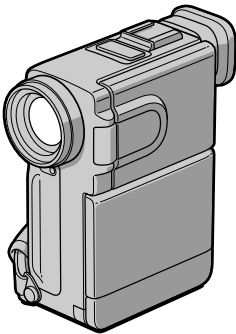


Digital Video Camera Recorder

Operating Instructions

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

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DCR-PC7E

Mini **DV** Digital
Video
Cassette
Handycam Vision™

©1996 by Sony Corporation

English

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.

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.

NOTICE FOR CUSTOMERS IN THE UNITED KINGDOM
A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.

NOTICE FOR CUSTOMERS IN THE UNITED KINGDOM
A moulded plug complying with BS 1363 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 BS 1362, (i.e. marked with  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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 Ö ÖîÜÈÈ, †ÂîÜ ÖÁ ÖÖî†îÜ.

Before you begin

Using this manual

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Welcome !

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

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

Note on TV colour systems

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

Precaution on copyright

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

ÑÓ· Ó ÔÓÊ±ÍÓ,±Ú, !

èÖÁ% ±,íñÄÏÇ±ÒÒÖ ÈÖ· ÄÚÄìÈÄÏ
%ììÓÈÈ,È%ÄÓÍ±ÏÄ ° Handycam Vision™
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ÈÄÖ· ±ÈÄìÈñ È Ä,ÚÍ±.
Ç±^±,È%ÄÓÍ±ÏÄ ± Handycam Vision
ÖÖì±^Äì± ÙÖÖ,Ä ^ÄìÖÚ,Ö,±ìì^ÈÈ
ÙÙìí^ÈñÈÈ, ÌÖ, ÙÓ ÈÄ, Äìñ ÄÄ Ö^Äì,
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è ÈÏ. ÌÖÚ±ÍÖ,ÈÚÄ, °Íì^±ÚÄÏ, POWER,
ÖÖÍÖÈÄìÈÄ CAMERA.
ÖÖÍÈ Ì± ÈÖÖÏì± ÙÍ±Ä°,±ÄÚÖñ Äìí Ì±, ÙÓ
Ç° ÍÖÈÄÚÄ ÖÍÙ^±Ú, ÄÚÏÄ Ì°È Ä,ÙÍÖ,ÓÈÈ
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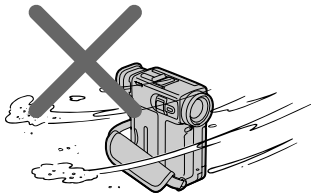
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Precautions on camcorder care

- Do not let sand get into the camcorder. When you use the camcorder on a sandy beach or in a dusty place, protect it from the sand or dust. Sand or dust may cause the unit to malfunction, and sometimes this malfunction cannot be repaired [a].
- Do not let the camcorder get wet. Keep the camcorder away from rain and sea water. Letting the camcorder get wet may cause the unit to malfunction, and sometimes this malfunction cannot be repaired [b].
- Never leave the camcorder exposed to temperatures above 60°C (140°F), such as in a car parked in the sun or under direct sunlight [c].

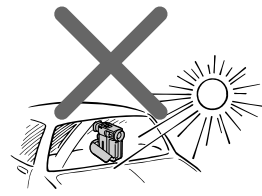
[a]



[b]



[c]



Note on the colour viewfinder and the LCD screen

The colour viewfinder and the LCD screen are made with high-precision technology. However, black points or bright points of light (red, blue, or green) may appear constantly on the colour viewfinder or the LCD screen. These points are not recorded on the tape. This is not a malfunction. (Effective dots: more than 99.99%)

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

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- ÇÄ ÖÓÁ,ÓİİÈÚÄ ,È%ÁÓÍ†İÄ Ä Â%Ä†Ü Öİİ
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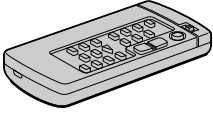
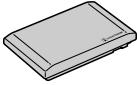
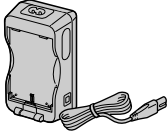
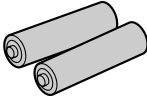
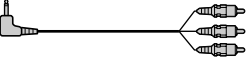
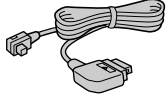
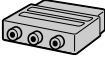
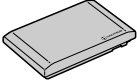
Before you begin / èÄ Â% İ††İÖİ †İÖİÜ†Ü†ÈÈ

Checking supplied accessories

Check that the following accessories are supplied with your camcorder.

Check that the following accessories are supplied with your camcorder.

Check that the following accessories are supplied with your camcorder.

1 	2 	3 
4 	5 	6 
7 	8 	9 

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Getting started

Charging and installing the battery pack

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

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

"InfoLITHIUM" is a trademark of Sony Corporation.

Charging the battery pack

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

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

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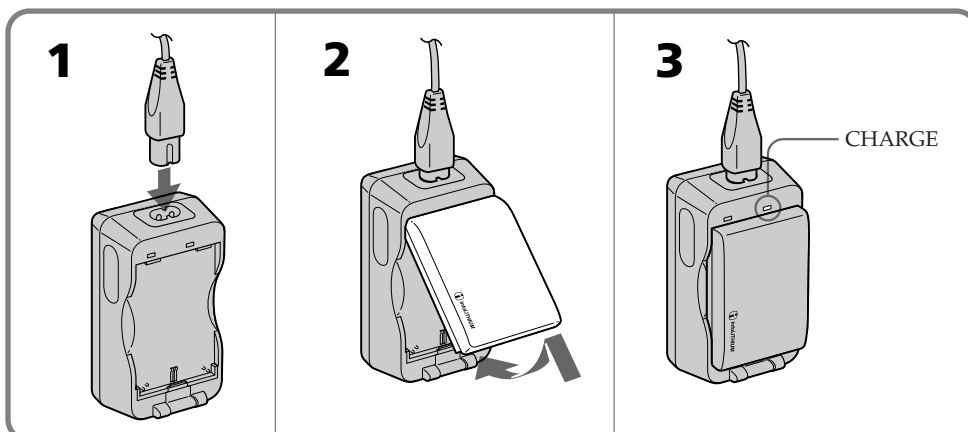
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†%†ÓÚÁ ÒÂ ÁÍÁÍÓ,ÓÚÓÍ†.
Ñ†ÍÍ†,È%ÂÓÍ†ÍÂ † †·ÓÚ†ÁÚ ÓÚ
·Ú† ÂÈÍÓ,Ó ·ÍÓÍ "InfoLITHIUM" NP-F100/
NP-F200.

"InfoLITHIUM" fl,ÍÍÁÚÒÈÍ ÓÓ,† ÌÍ ÁÍÍÓÍ
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ÍÒÂÚÁ,ÓÈ †%†ÓÚÁ ÒÂ ÁÍÁÍÓ,Ó ÚÓÍ†,
ÍÒ †,ÍÁÍÈÈ, ÚÍ†Â†ÍÍÓÍ ÒÚ ÁÍÍÓÈ.
- (3) èÓ%ÒÒÂ%ÈÈÈÚÁÒÂÚÁ,ÓÈ ÍÚ ÒÂ ÁÍ.ÚÓÍ†Í
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„Ó ÁÚ. á† fl%Í† Í†~Í†Ò,
äÓ,,%† Í†ÍÓÓ~Í† CHARGE ÒÒ,,ÒÒÁÚ,
ÍÓ Í†Í Í†Í Â† fl%Í† Â†,Â ~ÁÍ†
(ÍÓ Í†Í Í†Í Â† fl%Í†). ÑÍÍ ÒÓÍÓÈ Â† fl%ÈÈ,
ÍÓÚÓ †ÍÒÒÂ,ÓÍÍÁÚ Ç†ÍÈÒÒÓÍ,ÁÓ,†Ú,
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ÍÓÈÚÁ ÈÒÒÓÍ,ÁÓ,†Ú, ·Ú† ÂÈÍÓ ·ÍÓÍ %Ó
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Getting started / èÓ%,,ÓÚÓ,Í† Í ~ÍÒÔÎÚ†Ú†~ÈÈ

Charging and installing the battery pack

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Charging time

Battery pack	Charging time *
NP-F100 (supplied)	130 (70)
NP-F200	170 (110)

Numbers in parentheses indicate the time for a normal charge. **(Normal charge)**

* Approximate number of minutes to charge an empty battery pack fully using the supplied AC power adaptor. **(Full charge)** (Lower temperatures require a longer charging time.)

Battery life

While using with viewfinder

Battery pack	Continuous recording time **	Typical recording time ***
NP-F100 (supplied)	55 (45)	30 (25)
NP-F200	100 (85)	50 (45)

While using with LCD

Battery pack	Continuous recording time **	Typical recording time ***	Playing time with LCD
NP-F100 (supplied)	45 (40)	25 (20)	50 (45)
NP-F200	75 (70)	40 (35)	90 (80)

Numbers in parentheses indicate the time when you use a normal charged battery pack. When using both the viewfinder and the LCD screen, the battery life is shorter.

When recording in a cold environment, the battery life is shorter

** Approximate number of minutes to record at normal temperature

*** Approximate number of minutes when recording with repeated recording start/stop, standby, zooming and turning the power on/off. The actual battery life may be shorter.

Note on remaining battery time indication during recording

Remaining battery time is displayed on the LCD screen or in the viewfinder. It may not be displayed properly, however, depending on the conditions and circumstances of use.

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NP-F100(Ô Èİ±,±ÄÜÖfl)	130 (70)
NP-F200	170 (110)

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NP-F100 (Ô Èİ±,±ÄÜÖfl)	55 (45)	30 (25)
NP-F200	100 (85)	50 (45)

è È ÈÖÖÍ,ÄÖ,±ÈÈ ÜäÑ

Ä±Ú± ÂÈÍ°È ·ÍÓÍ	Ç Âİfl İÄ- Ö Ä°,ÍÓÈ Ä±ÖÈÖÈ**	Ç Âİfl ÜÈÖÈ~ÍÓÈ Ä±ÖÈÖÈ***	Ç Âİfl,ÓÖÖ Ö- ÈÄ,Ä%ÄÈÈÍ Ö Ö ÖÍ Ö°,· ÜäÑ
NP-F100 (Ô Èİ±,±ÄÜÖfl)	45 (40)	25 (20)	50 (45)
NP-F200	75 (70)	40 (35)	90 (80)

óÈÒÍ±, ÒÍÓ·Í± ÛÍ±Á°,± Ü ÍÓÍÈ~ÄÖÜ,Ó
ÈÈÜÜ, ÍÖ,%± Ç ÈÖÖÍ,ÄÜÄÜÄ ÍÓ Í±Í,ÍÓ
Á± flÈÄÍ°È ·±Ú± ÂÈÍ°È ·ÍÓÍ.
è È ÈÖÖÍ,ÄÖ,±ÈÈ È,È%ÖÈÖÍ±ÜÄÍfl È °Í ±Í±
ÜäÑ Ö ÓÍ ÖÍÜÈ° Á± fl%± ·±Ú± ÂÈÍÓ,Ó ·ÍÓÍ±
·Ä%ÄÜÍÖ Ö·Ä.
è È Ä±ÖÈÖÈ,ÍÓÍÖ%Í ÜÖÍÖ,Èfl Ö ÓÍ ÖÍÜÈ°
Ä± fl%± ·±Ú± ÂÈÍÓ,Ó ·ÍÓÍ± ·Ü%ÄÜÍÖ Ö·Ä.
** è È·ÈÄÈÜÄÍ,ÍÓÄ, Âİfl Ä±ÖÈÖÈ Ö È
ÍÓ Í±Í,ÍÓÈ ÜÄÖÍÄ ±ÜÜ Ä.
*** è È·ÈÄÈÜÄÍ,ÍÓÄ, Âİfl, ÈÈÜÜ±Í Ö È
Ä±ÖÈÖÈ Ö ÖÖ,ÜÖ Í°Í ±Í±ÍÖÍÖÖÜ±ÍÖ,ÓÍ
Ä±ÖÈÖÈ, ÄÈÈÍÖÍ,ÖÜÖ,ÍÖÖÜÈ,ÍÄÄ%ÖÍ
È,È%ÄÖÍ±ÍÄ ° È,ÍÍ ~ÄÈÄÍ/,°ÍÍ ~ÄÈÄÍ
ÖÈÜ±Èfl,Í±ÍÜÈ~ÄÖÍÈÈ Ö ÓÍ ÖÍÜÈ° Á± fl%±
·±Ú± ÂÈÍÓ,Ó ·ÍÓÍ± ÍÖÈÄÜ ·Ü, ÍÖ Ö·Ä.

è ÈÍÄ~±ÈÈ Í ÜÍ±Ä±ÈÈ. ÖÖÜ±,~Ä,ÖÖfl
,ÄÍÄÈÈ ±·ÖÜ° ·±Ú± ÂÈÍÓ,Ó ·ÍÓÍ±,Ö
,Âİfl Ä±ÖÈÖÈ.
éÖÜ±, ÄÄÖfl, Âİfl ±·ÖÜ° ·±Ú± ÂÈÍÓ,Ó ·ÍÓÍ±
ÖÜÖ ±È±ÄÜÖfl Í± °Í±Ä ÜäÑ ÈÈÈ,
È%ÖÈÖÍ±ÜÄÍÄ. èÍÖ ÍÖÈÄÜ İÄ ÖÜÖ ±È±Ü,Öfl
Ö ±ÈÍ,ÍÖ, Ä±ÈÖÍÖÖÜÈ ÖÜ ÜÖÍÖ,ÈÈ È
Ö·ÖÜÖflÜÄÍ,ÖÜ,ÈÖÖÍ,ÄÖ,±ÈÈ.

