ, %‡ÈÁ ÁÒÍÈ Ò‡í ‡Òò‡ ‡Û Ò È ~ÚÓÍ  
,·íí.~ÁÌ.

## Using a car battery

Use a car battery charger such as Sony DC-V515A (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 DK-315 (supplied with DC-V515A) connecting cord.

èËÛ‡ÌÈÁ ÓÚ ‡,ÚÓÍÓ·ÈÌ,ÌÒ,,ó  
‡ÍÍÛÌÛflÚÓ ‡

Ñflfl ~ÚÓ,óç‡í ÒÓÚ Á·ÛÁÛÒfl Á‡ fl%ÌÒÁ  
ÛÒÛ ÒÈÒÛ,ó%flfl ‡,ÚÓÍÓ·ÈÌ,Ì·1  
‡ÍÍÛÌÛflÚÓ ó,, Ì‡ò ÈÌÁ ÍÓ%ÁÍ, Sony DC-  
V515A (, ÍÓÍÒÍÁÍÚ ÌÁ,1Ó%ËÛ). èÒ%ÍÍ,~ÈÛÁ  
Ò ó,Ó% ÒÈÛ‡ÌÈÈfl ÒÚ ‡,ÚÓÍÓ·ÈÌ,Ìò,,ó  
‡ÍÍÛÌÛflÚÓ ‡ í,,ÌÁÁ%Û Ò ÈÍÛ È,‡ÚÁflfl,  
Ò‡ÍÓÍÁ ‡,ÚÓÍÓ·ÈÌfl ( Ò Ì‡ò flÈÁÍÈÁÍ  
·ó ÚÓ,ÓÈ ÒÁÛÈ 12 ç ÈÍÈ 24 ç). èÒÁ%ÈÌÈÛÁ  
Á‡ fl%ÌÒÁ ÛÒÛ ÒÈÒÛ,ó%flfl ‡,ÚÓÍÓ·ÈÌ,Ì·1  
‡ÍÍÛÌÛflÚÓ ó, ò,È%ÁÓÍ‡ÌÁ ÓÈ Ò È ÒÓÍÓ·È  
Ò ÈÍ‡,,‡ÁÍÓ,ó ÒÓÁ%ÈÌÈÛÁÍ,Ìò,ó ~ÌÛ ‡DK-315  
(ÒÓÒÛ‡, flflÁÛÒfl, ÍÁÒÛÁ Ò DC-V515A).



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.



ç‡ÒÛÓfl~fl ~í·ÍÁÍ‡  
ÒÓ%Ú,Á È%‡ÁÛ, ~ÚÓ ÒÓÍÁ~ÁÌÌÓÁ  
Á, ÈÁ%ÁÍÈÁ Ò Á%ÒÛ‡, flflÁÛ ÒÓ·ÓÈ  
ÛÈ ÌÁÌÛ. ÍÓÍÓÍÁÍÚ.~Û.  
~‡ÒÛ, í,È%ÁÓ‡Òò‡ ‡ÛÛ Á Sony.  
áÓÍÓ‡ÌÈÈfl Sony ÁÍÓÍÁÍ%ÛÁÛ ç‡í  
Ò ÈÓ· ÁÛ‡Û, í ÁÁ  
,È%ÁÓ‡Òò‡ ‡ÛÛ Á  
ÍÓÍÓÍÁÍÚ.~ÈÁ, ÒÓÍÁ~ÁÌÌ·Á  
%‡ÌÌÒÈ ~í·ÍÁÍÓÈ ("GENUINE  
VIDEO ACCESSORIES").









## Changing the mode settings

### CM SEARCH <ON/OFF>

- Select ON to search using cassette memory.
- Select OFF to search without using cassette memory.

### 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 RECLAMP 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 RECLAMP to OFF.

### Note

- When playing back a tape recorded in the 16-bit mode, you cannot adjust the balance in AUDIO MIX.
- If you select 16BIT in AUDIO MODE menu, you cannot add an audio sound.
- If you select BRIGHT in LCD B.L. menu, the battery life while recording becomes 10 to 20% shorter. When you use the power sources except for a battery, the menu item LCD B.L. is set to BRIGHT automatically and the item does not appear in the screen.

### CM SEARCH <ON/OFF>

- èÀÈËÌ ON - ÒÈÒÌ Ò ÈÒÒÍÁ, ÁÓ, †ÌÈÀÌ Ò†ÌñÌÈ Ì†ÒÒÁÚ°.
- èÀÈËÌ OFF - ÒÈÒÌ · ÁÁ ÒÓÍÓ`È Ò†ÌñÌÈ Ì†ÒÒÁÚ°.

### DATA CODE <DATE/CAM ÈÌÈ DATE>

- èÀÈËÌ DATE/CAM - , , Ó% %†Ú° È ÈÌÚÓ Ì†ÈÈÈ ÓÁ†ÒÈÈÈ Ì`Í ÌÌ Ò È , ÒÒ ÒÈÁ, Â%ÀÌÈÈÈ.
- èÀÈËÌ DATE - , , Ó% %†Ú° Ì†`Í ÌÌ Ò È , ÒÒ ÒÈÁ, Â%ÀÌÈÈÈ.

\* ùÈÈ ÙÓÚ†ÌÓ, ÌÈ ÒÓÌ †Ìñ. ÙÒñ, Ò†ÌñÌÈ , È%ÁÓÍ†ÌÁ ° %†ÈÁ ÒÓÓÍÁ ÓÚ%ÁÌÁÌÈñ ÓÚ ÌÁÁ †ÌÚÌÚÌÚÓ ÌÒÈ·†Ú† ÀÈ, %ÓÚÁÌ ÒÓ , ÒÓÍ† ÌÁ †Á ñ%ÈÚÓñ, ÌÚÓ ÁÌÌñ, †Ì%ÈÁ, Ó-ÌÈÚÈÁ, ñÌ·†Ú† Áñ. ÓÓÍ Ì†Ò†ÁÚÓñ ÒÓÁÈ`ÈÈ, ÌÁ ÒÓÍÁ-ÁÌÌ`Ì Á, ÁÁ%Ó`ÌÓÈ, ÚÓ ÈÌ ÙÓÚ†ÌÓ, ÌÈ , ÓÁ, †`†. ÙÒñ Ì ÓÚ†Ì%† ÙÌ`Ì ÒÓÒÓñ 5 ÈÌÈÈ · ÓÍÁÁ ÌÈÌÚÓ ÒÓÓÍÁ ÓÚ%ÁÌÁÌÈñ †ÌÚÌÚÌÚÓ ÌÒÈ·†Ú† ÀÈ.

è·ÁÌ† Ó·ÁÌÚ†, Ì†ÌÓ%ñ`Á, ÒÒñ Ì† Ì†ÒÍ †ÒÒÓñÌÈÈ ÓÓ·ÁÌÚÈ, † ÒÒÈÈ ÒÁ ÁÌÌ.~†ÚÁÌ, ÒÈ, Ì†Ì. ÌÒÈ Ì†ÌÒÓ`ÌÈ RECLAMP Ì†ÌÓ%ÈÚÓñ, ÒÓÍÓÈÁÌÈÈ ON, ÚÓ Ò. ÁÚ Ì †ÒÌÒÈ ÒÈ, Ì†Ì. ÌÒÈ Ì†ÌÒÓ`ÌÈ Á†ÒÈÈÈ, †ÒÒÓÍÓÈÁÌÒÈ Ì†ÒÁ Â%ÌÁÈÈ ÒÓÓ ÒÌÁ ÌÓ ÒÓò† Ì†ÌÁ °, ÌÓÈÁÚ ÒÓò%†Ú, Ì†·ÌÈÁÍÓ †ÒÒÓÍÓÈÁÌÌ`È Ò Â%ÌÁÚ Ò·ÁÌÈÈ. Ç Ú†ÌÈÌ ÒÌÚ~ñÌ ÁÌÓÍÁÌ%ÚÁÚÓñ, ·È †Ú, , ÌÁÌ, %Ìñ ÒÁ ÁÌÌ.~†ÚÁÌñ RECLAMP ÒÓÁÈ`È. OFF.

### è ÈÌÁ~ÌÈÁñ

- è È , ÒÒ ÒÈÁ, Â%ÀÌÈÈ Á†ÒÈÈÈ, Ó%ÁÌ†ÌÒÈÈ , 16-·ÈÚÍÓÍ ÁÈÈÌÁ, ÙÒÌÍ`Èñ Á, ÙÌÈ Ò, ÌÈ ·†Ì†Ò† AUDIO MIX ÌÁ †·ÓÚ†ÁÚ.
- ÒÒÈÈ , ÌÁÌ. AUDIO MODE , · †Ì† ÒÓÁÈ`Èñ 16BIT, ÚÓ Ì†ÌÓÈÁÌÈÁ Á, ÙÌ† ÌÁ, ÓÁÌÓÈÌÓ.
- ÒÓÈÈ , ÒÓÁÈ`ÈÈ LCD B.L. , · †Ì ÁÈÈÌ BRIGHT, ÚÓ Ò Ó%ÓÌÈÈÚÁÌ, ÌÓÓÓ, Ò·ÁÌÈÈ·ÁÁ ÓÓ%Á† ñ%ÌÈÈ·†Ú† ÀÈ ÒÓÍ †~†ÁÚÓñ Ì† 10 - 20%. è È ÒÓÍ, ÁÓ, †ÌÈÈ% Ù, ÈÈÈÈÈÒÓÓ`ÌÈÌ†ÈÈÈ ÒÈÚ†ÌÈñ ÒÁ ÁÌÌ.~†ÚÁÌ, LCD B.L. †, ÙÓÍ†ÚÈ~ÁÓÍÈ ÒÁ Á, Ó%ÈÚÓñ, ÁÈÈÈ BRIGHT, † ÒÓÓÓ, ÁÚÓÓ, Ù.~ññ ÒÓÁÈ`Èñ ÌÁÌ, Ì†`Í ÌÌ ÌÁ, , Ó%ÈÚÓñ.

# Fade-in and fade-out

ά†ÚÂÏÏÂÏËÊ Ë , ° 10%  
ËÁ Á†ÚÂÏÏÂÏËÏ

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 until the desired indicator flashes.
- (2) Press START/STOP to start recording. The fade indicator stops flashing.

## When fading out [b]

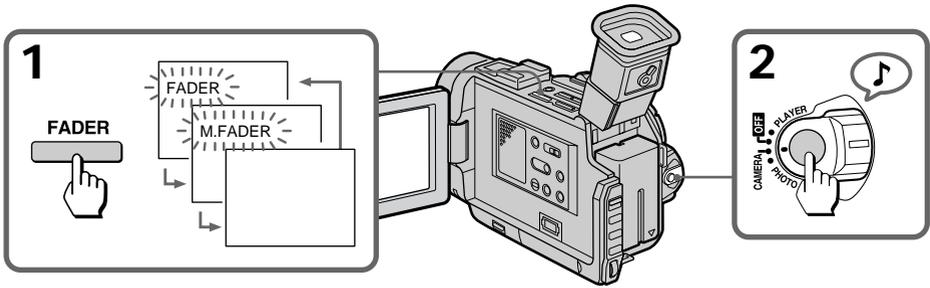
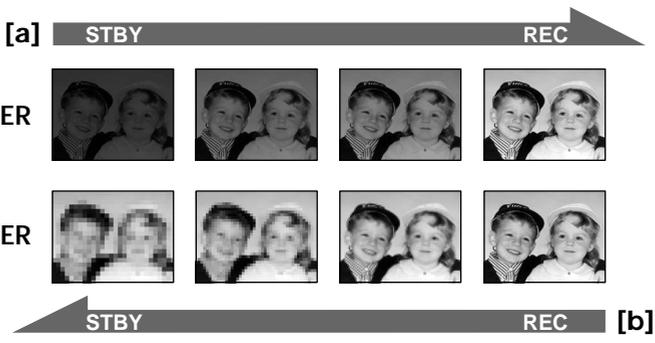
- (1) During recording, press FADER until the desired indicator flashes.
- (2) Press START/STOP to stop recording. The fade indicator stops flashing, and then recording stops.

óóó. Ç+È , È&AÓÙÈÏ. Ì· ÒÏÓÚ ÁÏÈÒ. ·ÓÏÁÁ  
Ò ÓÙÁÒÒÈÓÏ†Ï. ÌÓ, Ç· ÌÓÈÁÚÁ ÈÒÒÓÏ. ÁÓ, †Ú. ,  
ÏÈÏ Ú+ÏÈÁ Ò ÈÁÏ·, Ì†Ï Á†ÚÂÏÏÂÏËÊ Ë , °10% ÈÁ  
Á†ÚÂÏÏÂÏËÏ.

è È , °10%ÈÁ ÈÁ Á†ÚÂÏÏÂÏËÏ ÈÁÓ. †ÈÁÏÈÁ  
ÒÓÓÚÁÓÁÏÏÒ Ò ÓÓÓÚÓ+ÁÚ Ì+ ÚÁÏÏÏ Ì· Ì+ ÌÁ Ò  
Ó&ÏÒ, ÁÏÁÏ·Ï, ÓÁ †ÓÙ+ÏÈÁÏ , ÒÏÏÓÓÙÈ  
Á, ÒÏ†. è ÈÁ†ÚÂÏÏÂÏËËÏ ÌÓÓÓ, ÈÁÓ. †ÈÁÏËÏ  
ÒÓÓÚÁÓÁÏÏ Ò ÒÏÁÏ. †ÁÚÓÏ &Ó Á, Ò ÓÓÏÏÒ, Ò  
ÒÏËÏËÏ Ò ÓÚÁÏ·Ï ÒÓÏÓÏ, ~ÓÓ  
ÒÓÓ Ó, ÓÈ&A+ÁÚÓÏ Ò È, ÌÙ·ÁÏÈÁÏ Á, ÒÏ†.

Ç· 10% ÈÁ Á†ÚÂÏÏÂÏËÏ [a]  
(1) Ç· ÁÈÈÏÁ ÓÈÈ&+ÏËÏ Ì+·Ï† Ò·ÁÏÈÈ  
Ï+ÈÈÏ+ÈÚÁ ÌÓÓÓÏÙ FADER &Ó ÚÁÏ ÒÓ , ÓÓÏ†  
ÏÁ Ì+·ÏÁÚ ÏÈ,, †Ú. ÌÙÈÏ·È ÈÏ&ÈÏ+ÓÓ .  
(2) Ç+·ÏÈÚÁ Ò·ÁÏÏ Ì+È+ÚÈÁÏ ÌÓÓÓÏÈ START/  
STOP. àÈ,,+ÏÈÁ ÈÏ&ÈÏ+ÓÓ †Á†ÚÂÏÏÂÏËÏ  
Ò ÁÏ †+ÁÚÓÏ.

á†ÚÂÏÏÂÏËÊ [b]  
(1) ÇÓ , ÁÏÏ Ò·ÁÏÈÈ Ì+ÈÈÏ+ÈÚÁ ÌÓÓÓÏÙ  
FADER &Ó ÚÁÏ ÒÓ , ÓÓÏ† ÏÁ Ì+·ÏÁÚ ÏÈ,, †Ú.  
ÏÙÈÏ·È ÈÏ&ÈÏ+ÓÓ .  
(2) èÓÓ+ÏÓ, ÈÚÁ Ò·ÁÏÏ Ì+È+ÚÈÁÏ ÌÓÓÓÏÈ  
START/STOP. àÏ&ÈÏ+ÓÓ Á†ÚÂÏÏÂÏËÏ  
ÒÁ ÁÓÙ+ÁÚ ÏÈ,, †Ú. , ÓÓÓÏÁ ~Á, Ò Ò·ÁÏÏ†  
Ò ÁÏ †+ÁÚÓÏ.



## Fade-in and fade-out

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

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

When the POWER switch is set to PHOTO, or the START/STOP MODE control is set to ANTI GROUND SHOOTING  $\perp$  or 5SEC

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

### Note on the fader function

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

-Title

éÚÍÄ† Á†ÚÁÏÏÄÏËÄ/ , °1Ó%† ÈÄ Á†ÚÁÏÏÄÏËÄ  
èÄ Å% ì†È†ÚÈÄÏ ì† START/STOP ì†ÈÏÈÚÄ  
íìÓÓÍÛ FADER, ~ÚÓ. ° Èì%Èí†ÚÓ Á†ÚÁÏÏÄÏËÄ  
ÈÖ~ÄÄÖ´í †í†.

ÖÖíÈ ÖÄ Äíí. ~†ÚÁÏ, POWER ì†1Ó%ÈÚÖí ,  
ÓÓÍÓÈÄÏÈÈ PHOTO, ìÈ.ó ÖÄ Äíí. ~†ÚÁÏ,  
ÄÈÈí† START/STOP MODE ÛÖÚ†ìÓ, íÄì ,  
ÓÓÍÓÈÄÏÈÄ ANTI GROUND SHOOTING  $\perp$   
ÈíÈ 5SEC

Ç ~ÚÈì ÖíÛ~†íì ÛÖÍí^ÈÄ Á†ÚÁÏÏÄÏËÄ/ , °1Ó%†  
ÈÄ Á†ÚÁÏÏÄÏËÄ ÌÄ &ÄÈÖÚ, ÛÄÚ.

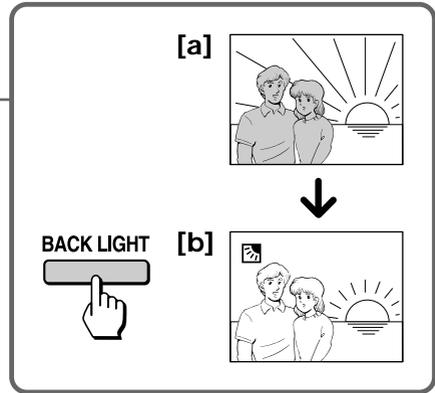
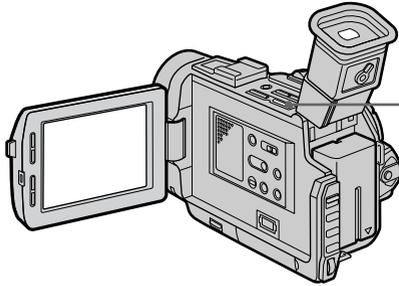
é ÛÖÍí^ÈÈ Á†ÚÁÏÏÄÏËÄ  
çÈÈÄÖÄ Ä~ÈÖíÄÏì. ìÈ ÛÖÍí^ÈÄ ÌÄÏ. Äí  
ÓÓÍ. ÁÓ, †Ú, Öí, Ó, Äíí †. ÓÚ' ÛÖÍí^ÈÈ  
Á†ÚÁÏÏÄÏËÄ. íÖÍí^È. Á†ÚÁÏÏÄÏËÄ, , ò, ó.  
ó~Ä Å%, ÌÄÏ. Äí ÈÖÓÓÍ. ÁÓ, †Ú, , ó, Äíí  
ÓÓÍ. ÁÓ, †ÈÄ ~ÚÈÈÈ ÛÖÍí^ÈÄ ìÈ.  
- íÈÚ °

# Shooting with backlighting

è · ÂÍÍ† ò ÓÚË, ò, ÂÚ†

When you shoot a subject with the light source behind the subject or a subject with a light background, use the BACKLIGHT function.

Press BACKLIGHT. The **c** indicator appears on the LCD or in the viewfinder.



- [a] Subject is too dark because of backlight.
- [b] Subject becomes bright with backlight compensation.

## After shooting

Be sure to release this adjustment condition by pressing BACK LIGHT again. The **c** indicator disappears. Otherwise, the picture will be too bright under normal lighting condition.

This function is also effective under the following conditions:

- A subject with a light source nearby or a mirror reflecting light
- A white subject against a white background. Especially when you shoot a person wearing shiny clothes made of silk or synthetic fibre, his or her face tends to become dark if you do not use this function.

## Note on the BACK LIGHT function

When you press EXPOSURE, the BACKLIGHT function is cancelled.

è È ò ÂÍÁ Ó · ÂÍÚ†, ÓÓÁ†È ÍÓÓÚ Ó, ò Ì†1ÓÈÈÚÓÈ ÈÖÚÓ~ÌÈÍ ò, ÂÚ†, ÈÌÈ Ó · ÂÍÚ† Ì† ò, ÂÚÍÓÍ ÒÓÍÁ, ÓÓÍ, ÂÚÈÚÁÐ, ÒÚÍÍ^ÈÈÈ BACK LIGHT.

ç†ÈÌÈÚÁ ÌÍÓÓÍÚ BACK LIGHT. è È ~ÚÓÍ Ì† ÈÈÈ·ÍÓÍ ÈÖÚ†ÌÈÈ~ÂÓÍÓÍ ~Í †ÌÁ ÈÌÈ, ÓÍÌÁ, ÈÈÓÈÓÍ†ÚÁÌ†È ÓÓÈ, Ì†ÂÚÓÈÈ ÈÌÈÈÍ†ÚÓ c .

- [a] è · ÂÍÚ ò · ÂÍÈÈ , \* Ì†ÈÈÈÚ ÒÈÈÈ ~ÍÓÍ ÚÁÌÌ~Í ÈÁ-Á†, ÓÚ Â~ÍÓ„ÓÐ, ÂÚ†.
- [b] äÓÍÓÁÌò†^È†, ÓÚ Â~ÍÓ„ÓÐ, ÂÚ† Á†òÚ†, Ì†ÂÚ Ó · ÂÍÚ , \* Ì†ÈÈ·ÁÚ, ò, ÂÚÍÁÁ.

èó ÓÍÓÍ~†ÌÈÈ ò · ÂÍÈÈ çÁ Á†·ÚÈ, ÚÁ ÓÚÍÍ, ~ÈÚ. ÁÈÈÈ ÍÓÍÓÁÌò†^ÈÈ, ÓÚ Â~ÍÓ„ÓÐ, ÂÚ† ÓÓ, ÚÓ Ì†Ì†È†ÚÈÁÍ ÌÍÓÓÍÈ BACK LIGHT. è È ~ÚÓÍ ÈÌÈÈÍ†ÚÓ c %ÓÍÈÁÌ ÈÖ~ÁÁÌÚÚ. . àì†~Á ÓÚÓÍÈÚÓÁ Ò È ÌÓ Ì†Ì, ÁÍÓÍ ÓÐ, Â~ÁÌÈÈÈ ÈÁÓ. †ÈÁÌÈÁ · ÚÈÁÚ , \* Ì†ÈÈ·ÁÚ, “Á†ò, Â~ÁÌÌ~Í”.

Ñ†ÌÌ†È† ÒÚÍÍ^ÈÈ ÌÓÈÁÚ · Ú. ÓÓÍÁÁÍÓÈ ÒÚ†ÍÈÁ , ÓÍÁÈ·Ú. ~ÈÌ òÍÚ~†ÈÌ† :  
 • è È ò ÂÍÁ Ó · ÂÍÚ†, ÈÈÓÍ ò ÍÓÓÚ · Í Ì†1ÓÈÈÚÓÈÈ ÈÖÚÓ~ÌÈÍ ò, ÂÚ† ÈÌÈÈ ÁÁ Í†ÍÓ, ÓÚ †È†. ~ÁÁ ÈÌÈÈ ò, ÂÚ.  
 • è È ò ÂÍÁ Ó · ÂÍÚÓ, · ÁÍÓ„Ó^ , ÂÚ† Ì† · ÂÍÓÍ ÒÓÍÁ. á ÓÍÁ ÓÚ, Ó, ÈÈ~Ó ~ÁÍÓ, ÁÍ† , ÓÈÁÈÈÁ ÈÁ · ÍÁÓÓÈ~ÁÈ ~ÁÍÍÓ, ÓÈ ÈÌÈ ÒÈÌÚÁÚÈ~ÁÓÍÓÈ ÚÍ†ÌÈÈ, ÁÓÍÈ ÒÈÌÈ†Ú, Á, ò · ÁÁ ÓÓÍÓ~ÈÈ·ÌÍÓÈ ÒÚÍÍ^ÈÈÈ. · ÚÈ·ÁÚ , \* Ì†ÈÈ·ÁÚ. ÚÁÌÌ~Í.

é ÒÚÍÍ^ÈÈ BACK LIGHT  
 è È Ì†È†ÚÈÈÈ ÌÍÓÓÍÈ EXPOSURE ÒÚÍÍ^ÈÈ† BACK LIGHT ÓÚÍÍ. ~†ÁÚÐÈ.



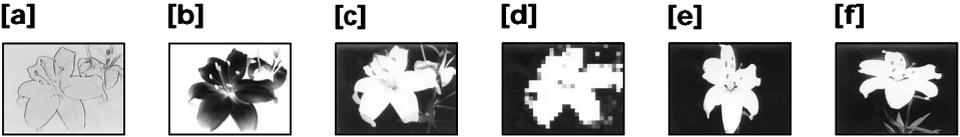


# Enjoying picture effect

è ÈÏÂÎÂÎËÂ  
, È%ÂÓ" ÛÛÂÍÚÓ,

## Selecting picture effect

You can make pictures like those of television with the Picture Effect function.



**PASTEL [a]**  
The picture is in pastel tones.

**NEG. ART [b]**  
The colour of the picture is reversed.

**SEPIA**  
The picture is sepia.

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

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

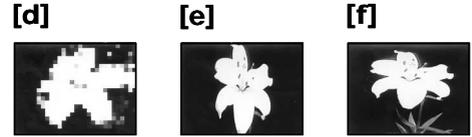
**MOSAIC [d]**  
The picture is mosaic.

**SLIM [e]**  
The picture expands vertically.

**STRETCH [f]**  
The picture expands horizontally.

Ç°·ó , È%ÂÓ" ÛÛÂÍÚ+

ÇÈ%ÂÓ" ÛÛÂÍÚ+ óóíó,,+ , Û Ò%ÂÍ+Ú, Ç+~È ÛÈÍ, Ì· ÓóíóÈÈÈÈ Ì+ Ò ÒÚÂÓÒÈóí+í, Ì·Â ÚÂÍÂ, ÈÈÈóí·Â Ì+ÚÂ È+í·



PASTEL [a]  
àÁÓ· +ÈÂÎËÂ Ò ÈÓ· ÁÚ+ÁÚ Ò+ÒÚÂÍ, Ì·Â ÚÓÍ+

NEG. ART [b]  
àÁÓ· +ÈÂÎËÂ ÒÚ+ÌÒ, ÈÛÒñ ÒóíóÈÈÈ Ì+ ÌÂ,,+ÚÈ,

SEPIA  
àÁÓ· +ÈÂÎËÂ Ò ÈÓ· ÁÚ+ÁÚ ÓÚÚÂÍÓÍ, Ì+ÓóíÈÈ+ , ~ÈÈ ÓÚ+ \*Â ÛÓÚÓ,, +ÛÈÈ

B & W  
àÁÓ· +ÈÂÎËÂ ÒÚ+ÌÒ, ÈÛÒñ ~Â ÌÒ-·ÂÍ·Ï

SOLARIZE [c]  
è, ÁÚ, ÚÂÍÈ È ^, ÁÚÓ, \*Â ÒñÚ+ ÒÚ+ÌÒ, ñÚÒñ ÌÓÍÚ +ÒÚÍÂÂ, Í+Í Ì+ ÈÒÚÍÁ.

MOSAIC [d]  
"áÓ+È" ÌÓÂ" ÈÁÓ· +ÈÂÎËÂ

SLIM [e]  
àÁÓ· +ÈÂÎËÂ , \*Úñ,,È, +ÁÚÒñ ÒÓ , Â ÚÈÍ+ÎÈ

STRETCH [f]  
àÁÓ· +ÈÂÎËÂ +ÒÚñ,,È, +ÁÚÒñ ÒÓ ,,Ó ÈÁÓÍÚ+ÎÈ

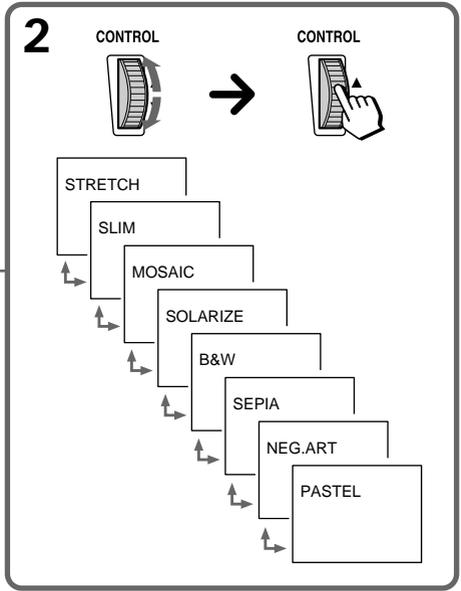
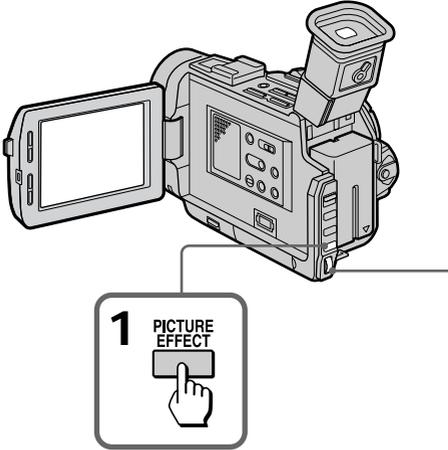
Advanced operations / àóí, áó, +ÈÂ ÓÓÚ+í, Ì· ÈÈ ÒÚÍ·ÈÈÈÈ

Using picture effect function

- (1) While in Standby mode, press PICTURE EFFECT.
- (2) Turn the CONTROL dial to select the desired Picture Effect mode.

èÓÍ, ÁÓ, †ÏÈÄ ÙÙÏÍ^ÈÄÈ  
, È%ÁÓ~ÙÙÂÍÚÓ,

- (1) Ç ÄÈÈÏÄ ÓÈÈ%+ÏÈÏ Ì+~†Ï+ Ò^ÄÍÈÈ Ì+ÈÏÈÛÄ ÍÏÓÓÍÚ PICTURE EFFECT.
- (2) èÓ, Ó ÓÓÍ ÙÍÓÍÚÍÈÈ CONTROL , \*^Ä ÈÛÄ ÌÙÈÏ^È , È%ÁÓ~ÙÙÂÍÚ.



**Returning to normal mode**  
Press PICTURE EFFECT repeatedly until the Picture Effect indicator disappears.

ÇÓÁ, †^ÄÏÈÄ , Ó.^~ì^È ÄÈÈÏ Ç+ÈÈÏ+ÈÛÄ Ì+ ÍÏÓÓÍÚ PICTURE EFFECT %Ó ÚÁı ÓÓ , ÓÓÍ+ ÈÏ%ÈÍ+ÚÓ , È%ÁÓ~ÙÙÂÍÚ+ ÌÄ ÈÖ^ÄÄÏÁÛÒ^Í †Ï+.

**Note on the picture effect**  
When you turn the power off, the camcorder returns automatically to normal mode.

é ÙÙÏÍ^ÈÈ , È%ÁÓ~ÙÙÂÍÚÓ,  
è È , †ÍÏ^ÄÏÈÈ ÓÈÛ+ÏÈÏ , È%ÁÓÍ+ÏÄ † †, ÚÓÍ+ÙÈ^ÄÒÍÈ , ÓÁ, †^†ÄÛÒÏ , Ó.^~ì^È ÄÈÈÏ.

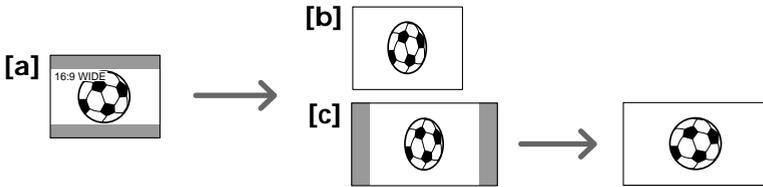
# Using the wide mode function

ΔΕ ΟΙΟΥΣ Ι+ΥΙ°Ε  
 ΑÊËÏ

You can record a 16:9 wide picture to watch on the 16:9 wide-screen TV (16:9WIDE).

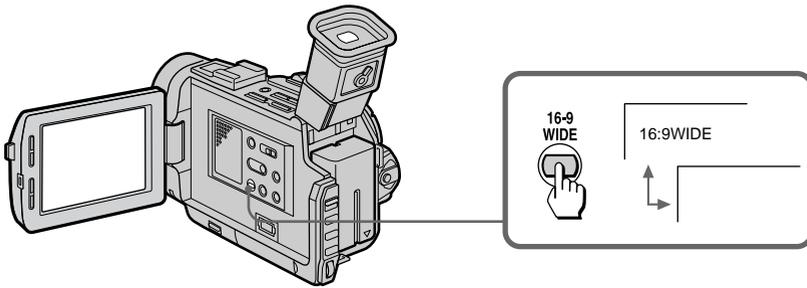
The picture with black bands at the top and the bottom on the LCD screen or in the viewfinder [a] is normal. The picture on a normal TV [b] is horizontally compressed. You can watch the picture of normal images on a wide-screen TV [c].

ç· ΙΟΡΑΥΑ, ΔΟΥΕ Ο· ΑΐΨ, ΨΟ Ι+ΥΑ 16:9 %ΐη  
 ΟΟΐΑ&Ω.· Α,,όο ΟΔΙΟΥ +ΐ+· Ε ΟΙΟΐ +ΐΙΟΐ  
 ΥΑΐΑ, ΕΑΟ Α (16:9WIDE).  
 ç+ Ε&ΙΟΐ ΕΟΥ+ΐΐΕ· ΑΟΐΟΐ ~ΐ +ΐΑ ΕΐΕ, ΟΐΙΑ  
 , Ε&ΕΟΐ+ΥΑΐη, Ε&ΤΟ ΙΟ Ι+ΐ, ΙΟΑ  
 ΕΑΟ· +ΕΑΐΕΑ, Ο,, +ΐΕ· ΑΐΙΟΑ, Α 1ΨΕ ΟΙΕΑΨ  
 ~Α ΐ· ΐΕ ΟΟΐΟΔ+ΐΕ [a]. ç+ ~ΐ +ΐΑ Ο· ~ΐΟ,,ό  
 ΥΑΐΑ, ΕΑΟ + ΕΑΟ· +ΕΑΐΕΑ, , ΐη&ΕΨ ΟΕ+Ψ· ΐ  
 ΟΟ ,,ό ΕΑΟΐΥ+ΐΕ [b]. ç+ ~ΐ +ΐΑ  
 ~Ε ΟΙΟΐΐ +ΐΙΟ,,ό ΥΑΐΑ, ΕΑΟ +  
 , ΟΟ ΟΕΑ, Ο&ΕΨΟη ΙΟ Ι+ΐ, ΙΟΑ ΕΑΟ· +ΕΑΐΕΑ  
 [c].



While in Standby mode, press 16:9 WIDE. 16:9 WIDE appears on the LCD screen.

ç· ΑÊËΙΑ ΟÊË&+ΐËη ΐ+~ΐ+· Ο· ΑΐΐΕ ΐ+ΒΐΕΨΑ  
 ΐΐΟΟΐΨ 16:9 WIDE. ç+ Ε&ΙΟΐ ΕΟΥ+ΐΐΕ· ΑΟΐΟΐ  
 ~ΐ +ΐΑ ΟΟη, ΐηΑΨΟη Ψΐ+Α· ΥΑΐ, 16:9 WIDE.



## To cancel wide mode

Press 16:9 WIDE again.

έΨΐΑΐ+· Ε ΟΙΟΐΟΥ Ι+ΨΙΟ,,ό ΑÊËΐ+  
 ç+ΕΐΕΨΑ ΐΐΟΟΐΨ 16:9 WIDE Α· Α· +Α.

## 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.

ε ΟΔΐΟΥ , Ε&ΑΟΑ+ΟΕΟΕ, Ο&Αΐ+ΐΙΟΕ ,  
 ~Ε ΟΐΟΥ Ι+ΨΙΟΐ ΑÊËΙΑ  
 Νΐη Ο ΟΐΟΥ + , Ε&ΑΟΑ+ΟΕΟΕ, Ο&Αΐ+ΐΙΟΕ ,  
 ΑÊËΙΑ 16:9WIDE, ΐΑΟ· 1Ο&ΕΐΟ ΑÊËΕ ,  
 ΟΟΐΐΟΥ Ι+ΨΙ· Ε ΑÊËΐ. ε&· Ο· ΐΑΑ Οΐ. ,  
 ΕΐΟΥ Ψΐ· ΕΕ ΟΟ ~ΐΟΐΨ+Ψ· ΕΕ ΥΑΐΑ, ΕΑΟ + .  
 ε· +ΨΕΨΑ, ΐΕΐ+ΐΕΑ ΐ+ΨΟ, ~ΨΟ ΐ+ ~ΐ +ΐΑ  
 Ο· ~ΐΟ,,ό ΥΑΐΑ, ΕΑΟ + ΕΑΟ· +ΕΑΐΕΑ, ΟΨΟΐΨΟΑ  
 , ΑÊËΙΑ 16:9WIDE, , ΐη&ΕΨ ΟΕ+Ψ· ΐ ΟΟ  
 ,,ό ΕΑΟΐΥ+ΐΕ.

## Note on wide mode

You cannot select or cancel the wide mode during recording.

ε ~Ε ΟΐΟΥ Ι+ΨΙΟΐ ΑÊËΙΑ  
 οΕ ΟΐΟΥ Ι+ΨΙ· Ε ΑÊËΐ ΐΑ, ΟΑΐΟΒΐΟ  
 , ΐΐ· ~ΕΨ, ΕΐΕ Οΐΐΐ· ~ΕΨ, ,ό, Αΐη Α+ΟΕΟΕ.

# Using the PROGRAM AE function

# PROGRAM AE

You can select from six PROGRAM AE (Auto Exposure) modes to suit your shooting situation. When you use PROGRAM AE, you can get a Portrait effect (the subject is in focus and the background is out of focus), capture high-speed action, record night views, etc.

## Selecting the best mode

Select a proper PROGRAM AE mode referring to the following description.



### Spotlight mode

Recording a subject spotlighted on a stage or at a wedding ceremony, etc.

### Soft portrait mode

To record

- A still subject such as a person or flower
- A softened picture
- A person in clearer flesh tones

### Sports lesson mode

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

### Beach & Ski mode

Recording a person in a place such as on the beach or in the ski slopes where there is a lot of reflection

### Sunset & Moon mode

Recording sunset, night views, fireworks or neon signs

### Landscape mode

Recording a landscape through a window or wire net

Ç Â, ÈÈÈÌÓÓÙ ÓÚ ÛÓÌ, ÈÈ Ò·ÁÍÉ Ç· ÍÓÈÁÚÁ  
 , ·· †Ú, Ó%ÈÌ ÈÁ·ÀÓÙÈ ÁÓ Ò, †ÌÈÈ Ó, †Ì·  
 ÂÈÈÌÓ, †, ÚÓÌ†ÚÈ·ÀÓÍÓÈ·ÍÓÓÓÁÈ·ÈÈ  
 (PROGRAM AE). èÓÌ, ÁÚÌÓ, ÛÚÍÍ·ÈÈÈ  
 PROGRAM AE, ÍÓÈÌÓ ÓÓÍÚ·†Ú, ·ÚÚÁÍÚ  
 ÓÓ Ú ÁÚÍÓÈ Ò·ÁÍÉÈ (Ó·ÁÍÚ, ÚÓÍÓÒÁ, Á†%ÌÈÈÈ  
 ÓÌ†Ì †ÓÓÓÍÓÈÈ Ó, †Ì), Á†ÓÁ·†ÚÍÁ, †Ú,  
 ··ÓÚ Ó%, ÈÈÚ·ÈÁÒÌ Ò Á%ÍÁÚ·, ÒÈÈÌ†Ú,  
 ÍÓ·Ì·Á ÒÁÈÁ†ÈÈ È·Ú.%.

Ç·Ó ÓÓÚÈÌ†Ì, ÌÓ,, Ó ÂÈÈÈ†

è È, ··Ó Á ÂÈÈÈ† PROGRAM AE  
 ÚÍÓ, Ó%ÓÚ, ÚÈÚÁÒ, ÌÈÈÁÓÍÁ%Ú, ·ÈÈÈ  
 ÓÓÌÒÍÁÌÈÌÈÈ.

⦿: è·ÁÍÍ† Ò È·ÈÈÚÁ †  
 àÓÓÓÍ, ÁÚÁÚÓÌ, ÒÍÚ·†Ì, ÍÓ,, %† Ò Á%ÍÁÚ  
 Ò·ÁÍÉÈ, %ÁÍÁÌ ÈÓÍÚÓÓÚ, ÁÌÍÓÈÈ ÓÓ%ò, ÁÚÍÓÈÈ  
 (Ì† Ò·ÁÌÁ, , ÌÓ%Á Ò, †%Á·ÍÓÈÈ·Á ÁÍÓÍÈÈÈ È·Ú.%.)

⦿: àÌ,, ÌÈÈÈ ÓÓ Ú ÁÚÍ·ÈÈ ÂÈÈÈ  
 àÓÓÓÍ, ÁÚÁÚÓÌ%†Ì:  
 • Ò·ÁÍÉÈ ÌÁÓÓ%, ÈÈÈ·Ì Ò Á%ÍÁÚÓ, (ÌÈ·Ó  
 ~ÁÍÓ, ÁÍ†, ^, ÁÚÓÍ)  
 • ÒÈÌ,, ~ÁÌÈÈ ÈÓÓÍÍ† Í†% †  
 • ÓÓ%·Á ÌÈÈ, †ÌÈÈ ÁÓÚÁÓÚ, ÁÌÌ·Ì ÚÓÍÓ, ÌÈ·†,  
 Í†% Á

⦿: èÓÓ ÚÈ, Ì·ÈÈ ÂÈÈÈ  
 ÑÌÌ ÛÈÈÍÓ†·ÈÈÈ·ÓÚ·Ì%, ÈÈÈÁÌÈÈÈ, Ì† Ò ÈÈÁ  
 Ò ÈÓÓÓ ÚÈÈ, Ì·ÈÈ, †Ì (,, ÓÍ, Û, ÚÁÌÈÈÈ)

⦿: è†ÌÈÈ·È/,, Ó ÌÓÍ·ÈÈ·ÈÈ ÂÈÈÈ  
 ÑÌÌ Ò·ÁÍÉÈ, † ÌÓÓÓ, Á·ÁÌ·Ì ÓÓÍÌ·ÁÍ  
 ÍÁÓÚ† Ò ÒÈÈ†, Ì·ÈÈ ÓÚ †ÈÁÌÈÁÍ ÓÓÍÁ·Ì·Ì  
 ÍÚ·ÁÈÈ (ÓÈÈÈÈ,, Ó ÌÓÍ·ÈÈ·ÁÓÍÓÍ·)

⦿: Ç·Á·Á ÌÈÈÈ/ÌÓ·ÍÓÈÈ ÂÈÈÈ  
 ÑÌÌ Ò·ÁÍÉÈ Ì† Á†Í†ÚÁ ÓÓÍÌ·†, Ò·ÁÍÉÈÈ  
 ÓÁÈÁ†ÈÁÈÈ Ò ÈÈÚÍÁ, ÚÁÈÁ, Á ÍÓ, ÈÈÈÈ  
 ÌÁÓÍÓ, ·Ì, ·, ÁÓÓÍ

⦿: à†Ì%·†ÚÚÌ·ÈÈ ÂÈÈÈ  
 ÑÌÌ Ò·ÁÍÉÈ ÓÁÈÁ†ÈÁÈÈ·Á ÁÁÓÍÍ† ÈÈÈÈ  
 Ò Ó, ÓÍÓ·Ì·Á ÒÁÚÍÈÈ.

# Using the PROGRAM AE function

## PROGRAM AE

### Notes on focus setting

- In the Spotlight, Sports lesson and Beach & Ski modes, 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.

ε ì†, 0%íÁ ì† ÁÁÍ00Ú.

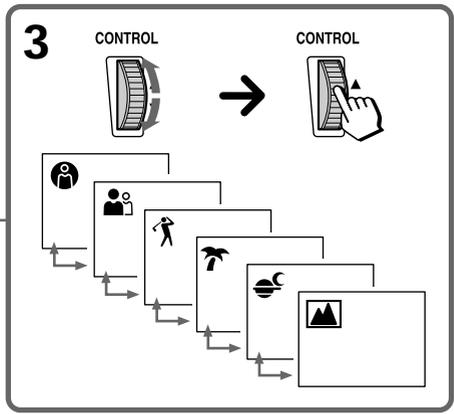
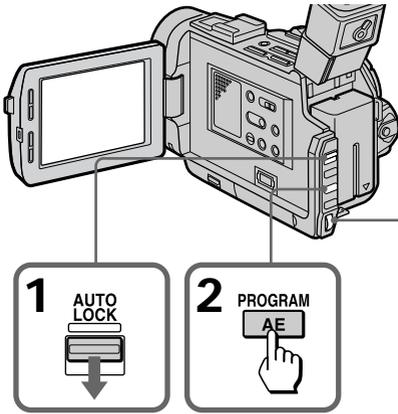
- Ç ÂÊËÏÄ Ò·ÁÍËË Ò È·0ÈÚÁ †₁, †Ú†ÍÊÁ , 00Ó ÚË, Ì0Í È0íñÊÍ0Í/„Ó Ì0Í·ÈÌ0Í ÂÊËÏ†₁ Í 00Ì·Á0Í†Ì· ÒÌËÏ†Ú, ÌÁÍ, Áñ, Ú†Í Í†Í0··ÁÍÚË, È%Á0Í†ÍÁ · Ú0Í00È ÚÁÚ0ñ Ú0Í, Í0 Ì† %†Í, ÌË₁ È Ò Â%ÌË₁ 0Í†ì†₁.
- Ç, Á·Á ÌÁÍ/Ì0~Ì0Í È Ì†Ì% †Ú0Í0Í ÂÊËÏ†₁ È%Á0Í†ÍÁ † Ú0Í00È ÚÁÚ0ñ Ú0Í, Í0 Ì† %†Í, ÌË₁ 0Í†ì†₁.

## Using the PROGRAM AE function

- (1) While the camcorder is in recording or Standby mode, slide AUTO LOCK down.
- (2) Press PROGRAM AE.
- (3) Turn the CONTROL dial so that the symbol of the desired PROGRAM AE mode matches the indicator on the LCD screen or in the viewfinder.

## PROGRAM AE

- (1) Ç ÂÊËÏÄ Ò·ÁÍËË ÈÌÈ 0ÈÈ%†ÌÈñ Ì†~†ì† Ò·ÁÍËË 0%, ÈÌ, ÚÁ, ÌËÁ ·~†È0Í AUTO LOCK.
- (2) Ç†ÈÌËÚÁ ÍÌ00Í0Ú PROGRAM AE.
- (3) ε0, Á ÌËÚÁ ÚÍ0ñ0Ú0Ú CONTROL Ú†Í, ~Ú0· ÒÈÌ, 0Í Ì0ÈÌ0„Ó ÂÊËÏ† PROGRAM AE ··Í 00Í†Á†Ì ÈÌÈÈÍ†Ú0 0Í Ì† ÈÈ%Í0Í È0Ú†ÌÈ~Á0Í0Í †Í †ìÁ ÈÌÈ, 0ÍìÁ È%0È0Í†ÚÁÍñ.



### To return to automatic adjustment mode

Press PROGRAM AE so that the indicator disappears, or slide AUTO LOCK up.

ÇÓÁ, †·ÁÌËÁ, ÂÊËÏ †, Ú0Í†ÚË~Á0Í0È ~Í000ÁÈ~ÈÈ Ç†ÈÌËÚÁ ÍÌ00Í0Ú PROGRAM AE, ~Ú0· ÈÌÈÈÍ†Ú0 È0~ÁÁ Ò †ì†, ÈÌÈ0Á Â%, ÈÌ, ÚÁ ·~†È0Í AUTO LOCK, , Á ₁.

### Note on shutter speed

The shutter speed in each PROGRAM AE mode is as follows:

- Soft Portrait mode – from 1/50 to 1/425
- Sports lesson mode – from 1/215 to 1/4000
- Beach & Ski mode – from 1/50 to 1/215

ε 0Í0 00ÚË, %Á ÈÌÈ ÇÈÈÁ Ò È, 0%ÈÚ0ñ0Í0 00Ú, %Á ÈÌÈ, 000Ú, ÁÚ0Ú, Û, ~†ñ Ì†È%0Í0 ÈÁ ÂÊËÏ0, PROGRAM AE: áñ, ÌËÈ0Ó Ú ÁÚÌ·È ÂÊËÏ – 0Ú 1/50 %0 1/425 ε00 ÚË, Ì·È ÂÊËÏ – 0Ú 1/215 %0 1/4000 εíñÈÌÈ·È/„Ó Ì0Í·ÈÌÈÈ ÂÊËÏ – 0Ú 1/50 %0 1/215

Advanced operations / ε0Í, Á0, †ìÁ 00Ú†ì, Ì·È 00Í·ÈÈÈÈ

# Focusing manually

êÛ~î†fl î†, Ó%í† î†  
 ÂÁÍÓÓÚ,

## When to use manual focus

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

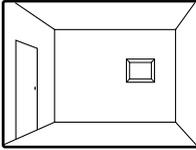
äö,,%† òîÂ%ûÂú Óóî, Áó, †ú. òfl  
 Û~ìòÈ ì†, Ó%íóÈ ì† ÂÁÍÓÓÚ,

êÛ~î†fl î†, Ó%í† î† ÂÁÍÓÓÚ, ÓóÁ, ÓîflÂú  
 %ó·ÈÛ, òfl îÛ~Èì ÂÁÚî, ú†úó, , òîÂ%û. ~Èì  
 òîÛ~fl:

[a]



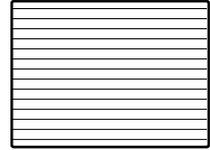
[b]



[c]



[d]



- 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

- è È îÂ%óóú†úó~ìóî óó, Á~ÂìÈÈ [a]
- è È ò·ÂííÂ î†îóíóîÛ †óúî·ì ò Â%íÁúó, (òúÂì·, ìÂ·óÈÛ.%.) [b]
- è È ò·ÂííÂ ò ÓúÈ, fl íó, óò, Âú† [c]
- è È î†îÈ~ÈÈ, í% Â,,ó ÈÁóîÛ†î, ì·ì óóíóó [d]
- è È ò·ÂííÂ ~Â ÂÁ î†úó, ÓÁ óúÁííó
- è È ò·ÂííÂ ~Â ÂÁ ÓÁúíúÈÛ.%.
- è È ò·ÂííÂ ò Â%íÁúó,, ÈÁíÛ~†, ~Èì ÈîÈ Óú †È†. ~Èì ò, Âú
- è È ò·ÂííÂ ìÁóó%, ÈÈì·ì ò Â%íÁúó, óó ~ú†úÈ, †

Focusing manually

εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν.

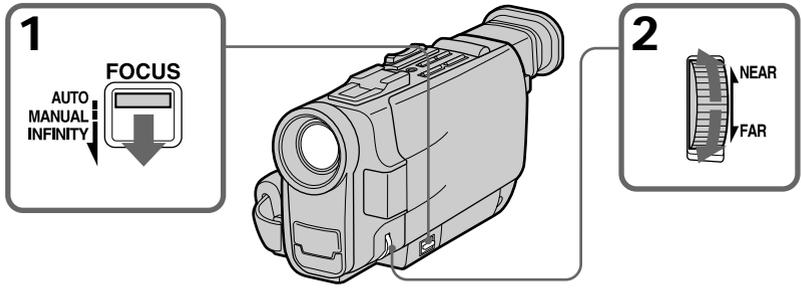
When focusing manually, first focus in telephoto before recording, and then reset the shot length.

- (1) Slide FOCUS down to MANUAL. The f indicator appears on the LCD screen or in the viewfinder.
- (2) Turn the focus dial to focus on the subject.

εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν.

εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν.

- (1) εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν. FOCUS, ἡ εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν. MANUAL. ἡ εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν.
- (2) ἡ εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν. ἡ εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν.



To focus in infinity

Slide FOCUS to INFINITY. ▲▲ indicator appears on the LCD screen or in the viewfinder. This function is useful when the nearer subject is focused automatically, and you want to focus the subject faraway.

εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν. εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν. INFINITY. ἡ εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν. ἡ εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν.

To return to the autofocus mode

Slide FOCUS up to AUTO to turn off f or ▲▲ indicator.

εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν. εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν. AUTO, ἡ εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν.

Shooting in relatively dark places or shooting the subject moving quickly outside

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

If lights up Subjectistoo close.

εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν. εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν. εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν.

εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν.

Advanced operations / εἰς τὴν ἀπόψιν ἱκανοποιεῖται ἡ ἀπόψιν.

# Adjusting the exposure

êÂ„ÛîË ò, í†  
~ íòôóáë^ëë

## When to adjust the exposure

Adjust the exposure manually under the following cases.

[a]



- [a]
- The background is too bright (back lighting)
  - Insufficient light: most of the picture is dark

- [b]
- Bright subject and dark background
  - To record the darkness faithfully

[b]



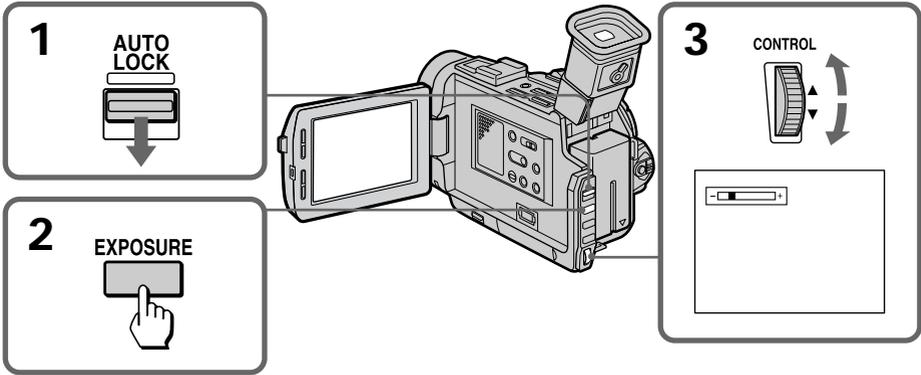
- [a]
- ëîË-íóî ò, áúí·è ùóì (ò·âíí† ò óúë, ò, áú†)
  - çâëóóú†úó·ì†í óò, â·âíìóóú, (.óí, ~†í ~†òú, í†ë †-, úâíìóúâ)
- [b]
- ü íó óò, â·âíì·è ó··áíú ì† úâíìóí ùóíâ
  - çâó·ìóëíóóú, ò †, %ë, óôâ âë†ú, ~ùâíú úâíìóú\*

## Adjusting the exposure

## ε̂Α,,ŪİĚ Ó,Í† ~ÍÒÒÁĒ^ĒĒ

- (1) Slide AUTO LOCK down.
- (2) Press EXPOSURE. The exposure indicator appears on the LCD screen or in the viewfinder.
- (3) Turn the CONTROL dial to adjust the exposure. The exposure is locked at the adjusted brightness.

- (1) ε̂Α̂, ŪİĚ, ŪÁ ~†ĒÓÍ AUTO LOCK, İĒĒ.
- (2) †ĒİĒŪÁ EXPOSURE. †† ĒĒ:ÍÓÍ ĒŪ†İİĒ^ĂÓÍÓÍ ~Í †İĒ ĒİĒ, ÓÍİĒ, Ē:ÓĒÍ†ŪĒİŋ Óŋ, İŋĒŪŋ Ēİ:Ēİ†ŪÓ ~ÍÒÒÁĒ^ĒĒ.
- (3) ε̂Ó, Ó ÓŪÓİ ŪÍŋÍŪİĒ CONTROL ŪŪ†İŌ, ĒŪÁ ~ÍÒÒÁĒ^Ē. †ĒİĒ^Ēİ† ~ÍÒÒÁĒ^ĒĒ ŪĒİŌĒ ŪĒŪŋ İ† Ē†:İİŌİ Ū Ó, İĒİ İÓŪĒĒĒÓ. †ĒİĒİŋ.



### To return to automatic exposure mode

Press EXPOSURE to turn off the exposure indicator. Or, slide AUTO LOCK up.

ÇÓÁ, †^ĒİĒĒ, ĂĒĒİ †, ŪŌİ†ŪĒ^ĂÓÍŌĒ ~ÍÒÒÁĒ^ĒĒ †ĒİĒŪÁ EXPOSURE, ~ŪÓ. ~Ō ~Í †İ† ĒŌ^ĒĒ Ēİ:Ēİ†ŪÓ ~ÍÒÒÁĒ^ĒĒ, ĒİĒŌ:, Ēİ, ŪÁ, , Ă †~†ĒÓÍ AUTO LOCK.

### Notes

- The CONTROL dial does not have a stop position.
- If you press PROGRAM AE, the exposure comes back to automatic adjustment again.
- When you adjust the exposure manually, you cannot use the BACKLIGHT function.

- ε̂ ĒİĒ^İĒİŋ
- ε̂ŪÍŋÍŪİ† CONTROL İĒ ĒİĒĒŪ Ó,, †İĒ^ĒŪĒİŋ, †^ĒİĒİŋ.
- ε̂ Ē İ†Ē†ŪĒĒ İİŌÍĒ PROGRAM AE, Ē:ĂÓÍ†İĒ †, ÓÁ, †^†ŪŪŋ, ĂĒĒİ †, ŪŌİ†ŪĒ^ĂÓÍŌĒ Ă,,ŪİĚ Ó,İĒ ~ÍÒÒÁĒ^ĒĒ.
- ε̂ Ē Ū^İŌĒ Ă,,ŪİĚ Ó,ÍĒ ~ÍÒÒÁĒ^ĒĒ ŪŪİÍ^Ēİŋ BACK LIGHT İĒ †.ŌŪ†ĒŪ.

# Releasing the STEADYSHOT function

έύίί ~ÀìÈÀ ~íÁíÚ òììó,ó  
 ÕÚ‡·ÈìÈÀ‡ÚÓ ‡ Í‡% ‡ (STEADYSHOT)

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

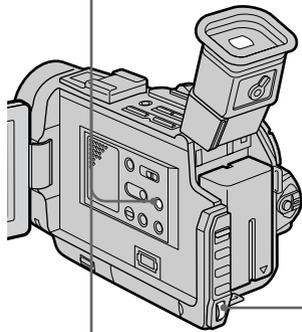
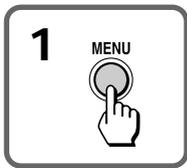
You can release the SteadyShot function when you do not need to use the SteadyShot function. Do not use the SteadyShot function when shooting a stationary object with a tripod.

- (1) Press MENU to display the menu on the LCD screen.
- (2) Turn the CONTROL dial to select STEADYSHOT, then press the CONTROL dial.
- (3) Turn the CONTROL dial to select OFF, then press the CONTROL dial.
- (4) Press MENU to erase the menu display.

çó, Àñò·ÀííÈ, óííÀ, È%ÓÈÓí+ÚÁíñ, È%Àì Èì%Èí+Úó "☞". ùóó ÓÁì+~+ÁÚ, ~Úó ~íÁíÚ òìì·È ÕÚ‡·ÈìÈÀ‡ÚÓ Í‡% ‡ +·ÓÚ+ÁÚ, íóíóÀìÒÈ Õñ íóíÁ·+ìÈñ, È%ÁÓí+íÁ ·.

ÒðíÈ ~íÁíÚ òìì·È ÒÚ‡·ÈìÈÀ‡ÚÓ Í‡% ‡ ç+í, %+ìì·È íóíÁíÚ ÌÀ ÌÒÈÀì, Á,ó íóÈìó ÓÚíí·~ÈÚ. Ì+í, Èì ÌÀ ÓíÀ%ÚÁÚ ÓÓí,ÁÓ, +Ú, òñ Ò È Ò·ÁííÀ ÌÀÓÓ%, ÈÈì·ì Ò·ÁíÚó, Ò Óóíó·. Ì·Ú+ÙÈ, ‡.

- (1) ç+È+ÙÈÁì ÌíÓÓíÈ MENU ,·, Á%ÈÚÁ ÌÀì. Ì‡ ÈÈ%íÓí ÈÒÚ+ííÈ~ÁÓíÈÈ ~í ‡ì.
- (2) èó,ó ‡~È, +ñ ÙíÓñÚíÚ CONTROL, ,··Á ÈÚÁ ÓÓÁÈ^È. STEADYSHOT È Ì+ÈìÈÚÁ Ì‡ ÙíÓñÚíÚ CONTROL.
- (3) èó,ó ‡~È, +ñ ÙíÓñÚíÚ CONTROL, ,··Á ÈÚÁ ÓÓÁÈ^È. OFF È Ì+ÈìÈÚÁ ÙíÓñÚíÚ CONTROL.
- (4) ç+È+ÙÈÁì ÌíÓÓíÈ MENU Õ·Á ÈÚÁ ÌÀì. Ò ~í ‡ì.



**2**

CONTROL



CONTROL



MENU

↑

COMMANDER

REC MODE

AUDIO MODE

D ZOOM

STEADYSHOT → ON

BEEP

TITLE ERASE

↓

[MENU]:END

MENU

STEADYSHOT ON OFF

[MENU]:END

MENU

↑

COMMANDER

REC MODE

AUDIO MODE

D ZOOM

STEADYSHOT → OFF

BEEP

TITLE ERASE

↓

[MENU]:END

## To activate the SteadyShot function again

Select ON in step 3, then press the CONTROL dial.

### Notes on the SteadyShot function

- The SteadyShot function will not correct excessive camera shake.
- When you switch the SteadyShot function on or off, the exposure may fluctuate.
- When the SteadyShot function is released, the  indicator does not appear.
- If you use a tele conversion lens (not supplied) or a wide conversion lens (not supplied), the Steady shot function may not work.

εο,ύο ιοά,ίφ.~ΑΙΕΑ ~ΙΑΙΥ ΟΙΙΟ,,Ο  
 ΟΥ+.ΕΙΕΑ+ΥΟ † Ι†% †  
 Ç 10%Α ΟΟΑ † ^ΕΕ 3 , ·.Α ΕΥΑ ON Ε Ι†ΕΙΕΥΑ  
 Ι† ΥΙΟΙΥΙΥ CONTROL.

- ε. ~ΙΑΙΥ ΟΙΙΟΙ ΟΥ+.ΕΙΕΑ+ΥΟ Α Ι†% †
- εετ,ι'Α οού ηοΑΙΕΗ Ι†ΙΑ · ~ΙΑΙΥ ΟΙΙ·Ι  
 ΟΥ+.ΕΙΕΑ+ΥΟ ΟΙ ΙΑ ΙΟΙΟΑΙΟΕ Û.ÛΗ.
- ε Ε,ίφ.~ΑΙΕΕ Ε ΟΥΙΐ.~ΑΙΕΕ ~ΙΑΙΥ ΟΙΙΟ,,Ο  
 ΟΥ+.ΕΙΕΑ+ΥΟ † Ι†% † ,ΟΑΙΟΕΙ· ΙΟΙΑ·†ΙΕΗ  
 ~ΙΟΟΑΕ^ΕΕ.
- ε Ε ΟΥΙΐ.~ΑΙΕΕ ~ΙΑΙΥ ΟΙΙΟ,,Ο  
 ΟΥ+.ΕΙΕΑ+ΥΟ † Ι†% † ΕΙ%ΕΙ+ΥΟ   
 ΕΟ~ΑΑ+ΑÛ ò ~ί †Ι†.
- ε Ε ΕΟΟΙ,ΑΟ,†ΙΕΕ ΥΑΙΑΟΙΟΟΕ~ΑΟΙΟΕ ΕΙΕ  
 -Ε ΟΙΟΥ,,ΟΙ,ΙΟΕ Ι†ò†%ΙΕ %ΗΟ·.ΑΙΥΕ,† (,  
 ΙΟΙΟΙΑΙΥ ΙΑ ,10%ΗΥ) ~ΙΑΙΥ ΟΙΙ·Ε  
 ΟΥ+.ΕΙΕΑ+ΥΟ Ι†% † ΙΟΕΑΥ ΙΑ Ò †·†Υ·,†Υ.

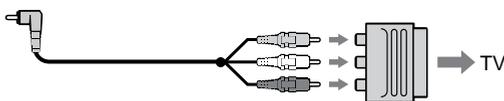
Advanced operations / εοί,ΑΟ,†ΙΕΑ ΟΟΥ†Ι,·Ι·ΙΕ ΟΥΙ·Ι·ΕΗΙΕ



## Watching on a TV screen

If your VCR or TV is a monaural type  
Connect only the white plug for audio on both the camcorder and the VCR or the 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.

If your TV/VCR has a 21-pin connector (EUROCONNECTOR)  
Use the supplied 21-pin adaptor.



## Using the AV cordless IR receiver — LASER LINK

Once you connect the AV cordless IR receiver (not supplied) having the **L** LASER LINK mark to your TV or VCR, you can easily view the picture on your TV. For details, refer to the instruction manual of the AV cordless IR receiver.

LASER LINK is a system which transmits and receives a picture and sound between video equipment having the **L** mark by using infrared rays. LASER LINK is a trademark of Sony Corporation.

### To play back on a TV

- (1) Set the POWER switch on the camcorder to PLAYER.
- (2) After connecting your TV and AV cordless IR receiver, set the POWER switch on the AV cordless IR receiver to ON.
- (3) Turn the TV on and set the TV/VCR selector on the TV/VCR selector on the TV to VCR.
- (4) Press LASER LINK. The lamp of LASER LINK button is flashing.
- (5) Press ( on the camcorder to start playback.
- (6) Adjust the angle and direction of both the camcorder and AV cordless IR receiver.

### To cancel the LASER LINK function

Press LASER LINK.

è òòìóú , È%ÀÓÁ†ÔÈÒÈ ì†  
“Í †ÌÀ ÚÀÌÀ, ÈÁÓ †

òòìÈ Ç· òòí, ÁÚÁÚÁÓ, ÌÓÌÓÚÓÌÈ~ÀÓÌÈÌ  
, È%ÀÓÌ†, ÌÈÚÓÚÓÌÓÌ ÈÌÈ ÚÁÌÁ, ÈÁÓ ÓÌ  
ÑÌÌ ÓÁ À%+~È+Ú%ÈÓÒÈ, Ì†Ì† ÒÓ%Í†, ~+ÈÚÁ Ì  
†ÌÀ ÀÈÍ, È%ÀÓÌ†, ÌÈÚÓÚÓÌÓ (ÚÁÌÁ, ÈÁÓ Ò)  
ÚÓÌ, ÌÓ· À†·Á·ÚÁÌÁ· òÓÁ%ÈÌÈÚÁÌ, ÌÓ, ò  
~ÌÚ †. è È ÒÓ%Í†, ~ÀÌÈÈ· ÀÌÓ, ò· ÚÁÌÁ †  
, ÒÓÒ ÓÈÁ, Ç%ÈÚÓÌÁ, ÚÌ ÌÁ, ò, ò· Ì†Ì† (L). è È  
ÒÓ%Í† ~ÀÌÈÈ Ì †ÒÌÓ, ò· ÚÁÌÁ †  
, ÒÓÒ ÓÈÁ, Ç%ÈÚÓÌÁ, ÚÌ Ò †, ò, ò· Ì†Ì† (R).

òòìÈ Ç+· ÚÁÌÁ, ÈÁÓ /, È%ÀÓÌ†, ÌÈÚÓÚÓÌ  
ÒÓÌ†· ÀÌ 21-·Ú·, ÌÓ, ·Ì †Á·ÀÌÓÌ  
(EUROCONNECTOR)  
èòí, ÁÚÈÚÁÓ, ò ÈÌ†, †ÁÌ·ì 21-·Ú·, ÌÓ, ·ì  
ÒÁ ÀÌÇ%ÌÈÌÓÌ.