[illegible]

Charging and installing the battery pack

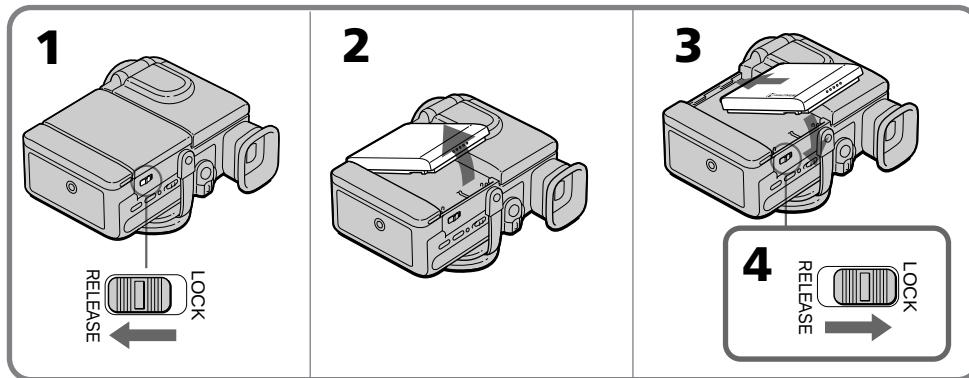
á± fl%Í± È ÛÒÚ±ÌÓ,Í±
·±Ú± ÂÈÌÓ,,Ó ·ÌÓÍ±

Installing the battery pack

ÌÒÚ±ÌÓ,Í± ·±Ú± ÂÈÌÓ,,Ó ·ÌÓÍ±

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

- (1) ÌÒÚ±ÌÓ,ÈÚÁ ÒÁ ÂÌ,~±ÚÁÌ, BATT LOCK/RELEASE, ÒÓÌÓÈÁÌÈÁ RELEASE.
- (2) ÈÌÈÈÚÁ Í °-ÌÚ ·±Ú± ÂÈÌ°Ì ÍÒÌÚ±ÌÚÓ,.
- (3) á±^ÂÒÈÚÁ Í,~È ·±Ú± ÂÈÌÓ,,Ó ·ÌÓÍ± Á± Á±Ì,±Ú°,È%ÂÓÍ±ÌÁ ° È ÛÒÚ±ÌÓ,ÈÚÁ ·±Ú± ÂÈÌ°È ·ÌÓÍ Í± ÍÁÓÚÓ.
- (4) ÌÒÚ±ÌÓ,ÈÚÁ ÒÁ ÂÌ,~±ÚÁÌ, BATT LOCK/RELEASE, ÒÓÌÓÈÁÌÈÁ LOCK.



To remove the battery pack

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

Note on battery terminal cover

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

Note on BATT LOCK/RELEASE switch

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

To prevent malfunction

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

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

ÑÌfl ÒÌflÚÈ ·±Ú± ÂÈÌÓ,,Ó ·ÌÓÍ±
ÈÌÁ%Úfl,~^ÁÓÓÈÒ±ÌÌÓÈ Ò Ó^Á%Ú Á,ÒÌÌÚÁ
3, ÒÌÈÈÚÁ ·±Ú± ÂÈÌ°È ·ÌÓÍ. È È ÒÌflÚÈÈ
·±Ú± ÂÈÌÓ,,Ó ·ÌÓÍ ·Ú%,ÚÁ ÓÓÚÓ ÓÈÌ°,~ÚÓ°
Á,ÓÌÁÚ ÒÌÈÚ,.

È ÈÌÁ~±ÌÈÁ Í Í °-ÌÁ ·±Ú± ÂÈÌ°Ì
ÌÓÌÚ±ÌÚÓ,
ÑÌfl Ò Á%ÓÌ ±ÌÁÌÈfl ·±Ú± ÂÈÌ°ÈÌ flÌÚ±ÌÚÓ,
ÛÒÚ±ÌÓ,ÈÚÁ Í °-ÌÚ ·±Ú± ÂÈÌ°Ì ÍÒÌÚ±ÌÚÓ,
ÒÓÓÌÁ ÒÌflÚÈfl ·±Ú± ÂÈÌÓ,,Ó ·ÌÓÍ±.

È ÈÌÁ~±ÌÈÁ Í ÒÁ ÂÌ,~±ÚÁÌ, BATT
LOCK/RELEASE
Ì-Á%ÈÚÁÒ,,~ÚÓ ÒÁ ÂÌ,~±ÚÁÌ, BATT LOCK/
RELEASE Í±ÌÓ%ÈÚÓfl, ÒÓÌÓÈÁÌÈÁ LOCK,
ÌÓ,,%± ÛÒÚ±ÌÓ,ÌÁÌ ·±Ú± ÂÈÌ°È ·ÌÓÍ. Ç
Ò ÓÚÈ,ÌÓÌ ÒÌÚ~±Á ÒÌÌÓÈÁÚ,Ò±ÓÚ,,ÍÓ,,%±
Ç° ·Ú%ÁÚÁ ÈÓÓÓÌ,ÁÓ,±Ú,È%ÂÓÍ±ÌÁ Û.

ÑÌfl Ò Á%ÓÚ, ±^ÁÌÈfl ÌÁÈÒÒ ±ÌÌÓÚÈ
Ç ÒÌÁ%Ú,ÈÌ ÒÌÚ~±fl,ÒÒÁ,± Û-Á%ÈÚÁÒ,,~ÚÓ
°Ì,~±ÚÁÌ, POWER ÛÒÚ±ÌÓ,ÌÁÌ,
ÒÓÌÓÈÁÌÈÁ OFF.
• ÌÒÚ±ÌÓ,Í± È Á±ÌÁÌ± ·±Ú± ÂÈÌÓ,,Ó ·ÌÓÍ±.
• ÇÓÚ±,Í± È °Ú±ÌÈÈ,±ÌÈÁ Í±ÓÓÁÚ°.

Inserting a cassette

ÇÒÚ±,Í± Í±ÒÒÂÚ°

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

Make sure that the power source is installed.

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

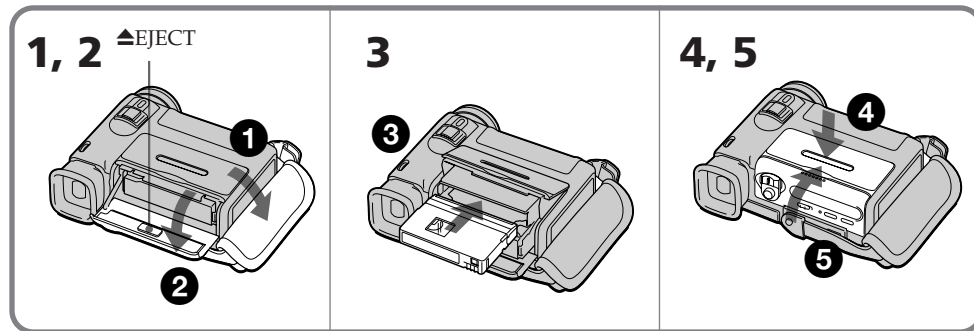
* **Mini DV** is a trademark.

Ç° ÍÓÊÂÚÂ ÈÒÒÓÍ,ÁÓ,±Ú, ÚÓÍ,ÍÓ Í±ÒÒÂÚÚ mini DV, co Áíáíóí **Mini DV** logo*.

Ì·Â%ÈÚÂÒ, ~ÚÓ ÈÒÚÓ~ÍÊÍ ÒÊÚ±ÍÊÍ ÒÒÚ±ÍÓ,ÍÂÍ.

- (1) Ê±ÒÒÓÍÓÊÊÚÂ ÂÍÂÍÍÓÊÂ±,±Ú, ÒÚÓ ÒíÂ ÒÚ Í°~ÍÊ Í±ÒÒÂÚÚÓ,Ó ÒÚÒÂÍ±,Ó ÊÁ·ÂÊ±ÍÊÂ ÒÓ, ÂÊ%ÂÍÊÍ Í°~ÍÊ.
- (2) ÊÚÍ ÓÊÚÂ Í°~ÍÚ Í±ÒÒÂÚÚÓ,Ó ÒÚÒÂÍ±. Ç±ÊÍÊÚÂ **EJECT** ,ÍÚÚ Ê Í°~ÍÊ. Â±ÒÒÂÚÚ°È ÒÚÒÂÍ±,ÚÓÍ±ÚÊ~ÂÓÍÊ ÒÓ%ÍÊÍ±ÂÚÒÍÊ ÒÚÍ°,±ÂÚÒÍ.
- (3) ÇÒÚ±,ÚÂ Í±ÒÒÂÚÚ ÒÍÓ~ÍÓÍ, Ó· ±~ÂÍ~Í Í±ÚÊÚ.
- (4) Ç±ÊÍÊÚÂ Í±ÒÒÂÚÚ°È ÒÚÒÂÍ. Â±ÒÒÂÚÚ°È ÒÚÒÂÍ±,ÚÓÍ±ÚÊ~ÂÓÍÊ,ÚÍ,Ê,±ÂÚÒÍ,ÍÊÁ.
- (5) Â±Í ÓÊÚÂ Í°~ÍÚ, ÒÓÍ± ÒÍ± ÍÂ Á±~ÂÍÍÂÚÒÍ.

* **Mini DV** fl,ÍÍÍÂÚÒÍ ÒÓ,± Í°Í ÂÍ±ÍÓÍ.



Note

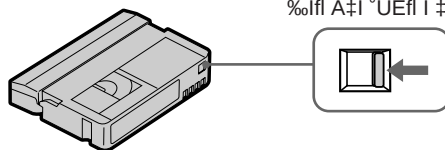
Before you close the lid of the cassette compartment, make sure the cassette compartment is completely pulled down.

To eject the cassette

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

To Prevent Accidental Erasure

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



È ÊÍÂ~±ÍÊÂ

ÈÂ Â% ÚÂÍ Í±Í Á±Í°Ú, Í°~ÍÚ Í±ÒÒÂÚÚÓ,Ó ÒÚÒÂÍ±Ú·Â%ÈÚÂÒ, ~ÚÓÍ±ÒÒÂÚÚ°È ÒÚÒÂÍ ÒÓÍÍÓÒÚ, ~ÚÍÍÚÚ,ÍÊÁ.

ÑÍÍ, °Ú±ÍÊ,±ÍÊÍ Í±ÒÒÂÚ°

ÊÍÂ%ÚÍ, ~ÂÓÒÈÒ~ÍÍÓÊ Ò Ó·Â%Ú Â, ÒÚÍÍÚÂ 3,Ú%±ÍÊÚÂÍ±ÒÒÂÚÚ.

ÑÍÍ Ò Â%ÓÚ, ±~ÂÍÊÍ ÒÍÚ~±ÈÍÓ,Ó ÒÚÊ ±ÍÊÍ

Ê%,ÊÍ,ÚÂÈÓÚÍ ÓÊÚÂÍÂÒÂÒÚÓÍ±Í±ÒÒÂÚÂ, ~ÚÓ··~ÍÓ,Ê%ÍÓ Í±ÒÍÚ,ÍÂÚÍÚ. ÒÒÍÊ Ç° ÒÓÒ°Ú±ÂÚÂÒ,°ÒÓÍÊÚ,Â±ÒÈÒ,Ó Ê,Ê%ÊÍÓÊ Í±ÒÍÓÊ ÍÂÚÍÂ,ÚÓ ÊÍ%ÊÍ±ÚÓ° ·Ú%ÚÚ ÍÊ,±Ú, Í±~Í±ÍÂ ÚÂÑ ÊÍÊ,Ê%ÓÊÓÍ±ÚÂÍÂ,Ê Ç°ÍÂ ÒÍÓÊÂÚÂ Ò ÓÊÁ,ÂÒÚÊÂ±ÒÈÒ,Í±~ÚÚ ÍÂÍÚÚ. ÑÍÍ,°ÒÓÍÂÍÊÍ ÍÓ,ÓÊ Â±ÒÈÒÊ Í±Ú±ÍÚ,ÍÂÍÚÚ Ò%,ÊÍ,ÚÂÈÁ±Í ÓÊÚÂÍÂÒÂÒÚÓÍ %ÍÍ Á±Í°ÚÊÍ Í±ÒÍÓÊ ÍÂÚÍÊ.

Basic operations

Camera recording

Make sure that the power source is installed and a cassette is inserted. When you use the camcorder for the first time, turn it on and reset the date and time to your local date and time before you start recording (p. 58).

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

(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) Slide START/STOP MODE to 2.

(4) 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.

Do not press START/STOP too strongly; if you do, the switching tone will be recorded.

éòìó,ì°À ÓÔÀ ±ÊË

á±ÔËÒ ò ôóíó~
,Ë%ÔÓí±ÌÀ °

ì.À%ËÚÀÒ,~ÚÓ ÈÒÚÓíÊí ÒËÚ±ÌÈí ÙÒÚ±ÌÓ,ÌÀì È Í±ÔÔÁÚ±,ÒÚ±,ÌÀì±. ÓÔíË Ç° ÈÒÔÓí,ÁÚÁÚÁ ,Ë%ÔÓí±ÌÀ Ù, ÔÀ,°È ±Á, ÚÓ,Ìì,~ËÚÁ ÁÁ È ÙÒÚ±ÌÓ,ËÚÁÌÀÒÚí°À%±ÚÚË, ÁìíÒÁ Á% Ì±±ÍÓíÁ±ÔËÒË (ÒÚ .58).

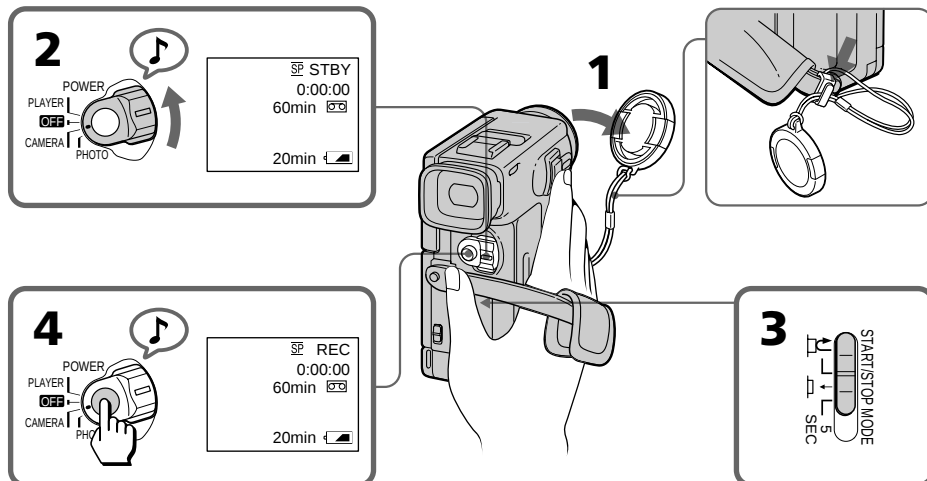
èÀ Á% ÚÁì Í±í Ç° Ì±ÌÁÚÁ Á±ÔËÒ, Ó%ÌÓ ±ÁÓ,°ì ÒÓ.~ÚËË, Ç° ÍÓËÁÚÁ Á±ÓÚÁÚ, Ò%Áì±Ú,Ò Ó-ÌÚ,Á±ÔËÒ,%ìíÒÓ%Ú,Á È%Ô-ÌËí,~ÚÓ,Ë%ÔÓí±ÌÀ ± ±.ÚÚ±ÁÚ Ò ±.Ëí,ÌÓ.

(1)èìËËÚÁ Í°~ÍÚ Ó·ÁìÚË,± È Á±^ÔËÚÁ ÁÁ Á± ÁìÀìÒË Á±,±Ú.