èò%ì†, ~ÀÌÈÁ· ÀÒÒ ò, òÌÓ~ÌÓ, ò  
ÈÌÚ †Í †ÒÌÓ, ò †Ú%ÈÓ/  
, È%ÀÓÒ ÈÁÌÌÈÍ† — LASER LINK

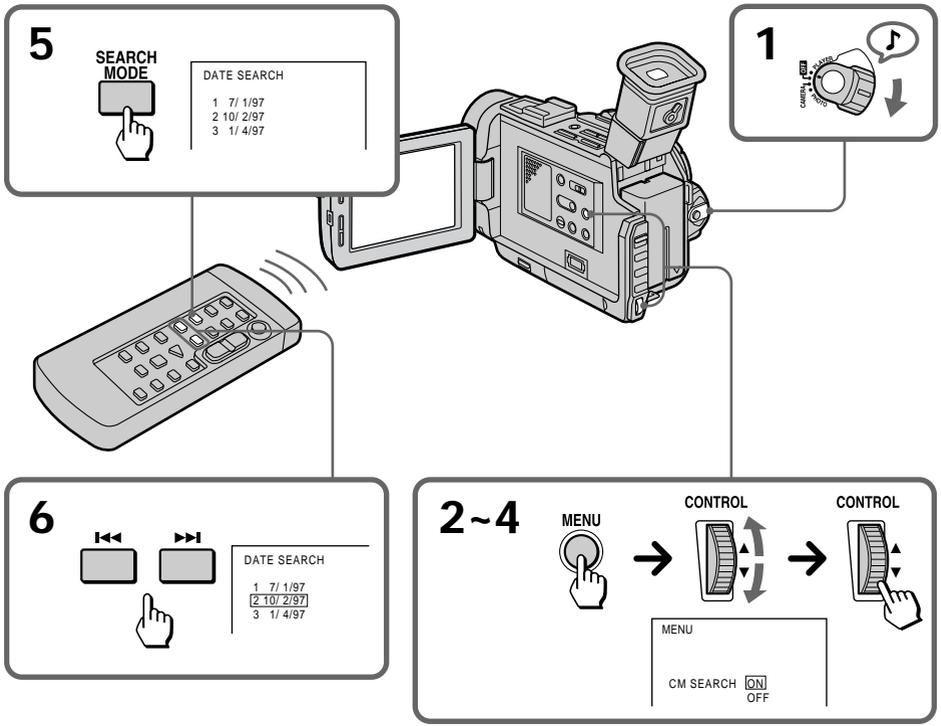
èò%Í†, ~È, Ì ÚÁÌÁ, ÈÁÓ Ò ÈÌÈ  
, È%ÀÓÌ†, ÌÈÚÓÚÓÌÓ· ÀÓÒ ò, òÌÓ~ì·È  
ÈÌÚ †Í †ÒÌ·È+Ú%ÈÓ/, È%ÀÓÒ ÈÁÌÌÈÍ,  
ÈÌÁ· ÈÈ ò· ÓÁÌ†· ÀÌÈÁ **L** LASER LINK (,  
ÌÓÌÓÌÁÌÚ ÌÁ, ÌÇ%ÈÚ), Ç· òÌÓÈÁÚÁ ÌÁ, ÌÓ  
Ò ÒÓÌ+Ú È, †Ú, È%ÀÓÁ+ÒÈÒÈ Ì†· Ì†Ì  
ÚÁÌÁ, ÈÁÓ †. èò% ò· ÌÁÁ·Ò· “ÚÓÌ ÒÌ.  
ÈÈÚ ÒÌ·ÈÈ Ì ÈÌÚ †Í †ÒÌÓÌÓ ÈÁÌÌÈÍÚ.  
ÈÈÚÁÌ† LASER LINK ÈÒÓÌ ÁÚÁÚ  
ÈÌÚ †Í †ÒÌÁ ÈÁÌÚ· ÀÌÈÁ %ÌÒ ÓÁ À%+~È È  
Ò ÈÁÌ†·Á, ÚÌÓ, ·Ì È, È%ÀÓÒÈ, Ì†ÌÓ, ÌÁÈ%Ú  
†Ò†+ †ÚÒ ÒÈ, ÈÌÁ· ~ÀÈ ò· ÓÁÌ†· ÀÌÈÁ **L**.  
Ç+Á, †ÌÈÁ LASER LINK Ì, ÌÌÁÚÒÌ ÚÓ “, ò, ÒÈ  
†† ÌÓÈ ÌÓÌÓ+ÌÈÈ Sony Corporation.

- ÇÒÒÒ ÓÈÁ, À%ÀÌÈÁ Ì†· Ì†Ì ÚÁÌÁ, ÈÁÓ †
- (1) èÁ· À, À%ÈÚÁ ÓÁ ÁÍ†, ~+ÚÁÌ, POWER Ì†  
, È%ÀÓÌ†ÌÁ· À, ÒÓÌÓÈÁÌÈÁ PLAYER.
  - (2) èÓÁ%ÈÌÈ, ÌÁÈ%Ú òó· ÒÈ ÚÁÌÁ, ÈÁÓ È  
ÈÌÚ †Í †ÒÌ·È Ò ÈÁÌÌÈÍ, ÒÓÚ+ÌÓ, ÈÚÁ  
, ·Í†· ~+ÚÁÌ, POWER Ì†· ÈÌÚ †Í †ÒÌÓÌ  
Ò ÈÁÌÌÈÁ, òÓÌÓÈÁÌÈÁ ON.
  - (3) ÇÌ†· ÈÚÁ ÚÁÌÁ, ÈÁÓ È ÒÓÚ+ÌÓ, ÈÚÁ  
ÓÁ· ÁÍ†· ~+ÚÁÌ, TV/VCR Ì†· ÚÁÌÁ, ÈÁÓ· À,  
ÒÓÌÓÈÁÌÈÁ VCR.
  - (4) Ç+ÈÌÈÚÁ ÌÌÓÌÓÚ LASER LINK. è È “ÚÓÌ Ì†  
ÌÁÈ Ì†· ÈÌ†ÁÚ ÌÈ, †Ú, Ì†ÌÓÒ· Ì†.
  - (5) Ç+ÌÈÚÁ, òÓÒ ÓÈÁ, À%ÀÌÈÁ Ì†·È+ÚÈÈÌ  
ÌÌÓÒÌÈ ( Ì†, È%ÀÓÌ†ÌÁ· À.
  - (6) è†ÒÓÒÌÓÈÈÚÁ, È%ÀÓÌ†ÌÁ Ò È  
ÈÌÚ †Í †ÒÌ·È Ò ÈÁÌÌÈÍ ÒÓ%  
ÒÓÚÈÌ†, Ì·ì Ò, ÌÓÌ% Ò, Ì% Ò, Ò.

Ç· Ì†, ~ÀÌÈÁ ÒÌÌ·ÈÈ LASER LINK  
Ç+ÈÌÈÚÁ LASER LINK.

# Searching the boundaries of recorded tape with date

ç+10È%ÀIEÄ", +IÈ`Û+0ÚÍ+ Á+0È0È,  
 ÓÓIÄ~ÀIIÒ,,Ó ÓÓ Ä&ÁIÀIIÒÈ %;+ÚÒÈ



**To stop searching**  
 Press p.

### Notes

- The interval of the boundaries between the dates needs more than two minutes. The camcorder may not search if the beginning of the recorded date is too close to the next one.
- The short cursor on the screens suggests the date selected in the previous time.

è ÁÍ +~ÀIEÄ ÓÓÈ0Í+  
 ç+ÈIÈÛÄ p.

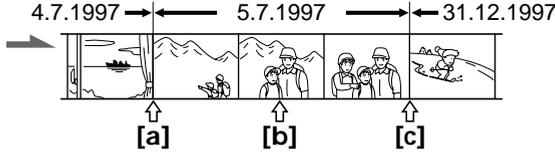
è ÈIÄ~+IÈH

- à Ó&ÓIÈÛÄI, IÓÓÛ, Û~+0ÚÍ+ Á+0È0È ÓÚ  
 Ì+~+Í+ Ó%Ì0È %;+Ú' % Ó Ì+~+Í+ ÓIÄ&Û. ~ÀÈ  
 %ÓIÈÛ+ ÓÓÓÛ+, ÎHÛ, .ÓIÄ&%, Û1 IÈÛÛ. Ó0IÈ  
 ~ÚÈ ÛÓ~IÈ IÄ&ÓÓÛ+ÚÓ~ÌÓ Û&+IÄ' % Û,, ÓÚ  
 % Û,,+, +, ÚÓI+ÚÈ~Ä0IÈÈ ÓÓÈ0Í IÄ  
 Ò +.Ú', +ÄÛ.
- äó ÓÚIÈÛ IÛ ÓÓ ÓI Ì+ `Í+ ÌÄ ÛI+Á', +ÄÛ0H  
 %;+Ú+, ,. +ÌÌ+HÌ Ò È Ò Ä&%Û~ÁI ÓÓÈ0IÄ.

Advanced operations / à0I, Á0, +IÈÄ ÓÓÛ+I, I' IÈ Û0I I~ÈIÈ

# Searching the boundaries of recorded tape with date

ç+1ÔÊ%ÂÏËÄ " †ÏË^ Û~†ÒÚÍ† Á†ÔËÒË, ÒÓÏÄ~ÂÏÒ, Ó ÓÓ Ä&ÂÏÄÏÒË %†ÚÓË

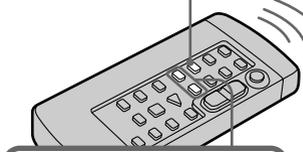


**5**

SEARCH MODE

DATE SEARCH

**1**



**6**

**2~4**

MENU

CONTROL

CONTROL

MENU

CM SEARCH ON OFF

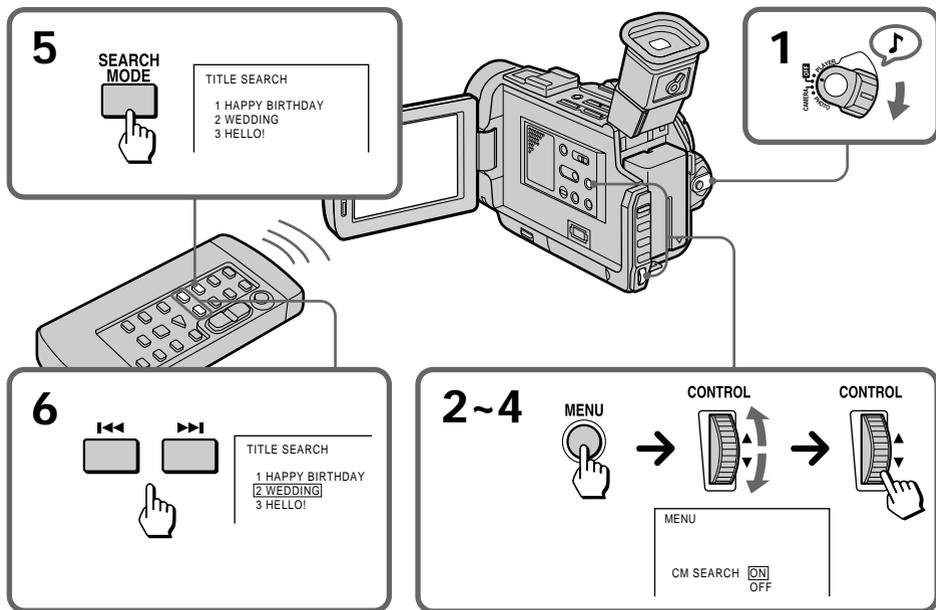
To stop searching  
Press p.

è Äí †~ÂÏËÄ ÓÓËÒí†  
ç†ËÏËÚÄ p .

Advanced operations / àòí, áó, †ÏËÄ ÓÓË†í, Ì, ÏË ÒÚÍ†~ËÏË

# Searching the boundaries of recorded tape with title

ç+1ÓÊ%ÂÎËÄ, †ËË^ Û~†ÔÚÍ†  
 Ä†ÔËÖË, ÖÓÏÄ~ÂÎÏÖ,,Ó  
 ÖÖ Ä%ÂÎÄÏ·Ï ÛËÛ ÖÏ



## To stop searching

Press p.

## Notes

- You cannot superimpose or search a title, if you use a cassette tape without cassette memory.
- The camcorder may not search, if there is a blank portion between the recorded portions in the tape.

è ÁÍ †~ÂÎËÄ ÖÓËÖÍ†  
 ç+ËËËÛÄ p.

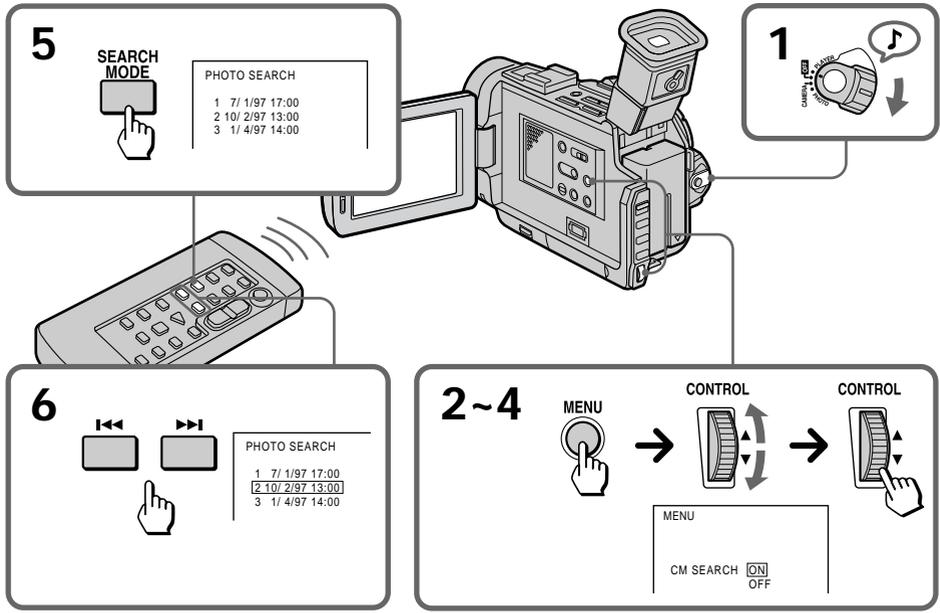
è ËÏÄ~†ËË

- ç+ÍÓËÄÏËÄ ÛËÛ Ó, È ÖÓËÖÍ ÖÓ ÛËÛ †Ï, ÓÁÍÓËÏ· ÓÓÏ, ÍÓ Ï†, È%ÄÓÍ†ÖÖÄÛ† ð Ö†ÏÏÛ... .
- èÓËÖÍ ÍÓËÄÛ ÏÄ ð †·ÓÛ†Û, , ÄÓÏË ÏÄË%Û Û †,,ÏÄÏÛ†ÏË Ä†ÔËÖË Ï† ÏÄÏÛÄ ËÏÄÄÛÖÏ ÏÄÄ†ÔËÖ†ÏÏ·È Û~†ÔÚÓÍ.

Advanced operations / èÓÏ, ÄÓ, †ÏËÄ ÖÓÛ†Ï, Ï·ÏË ÖÏÏ·ÏËÏË

# Searching for a photo-photo search/photo scan

ç†1ÓÊ%ÂÏÊÂ ,Ê%ÂÓÙÓÚÓÙÒÏËÏÍÓ,-  
ÙÓÙÓÓÙÊÒÍ/ÙÓÙÓÓÙ†ÏË Ó,†ÏÊÂ



To stop searching  
Press p.

**Note**  
When you play back a tape which has a blank portion between recorded portions, the Photo Search function will not work correctly.

è ÁÍ †~ÂÏÊÂ ÓÓÊÒÍ†  
ç†ÊÏËÚÁ p .

è ÊÏÂ~†ÏÊÂ  
è Ê ,ÓÓÓ ÓÊÁ,Â&ÂÏÊÊ ,Ê&ÂÓÏÂÏÚ´, Ì† ÍÓÙÓ ÓÊ  
ÏÂÊ%Ù Ù †,,ÏÂÏÚ†ÏÊ Á†ÓÊÓÊ ÊÏÂÁÙÓÏ  
ÏÂÁ†ÓÊÒ†ÏÏ´È Ó~†ÓÓÓÍ, ÙÙÏí~ÊÓÏÊ Ó,†ÏÊÂ  
ÙÓÙÓÓÙÊÒÍ† Ì† Ù~†ÁÙÓÏ.

Advanced operations / àòí,áó,†ÏÊÂ ÓÓÙ†í,†´ÏÊ ÙÙÏí~ÊÏÏÊ

## Scanning photo

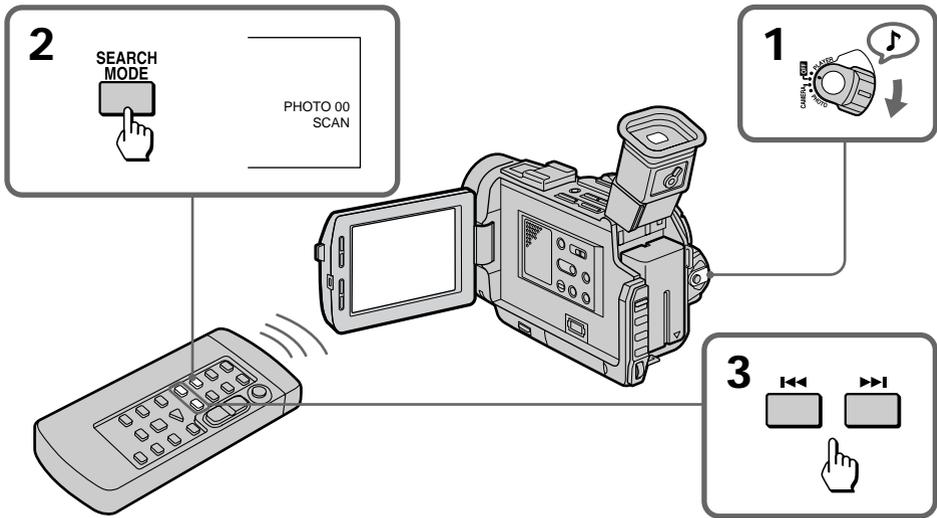
You can use this function whether the tape has cassette memory or not.

- (1) Set the POWER switch to PLAYER.
  - (2) Press SEARCH MODE on the Remote Commander repeatedly until the photo scan indicator displayed in the LCD screen.
  - (3) Press = or + .
- Each photos are displayed for about 5 seconds automatically.

ÈÍ+ÌÈ Ó , +ÌÈÄ  
, È%ÀÓÙÓÓÒÌÈÌÍÓ ,

ùÓÓÈ ÙÒÍ+ÈÄÈ ÌÓÈÒÓ ÓÓÍ , ÁÓ , +Ú , òñ  
ÌÄÄ+ , ÈÒÈÒÓ ÓÙ ÓÓ , ÓÒÌ+~ÄÌ+ ÌÈ Í+ÒÓÁÚ+  
~ÌÄÍÙ ÓÌÌÒÈ Ó+ÌñÓ , .

- (1) ÌÓÙ+ÌÓ , ÈÙÄ ÓÄ ÄÍÍ . ~+ÚÄÍ , POWER , ÓÓÍÓÈÄÌÈÄ PLAYER .
- (2) ç+ÈÈÍ+ÈÙÄ ÌÌÓÓÍÙ SEARCH MODE Ì+ ÓÙÍ , ÚÄ%ÈÒÓ+Ì^ÈÓÌÌÓ , Ó ÓÙ + , ÍÄÌÈñ%Ó ÚÄÌ ÓÓ , ÓÓÍ+ Ì+ ÈÈ%ÍÓÍ ÈÒÓ+ÌÈÈ~ÄÓÍÓÍ ~Í +ÌÄ ÌÄ ÓÓñ , ÈÙÓñ ÈÌ%ÈÍ+ÚÓ ÙÓÓÓÓÈÒÍ+ .
- (3) ç+ÈÈÈÙÄ = ÈÌÈ + .  
à+È%È , È%ÀÓÙÓÓÒÌÈÌÍÓÍ + , ÚÓÍ+ÚÈ~ÄÒÍÈ , ÓÓÒ ÓÈÄ , Ó%ÈÙÓñ , ÚÄ~ÄÌÈÄ Ó ÈÌÄ ÌÓ 5 òÄÍÙÌ% .



To stop searching  
Press p .

è ÄÍ +~ÄÌÈÄ ÓÓÈÒÍ+  
ç+ÈÈÈÙÄ p .



# Editing onto another tape

èÂ ÂÁ±ÔÈÒ, Ì±% Û,,Û.  
,È%ÂÓÍ±ÔÈÁÛÛ

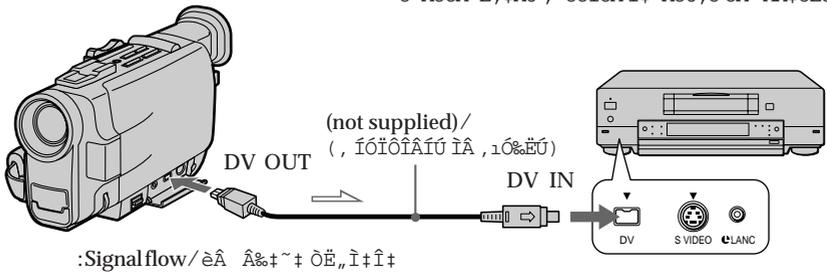
You can create your own video programme by editing with any other DV, mini DV, 8 mm, Hi8, j VHS, k S-VHS, VHSC, K S-VHSC or l Betamax VCR that has audio/video inputs. You can edit with little deterioration of picture and sound quality when using the DV connecting cable.

## 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.

## 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. With digital-to-digital connection, video and audio signals are transmitted in digital form for high-quality editing.



## Notes on editing when using the DV connecting cable

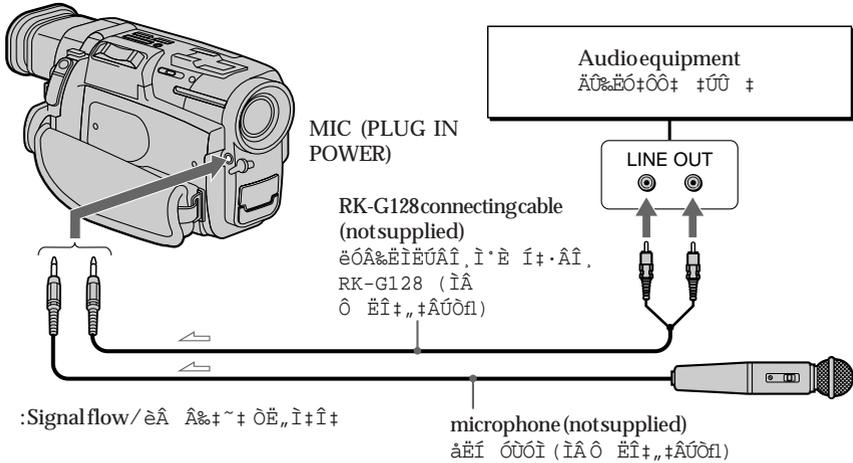
- You can connect one VCR only.
- You can record picture, sound and system data at the same time on the DV products by using the DV connecting cable only.
- You cannot edit the titles, display indicator, or the contents of cassette memory.
- If you record playback pause picture via the DV jack, the recorded picture becomes rough. And when you playback the picture using the other video equipments, the picture may jitter.
- When you record a playback pause picture via the DV jack, you cannot add audio to that portion of the tape.

- è ÓÁ ÁÁ±ÔÈÒÈ ò ÈÒÓÓÍ, ÁÓ, ±ÌÈÁÍ ÓÓÁ%ÈÌÈÚÁÍ, ÌÓ,, ò DV-Í±·ÁÍfl
- í±ÍÈÍÒ·. ±ÁÓÍ Ç· íÓÈÁÚÁ ÓÓ%ÍÍ. ~ÈÚ, ÛÓÍ, ÍÓ Ó%ÈÌ, È%ÂÓÍ±, ÌÈÓÓÙÍ.
  - Ç±±Ó± ±Ù± Á DV Ç· íÓÈÁÚÁ Ó%ÍÓ, ÁÍÁÍÒ Á±ÔÈÒ·, ±Ù, ÈÁÓ. ±ÈÁÌÈÁ, Á, ÛÍ È ÚÁÌÈÈ~ÁÓÍÈÁ %:ÍÍ·Á (ÛÓÍ, ÍÓ ò ÓÓÍÒ·, DV-Í±·ÁÍfl)
  - ÌÈÚ·, ·Í ±ÍÍ·Á ÈÌÈÈÍ±ÙÓ ·È ÓÓ%Á È±ÌÈÁ ~ÍÁÍÙ ÓÍÍÓÈ Ç±ÍflÙÈ Í±ÓÓÁ· ò È ÓÁ ÁÁ±ÔÈÒÈ ÌÁ ÍÓÈÈ Û ÛÓfl.
  - è È ÓÁ ÁÁ±ÔÈÒÈ ÈÁÓ. ±ÈÁÌÈfl, ÁÈÈÌÁ ò±ÚÁ· (ÓÓÓÓ-Í±. ) ò ÓÓ%ÍÍ. ~ÁÌÈÁÍ·Á ÁÁ,, ìÁÁ%Ó DV ÈÁÓ. ±ÈÁÌÈÁ ÚÁ flÁÙ·ÁÍÙÓÓÚ.. è ÈÁ, Ó, ÓÓÓ ÓÈÁ, Á%ÁÌÈÈ Ì±% Û, òÈ, È%ÂÓ±Ó± ±Ù± Á íÓÈÁÚ ÓÓfl, flflÙ, Ófl % ÓÈ±ÌÈÁ.
  - ÓÓÍÈ Ì±, È%ÂÓÍ±, ÌÈÓÓÙÒÍ, ÓÓ%ÍÍ. ~ÁÌÈ·È ~Á ÁÁ,, ìÁÁ%Ó DV, ÓÁ ÁÓÈÒ·, ±ÁÙÓfl ÈÁÓ. ±ÈÁÌÈÁ, ÁÈÈÌÁ ò±ÚÁ·, ÛÓ Ì± ~ÙÓÙ Û~±ÓÙÓÍ ÍÁÍÙ·, ÓÓÓÍÁ%ÓÙ, ÈÈ·Ù%ÁÚ ìÁ, ÓÁÍÓÈÌÒ Ì±ÍÓÈÈÚ, Á, ÛÍ.



You can record an audio sound to add to the original sound on a tape by connecting audio equipment or a microphone. If you 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.

èó%íí.~È, í, È%ÁÓÍ+ÏÄ Á †Û%ÈÓ+ÔÒ† †ÛÛ Û  
 ÈÏÈ ÌËÍ ÒÙÒÌ, ç· ÍÓÊÄÚÄ Ì+ÍÍ†%\*, †Û, Ì†  
 Á, ÛÍÓ, Û. %Ó ÒÈÛ, È%ÁÓÄ+ÔÈÒÈ  
 %ÓÓÓÏÏÈÚÄÏ, ÌÓÄ Á, ÛÍÓ, ÓÄ ÓÓÓ Ó, ÓÈ%ÄÏÈÄ.  
 èó%íí.~È, †Û%ÈÓ+ÔÒ† †ÛÛ Û, ÍÓÊÏÓ ~ÄÛÍÓ  
 ÓÓ Ä%ÄÏÏÛ, Ì†~†ÍÓ È ÍÓÏÄ~ Ì+ÍÓÊÄÏËÏÄ, ÛÍ†  
 Ì†, È%ÁÓÄ+ÔÈÒÈ. à. ÌÓ·ÓÛ, ÄÏÏ+ÏÄ, ÛÍÓ, †Ï  
 %Ó ÓÈÍ†+Ô È ~ÚÓÏ ÌÄ ÓÛÈ †ÄÛÛÏ.



### 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 with another camcorder (including DCR-TRV7E), the sound quality may become worse.
- If you connect the TV to the camcorder when you are recording audio, it may cause noise on the TV sound. But the noise is not recorded on the tape.

- é Ì+ÍÓÊÄÏËÈ Ä, ÛÍ†
- á+ÔÈÒ, Ì†, È%ÁÓÏÄÏÚÄ %ÓÓÓÏÏÈÚÄÏ, ÌÓ, Ó  
 Á, ÛÍÓ, Ó, Ó ÒÈ,, Ì††+ ÌÄ, ÓÄÏÓÈÏ†, ÄÓÏÈ  
 È%ÁÓÄ+ÔÈÒÈ, Ì† ÌÄÈ Ó%ÄÏ†Ï†, 16-ÈÛÏÓÏ  
 ÄÈÈÏÄ (32 ÍÈ^, 44,1 ÍÈ^ ÈÏÈ 48 ÍÈ^).
  - ÒÓÏÈ ÌÄ Ó%íí.~ÄÏ, ÌÄ~ÈÈÈ ÌËÍ ÒÙÒÌ,  
 Á, ÛÍÄ+ÔÈÒ\*, †ÄÛÛÏ, ÓÛ ÓÄÏÏ'í  
 ÌËÍ ÒÙÒÏÓÏ, È%ÁÓÍ+ÏÄ .
  - ÑÓÓÓÏÏÈÚÄÏ, Ì'È Ä, ÛÍÓ, ÓÈ ÒÈ,, Ì†† ÌÄ ÍÓÊÄÛ  
 ··Ó, Ì+ÍÓÊÄÏ Ì†, È%ÁÓÄ+ÔÈÒÈ,, Ó%ÄÏ†ÏÏÛ, .  
 ÄÈÈÏÄ LP.
  - è È+ÍÓÊÄÏËÈ Ä, ÛÍ† Ì†, È%ÁÓÄ+ÔÈÒÈ,,  
 Ó%ÄÏ†ÏÏÛ. % Û, ÓÈ, È%ÁÓÍ+ÏÄ ÓÈ (, ÚÓÏ  
 ~ÈÓÏÄ ÍÓÊÄÏËÈ DCR-TRV7E), Ì†~ÄÛÛ, Ó  
 Á, ÛÍÓ, Ó, Ó ÓÓÓ Ó, ÓÈ%ÄÏÈÏÈ ÍÓÊÄÛ  
 ÛÏÛ-ÈÛ, ÒÏ.
  - ÓÓÏÈ, Ó, ÄÏÏÄ, ÛÍÓÄ+ÔÈÒÈ, È%ÁÓÍ+ÏÄ †  
 ÓÓ%íí.~ÄÏ† Í ÚÄÏÄ, ÈÁÓ Û, ~ÚÓ ÍÓÊÄÛ. ·Ó.  
 Ó È~ÈÏÓÈ ÓÓÏÄ, †ÍÛÓÛÈ~ÄÓÏÓÈ ÒÈÓÚÄÏÄ  
 ÚÄÏÄ, ÈÁÓ †. ùÛÈ ÓÓÏÄÏÈ, Ó%Ï+ÍÓ, ÌÄ, ÌÈÏÏ. Û  
 Ì†Ä+ÔÈÒÈ..

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, locate the point where the recording should begin by pressing 0 or ). Then press P to set it to playback pause mode.
- (4) Press AUDIO DUB on the video control compartment or the Remote Commander.
- (5) Press P 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.
- (6) Press P at the point where you want to stop recording.

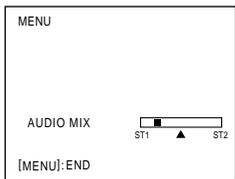
To play back the new recorded sound

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

ç†ÍÔÊÂÏÊÄ Á, ÛÍÓ, Ó,, Ó ÒÔÔ Ó, ÒÊÊ:ÄÏÊfl Ì†, Ê:ÄÓÁ†ÔÊÖ, .

- (1) ìÔÛ†ÌÔ, ÊÛÄ, , Ê:ÄÓÍ†ÌÄ ÛÍ†ÒÄÄÛÔ ÒÄ†ÔÊÖ, . .
- (2) ì%Ä ÊÊ, +n, Ì†Ê†ÚÓÍ ÓÓÍÔÊÄÏÊÊ Ì†ÌÄÏ. ÍÔ. ÄÄÌÄÏ. ÍÍÓÓÍÛ Ì† ÔÄ ÄÍÍ. ~†ÚÄÌÄ POWER, ÔÄ Ä, Ä:ÊÛÄ Ä,, Ó, ÓÓÍÔÊÄÏÊÄ PLAYER.
- (3) ç†ÊÊÏ†n ÍÍÓÓÍÛ Ó ÊÊÊ ) Ì† , Ê:ÄÓÍ†ÌÄ Ä, Ì†Ê:ÊÛÄ ÍÄÖÓÓ, Ò ÍÓÓÓ Ó,, Ó %ÓÍÊÏ† Ì†~†Ú. Òn Ä†ÔÊÖ. . æÓÓÍÄ ~ÚÓ,, Ó Ì†Ê†ÚÊÄÏ ÍÍÓÓÍÊ P ÔÄ Ä, Ä:ÊÛÄ Ì†ÌÄ Û, ÄÊÊÏ Ô†ÚÄ. Ô Ê, ÓÓÓ ÔÊÄ, Ä:ÄÏÊÊ.
- (4) ç†ÊÊÛÄ ÍÍÓÓÍÛ AUDIO DUB, ÔÄÍ†ÊÊ ÛÔ †, ÍÄÏÊfl, Ê:ÄÓÛÛÍÍ ÊnÏÊ Ì† ÓÓÍ. ÚÄ %ÖÓÛ†Ì ÊÓÍÌÓ,, Ó ÛÔ †, ÍÄÏÊfl.
- (5) ç†ÊÊÛÄ Ì†, Ê:ÄÓÍ†ÌÄ Ä ÍÍÓÓÍÛ P, Ó:ÌÓ, ÄÌÄÏÔ Ì†~†, , ÓÓÓ ÔÊÄ, Ä:ÄÏÊÄ Ä, ÛÍÓ, Ó,, Ó ÒÊ,, Ì†Ì†, ÍÓÓÓ \*È ÍÄÓ. 1ÓÊÊÏÓ Ä†ÔÊÖ†Ú. çÓ, \*È Ä, ÛÍÓ, ÔÊ ÔÊ,, Ì†Ì Ä†ÔÊÖ†, †ÄÛÔfl Ì†%Ó ÓÊÛÛ ÖÚÄ ÄÓ 2. Ä, ÛÍ, Ä†ÔÊÖ†Ì \*È Ì†%Ó ÔÊÌÄ ÖÚÄ ÄÓ 1, Ò Ê ~ÚÓÍ ÌÄ ÓÍ\* ÄÌ.
- (6) ç†ÊÊÛÄ P, ÍÄÖÓÄ, , %Ä ç† 1ÓÊÛÄ Ó ÄÍ †ÚÊÛ. Ä†ÔÊÖ. .

è ÓÓÍÛ~È, †ÌÊÄ, ÌÔ, , Ä†ÔÊÖ†ÌÌÓ,, Ó Ä, ÛÍ†  
 ç\* †, , ÌÄÏ. Ô† †ÌÄÛ Ó, ÓÓÄÊ~È. AUDIO MIX, ÓÚ Ä,, ÛÍÊ ÛÊÛÄ. †Í†ÌÔ ÍÄÊ:ÓÄ, ÛÍÓÍ Ó Ê,, ÊÌ†Ì† (ÓÚÄ ÄÓ 1). ç ~ÚÓ ÊÄ ÓÓÍÔÊÄÏÊÄ ÓÌ ÛÔÛ†ÌÔ, ÍÄÏ ÊÄ,, ÓÓÓ, ÊÛÄÌÄÏ.



Five minutes after when you turn the power off, the settings of AUDIO MIX return to the original sound (stereo 1) only. The factory setting is original sound only.

To end audio more precisely First, press ZERO SET MEMORY on the Remote Commander at the point where you want to stop recording. Then start recording from step 2, and the recording stops automatically near the counter's zero point.

ÓÄ ÄÄ 5 ÌÊÏÛÔ ÓÓÓÍÄ, \*ÍÍ. ~ÄÏÊfl ÔÊÛ†ÌÊfl ~†Í†ÌÔ AUDIO MIX, ÓÄ, ††ÄÛÔfl, ÓÓÍÔÊÄÏÊÄ, Ò Ê ÍÓÓÓ ÓÍ ÓÍ~ÄÌ ÛÓÍ, ÍÓ Ä, ÛÍ Ó Ê,, ÊÌ†Ì† (ÓÚÄ ÄÓ 1). ç ~ÚÓ ÊÄ ÓÓÍÔÊÄÏÊÄ ÓÌ ÛÔÛ†ÌÔ, ÍÄÏ ÊÄ,, ÓÓÓ, ÊÛÄÌÄÏ.

ÄÓÍÄÄ ÛÓ~ÌÓÄ ÓÍÓÍ~†ÌÊÄ Ì†ÍÓÊÄÏÊfl Ä, ÛÍ† ÑÍfl ~ÚÓ,, Ó ÍÄÓ. 1ÓÊÊÏÓÄ† †ÌÄ Ì†Ê†Ú. Ì† ÓÛÍ. ÚÄ %ÖÓÛ†Ì ÊÓÍÌÓ,, Ó ÛÔ †, ÍÄÏÊfl ÍÍÓÓÍÛ ZERO SET MEMORY, ÛÓÍ ÍÄÖÓÄ, Ê:ÄÓÁ†ÔÊÖÊ, , %Ä ÔÌÄ:ÓÚÄ Ó ÄÍ †ÚÊÛ, Ì†ÍÓÊÄÏÊÄ Ä, ÛÍ†. ÓÓÍÊ Ä†ÚÄÏ Ì†~†Ú. Ä†ÔÊÖ, Ä, ÛÍÓ, Ó,, Ó ÓÓÓ Ó, ÔÊÊ:ÄÏÊfl Ò ÓÓÄ †ÊÊ 2, ÛÓ ÓÍ†, ÛÓÍ†ÚÊ~ÄÓÍÊ Ô ÄÍ †ÚÊÛÔfl Ò Ê %ÓÓÛÊÄÏÊÊ Ô~ÄÛ~ÊÍÓÍ ÌÔÌÄ, ÔÊ ÓÚÄÄÛÍÊ.

Advanced operations / òÍÍ. ÄÓ, †ÌÊÄ ÓÓÛ†Ì. Ì. ÌÊ ÛÛÍÌ~ÊÄÏÊ

# Superimposing a title

ç† ÎÓÊÀÏÈÄ ÚËÜ Ó,

If you use a tape with cassette memory, you can superimpose the titles while recording or after recording. When you play back the tape, the title is displayed for 5 seconds from the point where you superimposed it. You can select from eight preset titles and one original (CUSTOM TITLE) to superimpose over the picture.

èóí, ÁÙñó, ÈÄÓÍ†ÒÓÁÚ†ÏÈ Ò ~ ÍÁÍÚ ÒÏÏÈ  
 Ò†ÍñÚ, . . . Ì†, ÈÄÓÁ†ÒÈÒ, ÍÓÈÏÓ Ì†ÍÍ†%, †Ú.  
 ÚËÜ † Í†Í, Ó, ÁÏñ Ò ÁÏÏÈ, Ú†Í È ÓÓ ÁÁ  
 ÓÍÓÍ ~ †ÏÈÈ. ÇÓ, ÁÏñ, ÓÓÒ ÓÈÄ, ÁÄÀÏÈñ ÚËÜ  
 ·ÙÄÁÚ, ÈÄÀÏ Ì† ~ Í† ðÏÄ, ÚÁ ~ ÁÏÈÄ 5 ÓÁÍÚÏ%,  
 Ì† ~ ÈÏ†ñ Ò ÓÓ ~ ÍÈ Á,, Ó Ì† ÎÓÊÀÏÈñ.  
 Ç† ÎÓÊÀÏÈÄ, † · †Ú, Ì. · ÒÈ ÈÄ, òð, ÏÈ „ÓÓÓ, †  
 ÚËÜ Ó, ÈÏÈ ÓÓÓÚ†, ÈÜ, ÓÄÈÏ ÒÓ · ÓÚ, ÁÏÏÈ È  
 (CUSTOM TITLE).

## Superimposing titles

- (1) Press TITLE to display the titles on the LCD screen or in the viewfinder.
- (2) Turn the CONTROL dial to select the title, then press the CONTROL dial.
- (3) Turn the CONTROL dial to select the colour, size, or position, then press the CONTROL dial.
- (4) Turn the CONTROL dial to select the desired item, then press the CONTROL dial.
- (5) Repeat steps 3 and 4 until the title is arranged as desired.
- (6) Press CONTROL dial again to complete the setting.

## ä†Í Ì†ÍÍ†%, †Ú, ÚËÜ †

- (1) Ç†È†ÚÈÄÏ ÍÍÓÓÏÈ TITLE, †, ÁÄÈÚÁ Ì† ÈÈÈ.ÍÓÍ ÈÒÓÚ†ÏÈÈ ~ ÁÓÏÈÈÈ ~ Í† ðÏÈÈ ~ Í† ðÏÈÈ, ÈÄÓÈÒÍ†ÚÁÏñ Í†Ú†ÏÓ, ÚËÜ Ó, .
- (2) èó, Ó † ~ È, †ñ ÚÍÓñÚÍÚ CONTROL, † · Á ÈÚÁ ÌÙÈÏÈ È ÚËÜ È Ì†ÈÏÈÚÁ Ì† ÚÍÓñÚÍÚ CONTROL.
- (3) èó, Ó † ~ È, †ñ ÚÍÓñÚÍÚ CONTROL, † · Á ÈÚÁ ÁÈÈÏ ÒÄ% · Ó † ~, ÁÚ† ÚËÜ †, †ÁÏÄ † - ÈÚÚ† ÈÏÈ †ÁÏÄ ~ ÁÏÈñ ÚËÜ †, Ì†% Á, È Ì†ÈÏÈÚÁ Ì† ÚÍÓñÚÍÚ CONTROL.
- (4) Ç† · Á ÈÚÁ ÌÙÈÏÈÈ, † È† ÌÙ ÓÓ, Ó ÓÓÓÍ ÚÍÓñÚÍÚ CONTROL È, †, ÁÄÈÚÁ Á,, Ó Ì†È†ÚÈÄÏ Ì† ~ ÓÚ ÚÍÓñÚÍÚ.
- (5) èó, ÓÓ ñÈÚÁ ÓÓÁ † ÈÈÈ 3 È 4% Ó ÚÁ ÒÓ, ÓÓÍ† ÚËÜ ÌÄ Ò ÈÏÁÚ ÚÓÓ †È, †. ÈÈÈ Ç† Ò, ÈÄ.
- (6) ÑÏñ Á†, Á ~ ÁÏÈñ Ò Ó ~ ÁÄÓ ~ †, ÌÓ, Ì†ÈÏÈÚÁ Ì† ÚÍÓñÚÍÚ CONTROL.

**While you are playing back, pausing, or recording**  
 After step 6, the "SAVE" appears on the screen for 5 seconds and the title is set.

ç† ÎÓÊÀÏÈÄ ÚËÜ Ó, , Ó, ÁÏñ  
 , ÓÒÒ ÓÈÄ, ÁÄÀÏÈñ, Ò†ÚÁ · ÈÏÈ Ò · ÁÏÏÈÈÈ  
 èóÓÍÁ ÓÓÁ † ~ ÈÈÈ 6 Ì† ~ Í† ðÏÄ Ì† ÒñÚ, ÒÁÍÚÏ%  
 ÓÓñ, ññÁÚÒñ ÒÏÓ, Ó "SAVE", È ÚËÜ , , ÓÄÈÚÓñ,  
 Ò†ÍñÚ. .

**While in Standby mode**  
 After step 6, the "TITLE" indicator appears. And when you press START/STOP to start recording, "SAVE" appears on the screen for 5 seconds and the title is set.

ç† ÎÓÊÀÏÈÄ ÚËÜ Ó, ÁÈÈÏÁ ÓÈÈ% ðÏÈñ  
 Ì† ~ †Í† Ò · ÁÏÏÈÈÈ  
 èóÓÍÁ ÓÓÁ † ~ ÈÈÈ 6 Ì† ~ Í† ðÏÄ Óñ, ññÁÚÒñ  
 ÈÏÈÈÍ†ÚÓ "TITLE". á†ÚÁÏ, ÍÓ, % Ç†  
 Ì† ~ ÈÏ†ÁÚÁ Á†ÒÈÒ, Ì†È†ÚÈÄÏ ÍÍÓÓÏÈ START/  
 STOP, Ì† ~ Í† ðÏÄ, ÚÁ ~ ÁÏÈÄ ÒñÚÈ ÒÁÍÚÏ%  
 , †, ÓÄÈÚÓñ ÒÏÓ, Ó "SAVE", È ÚËÜ , , ÓÄÈÚÓñ,  
 Ò†ÍñÚ. .





## Erasing a title

- (1) Press MENU to display the menu.
- (2) Turn the CONTROL dial to select TITLE ERASE, then press the CONTROL dial.
- (3) Turn the CONTROL dial to select the title you want to erase, then press the CONTROL dial.
- (4) Make sure the title is the one you want to erase, then press CONTROL dial again.
- (5) Press MENU to erase the menu display.

### Note

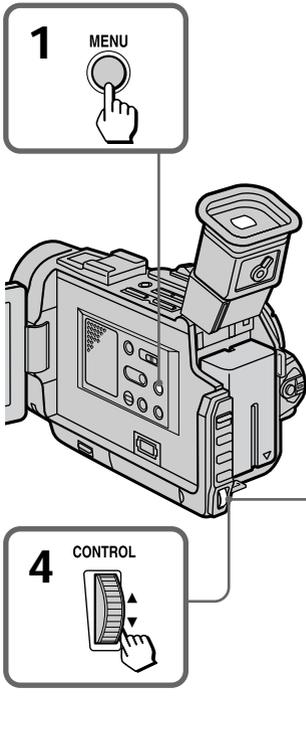
If you use a cassette tape set to prevent accidental erasure, you cannot erase the title. Slide the protect tab so that the red portion is not visible.

## èÛË †ÌÈÄ ÚËÚ †

- (1) ç†ê†úËÄ† ÍÍÓÓÍË MENU , ·, Â&ËÚÁ ì† ~í †ì ÌÄÌ.
- (2) èó,ó †~È,†ñ ÚÍÓÍÚÍÚ CONTROL , ··Â ËÚÁ TITLE ERASE È ì†ÈÌÈÚÁ Ì† ÚÍÓÍÚÍÚ CONTROL.
- (3) èó,ó ÓÓÓÍ ÚÍÓÍÚÍË CONTROL , ··Â ËÚÁ ÚËÚ , ÍÓÓÓ ~È ÌÄÓ·ÌÓ&ËÍÓ ÓÚÁ ÁÚ, È Ì†ÈÌÈÚÁ Ì† ÚÍÓÍÚÍÚ CONTROL.
- (4) è ó,Â ,ÚÁ, %ÄÈÖÚ,ËÚÁ†.ÌÓ ÌÈ Ç· ÍÓÓËÚÁ ÓÚÁ ÁÚ. ÈÌÄÌÌÓ ~ÚÓÚ ÚËÚ , È Ì†ÈÌÈÚÁ ÚÍÓÍÚÍÚ CONTROL ÓÓ,ÚÓ ÌÓ.
- (5) ç†ê†úËÄ† ÍÍÓÓÍË MENU Û·Â ËÚÁ ÌÄÌ. Ó ~Í †Ì†.

è ÈÌÄ~†ÌÈÄ

è È ÓÓÍ,ÁÓ,†ÌÈÈ Í†ÒÒÄÚÓÈ, Á† È·ÄÌÌÓÈ ÓÚ ÓÍÚ~ÈÌÓ,Ó ÓÚÈ †ÌÈñ, Ì†ÍÓÈÄÌì·Á ÚËÚ · ÓÚÁ ÁÚ. ÌÄ,ÓÁÍÓÈÌÓ. èÄ ÁÌÄÓÚËÚÁ Á†·ËÚÍÚ. Á†%,ÈÈÍÚ Ú†Í, ~ÚÓ· í †Òì†ñ ÓÍ†ÓÚÈÌì† ÓÍ†Á†Í†Ò, Á†Í ~ÚÓÈ.



**2**

CONTROL

→

CONTROL

MENU

COMMANDER

TITLE ERASE → **CH**

TAPE DSPL

TAPE TITLE

BEEP

AUDIO MIX

CM SEARCH

↓

[MENU]:END

MENU

TITLEERASE

**1** HAPPY BIRTHDAY

2 WEDDING

3 HELLO

[MENU]:END

**3**

CONTROL

→

CONTROL

MENU

TITLEERASE

1 HAPPY BIRTHDAY

**2** WEDDING

3 HELLO

[MENU]:END

MENU

ERASE?

1 HAPPY BIRTHDAY

**2** WEDDING

3 HELLO

[EXEC]:ERASE [MENU]:END

# Making a custom title

Ç, 0% †, ÚÓ ÒÍÓ,, Ó  
ÚÉÚ †

If you use a tape with cassette memory, you can make one title of up to 20 characters and store it in memory.

- (1) Press TITLE to display the titles on the LCD screen or in the viewfinder.
- (2) Turn the CONTROL dial to select CUSTOM TITLE, then press the CONTROL dial.
- (3) Turn the CONTROL dial to select the column of the desired character, then press the CONTROL dial.
- (4) Turn the CONTROL dial to select the desired character, then press the CONTROL dial.
- (5) Repeat steps 3 and 4 until you finish the title.
- (6) Turn the CONTROL dial to select [ ] , then press the CONTROL dial.

## To erase a character

In step 3, turn the CONTROL dial to select [ M ] then press CONTROL dial. The last character is erased.

## To change the title you have made

In step 2, turn the CONTROL dial to select the CUSTOM TITLE, then press the CONTROL dial. Erase characters one after another, then make the new title again.

## If it takes more than 5 minutes to make a title

If the Standby mode lasts for more than 5 minutes with a cassette inserted, the power will be turned off automatically. If the power is turned off while you are making a title, set the POWER switch to OFF once, then to CAMERA. The title you have made remains stored in memory.

èóí, ÆÚÏ, Ë, Æ:ÁÓÍ+ÒÒÁÚÓÈ Ò Ò+íñÚ, ., Ç  
íÒÈÁÚÁ Ò+íÒÓÓÚÓÚÁí, ÌÒ ÒÓÓÚ+, ÈÚ, È  
ÒÓ1 †ÈÚ, , Ò+íñÚÈ ÚÈÚ %ÈÈÌÓÈ %Ó 20  
Áí+íÓ, .

- (1) Ç+È+ÚÈÁí íÒÓÍÈ TITLE , , Æ:ÈÚÁ Ì+  
ÈÈ%ÍÓÍ ÈÒÚ+íÈÈ~ÁÓÍÈÈ ~í †ì ÈÈÈ Ì+  
~í †ì, È%ÒÈÍ+ÚÁíñ Í+Ú+íÓ,, ÚÈÚ Ó, .
- (2) èó, ó †~È, †ñ ÚÍÓÍÓÚÍÚ CONTROL,  
, , ~.Á ÈÚÁ CUSTOM TITLE È Ì+ÈÈÈÚÁ Ì+  
ÚÍÓÍÓÚÍÚ CONTROL.
- (3) èó, ó †~È, †ñ ÚÍÓÍÓÚÍÚ CONTROL,  
, , ~.Á ÈÚÁ ÍÓÍÓÍÚ, ÍÓÓÓ ÒÈ Ì+1%ÈÚÓñ  
ÍÙÈÌ+ñ .ÚÍ, †, È Ì+ÈÈÈÚÁ Ì+ ÚÍÓÍÓÚÍÚ  
CONTROL.
- (4) èó, ó †~È, †ñ ÚÍÓÍÓÚÍÚ CONTROL,  
, , ~.Á ÈÚÁ ÍÙÈÌÚ. .ÚÍ, Ò È Ì+ÈÈÈÚÁ Ì+  
ÚÍÓÍÓÚÍÚ CONTROL.
- (5) èó, ÚÓ ññ ÒÓÁ †~ÈÈ 3 È 4, , , Æ:ÈÚÁ ÚÈÚ  
ÒÓÍÒÓÚ, . .
- (6) èó, ó †~È, †ñ ÚÍÓÍÓÚÍÚ CONTROL,  
, , ~.Á ÈÚÁ [ ] È Ì+ÈÈÈÚÁ Ì+ ÚÍÓÍÓÚÍÚ  
CONTROL.

èÚÈ †ìÈÈ .ÚÍ,  
Ç 1Ò%Á ÒÓÁ †~ÈÈ 3 , ~.Á ÈÚÁ ÒÓ, Ó ÓÓÓÍ  
ÚÍÓÍÓÚÍÈ CONTROL ÒÓÁÈ^È. [ M ] È Ì+ÈÈÈÚÁ  
Ì+ ÚÍÓÍÓÚÍÚ CONTROL. èÒÓÍÁ%íññ .ÚÍ, †  
ÚÈÚ † Ò È ~ÓÓÍ ÒÓÈ †ÁÚÓñ.

èÁ%+íÚÈ Ó, †ìÈÈ †, ÚÓ ÒÍÓ,, Ó ÚÈÚ †  
Ç 1Ò%Á ÒÓÁ †~ÈÈ 2 ÒÓ, Ó ÓÓÓÍ ÚÍÓÍÓÚÍÈ  
CONTROL , , ~.Á ÈÚÁ CUSTOM TITLE È  
Ì+ÈÈÈÚÁ Ì+ ÚÍÓÍÓÚÍÚ CONTROL. èÒÓÍÁ ~ÚÓ,, Ó  
Ç\* ÍÒÈÁÚÁ ÓÚÁ ÁÚ. .ÚÍ, \* Ó%ÌÚ Á+ % Ò,, ÒÈ È  
, , ÁÒÓÈ, ÌÁÓÓÓ ÌÈ1 ÌÓ, \*Á.

ÒÒÍÈ%íñ , , %+ ÚÈÚ † Ú Á.ÚÁÚÒñ .ÓÍÁÁ 5  
ìÈÌÚÚ  
ÒÒÍÈ , , È:ÁÓÍ+íÁ Ò ÚÓÓ+íÓ, íÁì+ í+ÒÒÁÚ+, ÚÓ  
~.Á ÁÁ ÒñÚ, ÌÈÌÚÓ Ò Á., †ìÈñ, ÁÈÈíÁ  
ÒÈÈ%+ìÈñ Ò .ÁííÈ ÒÈÚ+ìÈÁ í+íÁ \*  
‡, ÚÓÍ+ÚÈ~ÁÓÍÈ ÓÚÍÍ. ~+ÁÚÓñ. ÒÒÍÈ ~ÚÓ  
Ò ÒÈÁÓÈ%ÁÚ, Ó, Áíñ , , Ó%+ ÚÈÚ †,  
ÒÁ Á, Æ:ÈÚÁ ÒÁ Áíí. ~+ÚÁí. POWER Òì+~+í+  
, ÒÓÍÓÈÁìÈÁ OFF, † Á+ÚÁí, ÒÓÍÓÈÁìÈÁ  
CAMERA. Ç+~ ÚÈÚ ÓÓÚ+ÁÚÓñ ÒÓ1 †ìÁìì~í ,  
Ò+íñÚÈ.

**1** **TITLE**



TITLE C/II

HELLO

HAPPY BIRTHDAY

HAPPY HOLIDAYS

CONGRATURATIONS!

OUR SWEET BABY

WEDDING

VACATION

[TITLE]:END

**2** **CONTROL**



➔



TITLE C/II

+

HAPPY HOLIDAYS

CONGRATURATIONS!

OUR SWEET BABY

WEDDING

VACATION

THE END

CUSTOM TITLE

[TITLE]:END

CUSTOM TITLE C/II

ABCDE

FGHIJ 12345

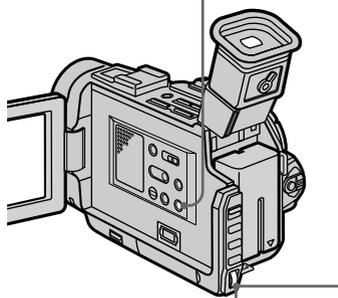
KL MNO 67890

PQRST [ + ]

UVWXY [ † ]

Z& ?!

[TITLE]:END



**3-5** **CONTROL**



➔



CUSTOM TITLE C/II

ABCDE

FGHIJ 12345

KL MNO 67890

PQRST [ + ]

UVWXY [ † ]

Z& ?!

[TITLE]:END

CUSTOM TITLE C/II

ABCDE

FGHIJ 12345

KL MNO 67890

PQRST [ + ]

UVWXY [ † ]

Z& ?!

[TITLE]:END

CUSTOM TITLE C/II

ABCDE

FGHIJ 12345

KL MNO 67890

PQRST [ + ]

UVWXY [ † ]

Z& ?!

[TITLE]:END

CUSTOM TITLE C/II

M

ABCDE

FGHIJ 12345

KL MNO 67890

PQRST [ + ]

UVWXY [ † ]

Z& ?!

[TITLE]:END

**6** **CONTROL**



➔



CUSTOM TITLE C/II

MUSIC

ABCDE

FGHIJ 12345

KL MNO 67890

PQRST [ + ]

UVWXY [ † ]

Z& ?!

[TITLE]:END

If you use a tape with cassette memory, you can label a cassette. The label can consist of up to 10 characters and is stored in cassette memory. When you insert the labeled cassette and turn the power on, the label is displayed on the LCD screen, in the viewfinder, or on the TV screen.

- (1) Insert the cassette you want to label.
- (2) Set the POWER switch to PLAYER.
- (3) Press MENU to display the menu.
- (4) Turn the CONTROL dial to select TAPE TITLE, then press the CONTROL dial.
- (5) Turn the CONTROL dial to select the column of the desired character, then press the CONTROL dial.
- (6) Turn the CONTROL dial to select the desired character, then press the CONTROL dial.
- (7) Repeat steps 5 and 6 until you finish the label.
- (8) Turn the CONTROL dial to select [↵], then press the CONTROL dial.

### To erase a character

In step 5 turn the CONTROL dial to select [ M ], then press CONTROL dial. The last character is erased.

### To change the label you have made

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

### If the mark appears in step 4

The cassette memory is full. If you erase the title in the cassette, you can label it.

### If you have superimposed titles in the cassette

When the label is displayed, up to 4 titles also appear.

### Note on "-----" indicator displayed on the LCD screen or in the viewfinder

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

### Note on the cassettes

If you use a cassette tape set to prevent accidental erasure, you cannot label it. Slide the protect tab so that the red portion is not visible.

ÇĒ&AÓİ+ÒÒÂŨ° ò Ò+İfnŨ, İÖĒİÖ  
İ‡ İĒ Ó +Ũ. α‡ İĒ Ó,İ‡,ÒÒı İfnÂİ+İ, ~İAİŨ ÒİİÖĒ Ò+İfnŨ İ+ÒÒÂŨ°, İÖĒÂŨ  
İİ ~+Ũ %ò 10 Âİ+İÖ, . äó, %+ Ç°  
ŨŨŨİ+ İĒ, İAŨA İ+ İĒ Ó, İİŨ İ+ÒÒÂŨŨ Ē  
İİ, ~+AŨA, Ē&AÓİ+İA Ũ, İ+A, İİĒA İ+ÒÒÂŨ°  
, °, Ö&EŨŨŨ İ+ ĒĒ&İÖİ ĒŨŨİĒ~AÓİĒĒ İı İİ,  
~ı İı, Ē&ÖĒİ+ŨAİfn ĒİĒ ŨAİA, ĒAÓ +.

- (1) İŨŨ+İÖ, ĒŨA, , Ē&AÓİ+İA Ũ İ+ÒÒÂŨŨ,  
İŨŨŨ Ũ. Ç° İŨŨĒŨA İ‡ İĒ Ó, +Ũ. .
- (2) äĀ Ā, Ā&ĒŨA ŌĀ Āİİ. ~+ŨAİ, POWER ,  
ÖÖİŌĒĀİĒĀ PLAYER.
- (3) Ç+Ē+ŨĒĀİ İİŌŌİĒ MENU , °AÓ, ĒŨA İĀİ.  
İ‡ İı İİ.
- (4) äŌ, Ō +~Ē, İİ ŨİŌŨİŨŨ CONTROL,  
, °Ā ĒŨA TAPE TITLE Ē İ+ĒİĒŨA İ‡  
ŨİŌŨİŨŨ CONTROL.
- (5) äŌ, Ō +~Ē, İİ ŨİŌŨİŨŨ CONTROL,  
, °Ā ĒŨA İŌİŌİŨ, İŨŨŨ ŌĒ İ+İ&EŨŨŨ  
İŨĒİ+İ. Ũİ, +, Ē İ+ĒİĒŨA İ‡ ŨİŌŨİŨŨ  
CONTROL.
- (6) äŌ, Ō +~Ē, İİ ŨİŌŨİŨŨ CONTROL,  
, °Ā ĒŨA İŨĒİŨ. Ũİ, Ũ Ē İ+ĒİĒŨA İ‡  
ŨİŌŨİŨŨ CONTROL.
- (7) äŌ ŨŌ İfnŌĀ +~ĒĒ 5 Ē 6, , Ā&ĒŨA  
İ+A, İİĒĀ ÖŌİİŌŨŨ.
- (8) äŌ, Ō +~Ē, İİ ŨİŌŨİŨŨ CONTROL,  
, °Ā ĒŨA [↵] Ē İ+ĒİĒŨA İ‡ ŨİŌŨİŨŨ  
CONTROL.

ĒŨĒ + İİĒĀ · Ũİİ,  
Ç İŌ&Ā ŌĀĀ +~ĒĒ 5 , °Ā ĒŨA ŌŌ, Ō ŌŨŌİ  
ŨİŌŨİŨŨŨ CONTROL ŌĀĒĒ~Ē. [ M ] Ē İ+ĒİĒŨA  
İ‡ ŨİŌŨİŨŨŨ CONTROL. äŌŌİĀ&İfn İ · Ũİ, +  
ŨĒŨ + Ō Ē ŨŌİŨŨŨ +AŨŨŨ.

Ē&A+İŨĒ Ē, İİĒĀ , , Ā&ĀİİŌ, Ō İ+A, İİĒİfn  
İŨŨ+İÖ, ĒŨA, , Ē&AÓİ+İA Ũ İ+ÒÒÂŨŨ, İ+A, İİĒĀ  
İŨŨŨ ŌĒ ŌİĀ&ŨAŨŨŨŨ Ā&A+İŨĒ Ó, +Ũ, , Ē, , Ā&ĒŨA  
İ+A, İİĒĀ Ā+İŌ, Ō.

ŌŌİĒ, İŌ&Ā ŌĀĀ +~ĒĒ 4 ŌŨİfn, İfnAŨŨŨŨ  
Ēİ&Ēİ+ŨŌ   
İ İ+ÒÒÂŨ° İĀ İ, İ+ŨAŨŨ Ō+İfnŨĒ. ŌŨŌ°  
İ‡ İĒ Ó, +Ũ, ĀĀ, İĀŌ. İŌ&ĒİŌŨA ŨŨ, Ö&Ēİ ĒĀ  
Ā+ĒŌ+İİ° İ‡ İĀĒ ŨĒŨ Ō, .

ŌŌİĒ, Ā+ŌĒŌĒ İ‡ İ+ÒÒÂŨA ĒİĀ. ŨŨİfn ŨĒŨ°  
Ē Ē, °&Ā İ+ İı İİ İ+A, İİĒİfn İ+ÒÒÂŨ°  
İŌĒİŨŨŨŨŨ, ĀİĀİİŌ, Ē&ĒŨŨ. %ò 4 ŨĒŨ Ō, .

Ē · Ēİ&Ēİ+ŨŌ Ā "-----" İ‡  
ĒĒ&İÖİ ĒŨŨİĒĒ~AÓİŌİ İı İ+A ĒİĒ, ŌİİĀ  
, Ē&ÖĒİŌ+ŨAİfn  
İİ&Ēİ+ŨŌ "-----" Ũİ+A°, İAŨ ~ĒŌİŌİĀİ+İŌ, , ĒĀ  
İŨŨŨ ° İ İŌĒĀŨ ŌŌŨŨŨŨŨ. İ+A, İİĒĀ İ+ÒÒÂŨ°.  
ŌŌİĒ, Ēİ&Ēİ+ŨŌ Ā İ+Ō~ĒŨ°, İAŨŨİ İĀİ. ~Ā 10  
Āİ+İŌ, , "ŨŌĀİ+~ĒŨ, "ŨŌ Ũ İ+ÒÒÂŨ° İĀ İ, İ+ŨAŨ  
Ō+İfnŨĒ.

Ē, Ē&AÓİ+ÒÒÂŨ+İ  
ŌŌİĒ İ+ÒÒÂŨ+ Ā+~Ē~Āİ+ ŌŨ ŌİŨ~ĒİŌ, Ō  
ŌŨĒ +İĒİfn, ŨŌ İ+İŌĒĀİĒĀ ŨĒŨŨ Ō, İĀ, ŌĀİŌĒİŌ.  
ÇĀ İĒŨA Ō Ā&Ōı İİĒŨĀİ. İŨ Ā&ĒİĒİŨ İ‡  
İĀŌŨŨ, Ũ+İ, ~ŨŌ° İ +ŌİfnŌİ+ŨŨĒİ+  
Ōİ+Ā+İ+Ō. Āİİ "ŨŌĒ.



# Usable cassettes and playback modes

ÇÓÁÍÓÊÏ · Â ÚÊÔ · Í+ÒÒÂÚ È  
ÂÊËÏ · ,ÒÒÒ ÓÊÁ, Â&ÂÏË

## Selecting cassette types

You can use the miniDV <sup>Mini</sup>**DV** cassette only. You cannot use any other **DV** DV, h 8 mm, H Hi8, j VHS, k S-VHS, VHSC, K S-VHSC or 1 Betamax cassette.

We recommend mini DV cassette with cassette memory.

There are two types of mini DV cassettes: with cassette memory and without cassette memory. We recommend you to use the tape with cassette memory. The IC memory is mounted on this type of mini DV cassette. This camcorder can read and write data such as dates of recording or titles, etc. to this memory. Tapes with cassette memory have **CM** (Cassette Memory) mark. Sony recommends that you use a tape having mark to enjoy this camcorder fully.

**CM**

Ç · Ó Í+ÒÒÂÚ ·

Ç · ΙΟΕΑΥΑ ΟΟΙ, ΑΟ, +Ú, Æη ÚΟÍ, ΙΟ ΙΕÏÈ-  
, Ê&ΑΟÍ+ÒÒÂÚ+ÏÈ DV <sup>Mini</sup>**DV** · ÇËÍ+ÏÈÂ % Û, ÈÁ  
, Ê&ΑΟÍ+ÒÒÂÚ · ÛÒ Ι+ÚΟ, **DV** DV h 8 mm, H  
Hi8, j VHS, k S-VHS, VHSC, K  
S-VHSC ÈÏÈ 1 Betamax %Ïη %+ÏÏÒÈ  
, Ê&ΑΟÍ+ÏÁ · ÌÁ ΟΟ%1 Ο%ÏÚ.

εΑÍΟÍÁÏ%ÚÁÏ Ç+Ï ÈÒΟΟÍ, ΑΟ, +Ú, ÏÈÏÈ-  
, Ê&ΑΟ+ÒÒÂÚ · DV ò ~ ÌÁÍÚ ÒÏÏÒÈ Ò+ÏÏÚ...  
ÈÛ · ΑΟÚ, Û Û%, + ÛÈÒ+ ÏÈÏÈ-, Ê&ΑΟÍ+ÒÒÂÚ DV: Ò  
~ ÌÁÍÚ ÒÏÏÒÈ Ò+ÏÏÚ... È · ΑÁ. à · ΑÍΟÍÁÏ%ÚÁÏ  
ΟΟÍ, ΑΟ, +Ú, Æη Ì+ÒÒÂÚ+ÏÈ Ò Ò+ÏÏÚ... ÛÈÈ  
Ï+ÒÒÂÚ · ÒÏ+ · ÈÁÏ · ÈÏÚÁ, + Ï, ÏÒÈ Ò+ÏÏÒÈ  
Ò+ÏÏÚÈ, ÏÓÓ Û, Ê&ΑΟÍ+ÏÁ + ÏΟΕÁÚ  
Á+ÏÏÒÈ, Û+ÏÚ, ÈÏÚ Ï+È, Ï+Ï%+Û · È  
, ÁÏÏ · ΑÏÓÍ, ÛÈÛ · ÈÛ% · à+ÒÒÂÚ ·  
ÒÒÏ+ · ÁÏ · Á Ò+ÏÏÚ... ÈÏÁ · Û Ò · ÒÁÏ+ · ÁÏÈÁ **CM**  
(~ ÌÁÍÚ ÒÏÏÏ+ÏÏÚ...),  
ÏÏÏ · ÒÏÁÁ ÒÏÏÏ, Ò + òÍ · ÛÈÏ, ÒÁÏÒÈÏÓÓÚÁÈ  
Ç+ · ÀÈ, Ê&ΑΟÍ+ÏÁ · ÏÓÏÒ+ÏÈÏ Sony  
· ΑÍΟÍÁÏ%ÚÁÏ ÈÒΟΟÍ, ΑΟ, +Ú, Ï+ÒÒÂÚ ·  
ÒÓÏÁ · ÁÏ · Á Ï, ÒÚÈÒÓÍ **CM**.