(2)Ç±ËËí±í Ì±ÌÀì,ÌÚ, ÁÁÌÀìÚ, ÌÒÓÍÚ Ì±,°Ìì,~±ÚÁÌÀ POWER, ÙÒÚ±ÌÓ,ËÚÁ Á,,Ó, ÓÓíÓËÀÈÁCAMERA.ÇË%ÔÓí±ÌÀ ±.Ú%ÁÚ ÙÒÚ±ÌÓ,ÌÀì± Ì± ÁËËí,ÓÚÓ,ÌÓÒÚË.

(3)èÀ Á%,Ëí,ÚÁ START/STOP MODE , ÓÓíÓËÀÈÁ 2.

(4)Ç±ËËÚÁ START/STOP. ÇË%ÔÓí±ÌÀ Ì±±Ëí±ÁÚÁ±ÔËÒ, àì%Ëí±ÚÓ "REC" ÓÓí,ÌíÁÚÒí, Ë%ÔËÒí±ÚÁÌÀ. ã±ÍÓÓí±Á±ÔËÒË,Ë%ÔÓí±ÌÀ ÒËÒÔÁ Á%Ë,Ë%ÔÓí±ÌÀ ° Ú±ÌËÁ.Ú%ÁÚ,Ó ÁÚ, ÇÁ Ì±ËËí±ËÚÁ ÌÒÓÍÚ START/STOP ÓíË~ÍÓí ÒËí,ÌÓ; ÒÓÚÓÍÚ ~ÚÓ, ÁÒíË Ç° Ú±í Ò%ÔÁì±ÁÚÁ, Á,Úí,Ìì,~ÁìËí.Ú%ÁÚ Á±ÔËÒ±ì.



To stop recording momentarily [a]

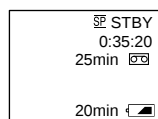
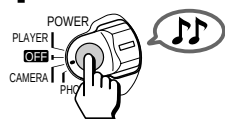
Press START/STOP. The "STBY" indicator appears in the viewfinder (Standby mode).

Ñííí, ÁìÀìÒË ÒÒÚ±ÌÓ,ÌÈ Á±ÔËÒË [a] Ç±ËËÚÁ START/STOP. àì%Ëí±ÚÓ "STBY" ÓÓí,ÌíÁÚÒí, Ë%ÔËÒí±ÚÁÌÀ (ÁËËí,ÓÚÓ,ÌÓÒÚË).

To finish recording [b]

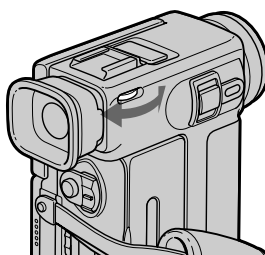
Press START/STOP again to stop recording. Set the POWER switch to OFF. Then, eject the cassette and remove the battery pack.

[a]



To focus the viewfinder lens

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



Note on Standby mode

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

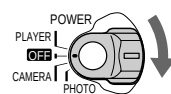
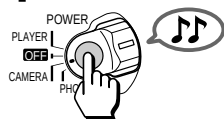
Note on recording mode

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

Νῆπι ὀρίοι~ἰἔφι Ἀ+ὈἔὈἔ [b]

ç±ÉİËÜÄ START/STOP òìò,± %òîfi òòú±ìò,İË Ä±ÖÈÖÈ. ìòú±ìò,ËúÄ, °îî~±úÄî, POWER, òòìòÉÄİËÄ OFF. á±úÄî, °úòîîËúÄ ì±òòÄúÜ È Ù%ò±İËÜÄ ±ú± ÄÈì°È ·ìóí.

[b]



Νῆπι ÙòíÙòÈ ò,İË ò·ÄíÜË,±

,Ë%òÉòì±úÄîfi
òòİÈ Ç° İÄ İÖÉÄÜÄ ~Äúíò,Ë%ÄÜ,
Èì%Èİ±úò °,Ë%òÉòì±úÄİÄ ÈİÈ òòòİÄ úò,ò,
İ±íúò-úò% Ù,òÈÈòòí,Áò,İî,Ë%Äòí±İÄ Ù,
°òòİËÜÄ ÙòíÙòÈ ò,İÜ ò·ÄíÜË,±
,Ë%òÉòì±úÄîfi.èò,Ä İËÜÄ%Èòí Ä,ÜİÈ ò,İË
ò·ÄíÜË,±,Ë%òÉòì±úÄîfi, Ù±í, ~úò°
Èì%Èİ±úò °,Ë%òÉòì±úÄİÄ ·İÈ ~Äúíò
òòòíÙòÈ ò,İî.

è ÈİÄ~±İËÄ í ÄÈÈİÜ „òúò,ìòòÜÈ
òòİÈ Ç° òòú±,İfiÄÜÄ,Ë%Äòí±İÄ Ù, ÄÈÈİÄ
„òúò,ìòòÜÈ ì± 5 İÈİÜÜ ò È,òú±,İÄİòÈ
İ±òòÄÜÄ,Ë%Äòí±İÄ ±, °îî~ËÜòfi
±,úòí±ÜËÄòİË.ùúòò Ä%òú,±~ÄÜ ±òìò%
Ä± fi%± ±ú± ÄÈìò,ò ·ìóí± È ÈÄìòò İÄíÜ°.
Νῆπι,òòòú±ìò,İÄİËfi ÄÈÈİ± „òúò,ìòòÜÈ,
İ±ÈÈİ±fi İ±İÄì,íÜ, ÄÄİÄìÜ, İìòòíÜ ì±
, °îî~±úÄİÄ POWER, òòÄ,± Ùòú±ìò,ËúÄ
Ä,ò, òòìòÉÄİËÄ OFF, ± Ä±úÄî, òòìòÉÄİËÄ
CAMERA. Νῆπι ì±~İ± Ä±ÖÈÖÈ ì±ÈİËÜÄ
START/STOP.

è ÈİÄ~±İËÄ í ÄÈÈİÜ Ä±ÖÈÖÈ
Ν±İ±fi,Ë%Äòí±İÄ ± İÖÉÄÜ Ä±ÖÈ°,±ú, È
,òòò òÉÄ,ò%ÈÜ, ÄÈÈİÄSP(òú±İ%± Ùìò,ò
,òòò òÉÄ,Ä%ÄİËfi) È, ÄÈÈİÄ
LP(Ù%İËİÄİìò,ò,òòò òÉÄ,Ä%ÄİËfi).Ç° Ä ÈÜÄ
SP ÈİÈ LP, òÈòúÄİÄ İÄì.

Camera recording

á±ÖËÒ Ò ÖÓÍÖ[~],
Ë%ÄÓÍ±IA°

Notes on LP mode

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

Notes on the time code

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

Note on connecting an external microphone

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

Note on the beep sound

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

Note on remaining tape indicator

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

è ÈIÄ~±IEfl í ÄÈÈIU LP

- ä° ÄIOIÄI%UÄI ÈÖÖÖI, ÄÓ, ±U %±IÜ, Ë%ÄÓÍ±IA Ü %fl, ÖÖÖ ÖÉÄ, Ä%ÄIEfl IÄIU°, Ä±ÖËÒ±IÖÈ Ì± %±IÖÈ, Ë%ÄÓÍ±IA Ä. ÖÖIE IÄIU±, Ä±ÖËÒ±Ifl Ì± % Ü, ÖÈ, Ë%ÄÓÍ±IA Ä, Ü%ÄU, ÖÖÖ ÖÉÄ, Ö%ÈU, Öfl±%±IÖÈ, Ë%ÄÓÍ±IA ÄÈÈÈ±Ö. Ö ÖU, UÖIÖÉÄU, ÖÖfl, ÈU, Öfl IÖÄ±È±fl Ä ÄUI± ÖÖIÄI.
- ÖÖIE Ç° Ä±ÖËÒ°, ±ÄUÄ, ÄÈÈÈI LP È SP Ì± Ö%IÜ È ÜÜ ÉÄ IÄIUÜ ÈIE ÄÖIE Ç° Ä±ÖËÒ°, ±ÄUÄ IÄIOÜ °Ä ÖÄI°, ÄÈÈIÄ LP, ÜÖ, ÖÖÖ ÖÉÄ, Ö%ÈIOÄÉÄÖ, ±ÈÄIÉÄ IÖÉÄU, °Ü, ÈOI±ÈÄIO ÈIE, ÄIÄIÖÈ IÖ% IÖÉÄU, °Ü, Ä±ÖËÒ±I IÄÖ ±, ÈI, IÖ IÄÈ%Ü ÖÄI±IE.
- ä° ÄIOIÄI%UÄI ÈÖÖÖI, ÄÓ, ±U, Ì±ÖÖÄUÜ Sony ME.
- àÖÖÖI ÄÜÈUÄ ÄÈÈI SP %fl IÄIU, Ì± IOÜÖ °Ä Ü%ÄU, °ÖÖIfl Ü Öfl ±Ü%ÈÖ%Ü ÈÈ Ö, ±IEÄ, Ç° IÄ IOIÉÄUÄ, °ÖÖIÈU, ±Ü%ÈÖ%Ü ÈÈ Ö, ±IEÄ Ì± IÄIUÜ, Ä±ÖËÒ±IÜ, ÄÈÈIÄ LP.

è ÈIÄ~±IEfl í, ÄIÄIÖIÜ IÖ%Ü

- Ç° ÄIÄIÖÈ IÖ% ÜI±Ä°, ±ÄU, Äfl Ä±ÖËÒÈ ÈIE, ÖÖÖ ÖÉÄ, Ä%ÄIEfl ÖÖÖ ÈIÈÖÜ "0:00:00" (Ç° : IÈIUÜ° : ÖÄIUÜ%), ÄÈÈIÄ CAMERA, È ÖÖ Ö ÈIÈÖÜ "0:00:00:00" (Ç° : IÈIUÜ° : ÖÄIUÜ% : I±%), ÄÈÈIÄ PLAYER.
- ÄÜ% UÄ, IÈI±UÄI, °Ü, °Ü IÄ ÖÖIUÈÈIÖÖ, IÄÄ±ÖËÒ±IÖÈ ±ÖÜÈ Ö ÈÄ±ÖËÒÈ, Üfl±I, ÄIÄIÖÈ IÖ% ÖIÖ, Ì± IÄU ÖÜÖÄU Ö "0:00:00:00". Ç° IÄ IÖÉÄUÄ ÖÄ ÄÄ±ÖËÒ±U, ÄIÄIÖÈ IÖ% Ì± IÄIUÄ, ÄÖIE Ì± IÄÈ ÖÜÄÜÜ, Ü, IÄÄ±ÖËÒ±IÄ Ä ±ÖÜÈ IÄÈ%Ü ÉÄÖ, ±ÈÄIÈIE.

è ÈIÄ~±IEÄ í ÖÖ%ÖÖÄ%ÈIÄIE, IÄ~IÄ, Ö IÈI ÖÜÖI±

Ç° IÖÉÄUÄ Ä±ÖËÒ°, ±U, Ä, ÜIÖ, ÖÄ ÖÖÖ Ö, ÖÈ%ÄIÉÄ ÖÜÜÄI ÖÖ%fl, ÄIÈfl ±%±ÖUÄ ± VMC-LM7 (IÄ Ö ÈI±, ±ÄÜÖfl) È IÄ~IÄ, Ö IÈI ÖÜÖI±. èÖ%ÖÖÄ%ÈIÈUÄIÈI ÖÜÖI, IÄÄ%ÜMIC±±%ÖUÄ Ä VMC-LM7, èpÈ ÄaÖEcÈ Ä ÄÄ, IÄ~IÈÈ IÈI ÖÜÖI, ÖÜ ÖÄIÈÈ IÈI ÖÜÖI, Ë%ÄÓÍ±IA ° IÄ ±. ÖÜ±ÄU.

è ÈIÄ~±IEÄ í ÄÜIÄ IÖIU Ä, ÜIÖ, ÖIU ÖÈ, I±IU ä±I ÜI±ÄIÖ Ì± ÈÖÜI±I Ö ÖÖIO[~], , Ö%ÈI ÄÜIÄ IÈÈ ÖÈ, I±I Ä, ÜÈÜ, IÖ, %± Ç° , IÄ, ±ÄUÄ ÖÈU±IEÄ ÈIE Ì± ÈI±ÄUÄ Ä±ÖËÒ°, È %± ÄÜIÄ I° ÖÈ, I±I Ä, ÜÈÜ, IÖ, %± Ç° ÖÖÜ±I±, IÈ, ±ÄUÄ Ä±ÖËÒ°, ÖÖ%ÜÄ È%±fl ÜÄIÖ±I ±. ÖÜÜ, ÇÄÖIÖ, IÖ ÄÜIÄ I°, ÖÈ, I±IÖ, Ü±IEÄ Ü%ÄU Ä, ÜÈÜ, Ì± ÄÖUÄ Ö Ä%ÜÖ ÄÈ%ÄIÈfl Ì±IÖ, ÖÈ, IÈ, Ü%Ä, IÄÖ, °IÖ, Ö ÖÖÖÜÖfl Èfl, Ë%ÄÓÍ±IA °. ä±IÄU ÜÄ, °ÜÖ ÄÜIÄ IÈÈ ÖÈ, I±I IÄ Ä±ÖËÒ°, ±ÄÜÖfl Ì± IÄIUÜ, ÖÖIE Ç° IÄ IÖÜÈUÄ ÖIU±U, ÄÜIÄ IÈÈ ÖÈ, I±I, ÜÖ, °Ä ÈUÄ "OFF", ÖÈÖUÄIÄ IÄI.

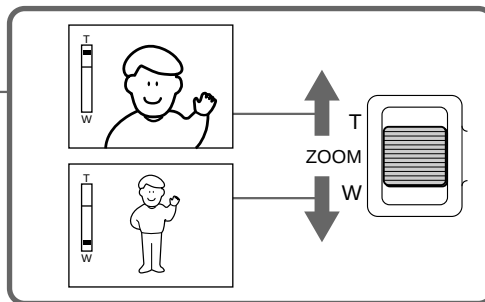
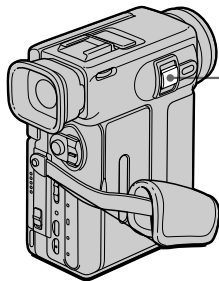
è ÈIÄ~±IEÄ í ÈI%ÈI±UÖ Ü ÖÖÜ±, ÄÈÖfl IÄIU° àI%ÈI±UÖ IÖÉÄU ÖÜÖ. ±È±U, Öfl IÄ UÖIÖ, Ä±ÈÖÈIÖÜÈ ÖÜ IÄIU°. NÈÄÄÄÖIE ÈI%ÈI±UÖ IÄ ÖÖfl, ÈUÖfl, Ö, Äfl Ì±±I± Ä±ÖËÒÈ, ÖI ÖÖfl, ÈUÖfl Ì± IÄÖIÖI, IÖ ÖÄIUÜ% ÖÖÄÉÄ.

Using the zoom feature

Zooming is a recording technique that lets you change the size of the subject in the scene. For more professional-looking recordings, use the zoom function sparingly.

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

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



Zooming speed (Variable speed zooming)

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

When you shoot a subject using a telephoto zoom

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

àÒÒÓÎ.ÁÓ.†ÌÊÂ ÙÙÌÍˆÊÊ Ì†ÁÁ% ‡
,Ê%ÂÓÍ†ÌÁ °

ç†ÁÁ% ,Ê%ÂÓÍ†ÌÁ ° Ì,ÌÍÁÚÒÍ ÙÁÌÌÊˆÂÒÌÊÌ
Ô ÊÁÌÓÌÁ†ÔÊÒÊ,ÍÓÚÓ °Ê ÔÓÁ,ÓÍÍÁÚ Ç†
ÊÁÌÍÁÚ, ‡ÁÌÁ Ôˆ ÁÌÚ† , Ì†% Â. ÑÌÍ .ÓÌÁÁ
Ô ÓÚÁÔÒÊÒÌ†Í,ÍÓ,Ô,Ê%†Á†ÔÊÒÁÊÙÌÁ ÀÌÓ
ÊÒÒÓÌ,ÁÙÊÚÁ ÙÙÌÍˆÊ Ì†ÁÁ% ‡,Ê%ÂÓÍ†ÌÁ °.
eÚÓ ÓÌ† “ Í”: %ÍÍ ÁÁÌÁÚÓÚÓ (Ôˆ ÁÌÚ
Ô ÊˆÊÊ†ÁÚÒÍ)
eÚÓ ÓÌ† “ W”: %ÍÍ Ê ÓÍÓ,Ó Ù,Ì† Ôˆ ÁÌÍÊ
(Ôˆ ÁÌÚ Ù%†ÍÍÁÚÍ)

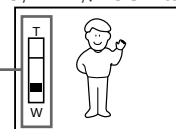
ëÍÓ ÓÓÚ, Ì†ÁÁ% ‡,Ê%ÂÓÍ†ÌÁ ° (Ì†ÁÁ%
Ò ‡ÁÌÊˆÌÔÊ ÓÍÓ ÓÓÚ,)
èÂ Á%,ÊÌ,ÚÁ °†, Ô Ê,Ó%ÍÓ,Ô
Ú ‡ÌÓÚÓ†ÚÓ ‡ ÍÁÌÍÓ,Ô %ÍÍ Ô ‡,ÊÙÁÌ,ÍÓ
ÌÁ%ÌÁÌÍÓ,Ô Ì†ÁÁ% ‡,Ê%ÂÓÍ†ÌÁ °;
ÔÂ Á%,ÊÌ,ÚÁ Á,Ô Áˆ Á%†Í, ˆ Á%ÍÍ Ì†ÁÁ% ‡ Ì†
°ÓÍÍÊÒÍÓ ÓÓÚÊ.ëÍÓ ÓÓÚ, Ì†ÁÁ% ‡,ÍÓ,% ‡
,Ê%ÂÓÍ†ÌÁ ‡ Ì†ÍÓÊÙÓÍ, ÁÊÊÌÁ
,ÓÚÓ,ÍÓÚÊ, Ù%ÁÚˆÓÚ ÁÁ,ˆÁÌÍÓ ÓÓÚ,
Ì†ÁÁ% ‡, ÁÊÊÌÁ†ÔÊÒÊ,ˆÓ%†ÁÚ
,ÓÁÌÊÊÌÓÚ, .ÓÌÁÁ ÌÁ,ÍÔÊ ÍÓÍÓÍÓ,ÍÊ ÔˆÁÌ.

äÓ,% ‡ Ç° ÒÌÊ†ÁÚÁ Ôˆ ÁÌÚ, ÊÒÒÓÌ,ÁÙÍ
Ì†ÁÁ% , ÁÊÊÌÁ ÁÁÌÁÚÓÚÓ
ÒÒÌÊ Ç° ÌÁ ÍÔÊÁÚÁ ÓÓÍˆÊÚ, ˆÁÚÍÔÊ
ÚÓÍÚÔÊ Ó,ÍÊ, Ô , ÁÍÍ Í ‡ÊÌÁ,Ô Ì†ÁÁ% ‡ ,
ÁÊÊÌÁÁÁÌÁÚÓÚÓ,ÔÂ ÁÌÁˆÊÚÁ
ÔÂ ÁÌ,ˆÁÚÁ, Ô Ê,Ó%ÍÓ,Ô Ù ‡ÌÓÚÓ†ÚÓ ‡ ,
ÒÚÓ ÓÍÚˆW%ÓÚÁÔÓ,ÔÓÍ†Ç° ÌÁÓÓÍˆÊÚÁ
ˆÁÚÍÔÊ ÚÓÍÚÔÊ Ó,ÍÊ. Ç° ÍÔÊÁÚÁ ÒÌÊ†Ú,
Ôˆ ÁÌÚ, ÍÓÚÓ °Ê ÔÓ ÌÁÌ,ˆÁÊ ÌÁ Á Ì† 80 ÒÌ
Ù%†ÍÁÌ ÓÚ ÓÓ,Á ÌÍÓÚÊ Óˆ ÁÌÚÊ,† ,
ÒÓÍÔÊÁÌÊÊ ÁÁÌÁÚÓÚÓ,ÊÊÊ Ù%†ÍÁÌ
Ô ÊˆÊÊÁÁÌ,ÍÓ Ì† 1 ÒÌ, ÓÓÍÔÊÁÌÊÊ
ˆÊ ÓÍÓ,Ó Ù,Ì†.

á±ÔËÒ ò ÔÓİÓ˘
 ,Ë%ÂÁÓİ±İÂ°

è ÈÏÂ~±ÌËfl Í ^ËÙ Ó,ÓÏÛ Ú ±ìòùóí±úó Û

- [illegible]



ë` Âİİ‡ Ò ÈÒÔÓÎ,ÁÓ,‡İËÂİ
"Í ‡İ‡ ÜäÑ

C' IOEÁUÁÚ±IEÂ ÔÉÄ,Ô%ÉÜ, Á±ÖÈÒ,
ÉÄÖ ±ÊÄIÊñ, „ññ%ñ ì± ´¹±ì ÜäÑ.
è È ÊÖÖÖÍ, ÄÖ,±IEÉ ´¹±ì ÜäÑ ´¹±ì
„È%ÖÖÖÖÍ±ÜÄñ, „ñ´±ÄÜÖñ,´ÜÖÖ±ÜÉ~ÄÖIE.
Ç´ IÄ IOEÄÜÄ ÖI~±Ü, Ä,ÜI ÖÜ
„ÖIIÖ Ç ÖÜ ÉÜÄñ Ö. Äñ Á±ÖÈÖÈ

- (1) éÚÍ ÓÈÚÂ Ô±ÎÂÎ, ÜäÑ.
(2) éÚ Â..ÛÎË ÛÈÚÂ Û..ÓÎ Ô±ÎÂÎË ÜäÑ.

- (2) éÚ Â,ÛÛË ÛÈÚÂ Û,ÓÎ Ô±ÎÂË ÛäÑ.

- è±àÎÂÎ, ÜäÑ ÔÂ ÂÏÂ~±ÂÚÒfl Ô Ë·ËÄ

[illegible]

Ñîfl Â„ÛîË Ó,ÍË fl ÍÓÒÚË ´Í ±ì± ÜäÑ

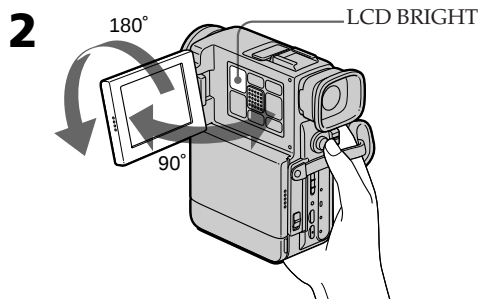
ÌÊËÜÂ LCD BRIGHT.

ěŮŌ ŌŮŮ +:9
"Í +è+ ŮäÑ

1 #1# UaN
 eUÓ ÒÌÛ - Ñîfi ÔÓÎÛ~ÀìËfi ·ÓîÂÂ ÚÛÒÍÍÓ„Ó
 1 #1# ÜäÑ

ě ÓÍ ÒÎÛË.° Á± f

àÒÒÔÎ ÂÛÈÛÂ ËÖÈÒÎÛÂÎ ÌÀÒÙÓ ÑÎÎ ÛÂÑ ÌÍÎ ÑÓÍÓÎËË Á ÎÎÎ ÛÎ ÆÈÒÓÓ ÌÓÎ.



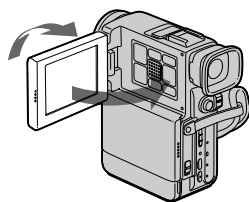
To let the subject monitor the shot

Turn the LCD panel 180 degrees (p. 32).

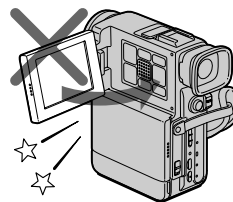
Notes on the LCD panel

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

[a]



[b]



óÚÓ.° %±Ú, ,ÓÁİÓÈİÓÓÚ, ÒÈİ±ÁİÓİÜ
~ÁİÖ,ÁİÜ İ±.İ %±Ú, Ö.ÁİİÜ
èÓ.Â İÈÚÂ Ö±İÂİ, ÜâÑ İ± 180 „ ±%ÜÖÓ, (ÒÚ .
32)

è ÈİÂ~İÈİ İ Ö±İÂİÈ ÜâÑ

• è È Á±İ °,İÈÈ Ö±İÂİÈ ÜâÑ

ÔÓ,Ó ±È,±ÈÚÂÂÂ,Â ÚÈİ±İ,İÓ%ÓÚÂİ ÔÓ ,
ÔÓİ± Ôİ± İÂ Á±~ÁİİİÂÚÖİİ **[a]**.

• è È , ±~ÁİÈÈ Ö±İÂİÈ ÜâÑ %„È„±ÈÚÂ ÂÂ
,ÔÂ„%±,Â ÚÈİ±İ,İÓ; ÈİÈ , Ô ÓÚÈ,İÓİ
ÒİÜ~±Â İÓ ÓÚÖ,È%ÂÓİ±İÂ ° İÓÈÂÚ. °Ú,
ÔÓ, ÂÈ%Âİ ÈİÈ Ö±İÂİ, ÜâÑ İÓÈÂÚ. °Ú,
Á±İ °Ú± İÂÖ ±,Èİ İÓ **[b]**.

• èÓİİÓÓÚ, Á±İ ÓÈÚÂ Ö±İÂİ, ÜâÑ, İÓ„%±
Ôİ±İÂÈÖÓÓİ,ÁÚÂÚÖİİ.

• ÇÂİ±ÈÈİ±ÈÚÂ È İÂ Ú Ó„±ÈÚÂ ÜâÑ Ô È
ÔÂ ÂİÂ~ÂİÈÈ Ö±İÂİÈ ÜâÑ.

• Ç~İÓÈÂÚÂÓÚÓİİÜÜ,ÒİÖ Ú Ü%İÓÖÚİİÈ Ô È
Ô ÓÖİÓÚ Â İ±.Í İÂ ÜâÑ ÈÂ-Â± ÓÚ.İÂÖİ±
Ô È ÈÖÖÓİ,ÂÓ,İÈÈ,È%ÂÓİ±İÂ ° İ± ÜİÈ~Â.

Camera recording

á±ÔËÒ Ò ÔÓÍÓ~
,Ë%ÔÓÍ±ÏÄ

Selecting the start/stop mode

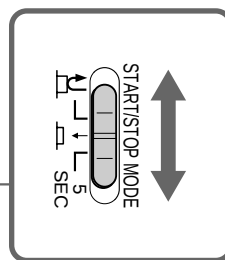
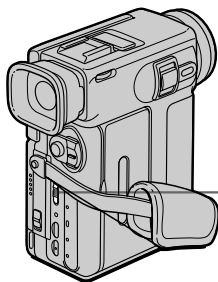
- ⏻ : When you press START/STOP, the camcorder starts recording. When you press the button again, the camcorder stops recording. (factory setting)
- ⏻ : As long as you keep pressing START/STOP, the camcorder records. When you release the button, the camcorder stops recording.
- 5SEC**: When you press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

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

Ç°·Ó ÂÊË± Á±ÔÙÒÍ±/ÓÓÙ±ÌÓ,±

- ⏻ : äÓ,± Ç° Ì±ÊË±ÄÚÂ START/STOP, Ë%ÔÓÍ±ÏÄ ± Ì±Ê±ÄÚ Á±ÔËÒ, äÓ,± Ç° Ì±ÊË±ÄÚÂ ÒÙ ÌÓÓÍÙ ÓÒÍÙ, Ë%ÔÓÍ±ÏÄ ± ÓÓÙ±Ì±,ÏÊ,±ÄÚ Á±ÔËÒ, (á±,Ó%ÔÍ±Í ÒÓÙ±ÌÓ,Í±)
- ⏻ : èÓÍ± Ç° %Ä ÊËÚÂ START/STOP, Ì±Ê±ÚÓÍÓÓÓÙÓÍÏÊ, Ë%ÔÓÍ±ÏÄ ± °ÓÓÍ±ÄÚ Á±ÔËÒ, äÓ,± Ç° ÓÓÙÓÓÍ±ÄÚÂ ÌÓÓÍÙ, Ë%ÔÓÍ±ÏÄ ± ÓÓÙ±Ì±,ÏÊ,±ÄÚ Á±ÔËÒ.
- 5SEC**: äÓ,± Ç° Ì±ÊË±ÄÚÂ START/STOP, Ë%ÔÓÍ±ÏÄ ± Ô ÓËÄ,Ó%ËÚÂ±ÔËÒ, ÚÂ±ÏÊÄ5 ÓÄÍÙÍ%Ë ÓÓÙ±Ì±,ÏÊ,±ÄÚÒÍ. (ÒÙ . 33)

ÒÒÍË Ç° ,°Ë ±ÄÚÂ ⏻ ÊÏÊ 5SEC, Ç° ÌÂ ÒÍÓËÄÚÂ ÊÒÒÓÍ,ÁÓ,±Ú, ÒÙÍÏÊ, „Ä%ÄÏÊÍ/°,Ä%ÄÏÊÍ ÊÁÓ· ±ÊÄÏÊÍ.
äÓ,± Ç° ,°Ë ±ÄÚÂ 5SEC ÊÍ%ÊÍ±ÚÓ ÓÓÙ±, ÆËÒÍ ÌÄÍÙ° ÓÓÙ· ±Ê±Ú,ÒÍ ÌÂ ·Ú%ÄÚ.