## 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.

## é, ÓÒÒ ÓÊÁ, Â&ÂÏË

èÈ,, Ì+Ï Á+ÈÛ · +, ÚΟ ÒÏË Ò +,  
è ÒÓÏ... %+ÏÏÒÈ, Ê&ΑΟÍ+ÏÁ · ÌÁ, ÒÁÏÒÈÏÓ  
, ÒÒ ÓÊÁ, ΑΟÚÈ, Ê&ΑΟÍ+ÒÒÂÚ, Ï+ ÏÓÓ ÒÈ  
Á+ÒÈÒ+Ï Á · ÈÛÏ · È ÒÈ,, Ì+Ï %ÏÏ Ò1 + Ï  
+ , ÚΟ ÒÏË Ò +, Ï+ ~ ÌÁÍÚ ÒÏÏ · ÁÏ+ÛÁ È+Ï ·  
è È ÒÓÓ · ÛÁ, ÒÒ ÓÊÁ, Â&ÂÏË Û+ÏÒÈ Ï+ÒÒÂÚ ·  
Ï+ È&ΑÍÓÍ ÈÛ+ÏÏÈ · ΑÓÍÓÍ · Ï+ ÏÁ, , ÒÏÏÁ  
, Ê&ΑÈÏ+ÛÁÏÏ ÈÏÈ Ï+ Ï+ ÏÁ ÛÁÏÁ, ÈÁÓ +  
ÒÓÏ, ÏÏÁÛÏÏ Ï+ %ÒÈÒ, "COPY INHIBIT". ÇÓ, ÁÏÏ  
Ò · ÁÏÏÈ Ò+Ï+ , Ê&ΑΟÍ+ÏÁ + ÏÁ Á+ÒÈÒ · , +ÁÏ Ï+  
ÏÁÏÁ ÒÈ,, Ï+ÏÏ, Á+ÈÛ · +, ÚΟ ÒÏË Ò +, .

εÂÊËÏ · Á, ÛÍÓÁ+ÒÈÒÈ  
12- · ÈÛÏ · È ÀÈÈÏ: à, ÛÏ, Á+ÒÈÒ · , +ÁÏ · È Ò È  
, Ê&ΑÒÓ · ÁÏÏÁ, ÛÈÏÒÈ ÛÁÛÏÏ Ï+ %Ó ÒÈÁ  
ÓÚÁ · ΑÓ 1, + Á, ÛÏ, Ï+Ï+ % · , +ÁÏ · È  
, ÒÓÏÏÁ&ÓÚ, ÈÈ - Ï+ %Ó ÒÈÁ ÓÚÁ ÒÓ 2 Ò  
ÈÒΟΟÍ, ΑΟ, +ÏÈÁÏ · + ÒÓÓÚ · 32 ÏÈ · à, ÛÍÓ, ÒÈ  
· Ï+ÏÏ %Ó ÒÈÁÏ ÓÚÁ · ΑÓ 1 È ÓÚÁ · ΑÓ 2 ÏÈÏÏÓ  
· Á, ÛÏÈ Ò, +Ú, , ò, ÁÏÏ, ÒÒÒ ÓÊÁ, Â&ÂÏËÏ,  
, · + · , ÌÁÏ · Ò+ ÏÁÛ Ò, ÒÓÁÈ · È · AUDIO  
MIX. è È · ÛÓÍ ÏÈÏÏ ÒÏ · +Ú, Á, ÛÏ Ò Ò · ÀÈ1  
%Ó ÒÈÁÏ.  
16- · ÈÛÏ · È ÀÈÈÏ: è ÒÓÏÁ&Ú · ÁÁ Ï+ÏÒÈÁÏÈÁ  
· Á, ÛÏ+ ÏÁ, ÒÁÏÒÈÏÓ, Ï Ò Ï+ · ΑΟÚ, Ò Á+ÒÈÒÈ · Á, ÛÏ+  
Ò · È Ò · ÁÏÏÁ ÒÒ, · + · ÁÛÏÏ. à ÒÏÁ ÛÓ, ò, , ÛÓÍ  
· ÀÈÈÏÁ ÏΟΕÁÚ, ÒÒÒ ÓÊÁ, Ò%ÈÛ · Æη Á, ÛÏ,  
Á+ÒÈÒ+ÏÏ · È Ò ÈÒΟΟÍ, ΑΟ, +ÏÈÁÏ · + ÒÓÓÚ 32 È ^,  
44,1 È ^ È 48 ÏÈ ^ . è È , ÒÓÓ ÓÊÁ, Â&ÂÏËÈ  
· Á+ÒÈÒÈ, Ò%ÁÏ+ÏÏÒÈ, 16- · ÈÛÏÓÍ ÀÈÈÏÁ, Ï+  
È&ΑÍÓÍ ÈÛ+ÏÏÈ · ΑÓÍÓÍ · Ï+ ÏÁ ÈÏÈ, ÒÏÏÁ  
, Ê&ΑÈÏ+ÛÁÏÏ ÒÓÏ, ÏÏÁÛÏÏ ÈÏÈÈÏ+ÛÓ 16BIT.

# Usable cassettes and playback modes

ÇÓÁÍÓÈÌ° Â ÚÈÖ° Í±ÒÒÂÚ È  
 ÂÈÈÌ° ,ÒÒÒ ÓÈÁ,Â%ÂÌÈÈ

## 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]

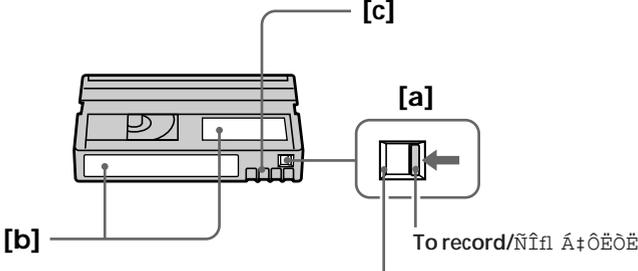
**After using the mini DV cassette**  
 Rewind the tape to the beginning, put the cassette in its case, and store it in an upright position.

## é ÌÈÌÈ- ,È%ÁÓÍ±ÒÒÂÚ±1 DV

è Â%ÓÚ, ±~ÂÌÈÄ ÒÌÛ~±ÈÌÖ,,Ò  
 ÒÚÈ ±ÌÈÈ Á±ÒÈÈÈ  
 è%,ÈÌ,ÚÁ Ì± Í±ÒÒÂÚÁ Ò Â%Ó1 ±ÌÈÚÁÈ,ÌÛ.  
 Á±%,ÈÈÌÛ,Ú±Í, ~ÚÓ· ÒÚ±Í±,È%Ì± Í ±ÒÌ±È  
 ÒÌ±ÒÚÈÌÍ±. [a]

Ç±ÍÍÁÈ, ±ÌÈÄ ~ÚÈÍÁÚÓÍ Ì± ÌÈÌÈ-  
 ,È%ÁÓÍ±ÒÒÂÚ° DV  
 ùÚÈÍÁÚÍÈ ÌÒÈÌÓ Ì±ÍÍÁÈ,±Ú. ÚÓÍ,ÍÓ, ÌÄÒÚ±1,  
 ÚÍ±Á±Ì~1 Ì± ÈÒÛÍÁ ÈÈÈÁ; ,Ò ÓÚÈ,ÌÓÍ  
 ÒÌÛ~±Ä ÓÌÈ ÌÓ,,ÚÛ Ì± Û~±Ú, ±·ÓÓÛ  
 ,È%ÁÓÍ±ÍÁ °. [b]

èÒ ÓÍÓÍ~±ÌÈÈ ÓÓÍ,ÁÓ, ±ÌÈÈ ÌÈÌÈ-  
 ,È%ÁÓÍ±ÒÒÂÚ±ÌÈ DV  
 èÄ ÁÌÓÚ±ÈÚÁ ÍÁÌÛÛ, Ì±~±ÍÓ, ÓÓÍÄÒÚÈÚÁ  
 Í±ÒÒÂÚÛ, ÚÛÛÈÈ È1 ±ÌÈÚÁ ÂÄ ,  
 ,Ä ÚÈÍ±Í,ÌÓÍ ÓÓÍÓÈÁÌÈÈ.



**Slide out to prevent accidental erasure./**  
 è%,ÈÌÛÛ, %ÈÈ Ò Â%ÓÚ, ±~ÂÌÈÈ ÒÌÛ~±ÈÌÖ,,Ò  
 ÓÚÈ ±ÌÈÈ

**Note on gold-plated connector**  
 If the gold-plated connector of mini DV cassettes is dirty or dusty, you may not operate the function using cassette memory. Clean up the gold-plated connector with cotton-wool swab, about every 10 times ejection of a cassettes. [C]

é ÍÓÍÛ±ÍÚÍÒÈ ÒÌ±ÒÚÈÌÍÁ Ò ÁÓÍÓÚ° Ì  
 ÓÓÍ °ÚÈÄÌ  
 èÓÒ±%±ÌÈÄ Ò°ÈÈ ÈÈÈ ,, ÈÁÈ Ì± ÈÍÁ. ~Û.ÒÈÈ,  
 ÌÈÌÈ-Í±ÒÒÂÚ±1 DV ÍÓÍÛ±ÍÚÛ. ÒÌ±ÒÚÈÌÍÛ Ò  
 ÁÓÍÓÚ° Ì ÓÓÍ °ÚÈÄÌ ÌÓÈÁÚ, °Á°,±Ú. Ò·ÓÈÈ  
 ÚÛÌÍ~ÈÈ, È%ÁÓÍ±ÍÁ °, Ò,ÈÁ±ÌÌ~1 Ò  
 ~ÍÁÍÛ ÓÌÒÈÈ Ò±ÈÛÛ. Í±ÒÒÂÚ°. áÓÍÛ±ÍÚÛÛ,  
 ÒÌ±ÒÚÈÌÍÛ Ò ÁÓÍÓÚ° Ì ÓÓÍ °ÚÈÄÌ ÒÍÁ%ÚÁÚ  
 Ò ÓÚÈ ±Ú, ±ÚÌ° ÌÛ±ÍÓÓÍÓÍ Ò ÈÍÁ ÌÓ ÓÓÍÁÈ  
 Í±È%Ó,,Ò %ÁÓÈÛÓ,,Ó ÈÁ, ÍÁ~ÂÌÈÈ Ì±ÒÒÂÚ° ÈÁ  
 ,È%ÁÓÍ±ÍÁ °. [c]

Additional Information / NOÖÓÍÈÚÁÌ, Ì±È ÈÌÖÖ Ì±~ÈÈ



# Resetting the date and time

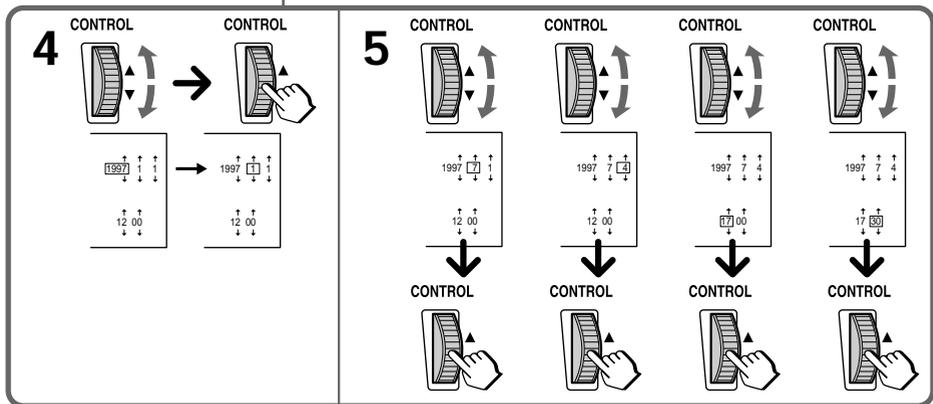
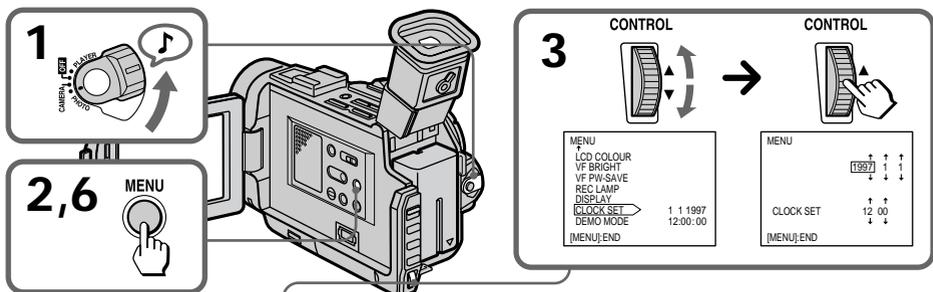
öó ÆÍÚË Ó,Í‡%‡Ú·  
Ë, ÆÎÆÏË

The date and time are set at the factory. Set the time according to the local time in your country. 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 or in the viewfinder.
- (3) Select CLOCK SET, then press the CONTROL dial.
- (4) Turn the CONTROL dial to adjust the year, and then press the CONTROL dial.
- (5) Set the month, day, hour and minutes by turning and pressing the CONTROL dial.
- (6) Press MENU to erase the menu display.

- ÍÆÍÚ·ËÄ%‡Ú·Ë, ÆÎÎÍ‡,ÓÚ ÓÆÏ·1~‡Ó‡1,Ë%ÆÓÍ‡ÏÄ·ÚÓÚ‡ÍÓ,ÍÆÍ·ËÄ,ÓÚÓ,ËÚÆÍÆÍ. ãÄ Ä,Ä%ËÚÄ~‡Ó·Í‡ ÍÆÓÚÍÓÄ, ÆÎÎÇ‡-ÆË ÓÚ ‡Í·.ÓÓÍËÇ·ÍÆÓÓÍ,ÆÓ,‡ÍËÓ.Í‡ÏÄ ÓË ÓÍÓÍÓ,Ó%‡,ÚÓ,ÓÚ ÓÆÏ·Ä~‡Ó·Í‡ÏÄ·ÍÓ,ÓÚ ÓÓÚ‡ÍÓ,ËÚ,ÓÎËÄ-Ä‡ ‡Ä ÎË‡ÏËÎÎ,‡Í‡%ËÄ,Ó-ÍËËËÄ,ÓË·‡Ú‡: ÆÍËË (Ó Ë~ÚÓÍ,ÍÆÓÓÓ%‡Ú·Ë, ÆÍÆÍË·Ú%ÓÓ ÓÓÎ,ÎÎÚ,ÓÎ Ó·Ó-Ä ÍË).Ç·ÚÓÍ ÓÍÓ~‡Ä ÍÆÓ·ÍÓ%ËÍÓ ÓÍ‡~‡Í‡Ä Î%ËÚ,‡Í‡%ËÄ,Ó-ÍËËËÄ,Ú·‡Ú‡ ÆÍËÚ,‡Ä‡ÚÆÍ‡ÄÍÓ,ÓÚÓÚ‡ÍÓ,ËÚ,%‡ÚÚËË ÆÎÎÍ‡~‡Ó‡1.
- (1) Ì%Ä ËË,‡Î, Í‡Ë‡ÚÓÍ ÓÓÍÓÆÍËË Í‡ÏÄ ÍÚ.ÄÆÍÆÍÚ.ÍÆÓÓÍÚ Í‡ ÓÄ ÆÍÍ·~‡ÚÆÍÄ POWER, ÓÄ Ä,Ä%ËÚÄ Ä,Ó,ÓÓÍÓÆÍÆÍÄ CAMERA.
  - (2) Ç‡Ë‡ËÆÍ ÍÍÓÓÍË MENU,·ÆÓ,ËÚÄ ÍÆÍ.Í‡ËË%ÍÓÍ ËÓÚ‡ÍË~ÆÓÍËË·Í Í‡ËËË·Í ‡Í,Ë%ÓËÍ‡ÚÆÍÎ.
  - (3) Ç·Ä ËÚÄ CLOCK SET Ë Í‡ËËËÚÆÍ Í‡ ÚÍÓÎÚÍÚ CONTROL.
  - (4) ãó,ó ÓÓÍ ÚÍÓÎÚÍË CONTROL,ÚÓÚ‡ÍÓ,ËÚÄ ÚËË·Ë,Ó%Ë Í‡ËËËÚÆÍ Í‡ ÚÍÓÎÚÍÚ CONTROL.
  - (5) ãó,ó ‡Ë,‡Î Ë Í‡ËËË‡Î ÚÍÓÎÚÍÚ CONTROL,ÚÓÚ‡ÍÓ,ËÚÄ ÍÆÓÎ^, %ÆÍ,·~‡Ó Ë ÍËËÓÓÚ.
  - (6) Ç‡Ë‡ËÆÍ ÍÍÓÓÍË MENU Ú·Ä ËÚÄ ÍÆÍ.Ó·Í ‡Í‡.

Additional Information / NOÖÍÍËÚÆÍ.Í‡Î ËÍÓÓ Í‡ËË



# Resetting the date and time

äÓ ÂÍÜË Ó,Í‡%‡Ú°Ë  
, ÂÏÂÏË

**To correct the date and time setting**  
Repeat steps 2 to 5.

The year indicators changes as follows:

→ 1997 → 1998 → ..... 2000 ..... → 2029

**Note on the time indicator**  
The internal clock of this camcorder operates on a 24-hour cycle.

àÒÒ ‡,ÍÂÏËÄ Ó-Ë·ÓÍ Ô Ë ÛÒÚ‡ÏÓ,ÍÂ  
%‡Ú°Ë , ÂÏÂÏË  
èó,Úó ËÚÁÓÔÂ ‡^ËË 2-5.

Éó% Ì‡ ~Í ‡ÏÂ òÏÂÏÂÏÂÏÂÏÂ , òÏÂ%Û. ~ÂÏ  
ÔÓ Ï%ÍÂ:

→ 1997 → 1998 → ..... 2000 ..... → 2029

é· ÈÏ%ËÍ‡^ËË , ÂÏÂÏË  
ÇÒÚ ÓÂÏÏ'Â ~‡ò° %‡ÏÏÓË ,Ë%ÁÓÍ‡ÏÂ ·  
ËÏÂ,Ú 24-~‡òó,ÓË ^ËÍÏ.

# Tips for using the battery pack

é ôôî, áó, †îëë  
†ííúîúîflúó ìóë · †ú† ââë

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.

ç ì†òóóñ`âî †á%âîá ò ë, â%âî`  
áíóíâî%†`ëë òó óóúëî†í, íóíú  
ëòóóî, áó, †îë, , óáíóëíóóúâë  
†ííúîúîflúó ìóë · †ú† âë.

èò%, óúó, í† · †ú† âë í † · óúâ

çòâ,,%† ìòóëúá ò óó · óë á†ò†òì`â  
· †ú† âë  
á† fl% ëîá, ~ëìòñ ù ç†ò óó% úíóë · †ú† âë  
%óíëâî, 2 - 3 †á† ò á, ~†ú, óó, ~úó  
îáó · ìó%ëíó %îfl óí†íë úâíóé  
ò ó%óíëëúâî, ìóóúë ò`âííë.

è ë ìëáíëì úâíóâ †úú †ì  
†ííúîúîflúó ì`â · †ú† âë  
†á flë†, ùòfl ·`óú ââ.  
òóíë ç` óóí, áúáúáò, ò%áóí†íâ òë ì†  
ìóíó%â, úó ~ùùáíúë, ìóóú,  
ùúíí`ëóíë ó, †ìëfl · †ú† âë òíëë†áúòñ, ë ëì  
á† fl%† †, †ú†áú ì† îâî, -ââ, áîfl.

â†í ò`íóíóíëëú, ~îâ „ë.  
†ííúîúîflúó ì`â · †ú† âë  
ñîñ ~íóíóíëë`îâ „ëë, óâ á` , †ì îâë%ú  
ò`âííóë íá óóú†, íñëúá, ë%áóí†íâ ù ,  
âëëîá óëë%†ìëfl.  
ç` íí. ~âíëâ ë, íí. ~âíëâ í†íâ ` íâ  
ì† ù`†áú óí†, ìóóúë óâ áìó%† îâë%ú  
í†% †íë. è ë, `ó áóí†í†, †íú ò†ò`âííë,  
ëíë ì†. í %âíëë á† ëë%íóí ëóú†ííë`âóíëí  
`í †íóí íë. ó`í †íóí, ë%óëòí†úâíñ íëíá†  
ó. `áíúë, ††, úóí†úë`áóíë óâ áíâ`†áúòñ ò  
óóóú, áúóú, ù. `ëí †òìó%óí`îâ „ëë · †ú† âë.  
á† fl% · †ú† âë †òìó%úáúòñ ù†íëâ ò ë  
ùóú†íó, íá ë ëâ, íâ`âíëë í†òòáú.

Additional Information / No. 00115041, 1+1 E106 1+`E1





Notes on the "InfoLITHIUM" Battery Pack

††Û† ÂÈ "InfoLITHIUM"

What is the "InfoLITHIUM" battery pack

óóó óó·óÈ ò Â%óÛ†, ìñÁÛ  
†ÍÏÛÏÛÎñÛÓ Ì†ñ · †Û† Áñ  
"InfoLITHIUM"  
††Û† Áñ "InfoLITHIUM" - "óó ÌÈÛÈÁ, †ñ  
†ÍÏÛÏÛÎñÛÓ Ì†ñ · †Û† Áñ, Ìóóó †ñ ÌóÈÁÛ  
ó·ÏÁÏÈ, †Û, òñ ò ó Èóóóóó·ÏÁÏÏÈ %ñ "óó, ò  
, È%Áó†óó† †ÛÛ óÈ %†ÏÏ·ÏÈ ó óóóóóñÏÈÈ È  
†òì%ó, †ÏÈÈ ò, óÁ, ò Á† ñ%†.  
äóÏò†ÏÈñ Sony ÁÍóÏÁÏÈÛÁÛ Ç†Ï  
ò Èó· ÁÛ†Û, %ñ, È%Áó†óó† †ÛÛ , Ì†  
Ìóóó óÈ ÈÏÁÁÛñ ò·óÁÏ†·ÁÏÈÁ (†† InfoLITHIUM ,  
†ÍÏÛÏÛÎñÛÓ Ì·Á·†Û† ÂÈ "InfoLITHIUM".  
è È óóÏ, Áó, †ÏÈÈ "óÈÏÈ· †Û† ÁñÏÈ Û††ñ  
†óó† †ÛÛ †óóó··†ÁÛ Ç†Ï·ó· óóó†··ÁÏñ  
, ÁÏÁÏÈ †·óó· óó·†Û† ÂÈ, ÏÈÏÛ†. \*  
\* Ìó·Ïóóó, Û†††ÏÈñ óóó†··Á, óñ, ÁÏÁÏÈ  
Á†, ÈòÈÛ óó òóÏó, ÈÈ È ó·óóóñÁÏ, óó,  
"íóóÏÛ†Û†·ÈÈ †óó† †ÛÛ .

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 (b) InfoLITHIUM mark. When you use this battery pack with video equipment having the (b) InfoLITHIUM mark, the video equipment will indicate the remaining battery time in minutes.\*

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

How the battery consumption is displayed

ä†í óóó· †È†ÁÛòñ óóó Á·ÏÁÏÈÁ  
"ÏÁ „ÈÈ·†Û† ÂÈ  
àÏÛÁÏÈÈ, Ìóóó, ò Ìóóó óÈ, È%ÁóÏ†ÏÁ †  
óóó Á·ÏñÁÛ "ÏÁ „È, Á†, ÈòÈÛ óó ÁÈÈÏ† ÁÁ  
"íóóÏÛ†Û†·ÈÈ (ÈóóóÏ, Áó, †ÏÈÁ  
ÈÈ%ÍóÏ Èóó†ÏÈÈ·Áóíó, "ó í †Ï†,  
†, óóÏ†ÛÈ·ÁóÏÈ Ì†, %ÏÏÈ Ì† ÁÁÍóóó, ÈÛ.%.)  
ÁÏ†ÈÈÁÈ òñ óóóóóñÏÈÁ, È%ÁóÏ†ÏÁ , ·†Û† Áñ  
"InfoLITHIUM" Á†ÏÁ ñÁÛóóó Á·ÏÁÏÈÁ "ÏÁ „ÈÈ  
È †óó·ÈÛ·, †ÁÛ, Ì† Ì†ÍóÁ, ÁÏñ Ì, †ÛÈÛ  
ÈÏÁ··Á, óñ, ÏÁÈ Á† ñ%†. è È ÁÁÍóÏ  
ÈÁÏÁÏÁÏÈÈ ÁÈÈÏ† †·óó· Ì†ÏÁ·  
ÈÈ%È·È ÛÁÏ†ñ, ÁÏÈÈ·ÈÏ† óóó†··Á, óñ  
, ÁÏÁÏÈ †·óó· ÌóÈÁÛò †ÁÛ, óÁ †óÙÈ ÈÏÈ  
óóÏ† †ÛÈÛ, òñ·óÏÁÁ·ÁÏ Ì† 2 ÏÈÏÛÛ·.  
Ç ÏÁÏóóó "ì óÏÛ†ñ ÌÈ, †·ÈÈ ÈÏÈÈÏ†Ûó Ì  
ÏóÈÁÛ óñ, ÈÛ, òñ Ì† ÈÈ%ÍóÏ Èóó†ÏÈÈ·ÁóÏÏ  
"Í †ÏÁ ÈÏÈ, óÏÏÁ, È%óÈòÏ†ÛÁÏñ, %†ÈÁ ÁòÏÈ  
óó ÛÏ†Á†ÛÁÏ. óóó†··Áòñ, ÁÏñ †·óó·  
óóóó†, ÌñÁÛ Á·Áóó 5 %ó 10 ÏÈÏÛÛ.

The power consumption of the camcorder changes depending on its use, such as whether the LCD is used or not, how the autofocusing is working on or not.

While checking the condition of the camcorder, the "InfoLITHIUM" battery pack measures the battery consumption and calculates the remaining battery power. If the condition changes drastically, the remaining battery indication may suddenly decrease or increase by more than 2 minutes.

Even if 5 to 10 minutes is indicated as the battery remaining time on the LCD or viewfinder, the indicator may also flash under some conditions.



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.

á† flÊ†ÏÈÂ · †Ú† ÂÈ

çÓ, †fl †ÍÍÛÛÛÛÛÛÛÛÛÛ Î†fl · †Ú† Âfl  
ÁÍÍÛÛÛÛÛÛÛÛÛÛ Î·Á · †Ú† ÂÈ Ó †Ú. ÛÓfl  
ÏÁÁ† flÊÁÏÏ·ÏÈ. æÁ Â¸ÓÓÍ, ÁÓ, †ÏÈÁÏ  
· †Ú† ÂÂÈ ÁÁ ÏÁÓ·ÍÓ¸ÈÍÓ ÓÓÍÍÓÓÚ, .  
Á† flÊËÛ, .

èÓ¸Á† flÊ†Ú, · †Ú† Â. ÏÓÈÏÓ, Ï·ÓÈ  
ÏÓÍÁÏÛ ÓÓ ç†·ÁÏÛ ÛÓÍÓÛ ÁÏÈ,  
æÁ Â¸·ÛÈÏ ÁÁ ÏÁÓ·flÁ·ÛÁÏ, ÏÓ †Á flÊ†Ú,  
ÓÓÍÍÓÓÚ, . ÓÓÏÈ ç·, ÓÓÍÍÓÓÚ, . Á† flÊÈ,  
· †Ú† Á, ÏÁ ÓÓÍ, ÁÛÁÛÁÓ, Á, ÛÁ·ÁÏÈÁ  
¸ÓÍ, Ó, Ó, ÁÏÁÏÈ, · †Ú† Âfl ~ †ÓÛÈ~ÍÓ  
†Á flÊ†ÁÛÓfl. ç Ú† ÏÈÏ ÒÏÛ~†fl ÒÁ Â¸Ï†·ÍÓÍ  
ÓÓÍ, ÁÓ, †ÏÈfl ÁÁ ÒÏÁ¸ÛÁÛ ÓÓ¸Á† flÊËÛ, .

é ÍÓÏÛ†ÍÛ†₁ · †Ú† ÂÈ

ÓÓÏÈ ÍÓÍÛ†ÍÛ· · †Ú† ÂÈ (ÏÁÛ†ÏÈÈ~ÁÓÍÈÁ  
~ †ÓÛÈ Ï†, ÏÛÛ ÁÏÁÈ ÓÓÓ ÓÏÁ ÍÓ ÓÛÓ†)  
Á†, flÁÏÁÏ·, ÛÓ ÁÁ ÁÏÍÓÓÚ, ÛÏÁÏ, ~ †ÁÛÓfl.  
ç ÓÏÛ~†Á Á†, flÁÏÁÏÈfl ÍÓÍÛ†ÍÛÓ, ÈÏÈ,  
ÓÏÛ~†Á, ÁÓÏÈ · †Ú† ÂÂÈ ÏÁ ÓÓÍ, ÁÓ, †ÏÈÓ, ,  
ÛÁ·ÁÏÈ¸ÈËÛÁÏÏ, ÏÓ, ÁÏÁÏÈ, · †Ú† Á.  
ÓÏÁ¸ÛÁÛ Ó ÈÓÓ¸ÈÏÈÛ, Í Í†ÏÁ ÂÈ  
ÓÓÓ¸¸ÈÏÈÛ, ÓÛ ÏÁÁ ÏÁÓÍÓÍ, ÍÓ †Á ÓÓ¸ fl¸.  
ÛÓÓ ÓÓÍÓ, †ÁÛ ÛÏÛ~ÈÛ, ÓÓÓÓflÈÈÁ ÍÓÍÛ†ÍÛÓ, .  
ä ÓÏÁ ÛÓ, Ó, ÍÓÍÛ†ÍÛ·, Ó·ÓÁÏ~ÁÏÏ·Á  
ÒÈÏ, ÓÏ†ÏÈ+, - Èè, ÓÏÁ¸ÛÁÛ Ó ÓÛÁ ÁÛ,  
Ïfl, ÍÓÈ Ï†ÛÁ ÈÁÈ ÈÏÈ·ÛÏ†, ÓÈ.

çÁ Á†· · †ÈÛÁ Ó ÓÏÁ¸Û· ~ ÈÏ ÏÁ †₁  
Ó Â¸ÓÓÓÓ ÓÈÏÓÓÛÈ:  
• ÁÁ Á, ÈÛÁ · †Ú† Á. ÓÓÓ, Ïfl.  
• çÁ ¸ÓÓÓÓÍ†ÈÛÁ Ï†ÍÓÍ†ÏÈfl · †Ú† ÂÈ.  
• çÁ, ÓÍ ·, †ÈÛÁ ÍÓ ÓÛÓ · †Ú† ÂÈ È ÏÁ  
Ó·Û†ÈÛÁÓ, †Á·È †Ú, ÁÁ.  
• çÁ ÓÓ¸, Á, †ÈÛÁ · †Ú† Á. ÁÁÍÈÏ  
ÏÁ†ÏÈ~ÁÓÍÈÏ, Ó¸¸ÈÈÓÓ, Èfl.



Video head cleaning

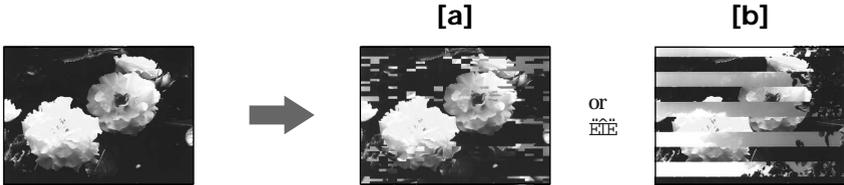
To ensure normal recording and clear pictures, clean the video heads.

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 v indicator and "CLEANING CASSETTE" message appear one after another or the v indicator flashes on the LCD screen or in the viewfinder

ΕΛΛΗΝΙΚΗ ΓΛΩΣΣΑ, ΕΛΛΗΝΙΚΟ ΚΕΝΤΡΟ ΣΥΜΒΟΥΛΩΝ

- Νέφη ή σκόνη εμφανίζονται στην οθόνη ή στην οθόνη, ή στην οθόνη ή στην οθόνη.
- Η εικόνα δεν κινείται.
- Η εικόνα είναι δύσκολο να είναι ορατή.
- Η εικόνα δεν εμφανίζεται.
- Το v δείκτη και το μήνυμα "CLEANING CASSETTE" εμφανίζονται διαδοχικά ή ο δείκτης v αναβοσβήνει στην οθόνη LCD ή στον οθλήτη.



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.

Αν συμβεί το [a] ή το [b], καθαρίστε τα κεφάλια της βίντεο με το κασέτκι καθαρισμού Sony DVM12CL (δεν είναι παρεχόμενο). Ελέγξτε την εικόνα και αν το πρόβλημα συνεχίσει να υπάρχει, επαναλάβετε τον καθαρισμό. (Μην επαναλάβετε τον καθαρισμό περισσότερο από 5 φορές σε μία συνεδρίαση.)

Εάν το κασέτκι καθαρισμού Sony DVM12CL (δεν είναι παρεχόμενο) δεν είναι διαθέσιμο στην περιοχή σας, συμβουλευθείτε τον πλησιέστερο αντιπρόσωπο της Sony.



### AC power adaptor

#### Charging

- Use only an InfolITHIUM type battery pack.
- 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 mains lead, 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

#### Αποφορτιστής

##### Άρτιος φόρτιση

- Χρησιμοποιείτε μόνο μπαταρία τύπου InfolITHIUM.
- Τοποθετήστε τη μπαταρία σε επίπεδη επιφάνεια χωρίς κραδασμούς κατά τη φόρτιση.
- Η μπαταρία μπορεί να θερμαίνεται κατά τη φόρτιση. Αυτό είναι φυσιολογικό.

##### Άλλα

- Αποσυνδέστε το καλώδιο τροφοδοσίας από το πρίζα όταν δεν χρησιμοποιείτε το προϊόν για μεγάλο χρονικό διάστημα. Για να αποσυνδέσετε το καλώδιο τροφοδοσίας, τραβήξτε το από την πρίζα. Ποτέ μην τραβήξετε το καλώδιο από το προϊόν.
- Μην λειτουργείτε το προϊόν με κατεστραμμένο καλώδιο ή αν το προϊόν έχει πέσει ή έχει υποστεί ζημιά.
- Μην κάμπωτε βίβρακα ή το καλώδιο τροφοδοσίας με δύναμη ή βάλτε αντικείμενα επάνω του. Αυτό μπορεί να προκαλέσει πυρκαγιά ή ηλεκτροσόκ.
- Βεβαιωθείτε ότι τίποτα μεταλλικό δεν έρχεται σε επαφή με τα μεταλλικά μέρη της επαφής. Εάν συμβεί αυτό, μπορεί να συμβεί βραχυκύκλωμα και να повредит το προϊόν.
- Κρατήστε τα μεταλλικά μέρη καθαρά.
- Μην αποσυναρμολογείτε το προϊόν.
- Μην εφαρμόζετε μηχανικό σοκ ή αφήνετε το προϊόν να πέσει.
- Κατά τη χρήση, ιδιαίτερα κατά τη φόρτιση, κρατήστε το προϊόν μακριά από λήκτες AM και βίντεο εξοπλισμό, καθώς μπορεί να προκαλέσει διαταραχή στην AM λήψη και στην λειτουργία βίντεο.
- Το προϊόν μπορεί να θερμαίνεται κατά τη χρήση. Αυτό είναι φυσιολογικό.
- Μην τοποθετείτε το προϊόν σε θέσεις που είναι:
  - Πολύ ζεστές ή πολύ κρύες
  - Πολύ σκόνη ή βρώμα
  - Πολύ υγρασία
  - Σε κεντρική θέρμανση ή σε κλιματιστικό

## Note on dry batteries

To avoid possible damage from battery leakage or corrosion, observe the following.

- Be sure to insert the batteries in the correct direction.
- Dry batteries are not rechargeable.
- Do not use a combination of new and old batteries.
- Do not use different types of batteries.
- The batteries slowly discharge while not in use.
- Do not use a battery that is leaking.

## If battery leakage occurred

- Wipe off the liquid in the battery case carefully before replacing the batteries.
- If you touch the liquid, wash it off with water.
- If the liquid get into your eyes, wash your eyes with a lot of water and then consult a doctor.

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

ΕΠΙΧΕΙΡΗΣΙΑΚΑ ΣΧΗΜΑΤΑ ΚΑΙ ΠΡΟΒΛΗΜΑΤΑ

ΟΡΓΑΝΙΣΜΟΣ ΣΥΝΤΗΡΗΣΗΣ, ΕΛΕΓΧΟΣ ΚΑΙ ΣΥΝΤΗΡΗΣΗ  
ΕΛΕΓΧΟΣ ΚΑΙ ΣΥΝΤΗΡΗΣΗ

- ελέγξτε την κατεύθυνση των μπαταριών κατά την εισαγωγή τους.
- οι μπαταρίες δεν είναι επαναφορτιζόμενες.
- μην χρησιμοποιείτε συνδυασμό νέων και παλιών μπαταριών.
- μην χρησιμοποιείτε διαφορετικούς τύπους μπαταριών.
- οι μπαταρίες εκφορτίζονται αργά όταν δεν είναι σε χρήση.
- μην χρησιμοποιείτε μπαταρία που διαρρέει υγρό.

ΕΠΙΧΕΙΡΗΣΙΑΚΑ ΣΧΗΜΑΤΑ ΚΑΙ ΠΡΟΒΛΗΜΑΤΑ

- ελέγξτε προσεκτικά το υγρό που έχει διαρρέσει από την μπαταρία πριν αντικαταστήσετε τις μπαταρίες.
- εάν έρθει σε επαφή με το υγρό, πλύντε το με νερό.
- εάν έρθει σε επαφή με τα μάτια, πλύντε τα με νερό και συμβουλευτείτε τον γιατρό.

ΕΠΙΧΕΙΡΗΣΙΑΚΑ ΣΧΗΜΑΤΑ ΚΑΙ ΠΡΟΒΛΗΜΑΤΑ  
ΕΛΕΓΧΟΣ ΚΑΙ ΣΥΝΤΗΡΗΣΗ  
ΕΛΕΓΧΟΣ ΚΑΙ ΣΥΝΤΗΡΗΣΗ

# Using your camcorder abroad

èÔÎ, ÁÓ, †ÏËÄ, È%ÄÓÍ†ÏÄ ÒË  
, Á† Û·ÄËÏ`\_1 ÓÓÄÄ%Í†\_1

Each country or area 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 or area with the supplied AC power adaptor within 110 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

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

### PAL-M system

Brazil

### PAL-N system

Argentina, Paraguay, Uruguay

### NTSC system

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

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

ç †ÁÏ`\_1 ÓÛ †Ï†\_1 È, ÁÓ,, †ÛË`ÄÓÍË\_1 Ä, ÈÓÏ†\_1 ÈÓÓÓÍ. ÁÛ. ÛÓñ †ÁÏË`\_Ï`\_Ä ÄËËÏ`\_ ÓÄÛÄ, Ó,, Ó`\_ÏÄÏÛ ÓÓËÛ†ÏËñ È`\_ , ÁÛÏÓ,, Ó ÚÄÏÄ, È%ÄÏËñ. è ÄË%Ä`\_ÄÏ`\_ÓÓ †, ÈÛ, Óñ ò, È%ÄÓÍ†ÏÄ ÒË , Á† Û·ÄËÏÛ. ÓÓÄÄ%ÍÛ, Ó. †ÛËÛÄÓ. Í ÈÏÛò Ì†`\_ÈË, ò È, Ä%ÄÏÏÓË ÌËËÄ.

## àòóó`\_ìëíë òëú†\_ìëñ

è ÈÏ†,, †ÄÏ`\_È †%:ÓÚÄ ÒÄÛÄ, Ó,, Ó ÈËÛ†\_ÏËñ ÌÓËÏÓ ÈÓÓÓÍ, ÁÓ, †Û, , Ì. ·ÓË ÓÛ †ÏÄ ÈÏË Ä,, ÈÓÏÄ, „%Ä Ì†\_ò ñËÄÏËÄ`\_ÏÄÏÛ È`\_ÄÓÏÓË ÓÄÛË ÓÓÓÛ†, ÌñÄÛ ÓÛ 110 %ó 240 ç ò È`\_~†ÓÛÓÚÄ 50/60 È`\_.

## ëÈÓÚÄÏ`\_ ^, ÁÛÏÓ,, Ó ÚÄÏÄ, È%ÄÏËñ

Ñ†\_ÏÏ†\_ñ, È%ÄÓÍ†\_ÏÄ † †. ÓÛ†\_ÄÛ, ÒÈÓÚÄÏÄ PAL. ÓÓ.·`\_ ò ÓÓÏ†\_Û È, †Û, ÓÛÓÏñÓÄ ÈÄÓ. †ËÄÏËÄ Ì†\_ÚÄÏÄ, ÈÄËÓÏÏÓÏ`\_ Ì`\_ †ÏÄ, ç†\_Ï ÓÓÏ†\_%ó·ÈÛÓñ ÚÄÏÄ, ÈÄÓ ÒÈÓÚÄÏ`\_ PAL. è. †ÛËÛÄÓ. Í ò È, Ä%ÄÏÏÏÛ ÌËËÄ ÓÄ Ä`\_Ì. .

ëÈÓÚÄÏ† PAL  
Ä, ÓÛ †ÏËñ, Ä, ÓÛ Èñ, ÄÄÏ, „Èñ, çÄÏËÓ. ÈÛ†\_ÏËñ, ÈÄ Ì†\_ÏËñ, ÈÓÏÏÓÏ`\_ , Ñ†\_ÏËñ, àÓÓ†\_ÏËñ, àÛ†\_ÏËñ, àÈÛ†\_È, àÛ, ÄËÛ, à†\_Ï†\_ÈÄËñ, çÈ%Ä Ì†\_Ï%`\_ , çÓ, †ñ áÄÏ†\_Ï%Èñ, çÓ , Ä, Èñ, èÓ ÓÛ,, †ÏËñ, èÈÏ,, †ÓÛ , Ì†\_ÈÏ†\_Ï% , ÌÈÏÏÏÏ%Èñ, ò, ÄË`\_† Èñ, ò, Ä`\_Èñ, èÏÓ, †`\_Ï†\_ñ èÄÓÓÛ·ÏËÏ†, óÄ`\_òÏ†\_ñ èÄÓÓÛ·ÏËÏ†\_È% . ÓÛ †\_Ï`\_.

## ëÈÓÚÄÏ† PAL-M Ä †ÄËÏËñ

## ëÈÓÚÄÏ† PAL-N Ä „ÄÏÛËÏ†, è† †,, †È, Ì Û,, †È

ëÈÓÚÄÏ† NTSC  
Ä†, †ÏÓÏËÄ èÓÛ Ó, †, ÁÓÏË, Èñ, çÄÏÄÓÛ`\_Ï†, à†\_Ï%†, áÓÏÛÏ·Èñ, áó Äñ, áÄÏÓËÏ†, èÄ Û, èÛ ÈÏ†\_Ï, èòÄ, Ì†\_È, †\_Ï, , ÌÈÏËÓÓËÏ`\_ , ñÄÏÛ †\_Ï, Ì†\_ñ ÄÏÄ ÈÏ†, óÈÏË, ùÏ, †%ó , ùÏ†\_ÈÏ†, ùÓÓÏÈñ È% . ÓÛ †\_Ï`\_.

ëÈÓÚÄÏ† SECAM  
ÄÓÏ,, † Èñ, çÄÏ,, Èñ, È†\_È†\_Ï†, à †\_Ï, à †\_Ï, áÓÏ†\_ÏÓ, èóÏ.†\_†, èóòòÈñ, ÌÏ †ÈÏ†, Ì †\_Ï`\_Èñ È% . ÓÛ †\_Ï`\_.

# 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.               <ul style="list-style-type: none"> <li>▫ Install the battery pack. (p. 7)</li> </ul> </li> <li>• The battery is dead.               <ul style="list-style-type: none"> <li>▫ Use a charged battery pack. (p. 7)</li> </ul> </li> <li>• The AC power adaptor is not connected to mains.               <ul style="list-style-type: none"> <li>▫ Connect the AC power adaptor to mains. (p. 27)</li> </ul> </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.               <ul style="list-style-type: none"> <li>▫ Set the POWER switch to OFF, then to CAMERA. (p. 13)</li> </ul> </li> <li>• The battery is dead.               <ul style="list-style-type: none"> <li>▫ Use a charged battery pack. (p. 7)</li> </ul> </li> </ul>
The battery pack is quickly discharged.	<ul style="list-style-type: none"> <li>• The ambient temperature is too low. (p. 81)</li> <li>• The battery pack has not been charged fully.               <ul style="list-style-type: none"> <li>▫ Charge the battery pack again. (p. 7)</li> </ul> </li> <li>• The battery pack is completely dead, and cannot be recharged.               <ul style="list-style-type: none"> <li>▫ Use another battery pack. (p. 27)</li> </ul> </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.               <ul style="list-style-type: none"> <li>▫ Eject the tape. (p. 11)</li> </ul> </li> <li>• The tape has run out.               <ul style="list-style-type: none"> <li>▫ Rewind the tape or use a new one. (p. 23)</li> </ul> </li> <li>• The POWER switch is set to PLAYER.               <ul style="list-style-type: none"> <li>▫ Set it to CAMERA. (p. 12)</li> </ul> </li> <li>• The tab on the cassette is out (red).               <ul style="list-style-type: none"> <li>▫ Use a new tape or slide the tab. (p. 11)</li> </ul> </li> </ul>
The cassette cannot be removed from the holder.	<ul style="list-style-type: none"> <li>• The battery is dead.               <ul style="list-style-type: none"> <li>▫ Use a charged battery pack or the AC power adaptor. (p. 7, 27)</li> </ul> </li> </ul>
{ and 6 indicators flash and no function except for cassette ejection works.	<ul style="list-style-type: none"> <li>• Moisture condensation has occurred.               <ul style="list-style-type: none"> <li>▫ Remove the cassette and leave the camcorder for at least 1 hour. (p. 87)</li> </ul> </li> </ul>
“CLOCK SET” appears when the camcorder is turned on.	<ul style="list-style-type: none"> <li>• Reset the date and time. (p. 79)</li> </ul>
The End Search function does not activate.	<ul style="list-style-type: none"> <li>• The cassette was ejected after you recorded on it.               <ul style="list-style-type: none"> <li>▫ The End Search function will not activate until you make a new recording after reinserting the cassette.</li> </ul> </li> <li>• The tape without cassette memory ejected after recording.</li> </ul>

Continued to the next page

## Operation

Symptom	Cause and/or corrective actions
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. m Set it to PLAYER. (p. 23)</li> <li>• The tape has run out. m Rewind the tape or use a new one. (p. 23)</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. m Open the LCD panel and press VOLUME +. (p. 23)</li> <li>• AUDIO MIX is set to ST2 side in the menu system. m Adjust AUDIO MIX in the menu system (p. 67).</li> </ul>
The new sound added to the recorded tape is not heard.	<ul style="list-style-type: none"> <li>• AUDIO MIX is set to ST1 side in the menu system. m Adjust AUDIO MIX in the menu system (p. 67).</li> </ul>
The SteadyShot function does not activate.	<ul style="list-style-type: none"> <li>• STEADYSHOT is set to OFF in the menu system. m Set it to ON. (p. 29)</li> </ul>
Recording stops at once.	<ul style="list-style-type: none"> <li>• The POWER switch is set to PHOTO. m Set it to CAMERA. (p. 12)</li> </ul>
Recording stops in a few seconds.	<ul style="list-style-type: none"> <li>• The START/STOP MODE switch is set to 5SEC or <math>\perp</math> ANTI GROUND SHOOTING. m Set it to <math>\perp</math>. (p. 16)</li> </ul>
The autofocus function does not activate.	<ul style="list-style-type: none"> <li>• Focus is set to the manual mode. m Set it to autofocus. (p. 44)</li> <li>• Shooting conditions are not suitable for autofocus. m Set focus to manual mode to focus manually. (p. 44)</li> </ul>
The fader function does not work.	<ul style="list-style-type: none"> <li>• The START/STOP MODE switch is set to 5SEC or <math>\perp</math> ANTI GROUND SHOOTING. m Set it to <math>\perp</math>. (p. 16)</li> </ul>
The title is not displayed.	<ul style="list-style-type: none"> <li>• TITLE DSPL is set to OFF in the menu system. m Set it to ON in the menu system. (p. 29)</li> </ul>
The title is not recorded.	<ul style="list-style-type: none"> <li>• The tape has no cassette memory. m Use a tape with cassette memory. (p. 68)</li> <li>• The cassette memory is full. m Erase another title. (p. 71)</li> <li>• The tape is set to prevent accidental erasure. m Slide the protect tab so that red portion is not visible. (p. 70)</li> <li>• The fader function is working. m Wait until the fader function is finished. (p. 35)</li> <li>• Nothing is recorded in that position on the tape. m Superimpose the title to the recorded position. (p. 70)</li> </ul>
The cassette label is not recorded.	<ul style="list-style-type: none"> <li>• The tape has no cassette memory. m Use a tape with cassette memory. (p. 74)</li> <li>• The cassette memory is full. m Erase some titles. (p. 74)</li> <li>• The tape is set to prevent accidental erasure. m Slide the protect tab so that red portion is not visible. (p. 74)</li> </ul>
Displaying the recorded date, date search function does not work.	<ul style="list-style-type: none"> <li>• The tape has no cassette memory. m Use a tape with cassette memory. (p. 52)</li> <li>• CM SEARCH is set to OFF in the menu system. m Set it to ON. (p. 52)</li> </ul>

## Trouble check

### Operation

Symptom	Cause and/or corrective actions
The title search function does not work.	<ul style="list-style-type: none"> <li>• The tape has no cassette memory.                             <ul style="list-style-type: none"> <li>m Use a tape with cassette memory. (p. 56)</li> </ul> </li> <li>• CM SEARCH is set to OFF in the menu system.                             <ul style="list-style-type: none"> <li>m Set it to ON. (p. 56)</li> </ul> </li> <li>• There is no title in the tape.                             <ul style="list-style-type: none"> <li>m Superimpose the titles. (p. 68)</li> </ul> </li> </ul>
Ⓢ indicator does not appear when using a tape with cassette memory.	<ul style="list-style-type: none"> <li>• The gold-plated connector of the tape is dirty or dusty.                             <ul style="list-style-type: none"> <li>m Clean the gold-plated connector. (p. 77)</li> </ul> </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.                             <ul style="list-style-type: none"> <li>m Adjust the viewfinder lens. (p. 13)</li> </ul> </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.                             <ul style="list-style-type: none"> <li>m Change locations.</li> </ul> </li> </ul>
The picture is "noisy" or does not appear.	<ul style="list-style-type: none"> <li>• The video heads may be dirty.                             <ul style="list-style-type: none"> <li>m Clean the heads using the Sony DVM12CL (not supplied) cleaning cassette. (p. 88)</li> </ul> </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.                             <ul style="list-style-type: none"> <li>m Clean the heads using the Sony DVM12CL (not supplied) cleaning cassette. (p. 88)</li> </ul> </li> </ul>
The picture is too bright or too dark.	<ul style="list-style-type: none"> <li>• LCD BRIGHT is not adjusted properly.                             <ul style="list-style-type: none"> <li>m Press + or - to obtain the brightness you want. (p. 17, 23)</li> </ul> </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 on the LCD screen or in the viewfinder.	<ul style="list-style-type: none"> <li>• Incorporated fluorescent tube is worn out.                             <ul style="list-style-type: none"> <li>m Please contact your nearest Sony dealer.</li> </ul> </li> </ul>
The picture does not appear in the viewfinder.	<ul style="list-style-type: none"> <li>• If VF PW-SAVE is set to ON in the menu system, the picture disappears automatically when you turn your face away from the viewfinder.                             <ul style="list-style-type: none"> <li>m Bring your face close to the viewfinder within 1 cm (1/2 inch). Or, set VF PW-SAVE to OFF. (p. 31)</li> </ul> </li> <li>• The LCD panel is open.                             <ul style="list-style-type: none"> <li>m Close the LCD panel.</li> </ul> </li> </ul>
The picture in the viewfinder does not disappear even VF PW-SAVE is set to OFF in the menu system.	<ul style="list-style-type: none"> <li>• Sunlight or the incandescent lamp may prevent the viewfinder sensor from working correctly. This is not a malfunction.</li> </ul>
An unknown picture is displayed in the viewfinder or on the LCD screen.	<ul style="list-style-type: none"> <li>• If 10 minutes elapse after you set the POWER switch to CAMERA without inserting a cassette, the camcorder automatically starts the demonstration or DEMO is set to ON in the menu system.                             <ul style="list-style-type: none"> <li>m Insert the cassette and the demonstration stops. You can deactivate the demonstration. (p. 115)</li> </ul> </li> </ul>

Continued to the next page

## Trouble check

### Others

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>
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>• Something is blocking the infrared rays.<ul style="list-style-type: none"><li>m Remove the obstacle.</li></ul></li><li>• The battery is not inserted with the correct polarity.<ul style="list-style-type: none"><li>m Insert the battery with the correct polarity. (p. 112)</li></ul></li><li>• The batteries are dead.<ul style="list-style-type: none"><li>m Insert new ones. (p. 112)</li></ul></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, open the LCD screen and press the RESET button above the FOCUS switch using a sharp-pointed object. (If you press the RESET button, all the settings including the date and time return to the default.) (p. 79)</li></ul>
The numbers or letters of 5 characters is displayed as a counter.	<ul style="list-style-type: none"><li>• Self-diagnosis function was activated.<ul style="list-style-type: none"><li>m See the table in page 98 and treat the camcorder appropriately.</li></ul></li></ul>

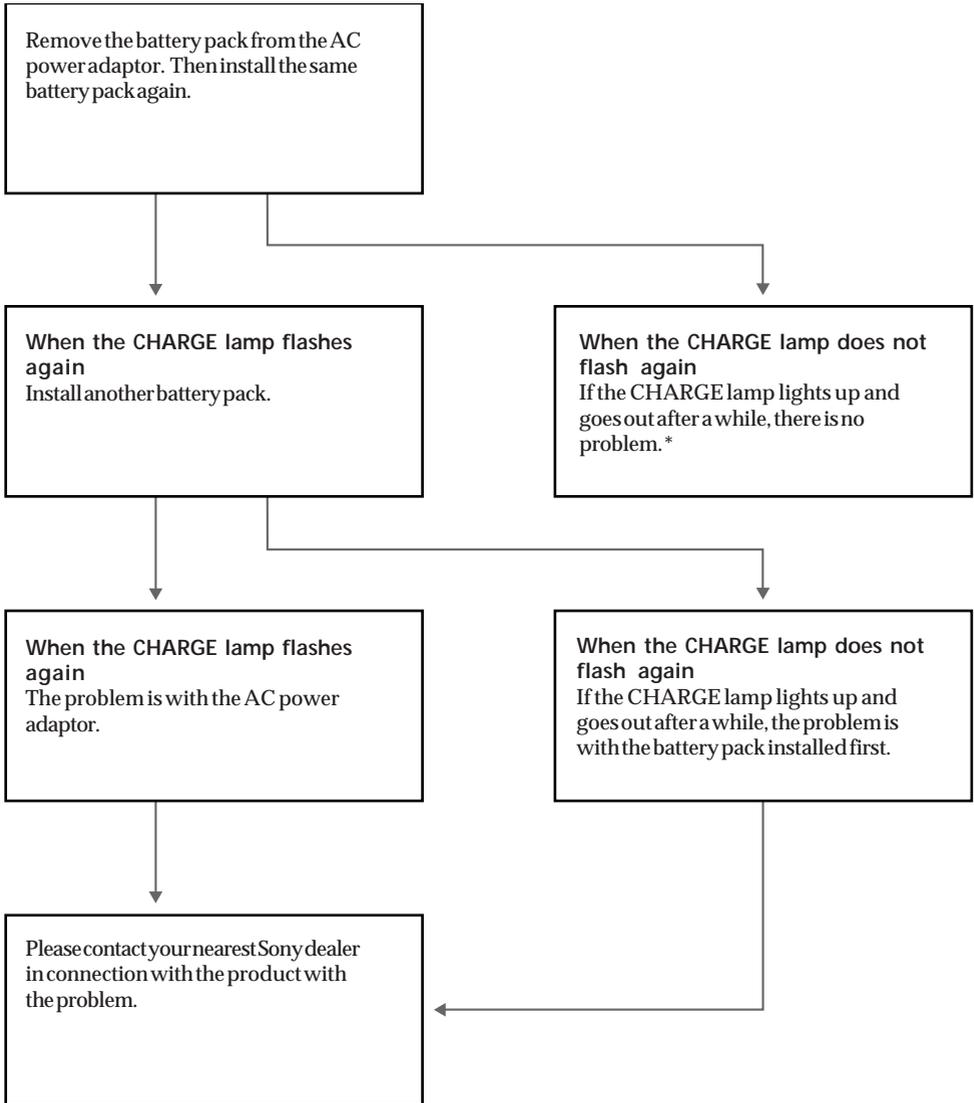
### AC power adaptor

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.

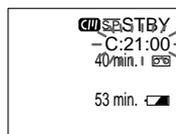


\* If you use a battery pack which you have just bought or which has been left unused for a long time, the CHARGE lamp may flash at the first charging. This does not indicate a problem. Repeat again to charge with same battery pack.

## Trouble check

### Self-diagnosis function

In the self-diagnosis function works to prevent the camcorder from malfunctioning, a five-digit service number (combination of a letter and figures) flashes in the viewfinder or on the LCD screen. In this case, check the following table.



First three digits	Cause and/or Corrective Action
C21	<ul style="list-style-type: none"><li>Moisture condensation has occurred.<ul style="list-style-type: none"><li>Remove the cassette and leave the camcorder for at least 1 hour. (p. 87)</li></ul></li></ul>
C22	<ul style="list-style-type: none"><li>The video heads are dirty.<ul style="list-style-type: none"><li>Clean the heads using the Sony DVM12CL cleaning cassette (not supplied). (p. 88)</li></ul></li></ul>
C23	<ul style="list-style-type: none"><li>The camcorder does not operate when using a battery pack that is not an "InfoLITHIUM" battery pack.<ul style="list-style-type: none"><li>Use an "InfoLITHIUM" battery pack. (p. 7)</li></ul></li></ul>
C31	<ul style="list-style-type: none"><li>To prevent the camcorder from malfunctioning, the self-diagnosis function has worked.<ul style="list-style-type: none"><li>Remove the cassette and insert it again, then operate the camcorder. (p. 11)</li></ul></li></ul>
C32	<ul style="list-style-type: none"><li>To prevent the camcorder from operating malfunctioning, the self-diagnosis function has worked.<ul style="list-style-type: none"><li>Disconnect the mains lead of the AC power adaptor or remove the battery pack. After reinstalling the power source, operate the camcorder.</li></ul></li></ul>
E61 E62	<ul style="list-style-type: none"><li>To prevent the camcorder from malfunctioning, the self-diagnosis function has worked.<ul style="list-style-type: none"><li>When you contact your Sony dealer or local authorized Sony service facility, inform the service number with five digits. (example: E:61:10)</li></ul></li></ul>

If a difficulty persists after checking the problem a few times, contact your Sony dealer or local authorized Sony service facility.

# ι̂ο̂υ̂ † ι̂α̂ι̂ε̂α̂ ι̂α̂ο̂ο̂ι̂ † %ο̂ι̂

ο̂ο̂ι̂ε̂ ϋ̂ † ο̂, ο̂α̂ι̂ε̂ι̂ε̂ ι̂ † ι̂ε̂α̂-ι̂ε̂. ο̂ ο̂ ο̂. ι̂α̂ι̂. ο̂ ε̂ ~ ι̂ο̂ο̂ι̂ϋ̂ † † ε̂ε̂, ε̂ε̂α̂ο̂ι̂ † ι̂α̂, , ο̂ο̂ο̂ο̂ι̂ α̂υ̂ε̂α̂ο̂. %ι̂η, , ι̂η, ι̂α̂ι̂ε̂η ε̂ ϋ̂ο̂υ̂ † ι̂α̂ι̂ε̂η ε̂ι̂ ο̂ ε̂ ~ ε̂ι̂ ο̂ ε̂, α̂ε̂α̂ι̂ο̂ε̂ ι̂ε̂ε̂α̂ ϋ̂. † ε̂ ~ α̂ε̂. ο̂ο̂ι̂ε̂ α̂ ~ ε̂υ̂, ο̂ ο̂. ι̂α̂ι̂ϋ̂ ι̂α̂ ϋ̂ε̂ † α̂ϋ̂ο̂η, ο̂ι̂ι̂. ~ ε̂υ̂α̂ † ο̂ο̂ † ϋ̂ ϋ̂ ο̂α̂υ̂ε̂ ε̂ ο̂, η̂ε̂ε̂α̂ο̂, ο̂. † ι̂ε̂ε̂ † ε̂ι̂ ε̂ε̂ι̂α̂ ο̂ι̂ ϋ̂ε̂ ι̂. Sony ε̂ι̂ε̂ ο̂α̂ ~ ε̂ † ι̂ε̂ε̂ ο̂, † ι̂ο̂ε̂ ι̂ † ο̂α̂ ο̂ι̂ο̂ε̂ ο̂ α̂ι̂ο̂ι̂ϋ̂ ο̂ ο̂ε̂ι̂ ~ ε̂ε̂ Sony.

## ϋ̂ε̂ε̂α̂ο̂ι̂ † ι̂α̂ †

### ε̂ε̂ϋ̂ † ι̂ε̂α̂

ε̂ε̂ι̂ο̂υ̂ο̂ι̂ \* ε̂ ε̂ ~ ε̂ι̂ \* ε̂ / ε̂ι̂ε̂ %α̂ε̂ο̂υ̂, ε̂η ο̂ο̂ ϋ̂ο̂υ̂ † ι̂α̂ι̂ε̂.

ϋ̂α̂, ι̂ι̂. ~ † α̂ϋ̂ο̂η ο̂ε̂ϋ̂ † ι̂ε̂α̂

- ϋ̂α̂ ϋ̂ο̂υ̂ † ι̂ο̂, ι̂α̂ι̂ † † ι̂ο̂ο̂ι̂ϋ̂η ο̂ ι̂ † η̂. † ϋ̂ † α̂η.
- η̂ ι̂ο̂υ̂ † ι̂ο̂, ε̂υ̂α̂ † † ι̂ο̂ο̂ι̂ϋ̂η ο̂ ι̂ϋ̂. † ϋ̂ † α̂. (ο̂υ̂ . 7).
- α̂ † ϋ̂ † α̂η † α̂ η̂ε̂α̂ι̂ †.
- η̂ α̂ο̂ο̂ο̂ι̂ α̂υ̂ε̂α̂ α̂ † η̂ε̂α̂ι̂ϋ̂. † ϋ̂ † α̂. (ο̂υ̂ . 7).
- α̂ε̂ † ο̂α̂ α̂ ο̂α̂υ̂, ο̂, ο̂ ο̂ε̂ϋ̂ † ι̂ε̂η ι̂α̂ ο̂ο̂ε̂ι̂. ~ α̂ι̂ ι̂ ο̂α̂υ̂ε̂.
- η̂ ε̂ο̂ε̂ι̂. ~ ε̂υ̂α̂ † ε̂ † ο̂α̂ α̂ ο̂α̂υ̂, ο̂, ο̂ ο̂ε̂ϋ̂ † ι̂ε̂η ι̂ ο̂α̂υ̂ε̂ (ο̂υ̂ . 27).

ε̂ε̂ϋ̂ † ι̂ε̂α̂ ο̂ † ι̂ο̂ ο̂ε̂α̂, ο̂ι̂. ι̂ο̂ ο̂ο̂ι̂ι̂. ~ † α̂ϋ̂ο̂η

- ε̂ †. ο̂υ̂ † η̂, α̂ε̂ε̂ι̂a camera, , ε̂ε̂α̂ο̂ι̂ † ι̂α̂ † . † ι̂ † ο̂ο̂ϋ̂ †, ι̂α̂ι̂ †, ο̂ο̂ο̂ο̂η η̂ε̂ε̂ ο̂ε̂ε̂ † ι̂ε̂η ι̂ † ~ † ι̂ † α̂ † ο̂ε̂ο̂ε̂ . ο̂ι̂. ~ α̂, ~ α̂ι̂ ι̂ † 5 ι̂ε̂ι̂ο̂υ̂.
- η̂ ε̂α̂ α̂, α̂ε̂ε̂υ̂α̂ ο̂α̂ α̂ι̂ι̂. ~ † ϋ̂α̂ι̂, power, ο̂ο̂ι̂ο̂ε̂α̂ι̂ε̂ε̂ off, † α̂ † ϋ̂α̂ι̂, ι̂ο̂, , ο̂ο̂ι̂ο̂ε̂α̂ι̂ε̂a camera (ο̂υ̂ . 13).
- α̂ † ϋ̂ † α̂η † α̂ η̂ε̂âι̂ †.
- η̂ α̂ο̂ο̂ο̂ι̂ α̂υ̂ε̂â α̂ † η̂ε̂âι̂ϋ̂. † ϋ̂ † α̂. (ο̂υ̂ . 7).

α̂ † ϋ̂ † α̂η † α̂ η̂ε̂ † α̂ϋ̂ο̂η ο̂ι̂ε̂ ~ ι̂ο̂ι̂ . ~ ο̂υ̂ ο̂

- ε̂ι̂ε̂ ~ ι̂ο̂ι̂ ι̂ε̂α̂ι̂η ϋ̂α̂ι̂ο̂α̂ † ϋ̂ †, ο̂α̂ε̂υ̂ † (ο̂υ̂ . 81).
- α̂ † ϋ̂ † α̂η α̂ † η̂ε̂âι̂ † ι̂â ο̂ο̂ι̂ο̂ο̂υ̂, . .
- η̂ ε̂â α̂α̂ † η̂ε̂ε̂υ̂â † ϋ̂ † α̂. (ο̂υ̂ . 7)
- ε̂ ο̂ι̂ ο̂ι̂ο̂ε̂. ~ † ϋ̂ † α̂ε̂ α̂ † ο̂ι̂ ~ ε̂ι̂ο̂η, ε̂ ο̂ι̂ † . ο̂ι̂. ~ α̂ ι̂â ο̂ο̂ε̂â † η̂ε̂ † α̂ϋ̂ο̂η.
- η̂ α̂ο̂ο̂ο̂ι̂ α̂υ̂ε̂â ε̂ ϋ̂, ϋ̂. † ϋ̂ † α̂. (ο̂υ̂ . 27).

### ϋ̂ι̂ο̂ο̂ι̂ϋ̂ † ϋ̂ † ε̂η

ε̂ε̂ι̂ο̂υ̂ο̂ι̂ \* ε̂ ε̂ ~ ε̂ι̂ \* ε̂ / ε̂ι̂ε̂ %α̂ε̂ο̂υ̂, ε̂η ο̂ο̂ ϋ̂ο̂υ̂ † ι̂α̂ι̂ε̂.

ϋ̂α̂ †. ο̂υ̂ † α̂ϋ̂ ι̂ι̂ο̂ο̂ι̂ † start/stop

- ϋ̂ε̂ε̂α̂ο̂ι̂α̂ι̂ϋ̂ ο̂ ε̂ι̂ε̂ο̂ι̂ † ι̂ . † † . † ι̂ϋ̂.
- η̂ α̂â, ι̂âι̂ε̂υ̂â ι̂ † ο̂α̂ϋ̂ (ο̂υ̂ . 11).
- α̂âι̂ϋ̂ †, ι̂ † ο̂α̂ϋ̂ α̂ † ο̂ι̂ ~ ε̂ι̂ † ο̂. .
- η̂ ε̂â α̂ι̂ο̂υ̂ † ε̂υ̂â ι̂âι̂ϋ̂ ε̂ι̂ε̂ ϋ̂ο̂υ̂ † ι̂ο̂, ε̂υ̂â ι̂ο̂, ϋ̂. ι̂ † ο̂α̂ϋ̂ (ο̂υ̂ . 23).
- ε̂â α̂ι̂ι̂. ~ † ϋ̂α̂ι̂, power ι̂ † ι̂ο̂ε̂ε̂ϋ̂ο̂η, ο̂ο̂ι̂ο̂ε̂âι̂ε̂ε̂ player.
- η̂ ι̂ο̂υ̂ † ι̂ο̂, ε̂υ̂â ο̂â α̂ι̂ι̂. ~ † ϋ̂α̂ι̂, , ο̂ο̂ι̂ο̂ε̂âι̂ε̂â camera (ο̂υ̂ . 12).
- ϋ̂ † ι̂ † ο̂α̂ϋ̂ α̂ ε̂, ε̂ι̂ϋ̂ † α̂ ~ ε̂ϋ̂ι̂ † η̂ α̂ † ε̂, ε̂ε̂ι̂ † ( , ε̂ε̂ι̂ † ι̂ † ο̂ι̂ † η̂ ο̂ι̂ † ο̂ε̂ι̂ †).
- η̂ α̂ο̂ο̂ο̂ι̂ α̂υ̂ε̂â ε̂ ϋ̂, ϋ̂. ι̂ † ο̂α̂ϋ̂ α̂ ε̂ι̂ε̂ ο̂â ε̂, ε̂ι̂. ϋ̂â † ε̂, ε̂ε̂ι̂ϋ̂ (ο̂υ̂ . 11).