To attach an accessory

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

ÑÍÍ Ô ÊÍ ÂÔÂÏÊÍ

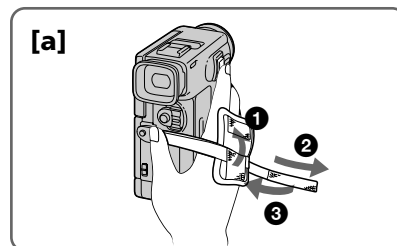
%ÓÓÓÓÍËÚÂÍ,ÌÓ,Ó Ó·Ó Ò%Ó,±ÏÊÍ

è ÊÍ ÂÔËÚÂ%ÓÓÓÓÍËÚÂÍ,ÌÓÁÓ·Ó Ò%Ó,±ÏÊÄ (ÌÂ Ô ÊÍ±,±ÄÚÒÍ) Í ,°Ó%Ú %ÍÍ, ÓÓÓÍÓ,±ÚÂÍ,ÌÓ,ÓÓ·Ó Ò%Ó,±ÏÊÍ.

Hints for better shooting

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

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



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



ẽÓ,ÂÚ° %oÎfl îÛ~ÂÈ
Ò·ÂÏË

Ñîfl í±%o Ó, Ò È Û%oÂ È±ÏËÈ, È%oÂÓí±iÂ°, Ûí±í Ç° ÓÓíÛ~ÈÚÁ îÛ~ÈÁ ÁÁÚí, Û±Ú°, ÂÒìÈ ·Û%oÂÚÁ%oÂ È±Ú, È%oÂÓí±iÂ Û,ÓÓÓÚ,ÁÚÓÚ,ÈÈ ÓÓ ÓiÁ%oÚ, ~ÈiÈ ÁiÓiÁi%o±~ÈîiÈ:
• ÑÁ ÈÈÚÁ,È%oÂÓí±iÂ Ûí ÂÓiÓÈÁí ÂÓÈÚÁÁÁ Ò ÓÓiÓ~ ÁiÁiíÓ,Ó Á±í,±Ú± Û±í, ~ÚÓ.° Ç° iÁ,íÓ iÓ,ÈÈ ï±ÈÓÚiÈ Ó,±Ú, Á,ÚîiÚÓ ïiÈ Ò ÓÓiÓ°,ç ·Óí,~Ó,Ó Ò±í,~±. **[a]**

- ê±ÓÓÓiÓÈÈÚÁ Ç±~È iÓiÚÈ ÓÓ ·Óí±í ÓÚ ÓÂ·fl.
- èÓ%oÂ ÈÈ,±ÈÚÁ,È%oÂÓí±iÂ ÛÇ±~ÂÈiÁ,ÓÈ ÛiÓÈ,~ÚÓ.° %oÂ È±Ú, ÁÁ·ÓiÁÁ ÚÓÚÓÈ~È,Ó.
- éÚ Á,ÚiÈ ÛÈÚÁ Û,ÓiÓ±iÁiÈ ÛáÑ.
- ÑÁ ÈÈÚÁ Ç±~È Ò±í~° ÓÓ%o±í~Á ÓÚ Ó·ÁiÚÈ,±.
- Ç±%oÂÈiÓ Ó ÈÓiÓiÈÚÁ Ç±~È,ï±Á í ÓiÚîfl Û,È%oÂÈÓi±ÚÁîfl.
- ÇÈ, íÓÁí ÒiÛ~±Á iÁ Û Ó,±ÈÚÁ,ÓÚ ÓÁiì~È ïÈí ÓÚÓi.
- ÇÈ, íÓÁí ÒiÛ~±Á iÁ %oÓÚ Ói,ÚÁÒ, %o ílÓÓiÈ FOCUS.
- àÓÓÓí,ÁÚÈÚÁ,ÈÁÈ îÛ, ïîiÛ Ó±iÁiÈ ÛáÑ,ï±~ÁÓÚ,Á ÛiÓ,Ó%oÓÚ,±%oîfl ÓÓ Á%oÁiÁiÈfl „Ó ÈÁÓiÚ±í,íÓ,Ó Ói±í±.
- Ç° iÓÈÁÚÁ Á±ÓÈÓ°,±Ú, ÈÁ iÈÁiÓ,Ó ÓÓiÓÈÁiÈfl %oîfl ÓÓiÛ~ÁiÈfl ÈiÚÁ ÂÓiÓ,Ó Û,ï± Á±ÓÈÓÈ. èÓ%oîflÈiÈÚÁ Ó±iÁí, ÛáÑ „Á í %oîfl Á±ÓÈÓÈÈÁiÈÁiÓ,Ó ÓÓiÓÈÁiÈfl. **[b]**
- Ç° iÓÈÁÚÁ Û±iÈÁ Á±ÓÈÓ°,±Ú, ÈÁ °ÓÓiÓ,Ó ÓÓiÓÈÁiÈfl. èÓ,Á iÈÚÁ Ó±iÁí, ÛáÑ, iÈÁ %oîfl Á±ÓÈÓÈÈÁ,°ÓiÓ,Ó ÓÓiÓÈÁiÈfl. **[c]**



Continued to the next page

è Ó%oÔiÈ±ÁÚÒîl ï± ÔiÁ%oÚ,~ÂÈ ÓÚ ïiÈ~Á

Hints for better shooting

ëÓ,ÂÚ° %îfl îÛ~ÂÈ Ò·ÂÏË

Place the camcorder on a flat surface or use a tripod

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

If you wear glasses

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

Cautions on the LCD panel and on the viewfinder

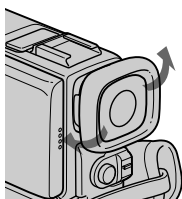
- Do not pick up the camcorder by the viewfinder or the LCD panel [e].
- Do not place the camcorder so as to point the viewfinder or the LCD panel toward the sun. The inside of the viewfinder or the LCD panel may be damaged. Be careful when placing the camcorder under sunlight or by a window [f].
- Do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

è±ÒÒÓî±,±ÈÚÂ,È%ÂÓí±iÀ Û î± ÔíÓÒíÓÈ
ÒÓ,Â ìlÒÓÚÈ ÈiÈ ÈÒÒÓî,ÂÚÈÚÂ Û ÂiÓ,Ú
èÒÓÚ± ±ÈÚÂÒ, ±ÒÒÓíÓÈÈÚ,È%ÂÓí±iÀ Û
Ò,Â ìÚ î± ÒÚÓiÀ ÈiÈ î,·ÓÈ % Û,·ÓÈ ÔíÓÒíÓÈ
ÒÓ,Â ìlÒÓÚÈÈÒÓ%lÒ%fl"ÂÈ,°ÒÓÚ°. ÒÒiÈ Û Ç±Ò
ÂÒÚ, Û ÂiÓ,±%fl ÛÒÓÚ±ÒÒ± ±Ú±, Ç° Û±iÈÂ
iÓÈÂÚÂ ÈÒÒÓî,ÂÓ,±Ú, ÂÂ È %fl
È%ÂÓí±iÀ °. è È Ò Èi ÂÒiÂiÈÈ Û ÂiÓ,È iÀ
ÚÈ i° Sony Û·Â%ÈÚÂÒ,·,·ÚÓ %iÈi±,ÈiÚ±
Ú ÂiÓ,È iÂiÂÂ 6,5 î. Ç Ò ÓÚÈ,iÓi ÔiÛ~±Â
ÈiÚ iÓÈÂÚ ÒÓ,Â%ÈÚ,ìÚÚ ÂiÈÂ~±ÓÚÈ
È%ÂÓí±iÀ °.

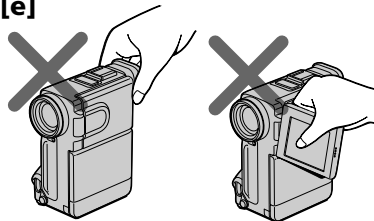
ÒÒiÈ Ç° iÓÈÈÚÂ Ó~iÈ
Ç° iÓÈÈÚÂ Ò,È·±Ú, Â±%l,· ÒÚÓ ÓiÛ
ÓiÛfl ± %fl ÒÒiÛ~ÂiÈfl îÛ~Â,Ò Ó·ÂÓ ±
È%ÒÈÒi±ÚÂfl [d].

è Â%ÒÒÓÚÓ ÓÈiÒÓÚÈ í Ô±iÂiÈ ÚaÑ È
È%ÒÈÒi±ÚÂi
• ÇÂÒÒ%lÈiÈÈÚÂ,È%ÂÓí±iÀ ÚÂ±
È%ÒÈÒi±ÚÂi, ÈiÈ Ô±iÂi, ÚaÑ. [e]
• ÇÂ ±ÒÒÓiÓ,±ÈÚÂ,È%ÂÓí±iÀ Û Û±i,·ÚÓ°
È%ÒÈÒi±ÚÂi, ÈiÈ Ô±iÂi, ÚaÑ.·iÈ
ì±Ô ±iÂi°, ÒÚÓ ÓiÛ ÒÓi~±. ÇiÚÚ ÂiÈÂ
~±ÓÚÈ,È%ÒÈÒi±ÚÂiÈ ÈiÈ Ô±iÂi, ÚaÑ iÓ,ÚÚ
·Ú,ÒÓ,ÂÈ%Âi°. ÂÚ%,ÚÂ ÒÓÚÓ ÓÈi° Ò È
±ÒÒÓiÓÈÂiÈÈ,È%ÂÓí±iÀ °ÒÓ%ÒÓi~Âi
ÈiÈ,ÓÁiÂ Óiì±. [f]
• ÇÂ i±Ô ±iÈÈÚÂ Ó·ÂiÚÈ,ì± ÒÓi~Â Ò È
ÈÒÒÓi,ÂÓ,±iÈÈ Ó·ÂiÚÈ,± %fl Ò·ÂiÈÈ
í ÛÒi~i Ôi±iÓi. i±iÓÂ %ÂÈÒÚ,ÈÂ iÓÈÂÚ
ÒÓ,Â%ÈÚ,È%ÂÓí±iÀ Û.

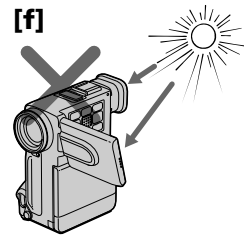
[d]



[e]



[f]

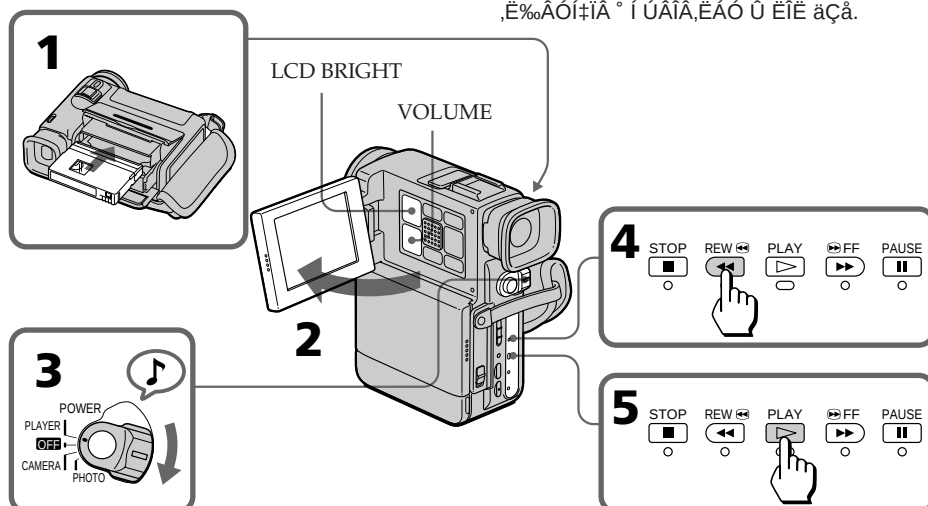


Playing back a tape

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

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



To stop playback, press ■.

To rewind the tape, press ◀◀.

To fast-forward the tape rapidly, press ▶▶.

Using the Remote Commander

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

To display the LCD screen/viewfinder screen indicators

Press DISPLAY.

To erase the indicators, press again.

Playing back a tape

Ç°İÖÊÁÚÁÔ ÖÖİ±Ú Ê,±Ú, ÖÖÖ ÖÊÁ,Ö%ÊİÖÂ ÊÁÖ. ±ÊÂİÊÂ İ± ı±İÂ ÚâÑ.

- (1) ÇÖÜ±, ÚÂ Â±ÖÊÖ±İİÜ, İÂİÜÜ Ö ÖİÖ-İÖİ, Ö. ±°Âİİ°İ İ± ÜÊÜ.
 - (2) ÊÜİ ÖÊÚÂ Ö±İÂİ, ÚâÑ.
 - (3) Ç±ÊÊİ±İ İ±İÂİ, İÜ, ÂÂİÂİÜ, İİÖÖİÜ İ±, İı~±ÚÂİÂ POWER, ÜÖÜ±İÖ,ÊÚÂ Â,Ö, ÖÖİÖÊÂİÊÂ PLAYER. Ç°Ö,Â°Ê,± ÜÖİ İİÖÖİÊ ÖÂ ÂİÂ°ÂİÊİ İÂİÜ°.
 - (4) Ç±ÊİÊÚÂ ◀◀ %İİ ÖÂ ÂİÖÜİÊ İÂİÜ° İ±Â±%.
 - (5) Ç±ÊİÊÚÂ ▶▶ %İİ İ±~İ±, ÖÖÖ ÖÊÁ,Â%ÂİÊİ.
 - (6) ÊÜ Â,ÜİÊ ÜÊÚÂ, ÖİİÖÜÜ, ÖÊÖÖÖİ,ÁÖ,±İÊİ VOLUME +/--İİ İÖÖÜ, %ÊÖÖİÂİ ÜâÑ Ö ÊÖÖÖİ,ÁÖ,±İÊÂİ LCD BRIGHT +/-.
- Ç°İÖÊÁÚÂ Ú±İÊÂ Ö ÖÖİÖÜ ÂÜ, ÊÁÖ. ±ÊÂİÊÂ İ± ı±İÂ ÚÂİÂ,ÊÁÖ ±ÖÖÖİÂÖÖ%ÖÖÂ%ÊİÂİÊİ, Ê%ÂÖİ±İÂ ° İ ÜÂİÂ,ÊÁÖ Ü ÊİÊ âÇâ.

Playing back a tape

Using headphones

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

To view the playback picture in the viewfinder

Close the LCD panel. The viewfinder turns on automatically.