α̂ † ο̂α̂ϋ̂ † ι̂â ε̂â, ι̂âι̂ † α̂ϋ̂ο̂η ε̂â ι̂ † ο̂α̂ϋ̂ ο̂ ε̂âι̂ε̂ι̂ †

- α̂ † ϋ̂ † α̂η † α̂ η̂ε̂âι̂ †.
- η̂ α̂ο̂ο̂ο̂ι̂ α̂υ̂ε̂â α̂ † η̂ε̂âι̂ϋ̂. † ϋ̂ † α̂. ε̂ι̂ε̂ † ε̂ † ο̂â α̂ ο̂âυ̂, ο̂, ο̂ ο̂ε̂ϋ̂ † ι̂ε̂η (ο̂υ̂ . 7, 27).

α̂ε̂, † ϋ̂ ε̂ι̂ε̂ε̂ι̂ † ϋ̂ο̂ { ε̂ 6, † ε̂â ϋ̂ο̂ι̂ ~ ε̂ε̂, ε̂ε̂α̂ο̂ι̂ † ι̂â . †. ο̂υ̂ † α̂ϋ̂ ϋ̂ο̂ι̂, ι̂ο̂ ο̂ε̂ϋ̂α̂ι̂ † ε̂â, ι̂â ~ α̂ι̂ε̂η ι̂ † ο̂α̂ϋ̂

- ε̂ ο̂ε̂α̂ο̂ ~ ι̂ † ο̂ι̂ε̂α̂ι̂ο̂ ~ ε̂η, ι̂ † η̂, ε̂.
- η̂ α̂â, ι̂âι̂ε̂υ̂â ι̂ † ο̂âϋ̂ ε̂ ι̂â ο̂ο̂ι̂, α̂υ̂ε̂âο̂, , ε̂ε̂α̂ο̂ι̂ † ι̂â ο̂ε̂, ϋ̂â ~ α̂ι̂ε̂â ο̂ ε̂îâ ι̂ ο̂ο̂ε̂ι̂ο̂, ο̂ ~ † ο̂ † (ο̂υ̂ . 87).

ε̂ ε̂, ι̂ι̂. ~ α̂ι̂ε̂ε̂, ε̂ε̂α̂ο̂ι̂ † ι̂â \* ο̂ο̂η, ι̂η α̂ϋ̂ο̂η ι̂ † ε̂ο̂ε̂ο̂, "clock set"

- ι̂ο̂υ̂ † ι̂ο̂, ε̂υ̂â ε̂ † ϋ̂ο̂ ε̂, α̂ι̂η α̂ † ι̂ο̂, ο̂ (ο̂υ̂ . 79).

ϋ̂α̂, ι̂ι̂. ~ † α̂ϋ̂ο̂η ϋ̂ο̂ι̂ι̂ ~ ε̂η ο̂ο̂ε̂ο̂ι̂ † ι̂ο̂ι̂ ~ † α̂ † ο̂ε̂ο̂ε̂

- ε̂ ο̂ε̂ο̂îâ ο̂ ~ α̂ι̂ε̂ ι̂ † ο̂α̂ϋ̂ † . † ι̂ † ε̂â, ι̂â ~ α̂ι̂ † ε̂â, ε̂ε̂α̂ο̂ι̂ † ι̂â .
- η̂ ε̂ ο̂ε̂ο̂ι̂ ο̂ι̂ ~ † α̂ † ο̂ε̂ο̂ε̂ ι̂â, ι̂ι̂. ~ † α̂ϋ̂ο̂η % ο̂ ϋ̂âι̂ ο̂ο̂, ο̂ο̂ι̂ † † ϋ̂ ο̂ο̂ο̂îâ ε̂â, ι̂â ~ α̂ι̂ε̂η ι̂ † ο̂α̂ϋ̂ ~ ι̂â ο̂ε̂α̂ι̂ † α̂υ̂â ι̂ † ι̂âε̂ ι̂ο̂, ϋ̂. α̂ † ο̂ε̂ο̂ε̂. .
- α̂ † ο̂α̂ϋ̂ †, ι̂â ε̂îâ. ~ † η̂ ~ ι̂âι̂ϋ̂ ο̂ι̂ο̂ε̂ ο̂ † η̂ ϋ̂ε̂, . † ι̂ † ε̂â, ι̂â ~ α̂ι̂ † ο̂ο̂ο̂îâ ο̂ ~ α̂ι̂ε̂ε̂.

Additional Information / Νοο̂ο̂ι̂ε̂υ̂âι̂. ι̂ † η̂ ε̂ι̂ο̂ ε̂ † ~ ε̂η





ε̂ ο̂~ΑΑ

ε̂ε̂ι̂ου̂ο̂ι̂· ε̂ ε̂~ε̂ι̂· ε̂/ε̂ι̂ε̂ ε̂.ε̂ε̂ου̂, ε̂η̂ ο̂ο̂ ου̂ου̂ †ια̂ι̂ε̂.

α̂α̂ο̂ †ε̂αι̂ε̂α̂, ο̂ι̂α̂, ε̂ε̂ο̂ε̂ο̂ι̂+υ̂α̂ι̂η̂ ι̂α̂ · ε̂, α̂υ̂ ο̂ο̂ι̂~† ε̂ι̂ε̂ ι̂+ι̂ο̂· ι̂+ι̂+ι̂ε̂, †ι̂ε̂η̂ ι̂ο̂ε̂α̂υ̂, 'Α', †υ̂, ο̂·ο̂ε̂ ε̂ο̂~α̂α̂†α̂υ̂ ε̂+ε̂α̂ ο̂ο̂ι̂α̂ υ̂ο̂, ο̂, ι̂+ι̂  
ο̂+ †ια̂υ̂ VF PW-SAVE, †ια̂ι̂.  
ο̂† †ια̂υ̂ ο̂, υ̂ο̂υ̂+ι̂ο̂, †ια̂ι̂, ο̂ο̂α̂ε̂~ε̂, OFF

ç ο̂ι̂α̂, ε̂ε̂ο̂ε̂ο̂ι̂+υ̂α̂ι̂η̂ ε̂ι̂ε̂ ι̂+ · ο̂ο̂ι̂ε̂, υ̂α̂~α̂ι̂ε̂α̂ ι̂ο̂ ι̂ε̂ι̂ου̂ ο̂ο̂ο̂ι̂ ο̂α̂ Α, ο̂ε̂+ ο̂α̂ Αι̂ι̂~†υ̂α̂ι̂η̂  
ε̂ε̂ε̂ι̂ο̂ι̂ ε̂ο̂υ̂+ι̂ι̂ε̂~α̂ο̂ι̂ο̂ι̂ ~ι̂ †ια̂ POWER, ο̂ο̂ι̂ο̂ε̂α̂ι̂ε̂α̂ CAMERA, †ε̂ε̂α̂ο̂ι̂+ι̂α̂ υ̂ ι̂α̂  
ο̂ο̂η̂, η̂η̂α̂υ̂ο̂η̂ ι̂α̂âî+ι̂ο̂î+η̂ ι̂+ υ̂ε̂îî+ υ̂ο̂υ̂+ι̂ο̂, †ια̂ι̂+ι̂+ο̂ôâυ̂+, †ôô+ †υ̂†, υ̂ο̂î+υ̂ε̂~α̂ôîê ο̂â Αι̂ο̂ε̂ε̂υ̂,  
ε̂âîôîôυ̂ †~ε̂ôîî~ε̂ ε̂ε̂êî (ι̂ô, ε̂+ ο̂† †ια̂υ̂ DEMO, †ια̂ι̂.  
ο̂† †ια̂υ̂ ο̂, ι̂+ι̂ôε̂ε̂υ̂ôη̂, ο̂ôâε̂~ε̂ê ON).  
m ι̂ôυ̂+ι̂ô, ε̂υ̂â ι̂+ôôâυ̂, ε̂ε̂âîôîôυ̂ †~ε̂η̂ ο̂ Αι̂ †υ̂ε̂υ̂ôη̂. ç  
ι̂ôε̂âυ̂â υ̂+ι̂ε̂â ο̂υ̂îî~ε̂υ̂, ε̂âîôîôυ̂ †~ε̂ôîî~ε̂ ε̂ε̂êî (ο̂υ̂ . 115).

çâ υ̂ε̂+α̂υ̂ο̂η̂ υ̂, ε̂ε̂α̂υ̂, Α+ο̂ε̂ο̂, †α̂ι̂ôâ · ε̂υ̂îî~ε̂υ̂â ο̂ôâε̂îε̂îε̂υ̂âî, ι̂~ε̂ ι̂+~Αι̂, DV ε̂ ο̂ôε̂.ι̂î~ε̂υ̂â Α,, ο̂  
ε̂âô. †ε̂âîε̂â, ο̂ ο̂~α̂ôôâ  
ôâ Αâ+ôêôê~â Αâ ôôâε̂îε̂ε̂υ̂âî, ι̂~ε̂  
ι̂+~Αι̂, DV

çε̂ε̂âôî+ι̂â †ι̂+,, Α, †α̂υ̂ο̂η̂ · ε̂υ̂ε̂îε̂υ̂âî, ι̂ôε̂ †·ο̂υ̂, ε̂ε̂âôî+ι̂â † ι̂ôε̂âυ̂ ι̂+,, α̂υ̂, ο̂η̂. υ̂ο̂  
ι̂âη̂, η̂η̂âυ̂ο̂η̂ ε̂âî+ι̂ôî ι̂âêô †, ι̂ôôυ̂ε̂.

çâ †·ο̂υ̂+α̂υ̂ ο̂ ε̂î+,, †âî~ε̂ ο̂υ̂î, υ̂ · ç† ο̂ôυ̂ε̂ ε̂îυ̂ †ι̂ †ôî~ι̂ ôε̂, ι̂+ι̂ô, ε̂îââυ̂ο̂η̂ ο̂ âôη̂ôυ̂, ε̂â.  
ε̂ε̂ôυ̂+ι̂~ε̂ôîô, ο̂ôυ̂ †, †ια̂ι̂ε̂η̂ m ι̂ôυ̂ †îε̂υ̂â ο̂ âôη̂ôυ̂, ε̂â.  
· ε̂ ε̂ υ̂ο̂υ̂+ι̂ô, ι̂ε̂·†υ̂† ε̂âîε̂ ι̂+ υ̂~âî+ôôîη̂ ι̂ôôυ̂.  
m ι̂ôυ̂+ι̂ô, ε̂υ̂â~†υ̂† ε̂âîô, ο̂·î, ε̂+η̂ ο̂ôîη̂ ι̂ôôυ̂. (ο̂υ̂ . 112).  
· Α+υ̂† ε̂âîε̂ ο̂âîε̂.  
m ι̂ôυ̂+ι̂ô, ε̂υ̂â ι̂ô, 'Α·†υ̂† ε̂âîε̂ (ο̂υ̂ . 112).

ε̂ε̂υ̂+ι̂ε̂â, ι̂î, ~α̂îô, ι̂ô ι̂ε̂ ο̂ε̂î+ · ε̂υ̂ôôâε̂îε̂ε̂υ̂â †îôîôîη̂ô υ̂ô. ~†υ̂† Α, ε̂îε̂ †ε̂+ο̂υ̂â  
ο̂âυ̂â, ο̂,, ο̂ ο̂ε̂υ̂+ι̂ε̂η̂ ε̂, ι̂ô, . ο̂ôε̂ôôâε̂îε̂ε̂υ̂â ε̂î. ο̂ôυ̂ôη̂  
ο̂ ε̂îâ ι̂ô ο̂ε̂îυ̂ ι̂ε̂îôôυ̂. çι̂îî~ε̂υ̂â ο̂ε̂υ̂+ι̂ε̂â. ο̂ôîε̂ υ̂ôîî~ε̂ε̂  
ε̂ε̂âôî+ι̂â ' ο̂ô~ο̂ ε̂âîâîυ̂ ι̂â ε̂.ε̂ε̂ôυ̂, υ̂.υ̂, ι̂+ε̂îε̂υ̂â †+îε̂î-  
îê·ο̂ â+ο̂ôυ̂ âîî~î ο̂ âε̂îâôî îîôôîû RESET ι̂+ , ι̂ôυ̂ âîîâê  
ο̂ô ο̂îâ î ~îε̂ ι̂+ôôâυ̂ô ε̂âîîêî+. (ε̂ ε̂ î+ê+υ̂ε̂ε̂ îîôôîê  
RESET, ο̂â, , âε̂âîî~â †îââ υ̂ôυ̂+ι̂ô, îε̂, , ι̂î~†η̂ ε̂+υ̂ε̂  
, âîη̂, , ο̂â, †~†. υ̂ôη̂ î ε̂ôîôε̂î~î âî+~âîêη̂î) (ο̂υ̂ . 79).

çîâôô ô~âυ̂~ε̂î+ îâîυ̂~ ι̂+ ~î †îâ · çι̂îî~ε̂υ̂â υ̂ôîî~ε̂η̂ †, υ̂ôε̂ê+, ι̂ôôôêîε̂.  
, ε̂ε̂î· ο̂η̂υ̂ε̂âî+~î~â ο̂ô~âυ̂+ι̂ε̂η̂ m ε̂, â υ̂âô, ο̂υ̂+~îε̂~âê ι̂+ο̂υ̂ . 98 ε̂ο̂ ε̂îε̂υ̂â  
~ε̂υ̂ ε̂·υ̂î, ο̂ôôυ̂, α̂υ̂ôυ̂, υ̂~ε̂â îâ'.

Αε̂+ο̂υ̂â ο̂âυ̂â, ο̂,, ο̂ ο̂ε̂υ̂+ι̂ε̂η̂

ε̂ε̂ι̂ου̂ο̂ι̂· ΝΑε̂ου̂, ε̂η̂ ο̂ο̂ ου̂ου̂ †ια̂ι̂ε̂.

çâ Α+, ο̂ †α̂υ̂ο̂η̂ ι̂+ι̂ôô~ι̂+ VTR/ · ε̂υ̂îî~ε̂υ̂â ο̂ ο̂, ο̂ε̂ ο̂ε̂υ̂+ι̂ε̂η̂ ο̂υ̂ ο̂âυ̂ε̂ ε̂, ι̂ô, , ι̂îî~ε̂υ̂â Α,, ο̂  
CAMERA ε̂îε̂ ι̂+ι̂ôô~ι̂+ CHARGE ο̂âυ̂, ο̂ôôôυ̂η̂ ο̂ ε̂îâ ι̂ôε̂îυ̂ ι̂ε̂îôôυ̂ (ο̂υ̂ . 7).

α̂+îôô~ι̂+ CHARGE îε̂,, †α̂υ̂. · ε̂î. υ̂+~îε̂~υ̂ ι̂+ ο̂îâε̂ô, ~ε̂ε̂ ο̂υ̂ †îε̂~â.

ÖÖÏË ÌË,,†ÄÚ Ì†ÏÖ~Í† CHARGE,  
ó. †ÜËÚÄÓ, Í Ö Ë,Ä&ÄÏÖË ÌËËÄ Ú†.ÏË^Ä.

éú%ÄÏËÚÄ †ÍÏÏÏÏÏ ÌÏ. .†Ú† Ä.  
ÓÚ †%†ÓÚÄ †ÖÄÚÄ,Ó,,Ó ÖËÚ†ÏËÏ, †  
Ä†ÚÄÏ,ÏÓ,, ÚÓÚ†ÏÓ,ËÚÄ Ì† ÌÄ,,Ó ÚÏ  
ËÄ .†Ú† Ä..

ÖÖÏË Ì†ÏÖ~Í† CHARGE ÌË,,†ÄÚ  
ÖÏÓ,†,  
yÖÚ†ÏÓ,ËÚÄ% Û,,Û. †ÍÏÏÏÏÏ ÌÏ.  
.†Ú† Ä..

ä†ÏÖ~Í† CHARGE ÖÄ ÄÖÚ†ÄÚ  
ÏË,,†Ú :  
ÖÖÏË Ì†ÏÖ~Í† CHARGE\*  
Ä†,Ó †ÄÚÖÏË~Ä ÄÄ ÌÄÏÓÓÓ ÖÄ  
, ÄÏÏ,,†ÖÏÄÚ, ÚÓ†ÖÖ† †ÚÛ †  
†.ÓÚ†ÄÚ ÌÓ Ì†Ï,ÏÓ.

ÖÖÏË Ì†ÏÖ~Í† CHARGE  
Ö Ö%ÓÏË†ÄÚ ÏË,,†Ú,,  
ÚÓ Ì† Û~ÄÏ† †.ÓÚ† †%†ÓÚÄ †  
ÖÄÚÄ,Ó,,Ó ÖËÚ†ÏËÏ.

ä†ÏÖ~Í† CHARGE ÖÄ ÄÖÚ†ÄÚ  
ÏË,,†Ú :  
ÖÖÏË Ì†ÏÖ~Í† CHARGE\*  
Ä†,Ó †ÄÚÖÏË~Ä ÄÄ ÌÄÏÓÓÓ ÖÄ , ÄÏÏ  
,,†ÖÏÄÚ, ÚÓ Ì† Û~ÄÏ† †.ÓÚ†  
†ÍÏÏÏÏÏ ÌÖË.†Ú† ÄË, ÍÓÓÓ †Ï  
..†Ï† ÖÖÚ†ÏÓ, ÌÄÏ†, Ì†~†ÏÄ.

èó óó,Ó%Û,ÓÄÏËÍ-ÄË  
ÏÄËÖÖ †,ÏÖÓÛË Ö ÖÖ.†ó. †ÜËÚ,ÖÏ Í  
.ÏËË†Ë ÄÏÛ %ËÏÄ Û ÛË Ì Sony.

\* ä Ë ÖÄ ,ÓÍ Ä† ÏË†ÏËË,ÏÓ,, Ö ËÓ. ÄÚÄÏÖË †ÍÏÏÏÏÏ ÌÖË.†Ú† ÄËËÏË.†Ú† ÄË, ÍÓÓÓ ÖË ÌÄ  
ÖÓÏ,ÄÓ,†ÏËÖ, %ÓÏ,ÓÄ, ÄÏÏ, Ì†ÏÖ~Í† CHARGE ÏÖËÄÚ Ì†~†Ú, ÏË,,†Ú. . ùÓÓ ÌÄÏ, ÏÄÄÓÏ Ö ËÄÏ†ÍÓÏ  
ÏÄËÖÖ †,ÏÖÓÛË. èó,ÚÓ ËÚÄ ÄÏÏ Ä† ÏËËËÚ†ÖË †ÍÏÏÏÏÏ ÌÖË.†Ú† ÄË.



# Specifications

## Video camera recorder

### System

Video recording system

Two rotary heads, Helical scanning system

Audio recording system

Rotary heads, PCM system

Quantization: 12bits (Fs 32kHz, stereo 1, stereo 2), 16bits (Fs 48kHz, stereo)

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

4 inches measured diagonally

80.7 x 58.9 mm

On-screen display

TN LCD/TFT active matrix method

Total dot number

112,086 (479 x 234)

## Input and output connectors

S video output

4-pin mini DIN

Luminance signal: 1 Vp-p, 75 ohms, unbalanced, sync negative

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

Audio/Video output

Special minijack, 1 Vp-p, 75 ohms, unbalanced, sync negative  
327 mV, (at output impedance more than 47 kilohms)

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

DV output

4-pin special connector

Headphones jack

Stereo mini jack (ø 3.5 mm)

MIC input

Stereo minijack (ø 3.5mm):0.388mV,

DC2.5V

Input impedance 6.8 kilohms

1 LANC jack

Stereo miniminijack (ø 2.5 mm)

Speaker

Dynamic-speaker

## LASER LINK

Video/audio

IR space transmission system

according to EIAJ (Electric Industries Association of Japan) standards

Audio carrier wave

Lch : 4.3MHz

Rch : 4.8MHz

## General

Power requirements

7.2 V (battery insertion input)

Average power consumption

4.4 W during camera recording using viewfinder

5.8 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. 96 x 109 x 183mm

(w/h/d)

Mass

Approx.840g excluding the battery pack and the cassette

Approx. 960g including the battery pack NP-F530, lithium battery and cassette DVM60

Approx. 1.1kg including the battery pack NP-F730, lithium battery and cassette DVM60

Approx. 1.2kg including the battery pack NP-F930, lithium battery and cassette DVM60

Microphone

Electret condenser microphone,

Stereo type

Supplied accessories

See page 6.

## AC power adaptor

Power requirements

110 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-F530, NP-F730, NP-F930 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.

# 1 A1 IE~AOIEA %+ II^A

á+ôëð°, +.~+fl/  
,óóô óéá,ó%fl~+fl  
,ε%áoí+íá +

εθώυάí+  
εθώυάí+,ε%áoá+ôëðë  
εθώυάí+,áíëíóε%íí,íó,,ó  
óí+íë ó,+íëñ%,úñ  
, +.~.éíëòñ,óíó,í+íë  
εθώυάí+ á,ύíóá+ôëðë  
εθώυάí+ ááá ò, +.~.éíëòñ  
,óíó,í+íë  
á,+íúó,+íëá: 12·εύ (32 íé·  
óύá áó 1,óύá áó 2)·16·εύ  
(48 íé·,óύá áó)  
çε%áoé,í+í  
εθώυάí+ ^,áύóá á%+~é pal,  
óύ+í%+ ú cclir  
íëð,ε%áoí+óóáú·  
áëíë-,ε%áoí+óóáú+ dv ò  
íó,,óóëóóí  
εíó óóó, %,ëëáíëñ íáíú·  
sp: óíóíó 18,83 íí/óáí  
lp: óíóíó 12,57 íí/óáí  
ε ó%óíëéúáí,íóóó. á+ôëðë/  
,óóó óéá,á%áíëñ  
ç áëéíá sp: 1~+ò (dvm60)  
ç áëéíá lp: 1,5~+ò+ (dvm60)  
ε ó%óíëéúáí,íóóó,  
óá áíóύíë íáíú·,óá %/í+á+%  
εíóíó 2 íëí. 30 óáí. (dvm60)  
(ò èú+íëáí óú+ú+ áë)  
εíóíó 1 íëí. 45 óáí. (dvm60)  
(ò èú+íëáí óúóáúë)  
íóó óëóó,ó úó íë ó,+íëñ  
éáó· +ëáíëë  
íëá (úóó óëóó,ó ò á+ í%íóë  
ò,íá., 1/3")  
çε%óëóí+úáí,  
úíáíú óíí·ë,ε%óëóí+úáí,  
(^,áíúóë)  
ε· áíúë,  
áóí·éíë ó,+íí·ë ó· áíúë, ò  
+,úóí+úë~áoíëí  
ú +íóóóí+úó óí, 201 (^éú ó,óë  
áëéí), 101 (óóé~áoíëë áëéí)  
íóíúóíóá +óóóóñíëá  
f=4,0-40 íí  
(+í+íó,,é~íó úóíúóíóíó  
+óóóóñíë. 38-380 íí%íñ  
35-íí óíáíó-íó,,ó úóóó+óó+ +ú+)  
f1,8-2,6  
çóó óáíí+ñ ðëóúáí+  
,úóí+úë~áoíóë í+,,ó%íë í+  
ááíóóó, tml ò-ë óíóó,,óí,íóë  
í+í óó·áííóë  
éá,,úíë ó,í+ ^,áύó,óë  
úáíóá +úó·  
á,úóí+úë~áoí+ñ  
áëíëí+í,í+ñ óó,,á~áííóóó,  
ò èò·áííá  
3 í.íó+ò é f 1,8

NÉ+ò+áóí óó,,á~áííóóóë  
3-100 000 í.íóó,  
éáíóíáí%úáí+ñ óó,,á~áííóóó,  
é,,^ á 100 í.íóó,  
ύëë,íóí éòó+ííë~áoíëë  
~í +í  
é+áíá éáó· +ëáíëñ  
4%,ëí+ óó%ë+,óí+íë  
80,7x58,9 íí  
úí +íí·ë %ëóóíáë  
tn lcd/tft (+íúë,í+í+ú é~+)  
é· áá ~ëóíó úó-á-í·1  
~íáíáíúó,  
112 086 (479 x 234)

çíó%í·á ë ,^ó%í·á  
,,íáá%+  
ç·íó% s-,ε%áo  
4-ú·,íó,,é íëíë +á·áí din  
éë,í+íñ íóóóë: 1 vp-p, 75 éí,  
íáó·+í+íóë ó,+íí·ë,  
òëí1 óíá,+úë,í·ë  
sp:,í+í ^,áííóóóë: 0,3 vp-p,  
75 éí, íáó·+í+íóë ó,+íí·ë  
áú%ëó/,ε%áo,,^íó%  
éóá·é+í,íóá íëíë,íáá%ó, 1 vp-p,  
75 éí, íáó·+í+íóë ó,+íí·ë,  
òëí1 óíá,+úë,í·ë  
327 íç (ò ë ,^íó%íóí  
óóó óúë,íáíëë ò,,^ á 7 íéí)  
ç·íó%íóá óóó óúë,íáíëá íáíáá  
2,2 íéí/óύá áó íëíë,,íáá%ó  
(ø 3,5íí)  
çíó%/,^íó% dv  
éóá·é+í,í·ë 4-ú·,íó,,é  
+á·áí  
éíáá%ó%íñ í+ò-íëíó,  
éúá áó íëíë,,íáá%ó (ø 3,5 íí)  
çíó% mic  
éúá áó íëíë,,íáá%ó (ø 3,5 íí):  
0,388 íb, 2,5 ç óóóóñííó,ó úóóí+,  
çíó%íóá óóó óúë,íáíëá 6,8 íéí  
çíó% 1 lanc  
éúá áó íëíë,,íáá%ó (ø 2,5 íí)  
áíúóóë~áoí+ñ ðëóúáí+  
ñëí+íë~áoíëë,, óííó,ó ó éúáí,

### LASER LINK

çε%áo/+ú%ëó  
áíú +í +òí+ñ óá á%+~+ñ  
òëóúáí+ %íñ á+í·ú·1  
óóíá áíëë, óóóó,áúóó,ú·~+ñ  
óóí+í%+ ú+í uóóóíóë  
+óóó·é+·éë~íáíú óííóë  
ò óí·~íáííóóóë (éíáí)  
çáóó·+ñ ~+óóóó+ +ú%ëóóë,,í+í+  
áá,,é í+í+í: 4,3 áë^  
é +,~é í+í+í: 4,8 á,,^

é·~éá %+íí·á  
é+·ó-áá í+ò ñëáíëá  
7,2ç (ò è èú+íëë óú  
+ííúíóíñúó íóë·+ú+ áë)

é á%íññ óóó á·íñáí+ñ  
íó·íóóó,  
4,4 çú ó ë,ε%áoó·áííá ò  
ëóóóí,áó,+íëáí,ε%óëóí+úáíñ  
5,8 çú ó ë,ε%áoó·áííá ò  
ëóóóí,áó,+íëáí  
éë%íóí éòó+ííë~áoíó,,ó íí +í+  
íáíóá +úó + ^íóóíú+ú~éë  
óú óç %ó 40°c (32°f - 104°f)  
íáíóá +úó + 1 +íáíëñ  
óú -20°c %ó 60°c (-4°f - 140°f)  
é+·+ éú· (ò ë·íëáëúáí,íó)  
96 x 109 x 183 íí  
(%/^)  
á+òò+  
εíóíó 840 ,.áá +ííúíóíñúó íóë  
·+ú+ áëë,ε%áoí+óóáú·  
εíóíó 960 , ò +ííúíóíñúó íóë  
·+ú+ ááë np-f530, íëúëá,óë  
·+ú+ áëíóë ë,ε%áoí+óóáúóë  
dvm60  
εíóíó 1,1 í, ò +ííúíóíñúó íóë  
·+ú+ ááë np-f730, íëúëá,óë  
·+ú+ áëíóë ë,ε%áoí+óóáúóë  
dvm60  
εíóíó 1,2 í, ò +ííúíóíñúó íóë  
·+ú+ ááë np-f930, íëúëá,óë  
·+ú+ áëíóë ë,ε%áoí+óóáúóë  
dvm60  
áëí óóóí  
úíáíú áúí·ë íóí%áíò+úó í·ë  
óóá áóíëí óóóí  
áoíóíáíú+·éñ  
éí.óó .6.

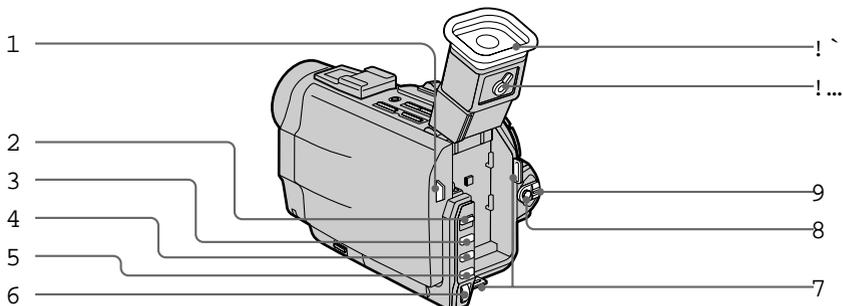
### Ά % + ò ú á óáúá, ó,,ó èú+íëíñ

é+·ó-áá í+ò ñëáíëá  
110-240 ç áá áíáííó,,ó úóí+,  
50/60 é^  
éóó á·íñáí+ñ íó·íóóó,  
25 çú  
ç·íó%íóá í+ò ñëáíëá  
dc out: 8,4ç, 1,8 á, +·ó-áí  
áëéíá  
á+ íëáíóúó óëóó,ó: 8,4ç, 1,4 á,  
áëéíá á+ íë+íëñ  
á+ íë+áí·á·+ú+ áë  
áoííó-íëúëá,,á +ííúíóíñúó í·á  
·+ú+ áë Sony NP-F530, NP-F730 é  
NP-F930  
íáíóá +úó + ^íóóíú+ú~éë  
óú óç %ó 40°c (32°f - 104°f)  
íáíóá +úó + 1 +íáíëñ  
óú -20°c %ó 60°c (-4°f - 140°f)  
é+·+ éú· (ò ë·íëáëúáí,íó)  
57 x 44 x 107 íí (%/^)  
á+òò+ (ò ë·íëáëúáí,íó)  
190 ,

áoíóó úí·éñ ë úáí·ë~áoíëá  
1+ +íúá ëóóéíë íó,,úó·ú,  
éáíáíáí·. áá óóó,,á~áíëñ.