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

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

Various playback modes

To view a still picture (playback pause)

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

To locate a scene (picture search)

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

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

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

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

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

To view the picture at double speed

For double speed playback in the reverse direction, press **<**, then press **x2** on the Remote Commander during playback. For double speed playback in the forward direction, press **>**, then press **x2** during playback. To resume normal playback, press **▷**.

ÇÒÒÔ ÓĖÁ,Â%ÂĬĖÂ ĬÂĬÚ°

àÒÓÓĬ,ÁÓ,†ĬĖÂ „ÓĬÓ,Ĭ°Ĭ ÚÂĬÂÚÓĬÓ, ĖÓ%ÓÓÂ%ĖĬĖÚÂ „ÓĬÓ,Ĭ°Ĭ ÚÂĬÂÚÓĬ° (ĬÂ ÓĖ†,†,ÚÓĬ) Ĭ „ĬÂÂ%Ú AUDIO VIDEO OUT/ (ÓÚ, 83). Ç ÓĬÓĖÂÚÂ Â,ÚĬĖ Ó,†Ú „ÓĬÓÓÚ, „ÓĬÓ,Ĭ°Ĭ ÚÂĬÂÚÓĬÓ, Ò ÓÓĬÓ°, VOLUME +/-.

ŇĬĬ, ÓÒÔ ÓĖÁ,Â%ÂĬĖĬ ĖÁÓ, †ĖÂĬĖĬ, Ė%ÓĖÓĬ†ÚÂĬÂ ħ†Ĭ ÓĖÚÂ Ó†ĬÂĬ ÚÂŇ. ÇĖ%ÓĖÓĬ†ÚÂĬ, ĬĬ, ĖÚÓĬ †,ÚÓĬ†ÚĖ~ÂÓĬĖ. ĖĖĖÓÓÓĬ,ÁÓ,†ĬĖĖ,Ė%ÓĖÓĬ†ÚÂĬĬ Ç ÓĖĖÂÚÂ ÓĬÚ,†Ú, Â,ÚĬ ÚÓĬ,ĬÓ Ó ÓÓĬÓ°, „ÓĬÓ,Ĭ°Ĭ ÚÂĬÂÚÓĬÓ, ŇĬĬ Ó ÓÓĬÓÚ † Ĭ† Ĭ†Ĭ ÚÂŇ ÓĬÓ,† ÓÚĬ ÓĖÚÂ Ó†ĬÂĬ ÚÂŇ. ÇĖ%ÓĖÓĬ†ÚÂĬ, ĬĬ, ĖÚÓĬ †,ÚÓĬ†ÚĖ~ÂÓĬĖ.

Ė†ÂĬĖ~Ĭ°Ĭ ÂĖĖĬ°,ÓÒÔ ÓĖÁ,Â%ÂĬĖĬ

ŇĬĬ Ó ÓÓĬÓÚ † ĬÂÓÓ%,ĖĖĬÓ,Ó ĖÁÓ, †ĖÂĬĖĬ (Ó†ÚÂ†,ÓÒÔ ÓĖÁ,Â%ÂĬĖĬ) Ç†ĖĬĖÚÂ **II**,Ó, ÂĬĬ,ÓÒÔ ÓĖÁ,Â%ÂĬĖĬ. ŇĬĬ,ÓÓÓÚ†ĬÓ,ĬÂĬĬ,ÓÒÔ ÓĖÁ,Â%ÂĬĖĬ Ĭ†ĖĬĖÚÂ **II** ĖĬĖ **▷**.

ŇĬĬ Ó,† ÚĖÂĬĖĬ Ú †,ĬÂĬÚ† (ÓÓĖÓĬ ĖÁÓ, †ĖÂĬĖĬ) ŇÂĖĖÚÂ Ĭ†Ė†ÚÓĖ ĬĬÓÓĬÚ **◀◀** ĖĬĖ **▶▶**,Ó, ÂĬĬ,ÓÒÔ ÓĖÁ,Â%ÂĬĖĬ. ŇĬĬ,ÓÓÓÚ†ĬÓ,ĬÂĬĬ ĬÓ Ĭ†ĬÓ,Ó,ÓÓÓ ÓĖÁ,Â%ÂĬĖĬÓÚÓÚÓÚĖÚÂ ĬĬÓÓĬÚ.

ŇĬĬ ĬÓĬÚ ÓĬĬ ĖÁÓ, †ĖÂĬĖĬ Ĭ† °ÓÓĬÓĖ ÓĬÓ ÓÓÚĖ,Ó, ÂĬĬ ÚÓĬÓ ÂĬĬÓĖ ÓÂ ÂĬÓÚĬĖ ĬÂĬÚ°,ÓÂ Â%ĖĬĖ Ĭ†Â†% (ÓÓĖÓĬ ĬÂÚÓ%ÓĬ Ó Ó,ÓĬ†) ŇÂĖĖÚÂ Ĭ†Ė†ÚÓĖ ĬĬÓÓĬÚ **◀◀**,Ó, ÂĬĬ ÓÂ ÂĬÓÚĬĖ ĬÂĬÚ° Ĭ†Â†% ĖĬĖ ĬĬÓÓĬÚ **▶▶**,Ó, ÂĬĬ ÓÂ ÂĬÓÚĬĖ ĬÂĬÚ°,ÓÂ Â%. ŇĬĬ,ÓÓÓÚ†ĬÓ,ĬÂĬĬ ĬÓ Ĭ†Ĭ ĬÓĖ ÓÂ ÂĬÓÚĬĖ,ÓÂ Â%ĖĬĖ†Â†%ÓÚÓÚÓÚĖÚÂĬĬÓÓĬÚ.

ŇĬĬ Ó ÓÓĬÓÚ † ĖÁÓ, †ĖÂĬĖĬ Ĭ† 1/3 ÓĬÓ ÓÓÚĖ (Â†Â%ĬÂĬÓÂ,ÓÒÔ ÓĖÁ,Â%ÂĬĖÂ) Ç†ĖĬĖÚÂ **▶** Ĭ† ÓÚĬ,ÚÂ %ĖÓÚ†ĖÓĬÓ,Ó ÚÓ †,ĬÂĬĬ,Ó, ÂĬĬ,ÓÒÔ ÓĖÁ,Â%ÂĬĖĬ. ŇĬĬ Â†Â%ĬÂĬÓ,Ó,ÓÒÔ ÓĖÁ,Â%ÂĬĖĬ,Ó, †ÚĬÓĬ Ĭ†Ó †,ĬÂĬĖĖ Ĭ†ĖĬĖÚÂ **<**, † Â†ÚÂĬ **▶**. ŇĬĬ,ÓÓÓÚ†ĬÓ,ĬÂĬĬ ĬÓ Ĭ†Ĭ,ĬÓ,Ó,ÓÒÔ ÓĖÁ,Â%ÂĬĖĬ Ĭ†ĖĬĖÚÂ **▷**.

ŇĬĬ Ó ÓÓĬÓÚ † ĖÁÓ, †ĖÂĬĖĬ Ó Ú%,ÓÂĬÓĖ ÓĬÓ ÓÓÚ. ŇĬĬÚ%,ÓÂĬĖĬÓĬÓ ÓÓÚĖ,ÓÒÔ ÓĖÁ,Â%ÂĬĖĬ,Ó, †ÚĬÓĬ Ĭ†Ó †,ĬÂĬĖĖ Ĭ†ĖĬĖÚÂ **<**, † Â†ÚÂĬ Ĭ†ĖĬĖÚÂ **x2** Ĭ† ÓÚĬ,ÚÂ %ĖÓÚ†ĖÓĬÓ,Ó ÚÓ †,ĬÂĬĬ,Ó, ÂĬĬ,ÓÒÔ ÓĖÁ,Â%ÂĬĖĬ. ŇĬĬ Ú%,ÓÂĬĖĬÓĬÓ ÓÓÚĖ,ÓÒÔ ÓĖÁ,Â%ÂĬĖĬ, Ĭ†Ó †,ĬÂĬĖĖ,ÓÂ Â%Ĭ†ĖĬĖÚÂ **>**, † Â†ÚÂĬ Ĭ†ĖĬĖÚÂ **x2**,Ó, ÂĬĬ,ÓÒÔ ÓĖÁ,Â%ÂĬĖĬ. ŇĬĬ,ÓÓÓÚ†ĬÓ,ĬÂĬĬ ĬÓ Ĭ†Ĭ,ĬÓ,Ó,ÓÒÔ ÓĖÁ,Â%ÂĬĖĬ Ĭ†ĖĬĖÚÂ **▷**.

To view the picture frame-by-frame

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

To change the playback direction

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

Notes on playback

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

Note on slow playback

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

Ñífl Ò ÒÒÍÓÚ ± Í±% ± Á± Í±% Óí
ÉÁÓ· ±ÉÁìÈfl
ç±ÈÈÉÚÁ ◀ ÌÈÈ Ì▶ Ì± ÒÚí,ÚÁ
%ÈÒÚ±ìÈÒìÒ,Ó ÚÒ ±,ÌÁìÈfl, ÁÈÈÌÁ Ò±ÚÁ°
,ÒÒÒ ÓÉÁ,Á%ÁìÈfl.ÒÒÍÈÇ°%Á ÈÈÚÁ·Ú%ÁÚÁ
%Á È±Ú, ÌÍÓÍÚ ÌÈ±ÚÓÈ, ÚÓ Ç° ÍÓÉÁÚÁ
Ò ÒÒí±Ú È,±Ú, ÉÁÓ· ±ÉÁìÈÁ Ì± 1/25
ÒÍÓ ÓÒÚÈ. Ñífl,ÒÒÒÚ±ìÓ,ÌÁìÈfl ÌÓ Ì±,ÌÓ,Ó
,ÒÒÒ ÓÉÁ,Á%ÁìÈfl ÌÈÈÈÚÁ ▷.

Ñífl ÉÁìÁìÁìÈfl Ì± Ò ±,ÌÁìÈfl
,ÒÒÒ ÓÉÁ,Á%ÁìÈfl
ç±ÈÈÉÚÁ < Ì± ÒÚí,ÚÁ %ÈÒÚ±ìÈÒìÒ,Ó
ÚÒ ±,ÌÁìÈfl %ífl Ò· ±ÚÍÓ,Ó Ì± Ò ±,ÌÁìÈfl ÈìÈ
> Ì± ÒÚí,ÚÁ %ÈÒÚ±ìÈÒìÒ,Ó ÚÒ ±,ÌÁìÈfl %ífl
Ì± Ò ±,ÌÁìÈfl,ÒÁ Á% ,Ó , Áífl
,ÒÒÒ ÓÉÁ,Á%ÁìÈfl. Ñífl,ÒÒÒÚ±ìÓ,ÌÁìÈfl
ÌÓ Ì±,ÌÓ,Ó ,ÒÒÒ ÓÉÁ,Á%ÁìÈfl ÌÈÈÈÚÁ ▷.

è ÈÌÁ~±ìÈ í ,ÒÒÒ ÓÉÁ,Á%ÁìÈ,
• á,Úí ·Ú%ÁÚ Ò È,ÌÚ~Áì , ±ÁìÈ~ì°
ÁÈÈì±,ÒÒÒ ÓÉÁ,Á%ÁìÈfl.
• ÇÓ, Áífl,ÒÒÒ ÓÉÁ,Á%ÁìÈfl, ÁÈÈÌÁ
ÓÚíÈ~ìÓí ÓÚ ÌÓ Ì±,ÌÓ,Ó ÉÁÓ· ±ÉÁìÈfl
±ÌÁÁ Á±ÒÈÒìì° í ±±% Ó, ÌÓ,ÚÚ ÈìÁÚ,
ÌÓÁ±È~ì° È,È%. ùÚÓ ÌÁ fl,ÌflÁÚÒfl
ÌÁÈÒÒ ±,ÌÓÒÚ,.,.
• ÒÒÍÈ ÁÈÈìÒ±ÚÁ° Á±ÒÈÒÈÒ Ó%ÓíÈ±ÁÚÒfl,
ÚÁ~ÁìÈÁ 5 ÌÈìÚÚ, È%ÁÓí±Á ±
±,ÚÓí±ÚÈ~ÁÒíÈ,ÓÈ%ÁÚ, ÁÈÈì ÓÒÚ±ìÓ,±.
Ñífl,ÒÒÒÚ±ìÓ,ÌÁìÈfl,ÒÒÒ ÓÉÁ,Á%ÁìÈfl
ÌÈÈÈÚÁ ▷.

è ÈÌÁ~±ìÈÁ í Á±ÌÁ%ÁìÒìÚ
,ÒÒÒ ÓÉÁ,Á%ÁìÈ,
á±ÌÁ%ÁìÒìÁ,ÒÒÒ ÓÉÁ,Á%ÁìÈÁ Ì± %±ìÒÈ
,È%ÁÓí±Á Á ÌÓÉÁÚ ·°Ú, °ÓÓìÁìÒ
Òí±,ÌÓ, Ó%ì±ÍÓ, %±ì±fl ÚÚííÈfl ÌÁ ·Ú%ÁÚ
±·ÓÚ±Ú,Ò ÈÒÒÒÚÚÒíÁìÈÈÒÈ,Ì±ÍÓ,ÓÚ,ÌÁÁ%±
DV OUT.

Searching for the end of the picture

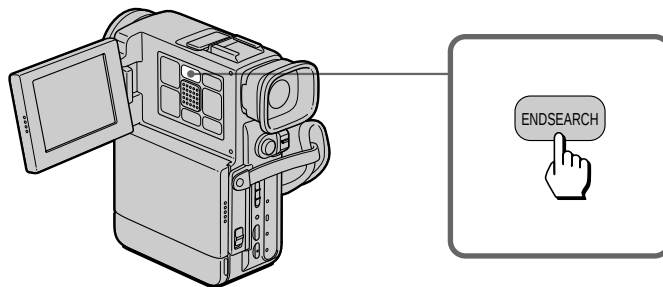
èÓËÒÍ ÍÓÌ~‡
ËÁÓ· ‡ÊÀÌËfl

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

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

Ç° ÌÓËÁÚÁ ÔÁ ÆËÚË Í ÍÓÌ~Ú Á‡ÔËÒ‡ÌÍÓË
~‡ÔËËÓÓÍÁÁ‡ÔËÒËË,ÓÓÔ ÓËÁ,Â%ÀÌËfl
ÌÁÌÚ°. ãÁÌÚ‡ Ì‡~ËÌ‡ÁÚ ÔÁ ÁÌ‡Ú°,‡Ú,Òfl
Ì‡Á‡% ËËË,ÔÁ Á%,Ë Ô Ë.ÌËÁËÚÁÌ,ÌÓ
ÓÓÓÍÁ%ÌËÁÓÁÌÚÌ%Á‡ÔËÒ‡ÌÍÓË~‡ÔËË.Ú%ÚÚ
,ÓÓÔ ÓËÁ,Â%ÁÌ°. ã‡ÚÁÌ ÍÁÌÚ‡ ÓÓÚ‡ÌÓ,ËÚÒfl,
ÍÓÌ~Á Á‡ÔËÒ‡ÌÍÓ,Ó ËÁÓ· ‡ÊÀÌËfl (ÓÓËÓÍ
ÍÓÌ~‡).

éÚÍ ÓËÚÁ Ô‡ÌÁÌ, ÚáÑ Ë Ì‡ËËÚÁ END
SEARCH.
Ñ‡Ì‡fl ÚÚÌÍ~Ëfl ‡·ÓÚ‡ÁÚ, ÍÓ,%‡
,°Ì~‡ÚÁÌ, POWER ÚÓÚ‡ÌÓ,ÌÁÌ ÌË.Ó ,
ÓÓÍÓËËËÁ CAMERA, PLAYER ËË PHOTO.



Note on End Search

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

è ËÌÁ~‡ÌËÁ Í ÚÚÌÍ~ËË ÓÓËÓÍ‡ ÍÓÌ~‡
ÚÚÌÍ~Ëfl ÓÓËÓÍ‡ Á‡ÔËÒË ÌÁ ‡·ÓÚ‡ÁÚ, ÁÒËË Ç°
,°ÚÓÌÍÚË Ì‡ÓÓÁÚÚ ÓÓÓÍÁ,°ÓÓÌÁÌËfl
Á‡ÔËÒË Ì‡ ÍÁÌÚÚ, ËËË ÁÒËË Ç° ÌÁ Ô ÓËÁ,ÁÌË
Á‡ÔËÒ, ÓÓÓÍÁ,ÓÚ‡,ÌË ÍÁÌÚÚ°.

Advanced operations

Using alternative power sources

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

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

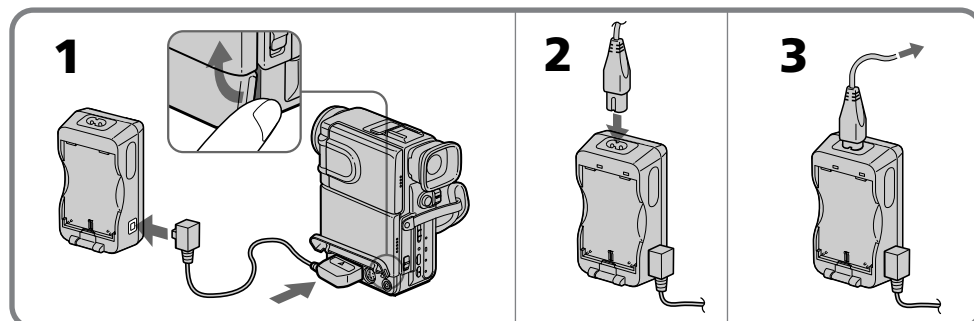
Note on power sources

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

Using the mains

To use the supplied AC power adaptor:

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



Continued to the next page

Advanced operations / 100. A - AIOU, O, + IIA OOA + EE

àÒÒÓÍ, ÁÓ, + IÊÄ + Î ÚÄ Ì + ÚË- Ì, Ì ÈÒÚÓ~IÊÍÓ, ÔËÚ+IÊÍ

Ç° ÎÓÊÄÚÄ, °: +Ú, Î: ÔË ÄÄ ÔÏÄ%Ú, ~ËÌ
ÈÒÚÓ~IÊÍÓ, ÔËÚ+IÊÍ%ÎÍ Ç+~ÄË, È%ÄÓÍ+IÄ °:
+Ú+ ÄËÌ°È, ÎÓÍ, ÎÄÍÚ È~ÄÓÍÚ, ÔÄÚ, È
12/24 Ç +, ÚÓÍÓ·ËÌ, Î°È +ÍÍÚÍÍÍÚÓ
Ç°Ä ÈÚÄÔÓ%Ô%ÎÍÈÈ ÈÒÚÓ~IÊÍÔËÚ+IÊÍ,
Ä+ÈÒËÍÔÚÈÒÚÓ, Ô, %ÄÇ°ÍÓÚÈÚÄ
ÈÒÔÓÍ, ÁÓ, +Ú, Ç+~Ú, È%ÄÓÍ+IÄ Û.

ÄÄÚÓ	àÒÒÓÍ~IÊÍ ÔËÚ+IÊÍ	àÒÒÓÍ, ÁÚÄÎ°Ä Ô ÈÌ+~IÄÈÍÔÚÈ
Ç°ÔÓÄ- ~ÄËÈ	ÛÎÄÍÚ È~ÄÓÍ+Î ÔÄÚ,	è ÈÌ+~ÄËÈ ÔÄÚÄ, ÔÈ +~ÔÚÄÔÄ ÄÍÚÓÍ+
Ç+ ÚËÈ~Ä	Ä+Ú+ ÄËÌ°È ·ÍÓÍ	Ä+Ú+ ÄËÌ°È ·ÍÓÍ NP-F100(Ô ÈÌ+~ÄÚÔÍ), NP-F200
Ç+ÚÓ- ÍÓ·ËÄ	12 Ç ÈË 24 Ç +~ÚÓÍÓ·ËÌ, Î°È +ÍÍÚÍÍÍÚÓ	á+ Î%Ì°È, °Ô ÎËÈ- ÚÄÍ, +~ÚÓÍÓ·ËÌ, ÎÓ, Ô +ÍÍÚÍÍÍÚÓ + Sony DC-V515

è ÈÌÄ+IÊÄ ÔÔ ÈÒÚÓ~IÊÍ+IÊÍ ÔËÚ+IÊÍ
ÈÚÔÔÄ%ÈÌÄÈÄÈÒÚÓ~IÊÍ+IÊÍÔËÚ+IÊÍÈÈ ÔÎÍÚÈÄ
+Ú+ ÄËÌ°È, Ô·ÍÓÍ+Ô, ÄÎÍ Ä+ÔÈÔÈ ÈËÈ
ÔÔÔ ÔÈÄÄ%ÄËÈÎÓÈÄÚÔÔ, Ä%ÈÚ,
ÔÚ+~ÄËÌÚ, ÎÄÍÚÚ. ÔÔËÈ ~ÚÓ ÔÍÚ~ÈÚÔÍ,
ÔÔÔÚ+IÔ, ÈÚÄ ÈÒÚÓ~IÊÍ ÔËÚ+IÊÍ ÎÄÍÄ%ÎÄËÔ.

àÒÒÓÍ, ÁÓ, + IÊÄ ÎÄÍÚ È~ÄÓÍÔÈ ÔÄÚÈ

ÎÎÍÈÈÒÔÓÍ, ÁÓ, +IÊÍÔÄÚÄ, Ô, Ô+~ÔÚÄ +ÔÄ ÄË.
ÚÓÍ+:

- (1) èÚÍ ÔÈÚÄÍ °~ÍÚ, ÎÄÄ%+ÈÔÔ%ÔÔÄ%ÈËÈÚÄ
ÔÔÄ%ÈËÈÚÄÍ, Î°È +Ä ÄË Ì+ È%ÄÓÍ+IÄ Ä
Î, ÎÄÄ%Ú DC OUT Ì+ ÔÄÚÄ, ÔÍ+~ÔÚÄ Ä
ÔÄ ÄË. ÚÓÍ+ ÔÈÒÔÓÍ, ÁÓ, +IÊÄÍ
Ô ÈÌ+~ÄËÌ, ÔÔÔÄ%ÈËÈÚÄÍ, ÎÓ, Ô·ÍÚ +.
(2) èÔ%ÔÔÄ%ÈËÈÚÄÔÄÚÄ, ÔÈÔ Ô, Ô%ÔÄÚÄ, ÔÍÚ
+~ÔÚÄ ÚÔÄ ÄÍÚÓÍ+.
(3) èÔ%ÔÔÄ%ÈËÈÚÄÔÄÚÄ, ÔÈ~ÍÚ ÔÄ ÄË. ÚÓÍ+Î
ÎÄÍÚ È~ÄÓÍÔÈÔÄÚÈ.

Using alternative power sources

àÒÒÓÍ ÁÓ, ÷ÌÊÄ ÷Î ÛÄ Ì÷ÛË, Ì°
ËÓÚÓ~ÌËÍÓ, ÒËÛ÷ÌËÍ

Charging the battery pack

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

Charging two battery packs at the same time

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

Notes on the CHARGE lamp

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

á÷ ñ%Í÷ ÷÷÷ ÄËÍÓ, Ò ÌÓÍ÷
Ç° ÌÖÄÜÄ Ä÷ ñË÷Û, ÛÓÚ÷ÌÓ, ÌÄÌ°Ë Ì÷
Ì÷ÌÄ Ä ÷÷÷ ÄË°Ë ÌÓÍ ÒÓÚÄÌ
ÒÓ%ÒÖÄ%ËÌÄËÖÄÜÄ, Ò÷%÷ÓÜÄ ÷ÖÄ ÄÌ.
ÚÓÍ÷ Í, Ë%ÄÓÍ÷ÌÄ Ä Ë ÛÓÚ÷ÌÓ, ÌË
°, Ì° ÷÷÷ÄÌ ñ POWER, ÒÓÍÖËÄËÄ OFF.
ä÷ÌÖÓ°Í÷ CHARGE ÷%ÄÜ, Ò ÄÜ, Ë ÓÓ, ÷ÖÌÄÜ,
ÍÓ, %÷ ÌÓ Ì÷Ì Ä÷ ñ%Í÷ ÷%ÄÜ Ä÷, Ä ÌÄ÷.
ÑÌÍ ÒÓÍÖË Ä÷ ñ%Í ÒÓÚ÷, ÜÄ ÷÷÷ ÄË°Ë
ÌÓÍ Ì÷ ÌÄÜÄ Ò Ë ÌÄÄÜÄÌ, ÌÓ Ì÷ Ó%Ë ÷÷.
Ç ÄÌÄ÷ ñ%Í Ò Ë÷, ÷ÄÍÓ, Ò ÷÷÷ ÄËÍÓ, Ò
ÌÓÍ÷ NP-F100 ÷%ÄÜ ÒÌÄ%Ü, ÌË:
èÖÌ÷Ì Ä÷ ñ%Í÷: Ò Ë ÌÄÄ. 2 ÷÷÷ 30 ÌËÛÜ
ÇÓ Ì÷Ì, Ì÷Ì Ä÷ ñ%Í÷: Ò Ë ÌÄÄ. 1 ÷÷÷ 30
ÌËÛÜ

á÷ ñ%Í÷ %Ü, Û ÷÷÷ ÄË°Ë ÌÓÍÓ,
Ó%ÍÓ, ÄÌÄÌÖ
ìÖÚ÷ÌÓ, ËÜÄ Ó%Ë ÷÷÷ ÄË°Ë ÌÓÍ,
Ë%ÄÓÍ÷ÌÄ Ü, ÷, ÜÓ ÒË÷ÖÄÜÄ, ÒË÷%÷ÓÜÄ
ÖÄ ÄÌ. ÚÓÍ÷. ä÷ÌÖÓ°ÍË CHARGE Ì÷
Ë%ÄÓÍ÷ÌÄ ÄË÷ÖÄÜÄ, Ò÷%÷ÓÜÄ ÄÖÄ ÄÌ.
ÚÓÍ÷ ÷%ÜÜ, Ò ÄÜ, Ë ÓÓ, ÷ÖÌÜÜ, ÌÓ, %÷
ÍÓ Ì÷Ì, Ì÷Ì Ä÷ ñ%Í÷ ÷%ÄÜ Ä÷, Ä ÌÄ÷. ÑÌÍ
ÒÓÍÖË Ä÷ ñ%Í ÒÓÚ÷, ÜÄ ÷÷÷ ÄË°Ë ÌÓÍ
Ì÷ ÌÄÜÄ Ò Ë ÌÄÄÜÄÌ, ÌÓ Ì÷ Ó%Ë ÷÷. ÒÖÌË
Ó%Í÷ ÄÄ%, Û Ì÷ÌÖÓ°Í÷ CHARGE ÒÓÚ÷ÄÜÖÍ
„Ò ÄÜ, ÜÓ Ä÷ ñ%Í÷ Ò ÒË ÷÷÷ ÄË°Ë ÌÓÍÓ,
ÌÄ Ä÷, Ä ÌÄ÷. Ç ÄÌÄ ñ%Í Ä÷ ñ%Í Ë%, Û
÷÷÷ ÄË°Ë ÌÓÍÓ, NP-F100 ÷%ÄÜ
ÒÌÄ%Ü, ÌË:
èÖÌ÷Ì Ä÷ ñ%Í÷: Ò Ë ÌÄÄ 2 ÷÷÷ 40 ÌËÛÜ
ÇÓ Ì÷Ì, Ì÷Ì Ä÷ ñ%Í÷: Ò Ë ÌÄÄ 1 ÷÷÷ 40
ÌËÛÜ

è ËÌÄ~ÌËÍ Í Ì÷ÌÖÓ°ÍÄ CHARGE

- ä÷ÌÖÓ°Í÷ CHARGE ÷%ÄÜ ÒÓÚ÷, ÷Ü, ÒÍ
„Ò ñÄÄ ÄÄ, ÜÄÄÌÄ ÌÄÍÜÜÓ Ó, Ó, ÄÌÄË,
%÷ÄÄÖË÷Ö÷ ÷ÜÜÜÖÖÄ%ËÌÄÜÜÜÄÜË
ÖÖÖÍÄ ËÖÖÖÍ, ÄÓ, ÌËÍ. ÛÜÜ ñ, ÌÍÄÜÖÍ
ÌÓ Ì÷Ì, Ì° Í.
• ÖÖÌË÷ÌÖÓ°Í÷ CHARGE ÌÄ, Ò ËÜ, ÜÜÜÖÄ%ËËÜÄ
Ò Ó, Ó% ÌÄÍÜ ÒÖËÜ÷ÌËÍ. è Ë ÌÄÄÜÄÌ, ÌÓ
ÌÄÄÄÖ%ÜËËÛÜÜÜÜÜÜÜ, ÷Ö%ÖÖÄ%ËËÜÄ
Ò Ó, Ó% ÌÄÍÜ ÒÖËÜ÷ÌËÍ.