# Identifying the parts

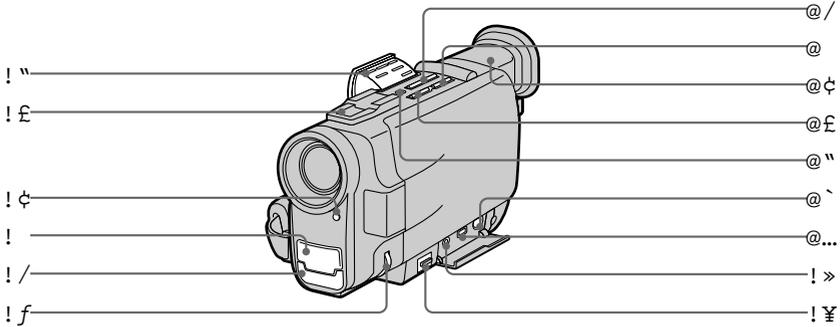
ÿÿ†Á†ÚÂÎ,  
†ÒÒÓÍÓÊÂÏËfl %ÂÛ†ÎÂË



- 1 PUSH/OPEN button (p. 17)
- 2 AUTO LOCK switch (p. 43, 47)
- 3 EXPOSURE button (p. 47)
- 4 PROGRAM AE button (p. 43)
- 5 PICTURE EFFECT button (p. 40)
- 6 CONTROL dial (p. 29)
- 7 Hook for shoulder strap (p. 113)
- 8 START/STOP button (p. 12)
- 9 POWER switch (p. 12, 23)
- 0 Viewfinder lens adjustment lever (p. 13)
- !` Eyecup (p. 21)

- 1 äÏÒÓÍ† PUSH/OPEN (ÒÚ . 17)
- 2 äÏÒÓÍ† AUTO LOCK (ÒÚ . 43, 47)
- 3 äÏÒÓÍ† EXPOSURE (ÒÚ . 47)
- 4 äÏÒÓÍ† PROGRAM AE (ÒÚ . 43)
- 5 äÏÒÓÍ† PICTURE EFFECT (ÒÚ . 40)
- 6 êÛÍÓÍÚÍ† CONTROL (ÒÚ . 29)
- 7 ï-íó%Îfl ÔÎÂ~Â, Ó„ó ÂÏfl (ÒÚ . 113)
- 8 äÏÒÓÍ† START/STOP (ÒÚ . 12)
- 9 èÂ ÂÍÎ, ~†ÚÂÎ, POWER (ÒÚ . 12, 23)
- 0 ê~†ÊÓÍ ÔÓ%ÒÚ ÓËËÓÍÚfl † (ÒÚ . 13)
- !` ††Ò†%Í† ÓÍÚfl † (ÒÚ . 21)

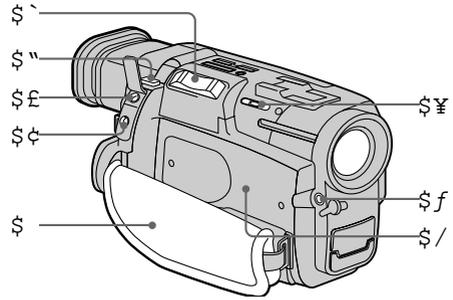
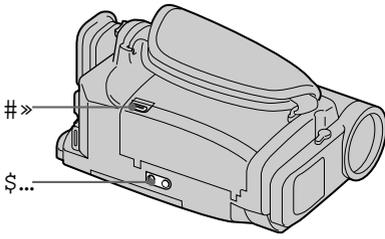
Additional Information / NOÖÍËÛÂÎ, Îfl ÊÏÒÓ Í†Êfl



- ! " Tape transport buttons (p. 23)
  - p STOP (stop)
  - 0 REW (rewind)
  - ( PLAY (playback)
  - ) FF (fastforward)
  - P PAUSE (pause)
  - AUDIO DUB
- ! £ Intelligent Accesory shoe
- ! † Recording lamp
- ! ∞ Microphone
- ! / Remote sensor (p. 23) / IR emitter (p. 51)
- ! f Focus dial (p. 45)
- ! ¥ FOCUS switch (p. 45)
- ! » AUDIO/VIDEO OUT jack (p. 50, 65)
- @... DV OUT jack (p. 64)
- @ ` S VIDEO OUT jack (p. 38, 50, 65)
- @ " LASER LINK button (p. 51)
- @ £ FADER button (p. 34)
- @ † Viewfinder (p. 13)
- @ ∞ BACKLIGHT button (p. 36)
- @ / EDITSEARCH button (p. 22)

- ! " äïŌŌİĒ ŪŌ †, İĀİĒfl %, ĒĒĒİĒĒİ İĀİŪ`  
(ŌŪ . 23)
  - p STOP (ŌŌŪ+İŌ, İ†)
  - 0 REW (ŌĀ ĀİŌŪİ+ İ+Ā+%)
  - ( PLAY(, ŌŌŌ ŌĒĀ, Ā%ĀİĒĒ)
  - ) FF (ŌĀ ĀİŌŪİ†, ŌĀ Ā%)
  - P PAUSE (Ō+ŪĀ+)
  - AUDIO DUB
- ! £ äŌİŪ+İŪİ+n ĒĒİ† %İfl ŌŌ%İİ, ~ĀİĒfl  
ŌĀ ĒŪĀ ĒĒİ`ı ŪŌŪ ŌĒŌŪ,
- ! † äĒ, İ+İ, İ+n İ+İŌŌ~İ† Ā+ŌĒŌĒ
- ! ∞ äĒİ ŌŪŌİ
- ! / äĀİŌŌ %ĒŌŪ+İ`ĒŌİİŌ, ŌŪŌ †İĀİĒfl (ŌŪ .  
23) /ĒİŪ †İ †Ōİ`ĒĒĀİŪ~+ŪĀÎ, (ŌŪ . 51)
- ! f äŪİŌİnŪİ+ İ†, Ō%İĒ İ+ ĀĀİŌŌŪ, (ŌŪ . 45)
- ! ¥ äĀ Āİİ, ~+ŪĀÎ, FOCUS (ŌŪ . 45)
- ! » ĒİĀĀ%Ō AUDIO/VIDEO OUT (ŌŪ . 50, 65)
- @... ĒİĀĀ%Ō DV OUT (ŌŪ . 64)
- @ ` ĒİĀĀ%Ō S VIDEO (ŌŪ . 38, 50, 65)
- @ " äİŌŌİ† LASER LINK (ŌŪ . 51)
- @ £ äİŌŌİ† FADER (ŌŪ . 34)
- @ † ÇĒ%ŌĒİ+ŪĀÎ, (ŌŪ . 13)
- @ ∞ äİŌŌİ† BACKLIGHT (ŌŪ . 36)
- @ / äİŌŌİ† EDITSEARCH (ŌŪ . 22)





#» OPEN/EJECT lever (p. 11)

#» ã~†ÊÓÍ OPEN/EJECT (ÔÛ . 11)

\$... Tripod receptacle (p. 21)

\$... ä ÂÔÎÂÎËÄ Ú+ÚË, † (ÔÛ . 21)  
ëÍÂ%ËÛÄ Á+ ÚÁÎ, ~ÚÓ· %ÎËÍ+ Í ÂÔÂËÎÓ, Ó  
, ÈÛ+ · ·Í+ ÍÂÎÄÄ 6, 5 ÍÍ. Ç Ó ÓÚË, ÍÓÍ  
ÔÏÛ~†Á Í ÂÔÎÂÎËÄ ·Ú%ÁÛ ÍÂÎ+ÂËÎ·Í, †  
, ÈÛ ÍÓËÄÛ ÓÓ, Â%ËÛ, È%ÁÓÍ+ÎÄ Ú.

Make sure that the length of the tripod screw is less than 6.5mm (9/32 inch). Otherwise, you cannot attach the tripod securely and the screw may damage the camcorder.

\$` Zoom lever (p. 15)

\$` ã~†ÊÓÍ ÛÓ †, ÍÂÎËÎ Û †ÏÔÔÓÍ+ÚÓ ÓÍ  
(ÔÛ . 15)

\$" BATT(battery) RELEASE button (p. 10)

\$" äÏÓÓÍ† BATT RELEASE (ÓÚÓÓÄ%ËÏÂÎËÄ  
†ÍÏÏÏÏÏÏÏÏÏ ÌÔË·Ú† ÂË) (ÔÛ . 10)

\$£ LANC 1 control jack

\$£ ÈÍÄÄ%Ó ÛÓ , ÍÂÎËÎ LANC 1  
1 ÍÓ, ÓÚËÓ ãËÓÛÁÍ· ÛÓ †, ÍÂÎËÎ  
ÔÄ ÈÛÄ ÈËÎ·ËË ÛÓÛ ÓËÓÛ, †ËË (Local  
Application Control Bus System). ÈÍÄÄ%ÓÏ  
ËÓÓÓÍ, ÁÛÁÛÓÎ%ÎÎ ÛÓ †, ÍÂÎËÎ%, ÈËÄÎËÄÍ  
ÍÂÎÛ· , È%ÁÓ+ÔÓ† †ÚÓ Ä È †·ÓÓË  
ÓÓ%ÍÍ· ~ÂÎÏ· Í ÍÄË %ÓÓÓÍËËÛÁÍ, Ì·  
ÛÓÛ ÓËÓÛ, · Ó, ÓÛÏÍÍ·ÈÈ+Ì+ÍÓ, È·Ì·  
ÛÛÍÍ·ËÎÍ „ÍÄÄ%†, Ó·ÓÁÍ+~ÂÎÍÓ, Ó  
CONTROL L ÈËË REMOTE.

1 stands for Local Application Control Bus System. The 1 control jack is used for controlling the tape transport of video equipment and peripherals connected to it. This jack has the same function as the jack indicated as CONTROL L or REMOTE.

\$¢ 2 headphones jack (p. 24)

\$¢ 2 ÈÍÄÄ%Ó%ÎÎ ÓÓ%ÍÍ· ~ÂÎËÎ Ì+Û·ËËÍÓ,  
(ÔÛ . 24)

\$∞ Grip strap (p. 20)

\$∞ ãÛ·ÍÓË ÄÍÄÌ, (ÔÛ . 20)

\$/ Cassette compartment (p. 11)

\$/ ä+ÔÔÁÛÓÓ ÈÄÎËËÍ (ÔÛ . 11)

\$f MIC jack (PLUG IN POWER) (p. 66)

\$f ÈÍÄÄ%Ó%ÎÎ ÓÓ%ÍÍ· ~ÂÎËÎ ËËÍ ÓÛÓÍ+  
MIC (PLUG IN POWER) (ÔÛ . 66)  
ä·ÚÓÍÛ „ÍÄÄ%Û ÓÓ%ÍÍ·~†ÁÛÓÎ, ÍÄ·ËËÈ  
ËËÍ ÓÛÓÍ (, ÍÓÍÓÍÁÍÛ ÍÄ, 1Ó%ËÛ). Ñ+ÏÏÓÄ  
„ÍÄÄ%Ó Û+ÍËÄ ÍÓËÄÛ ÔÏÛËËÛ, %ÎÎ  
ÓÓ%ÍÍ· ~ÂÎËÎ †ÍËÈ, ÌÓ, Ó ËËÍ ÓÛÓÍ+.

Connect an external microphone (not supplied). This jack also accepts a “plug-in-power” microphone.

\$¥ Video control compartment OPEN switch (p. 23)

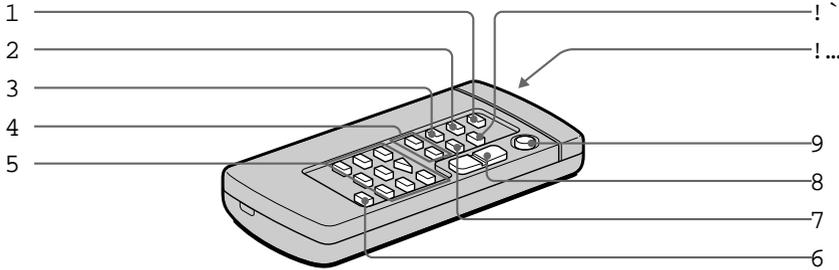
\$¥ ã~†ÊÓÍ OPENc %ÎÎ , \*%, ÈËÄÎËÎÎ  
·ÍÓÍ+ ÛÓ †, ÍÂÎËÎ, È%ÁÓÓ ÓÓÍÓÛ ÓÍ  
(ÔÛ . 23)

## Remote Commander

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

èÛî, ú %Èòú†ì`Èóììó,,ó  
Ûò †, îÂîÈñ

é%íóÊîÁîì`Á ííóóíÈ ì†, È%Áóí†îÂ Á È  
óúí, úÁ %Èòú†ì`Èóììó,,ó Ûò †, îÂîÈñ  
Ûòíí`ÈóìÈ Û, úó%Èî†íó,,ó.



- |      |                                                                                                        |      |                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | PHOTO button (p. 37)                                                                                   | 1    | äìóóí† PHOTO (òú . 37)                                                                                                                      |
| 2    | DISPLAY button (p. 24)                                                                                 | 2    | äìóóí† DISPLAY (òú . 24)                                                                                                                    |
| 3    | SEARCH MODE button (p. 52, 56, 58)                                                                     | 3    | äìóóí† SEARCH MODE (òú . 52, 56, 58)                                                                                                        |
| 4    | = /+ buttons (p. 52, 56, 58)                                                                           | 4    | äìóóíÈ= /+ (òú . 52, 56, 58)                                                                                                                |
| 5    | Tape transport buttons (p. 23)                                                                         | 5    | äìóóíÈ Ûò †, îÂîÈñ %, ÈÈÁîÈÁî íÂîú`<br>(òú . 23)                                                                                            |
| 6    | AUDIO DUB button (p. 66)                                                                               | 6    | äìóóí† AUDIO DUB (òú . 66)                                                                                                                  |
| 7    | DATA CODE button (p. 63)                                                                               | 7    | äìóóí† DATA CODE (òú . 63)                                                                                                                  |
| 8    | Power zoom button (p. 15)                                                                              | 8    | äìóóí† Ûò †, îÂîÈñ Û †ìòòóí†úó óí<br>(òú . 15)                                                                                              |
| 9    | START/STOP button (p. 12)                                                                              | 9    | äìóóí† START/STOP (òú . 12)                                                                                                                 |
| !... | Transmitter<br>Point toward the remote sensor to control the camcorder after turning on the camcorder. | !... | èÁ Á%†. `ÁÁ Ûòú óÈòú,ó<br>Ñíñ Ûò †, îÂîÈñ, È%Áóí†îÂ óÈ, íí. `ÈÚÁ<br>ÁÁ È ì†ó †, úÁ ÓÁ Á%†. `ÁÁ Ûòú óÈòú,ó,<br>óóó óíú%Èòú†ì`Èóììó,,óÁîóó †. |
| !`   | ZERO SET MEMORY button (p. 62)                                                                         | !`   | äìóóí† ZERO SET MEMORY (òú . 62)                                                                                                            |

# Identifying the Parts

İİ+Ā+ŪĀİ, †ÖÖİÖĒĀİĒİ  
%ĀŪ+İĀĒ

## To prepare the Remote Commander

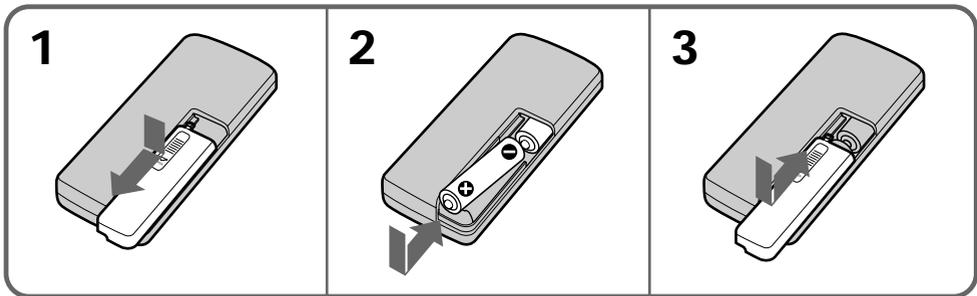
To use the Remote Commander, you must insert two R6 (size AA) batteries. Use the supplied R6 (size AA) batteries.

- (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.

èÓ%„,ÓŪÓ, İ+ ÖŪİ, Ū+ %ĒÖŪ+İ^ĒÖİİÖ„,Ó  
ŪÖ †, İĀİĒİ İ †.ÓŪĀ

è ĀĒ%Ā ~Āİ ÖŪİ,ĀÓ, †Ū, òñ ÖŪİ, ŪŪİ  
%ĒÖŪ+İ^ĒÖİİÖ„,Ó ŪÖ †, İĀİĒİ, , İĀ„,Ó  
İĀÖ.İÓ%ĒİÖ ŪŪ+İÖ,ĒŪ, %, Ā +Ū+ ĀĒİĒ R6  
( †ĀİĀ ĀĀ).Ā+Ū+ ĀĒİĒ R6 ( †ĀİĀ ĀĀ)  
Ö Ēİ+„, †, ŪŪñ.

- (1) èİĒİĒŪĀ İ † İŪ Ū%ĀİĀİĒİ %İñ †Ū+ ĀĀİ  
ÖŪİ, Ū+ %ĒÖŪ+İ^ĒÖİİÖ„,Ó ŪÖ †, İĀİĒİ.
- (2) èÖ.İ.%,ñİ öŪİñ İÖŪŪ, , ŪŪ+İÖ,ĒŪĀ Ö.Ā  
+Ū+ ĀĒİĒ R6 ( †ĀİĀ ĀĀ).
- (3) İŪŪ+İÖ,ĒŪĀ İ+ İĀŪŪ İ † İŪ Ū%ĀİĀİĒİ  
%İñ †Ū+ ĀĀİ.



### 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.

è Öİ ÖİŪĒ.· †Ū+ ĀĀİ  
è Ē İÖ İ+İ, İÖĒ ĒİŪĀİÖĒ, İÖŪĒĒ ÖŪİ,ĀÓ, †İĒİ  
ÖŪİ, ŪŪİ %ĒÖŪ+İ^ĒÖİİÖ„,Ó ŪÖ †, İĀİĒİ. †Ū+ ĀĀİ  
ı, †Ū+ĀŪ Ö ĒİĀ İÖ İ+ Ē İĀñ^Ā, . äŪ, %  
+Ū+ ĀĒİĒ İ+ĒĒİ. Ū Ö+%,ĒŪ, òñ ĒİĒĒ ÖŪİİÖŪ. .  
†Ā İĒ+ ŪŪñ, ÖŪİ, Ū %ĒÖŪ+İ^ĒÖİİÖ„,Ó  
ŪÖ †, İĀİĒİŪĀ ĀŪ+ĀŪ †.ŪŪ+Ū. .

è Ā%Ū, †~ĀİĒĀ ÖŪ, ĀĒ%ĀİĒĒ,  
, \*Ā°, †Āİ'ı Ö ŪĀİ+İĒĀİ. †Ū+ ĀĀİ  
ÖŪİĒ ĸ, ŪĀ~ĀİĒĀ %İĒŪĀİ, İÖ„,Ó , ĀİĀİĒ İĀ  
ÖŪ.Ē †ĀŪĀÖ, ÖŪİ,ĀÓ, †Ū, òñ ÖŪİ, ŪŪİ  
%ĒÖŪ+İ^ĒÖİİÖ„,Ó ŪÖ †, İĀİĒİ, ĒĀ, İĀİĒŪĀ ĒĀ  
İĀ„,Ó †Ū+ ĀĒİĒ.

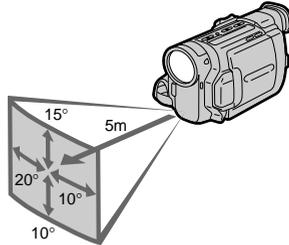
# Identifying the parts

## 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.

α†Ί ∂∂Ί, Α∂, †ΰ, ∂Η ∂∂Ί, ΰ∂Ί  
%Ε∂∂ΰ†Ί`Ε∂∂Ί∂, ∂ ΰ∂ †, ΊΑΊΕΗ  
αΰΊ, ΰ%Ε∂∂ΰ†Ί`Ε∂∂Ί∂, ∂ ΰ∂ †, ΊΑΊΕΗ %∂ΊΕΑΊ  
·ΰ, Ί∂∂ †, ΊΑΊ, ∂∂∂ ∂Ίΰ%Ε∂∂ΰ†Ί`Ε∂∂Ί∂, ∂  
∂ΑΊ∂∂ †.  
ΝΕ∂∂ΰ†Ί`Ε∂∂Ί∂Α ΰ∂ †, ΊΑΊΕΑ, Α†Ί ΰ∂Ί  
∂∂ΊΑ ΑΊΕΕ ∂·Α∂∂Α`Ε, †Αΰ∂Η Ί† †∂∂∂∂ΊΕΕ %∂  
5 ΊΑΰ ∂, ∂, ∂ ΰΰΑΊΰΕ, Ί∂∂ΰ, Α†, Ε∂Εΰ∂  
ΰ, Ί†, ∂∂%Ί∂∂ ΰΊ∂Ε, Ί†Ί ∂ ΕΊΕΊ†Αΰ∂Η  
, Ε%Α∂Ί†ΊΑ ∂Ε.



## 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 in commander mode VTR 2. The commander modes (1, 2 and 3) are used to distinguish this camcorder from other Sony VCRs to avoid remote control misoperation. If you use another Sony VCR in commander mode VTR 2, we recommend you change the commander mode or cover the remote sensor of the VCR with black paper.

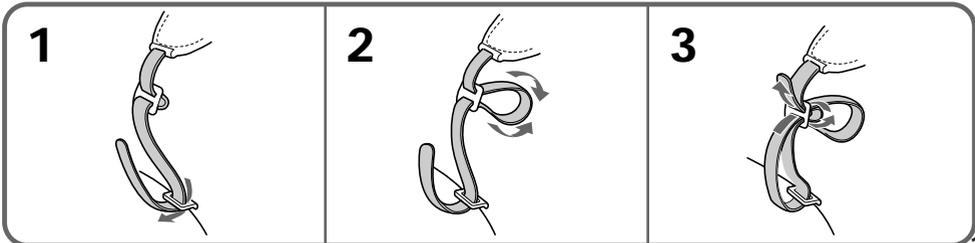
ε ∂∂Ί, ΰΑ %Ε∂∂ΰ†Ί`Ε∂∂Ί∂, ∂ ΰ∂ †, ΊΑΊΕΗ  
• ΝΑ ΕΕΰΑ ∂∂Ί, ΰ%Ε∂∂ΰ†Ί`Ε∂∂Ί∂, ∂ ΰ∂ †, ΊΑΊΕΗ  
%, †ΊΕ ∂∂ ΰΕΊ, Ί·Ί Ε∂∂∂ΊΕΊ∂, ∂, Αΰ† (∂ ΗΊ·Α  
∂∂ΊΑ·Ί·Α Ίΰ`Ε, Η ΊΕΑ Ί†∂∂). †∂ ∂∂Ε, Ί∂Ί  
∂Ίΰ†Α ΰΰΑΊΰΕ, Ί∂∂ΰ, %Ε∂∂ΰ†Ί`Ε∂∂Ί∂, ∂  
ΰ∂ †, ΊΑΊΕΗ Ί∂ΕΑΰ·ΰ, Ί† ΰ·ΑΊ†.  
• εΊΑ%ΕΰΑ Α† ΰΑΊ, ΰ∂·Ί ΊΑΕ%ΰ ∂∂Ί, ΰ∂Ί Ε  
%Ε∂∂ΰ†Ί`Ε∂∂Ί·Ί ∂ΑΊ∂∂ ∂Ί, Ε%Α∂Ί†ΊΑ Ί·Α  
·Ί∂ ΊΕΊ†ΊΕΊ ∂ ΑΊΝ∂∂∂, ΕΕ.  
• †Ε%Α∂Ί†ΊΑ † †·∂∂†Αΰ, ΑΕΕΊΑ  
%Ε∂∂ΰ†Ί`Ε∂∂Ί∂, ∂ ΰ∂ †, ΊΑΊΕΗ VTR 2.  
ε†ΑΊΕ`Ί·Α ΑΕΕΊ·%Ε∂∂ΰ†Ί`Ε∂∂Ί∂, ∂  
ΰ∂ †, ΊΑΊΕΗ (1, 2 Ε 3) Ε∂∂∂Ί. Αΰ. ΰ∂Η %ΊΗ ΰ∂, ∂,  
ΰ∂·Ί ∂∂ΊΕ~†ΰ, Ί∂Ί†Ί%, ∂ Α%Ί†ΑΊ†·ΑΊΊ·Α  
%ΊΗ, Ε%Α∂Ί†ΊΑ ·, ∂ΰ Ί∂Ί†Ί% ΰ∂ †, ΊΑΊΕΗ  
% ΰ, ∂Ε, Ε%Α∂∂∂† †ΰ∂ ∂Ε Sony, ΕΑ·Α, †Η ΰΑΊ  
∂†Ί·Ί∂·∂Α, †·∂∂Α %Ε∂∂ΰ†Ί`Ε∂∂Ί∂, ∂  
ΰ∂ †, ΊΑΊΕΗ. ∂∂ΊΕ ΰ †∂∂ ∂ΕΑ Α∂ΰ,  
, Ε%Α∂Ί†, ΊΕΰ∂∂∂Ί Sony, †·∂∂†. `ΕΕ,  
ΑΕΕΊΑ VTR 2, ΰ∂ ΑΊ∂ΊΑΊ%ΰΑΊ  
∂Α Α∂ ∂, †ΊΕ ∂, †ΰ Α, ∂Ί†% ΰ, ∂Ε ΑΕΕΊ  
ΕΊΕ Α†Ί ΰ, %Ε∂∂ΰ†Ί`Ε∂∂Ί·Ί Ε∂ΑΊ∂∂  
, Ε%Α∂Ί†, ΊΕΰ∂∂∂†·Α Ί∂Ε·ΰΊ†, ∂Ε.

## Attaching the shoulder strap

Attach the supplied shoulder strap to the hooks for the shoulder strap.

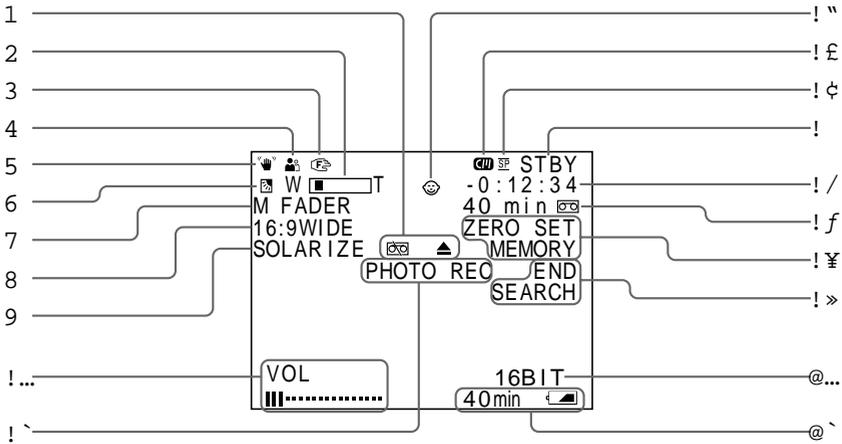
ε Ε∂∂Α%ΕΊΕΑΊΕΑ ∂ΊΑΊ·Α, ∂, ∂ ΑΊΊΗ

ε Ε∂∂Α%ΕΊΕΑ ∂ ΕΊ†, †ΑΊ·Ε∂ΊΑ·Α, ∂Ε ΑΊΑΊ,  
Ε∂∂∂Ί, ΑΰΗ ∂ Α%Ί†ΑΊ†·ΑΊΊ·Α %ΊΗ ΊΑ, ∂ ΰΊΕ.



Operation indicators

îÛîÍ^ÈÒì†î, ì^Â Èì%Èí†úÓ °



- |     |                                                                    |     |                                                                         |
|-----|--------------------------------------------------------------------|-----|-------------------------------------------------------------------------|
| 1   | Warning indicator (p. 116)                                         | 1   | è Â%ÔÓ ÂÊ%+, ~ÈÈ Èì%Èí†úÓ (ÔÚ . 116)                                    |
| 2   | Zoom indicator (p. 15)                                             | 2   | àì%Èí†úÓ Ó È·îÊÊÂîËfl/ÓÚ%+îÂîËfl (ÔÚ . 15)                              |
| 3   | Manual focus/Infinity indicator (p. 45)                            | 3   | àì%Èí†úÓ Û~ìÓÈ ÙÒíÚÒÈ Ó, íÊ/ ì†, Ó%íÊ ÙÒíÚÒ† ì† ·ÂÓíÓîÂ~ìÓÓÚ, (ÔÚ . 45) |
| 4   | PROGRAM AE indicator (p. 43)                                       | 4   | àì%Èí†úÓ PROGRAM AE (ÔÚ . 43)                                           |
| 5   | SteadyShot indicator (p. 48)                                       | 5   | àì%Èí†úÓ ~îÁîÛ ÓììÒ„ó ÓÚ†·ÈÊÊÁ†úÓ † ì†% † (ÔÚ . 48)                     |
| 6   | BACK LIGHT indicator (p. 36)                                       | 6   | àì%Èí†úÓ BACK LIGHT (ÔÚ . 36)                                           |
| 7   | FADER indicator (p. 34)                                            | 7   | àì%Èí†úÓ FADER (ÔÚ . 34)                                                |
| 8   | 16:9 WIDE indicator (p. 41)                                        | 8   | àì%Èí†úÓ 16:9 WIDE (ÔÚ . 41)                                            |
| 9   | PICTURE EFFECT indicator (p. 40)                                   | 9   | àì%Èí†úÓ PICTURE EFFECT (ÔÚ . 40)                                       |
| 0   | BRT (bright) indicator (p. 17, 23) /VOL (volume) indicator (p. 23) | 0   | àì%Èí†úÓ BRT(fl íÓÓÚÈ) (ÔÚ . 17, 23)/ Èì%Èí†úÓ VOL(„ ÓííÓÓÚÈ) (ÔÚ . 23) |
| ! ` | Photo recording indicator (p. 37)                                  | ! ` | àì%Èí†úÓ , È%ÂÓÚÓÓÓ·ÂîíÈ (ÔÚ . 37)                                      |
| ! ` | Mirror mode indicator (p. 18)                                      | ! ` | àì%Èí†úÓ ÁÁ ì†î, ìÒ„ó ÂÊÊì† (ÔÚ . 18)                                   |
| ! É | Cassette Memory indicator (p. 4)                                   | ! É | àì%Èí†úÓ Ó†îñÚÈ ì†òòÁÚ* (ÔÚ . 4)                                        |
| ! Ç | Recording mode indicator (p. 13)                                   | ! Ç | àì%Èí†úÓ ÂÊÊì† ò·ÂîíÈ (ÔÚ . 13)                                         |



# Warning indicators

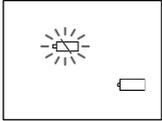
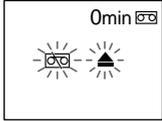
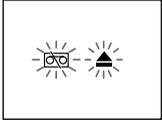
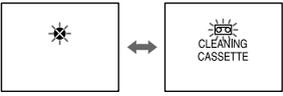
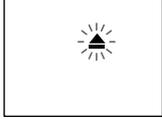
À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã

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.

ÖÖÍÈ Ì; ÈÈ;ÍÓÍ ÈÓÚ;ííÈ~ÀÓÍÓÍ ~Í ;íÀ ÈÍÈ , ÓÍÌÀ ,ÈÈ;ÓÈÓÍ;ÚÁíñ ÓÓñ, íñ, ÚÓñ ÌÈ,,+; ~ÈÀ ÈÌ;ÈÍ;ÚÓ \* ÈÍÈ Ó À;ÚÓ ÀÈ;+; ~ÈÀ ÓÓÓ.~ÀÌÈñ,, ÓÓÓÓÍ, ÁÚÈÚÁÒ, ÌÈÈÁÓÍÀ;Ú. ~ÈÌÈ ÓÓñÓÌÀÌÈñÍÈ.

♪: ÓÓÍÈ Ó; +íÁÚ BEEP, íÁÌ. Ó; +íÁÚ Ó, Ì;íÓ;ÈÚÓñ, ÓÓÍÓÈÁÌÈÈ ON, Ç\* ÓÍ\*~ÈÚÁ Á,ÚÍÓ,ÓÈ ÓÈÈ,,ííí.

<p>1</p> 	<p>2</p> 	<p>3</p>  <p>♪...♪</p>
<p>4</p>  <p>♪...♪</p>	<p>5</p>  <p>♪...♪</p>	<p>6</p>  <p>♪...♪</p>
<p>7</p> 	<p>8</p> <p>CLOCK SET</p>	<p>9</p>  <p>♪...♪</p>
<p>! ...</p> <p>FOR "InfoLITHIUM" BATTERY ONLY</p>	<p>! `</p> 	

- The battery is weak or dead.**  
 Slow flashing: The battery is weak.  
 Fast flashing: The battery is dead.  
 Depending on conditions, the battery indicator may flash, even if there are 5 to 10 minutes remaining.
- The tape is near the end.**  
 The flashing is slow.
- The tape has run out.**  
 The flashing becomes rapid.

- À;Ú; Áñ Ò;È;ÈÚÓñ ÈÍÈ +Á ñÈÁÌ; ÓÓÍÍÓÓÚ...  
 àÀ;íÁÌíÓÁ ÌÈ,,+ìÈÀ: ·+Ú; Áñ Ò;È;ÈÚÓñ. Á·ÓÚ ÓÁ ÌÈ,,+ìÈÀ: ·+Ú; Áñ ÓÓÍÍÓÓÚ, . +Á ñÈÁÌ;.  
 Ç Á; ,ÈÓÈÍÓÓÚÈ ÓÚ ÚÓÍÓ,ÈÈ ~ÍÓÓÍÚ;+~ÈÈ ÈÌ;ÈÍ;ÚÓ ì ÍÓÈÁÚ Ì;+Ú, ÌÈ,,+Ú, ,%;+ÈÁ ÍÓ,,%;+ ÓÓÚ; ~Á,,ÓÓñ Á; ñ%;+ Ì, +Ú;ÁÚ Á~Á Ì;+ 5-10 ÌÈÌÓÚ +·ÓÚ'.
- áÁÌÚ; Ó È·íÈÈ;ÁÚÓñ Í ÍÓÍ^Ú.  
 àÌ;ÈÍ;ÚÓ ÌÈ,,+ÁÚ ÌÀ;íÁÌíÓ.
- áÁÌÚ; Á;íÓÍ~ÈÍ;Ò,  
 àÈ,,+ìÈÀ ÓÚ;ìÓ,ÈÚÓñ ~+ÓÚ·Í.

# Warning indicators

- 4 No tape has been inserted.
- 5 The tab on the tape is out (red).
- 6 Moisture condensation has occurred. (p. 87)
- 7 The video heads may be contaminated. (p. 88)
- 8 The clock is not set.  
When this message appears though you set the date and time, the vanadium-lithium battery is discharged. Charge the vanadium-lithium battery. (p. 80)
- 9 Some other trouble has occurred.  
Disconnect the power source and contact your Sony dealer or local authorized facility.
- ! The battery is not the "InfoLITHIUM" type.
- ! The tape has no cassette memory. (p. 4)

- 4 Ç ,È%ÁÓÍ†iÂ Â ÎAU Í†ÒÒÁÚ' .
- 5 á† ~ËÛÍ†fl Á†%, ÈÈÍ† Î† Í†ÒÒÁÚÁ  
Ò%, ÈÏÛ† ( ,È%Î† Í †ÒÍ†fl ÔÍ†ÓÚÈÏÍ†)
- 6 è ÓÈÁÓ-Í† ÍÓÍ%ÁÏÒ† ^Èfl ,Í†, È (ÏÚ . 87)
- 7 ÇÓÁÍÓÈÏÒ, Á†, flÁÍÁÌ' , È%ÁÓ, ÓÍÓ, ÍÈ  
(ÏÚ . 88).
- 8 çÂ ÛÒÚ†ÏÓ, ÎÁÏÓ , ÂÏfl Î† ~†Ò†1.  
ÒÒÍÈ %†ÏÏÓÁ ÓÓÓ. ~ÁÏÈÁ ÎÁ ÈÒ~ÁÁ†ÁÚ %†ÈÁ  
ÒÓÓÍÁ ÛÒÚ†ÏÓ, ÍÈ Ç†ÍÈ%†Ú' È , ÁÍÁÏÈ, ~ÚÓ  
ÁÍ†~ËÚ, ~ÚÓ †Á flÈÁÏ† , †Í†%ÈÁ, Ó-  
ÎÈÚÈÁ, †fl . †Ú† ÁÈÍ†. á† fl%ÈÚÁ  
, †Í†%ÈÁ, Ó-ÎÈÚÈÁ, Û. . †Ú† ÁÈÍÛ (ÏÚ . 80).
- 9 è Ó~ÈÁ ÎÁÒÓÍ†%ÍÈ.  
éÚÍÍ. ~ÈÚÁ ÓÈÚ†ÏÈÁ È Ò, flÈÈÚÁÒ. Ò  
. ÎÈÈ†È~ÈÏ %ÈÎÁ ÓÍ Sony ÈÏÈ . ÎÈÈ†È~È  
ÒÒÁ^È†ÎÈÁÈ Ó, †ÏÏÒÈ Î†ÒÚÁ ÒÍÓÈ.
- ! ìÒÚ†ÏÓ, ÎÁÏ† . †Ú† Áfl , ÎÁ ÓÚÏÒÒfl ~ †flÒfl Í  
ÚÈÒÚ "InfoLITHIUM" .
- ! ` à†ÒÒÁÚ† ÎÁ ÈÍÁÁÚ ~ÍÁÍÚ ÓÏÏÒÈ Ò†ÍflÚÈ  
(ÏÚ . 4)

Additional Information / No. 001-1001, 1-11-1001, 1-1-1001

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## Ä Î Û †, Ë Û Î ° È Û Î † Á † Ú Â Î

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