Changing the mode settings

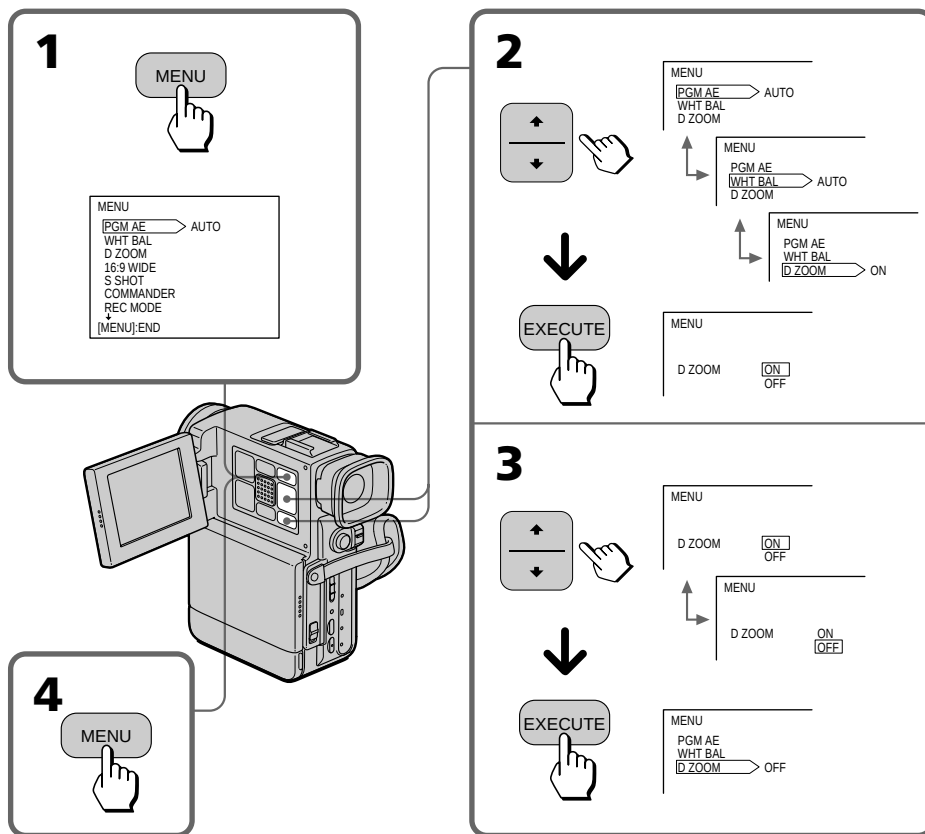
ÀÁÏÂÏÂÏÊÂ ÛÒÚ±ÌÓ,ÓÍ ÂÊËÏÓ,

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

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

Ç° ÌÓÊÂÛÂ ÊÁÏÂÏÚ, ÛÒÚ±ÌÓ,ÍÊ ÂÊËÏÓ, , ÒÊÒÚÂÏÂ ÌÂÏ, %ÌÍÌ ·ÓÍ, -Â,,Ó Ì±ÒÌ±Ê%ÂÏÊÍÌ ÒÓÓ·ÂÏÒÓÓÚÍÊ Ê ÛÒÏÏÊÍÊ ,Ê%ÂÓÍ±ÏÂ °.

- (1) Ç±ÊÏÊÛÂ MENU %ÌÍÌ ÓÚÓ· ±ÊÂÏÊÍÌ ÌÂÏ, Ì± ÌÍ ±ÏÂ ÛÂÑ.
- (2) Ç±ÊÏÊÛÂ $\downarrow$ ÊÏÊ $\uparrow$ %ÌÍÌ , °·Ó ± ÊÂÏ±ÂÏÓÊ ÛÒÚ±ÌÓ,ÍÊ, ± Á±ÚÂÏ Ì±ÊÏÊÛÂ EXECUTE. ÂÛ%ÂÛ ÓÚÓ· ±Ê±Ú,ÒÍÌ ÛÓÍ,ÍÓ , °· Ì±ÍÌ ÛÒÚ±ÌÓ,Í±.
- (3) Ç±ÊÏÊÛÂ $\downarrow$ ÊÏÊ $\uparrow$ %ÌÍÌ , °·Ó ± ÊÂÏ±ÂÏÓ,Ó ÂÊËÏ± ± Á±ÚÂÏ Ì±ÊÏÊÛÂ EXECUTE. ÒÓÏÊ Ç° ÌÓÚÊÛÂ ÊÁÏÂÏÊÛ, %Û,ÊÂ ÂÊËÏ°, ÓÓ,ÚÓ ÊÛÂÒÛÏÛ° 2 Ê 3.
- (4) Ç±ÊÏÊÛÂ MENU %ÌÍÌ ÒÚÊ ±ÏÊÍÌ %ÊÒÒÏÂÏ ÌÂÏ, .



Note on changing the mode settings

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

Selecting the mode setting of each item

Items for both CAMERA/PHOTO and PLAYER modes

COMMANDER <VTR4/OFF/ID/ID SET>

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

REC MODE <SP/LP>

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

BEEP <ON/OFF>

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

LCD COLOUR

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

è ÈIÄ~±IÈfl í ÈÁIÄIÄIÈ. ÛÒÚ±IÓ,ÓÍ
ÄÈÈIÖ,
ìÒÚ±IÓ,ÍÈ IÄI. ÓÚIÈ~±.ÚÒfl, Á±.ÈÒIÓÒÙÈ
ÓÚ ì±IÖÈ%ÄIÈfl, °IÄI.~±ÚÄIfl POWER,
ÓÓIÖÈÄIÈÈÈ PLAYER ÈIÈ CAMERA/PHOTO.

àÁIÄIÄIÈÄ ÛÒÚ±IÓ,ÓÍ ÄÈÈIÖ,

ìÒÚ±IÓ,ÍÈ %Ifl Ó.ÖÈI ÄÈÈIÖ,,
CAMERA/PHOTO È PLAYER
COMMANDER <VTR4/OFF/ID/ID SET>
• Ç°.Ä ÈÚÄ VTR4 Ö È ÈÒÓÓI,ÄÓ,±IÈÈ
Ó ÈI±.,±ÄIÖ.,ÓÒÚI,Ú±%ÈÒÚ±IÈÈÖIÖ.,Ó
ÛÖ ±.IÄIÈfl %Ifl,È%ÄÓI±IÄ °.
• Ç°.Ä ÈÚÄ OFF,ÄÓIÈ ÖÚI,Ú±%ÈÒÚ±IÈÈÖIÖ.,Ó
ÛÖ ±.ÄIÈflIÄÈÖÖÓI,ÄÚÄÚÖfl.
• Ç°.Ä ÈÚÄ ID Ö È ÈÒÓÓI,ÄÓ,±IÈÈ ÖÚI,Ú±
%ÈÒÚ±IÈÈÖIÖ.,ÓÛÖ ±.IÄIÈfl,
ÛÒÚ±IÓ,IÄIÖ.,Ó ì± IÓIÄ ID.
• Ç°.Ä ÈÚÄ ID SET Ö È ÛÒÚ±IÓ,IÄ IÓIÄ ± ID
ì± ÖÚI,ÚÄ %ÈÒÚ±IÈÈÖIÖ.,ÓÛÖ ±.IÄIÈfl.

REC MODE <SP/LP>

- Ç°.Ä ÈÚÄ SP Ö È Ä±ÖÈÖÈ, ÄÈÈIÄ SP
(ÖÚ±I±.ÚIÖ.,ÓÒÓÖ ÖÈÄ,Ä%ÄIÈfl).
- Ç°.Ä ÈÚÄ LP Ö È Ä±ÖÈÖÈ, ÄÈÈIÄ LP
(I%ÄIÄIÖ.,Ó,ÓÒÖ ÖÈÄ,Ä%ÄIÈfl).

BEEP <ON/OFF>

- Ç°.Ä ÈÚÄ ON, ~ÚÓ.° ÄÚIÄ I°Ä ÖÈ.,ì±I°
Ä,Û~±IÈ, IÖ.,%± Ç° ì±~ÈI±ÄÚÄ/
ÓÒÚ±I±,IÈ,±ÄÚÄÄ±ÖÈÖÈ,ÈÚ.%.
- Ç°.Ä ÈÚÄ OFF, ÖÖIÈ Ç° IÄ IÓÚÈÚÄ
ÓI°~±Ú, ÄÚIÄ I°È Ä,ÚIÖ,ÖÈ ÖÈ.,ì±I.

LCD COLOUR

Ç°.Ä ÈÚÄ %Ifl ÛÒÚ±IÓ,IÜ È ÈÁIÄIÈÚÄ
Ú Ó,ÄI, ÈI%ÈI±ÚÓ ± ÖÚÄÄI ì±È±ÚÈfl + ÈIÈ -
%Ifl Ä,ÚIÈ Ö,ÍÈ fl IÓÒÚÈ,ÄÚ±ÈÄÓ. ±ÈÄIÈfl.

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è Ö%ÓIÈ±ÄÚÖfl ì±ÖIÄ%Ú.~ÄÈÖÚ ì±IÈ~Ä

Changing the mode settings

ÀÁÂÃÄÅ 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

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

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

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

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

D ZOOM <ON/OFF>

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

16:9 WIDE <OFF/ON>

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

S SHOT <ON/OFF>

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

REC LAMP <ON/OFF>

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

CLOCK SET

Select this item to reset the date or time.

ÌÒÙ±ÌÓ,ÍÊ ÛÓÌ,ÍÓ %ÍÍ ÆÊË± CAMERA/PHOTO

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

- Ç°·À ÉÚÀ AUTO %ÍÍ ÛÒÙ±ÌÓ,ÍÊ PROGRAM AE (±,ÛÓÌ±ÚÊ·ÀÓÍÔÊ ÌÓÔÓÁÊ·ÊÊ) ±,ÛÓÌ±ÚÊ·ÀÓÍÊ, Á±,ËÔÊÍÓÔÚÊ ÓÚ Ç±·ÀÈ ÒÈÚÚ±·ÊÊ Ò·ÀÍÊ.
- Ç°·À ÉÚÀ SPORTS %ÍÍ ÛÒÙ±ÌÓ,ÍÊ PROGRAM AE Ì± ÆÊË ÒÔÔ ÛÊ,Ì° Á±ÍÍÚÊÊ.
- Ç°·À ÉÚÀ SUNSETMOON %ÍÍ ÛÒÙ±ÌÓ,ÍÊ PROGRAM AE Ì± ÆÊË Á±ÍÓ± ÒÓÌ± Ê Ì Û Ì°.
- Ç°·À ÉÚÀ LANDSCAPE %ÍÍ ÛÒÙ±ÌÓ,ÍÊ PROGRAM AE Ì± Ì±Í°±±ÚÌ°Ê ÆÊË.

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

- é·~ÌÓ, °·Ê ±ÈÚÀ AUTO %ÍÍ Æ,ÛÍÊ Ó,ÍÊ ±Ì±ÌÒ±·ÀÍÓ,Ó ±,ÛÓÌ±ÚÊ·ÀÓÍÊ.
- Ç°·À ÉÚÀ HOLD Ò Ê Á±ÔÊÔÊÌÓÍÓ, ÓÌÍÓ,Ó Ó·ÀÍÚ± ÊÊ ÛÓÌ±.
- Ç°·À ÉÚÀ OUTDOOR Ò Ê Á±ÔÊÔÊÊ, ÆÊË Ò·ÀÍÊ ÌÀ ÌÓÌÀ·ÀÍÊ.
- Ç°·À ÉÚÀ INDOOR Ò Ê Á±ÔÊÔÊÊ, ÆÊË Ò·ÀÍÊ, ÒÓÌÀ·ÀÍÊ.

D ZOOM <ON/OFF>

- Ç°·À ÉÚÀ ON %ÍÍ ±ÍÚÊ,ËÁ±·ÊÊ·È Ò,ÓÊ Û ±ÌÒÙÓÍ±·ÊÊ.
- Ç°·À ÉÚÀ OFF Ò Ê ÌÀÈÒÒÓÌ,ÁÓ,±ÍÊ·È Ò,ÓÊ Û ±ÌÒÙÓÍ±·ÊÊ. ÇÊ%ÁÓÌ±± ±,ÓÁ, ±±ÁÚÒÍÍÓÔÚÊ·ÀÓÍÚÊ Û ±ÌÒÙÓÍ±·ÊÊ 10Ì.

16:9 WIDE <OFF/ON>

- é·~ÌÓ, °·Ê ±ÈÚÀ OFF.
- Ç°·Ê ±ÈÚÀ ON %ÍÍ Á±ÔÊÔÊÊ ÊÁÓ· ±ÊÀÍÊ, ÌÊ ÓÍÓÚÓ Ì±ÚÍÓ ÆÊË ÌÀ 16:9 %ÍÍ Ò ÓÓÍÓÚ ±Ì±·ÊÊ ÓÍÓ Ì±ÚÍÓ ÛÁÌÀ,ÊÁÓ Á.

S SHOT <ON/OFF>

- é·~ÌÓ, °·Ê ±ÈÚÀ ON.
- Ç°·Ê ±ÈÚÀ OFF, ÍÓ,%± Ç° ÌÀ·ÀÒÓÍÓÁÚÁÒ, Ó%ÓÊ±ÍÊ Ì±ÌÀ°.

REC LAMP <ON/OFF>

- é·~ÌÓ, °·Ê ±ÈÚÀ ON.
- Ç°·À ÉÚÀ OFF, ÆÔÊ Ç° ÌÀ ÍÓÚÈÚÀ, ~ÚÓ·Á±,Ó ±Ì±Ò, Ì±ÌÓÓ·± Á±±ÔÊÔÊ Ì±ÌÀ ÒÊ/Á± Í%±±Ú± ÆÊÌÓ,Ó·ÍÓÌ± ÒÁ Á%ÌÀÊ Ò·ÀÍÊ±ÔÔ± ±Ú±.

CLOCK SET

Ç°·À ÉÚÀ %±ÌÒ, ÛÒÙ±ÌÓ,ÍÓ %ÍÍ Æ,ÛÍÊ Ó,ÍÊ %±Ú° ÊÊ, ÆÌÀÊ.

DATA CODE <DATE/CAM or DATE>

When recording a close subject

Note

DATA CODE <DATE/CAM ÈÈ DATE>

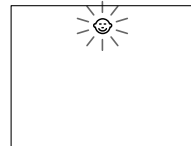
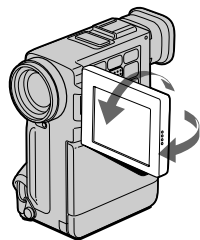
è ÈÌÂ~±ÌÈÂ
 àÒ,%±,ÒÒÒ ÓÈÁ,Ó%ÈÚÒ±ÌÁÌÚ±,Â±ÔÈÒ±Ì±±,
 16-ÈÚÓ,ÓÍ ÂÈÈÌÂ, Ç° ÌÂ ÒÌÓÈÂÚÂ
 ÓÚ Â,ÚÌÈ Ó,Ú, ±Ì±ÌÒ È AUDIO MIX.

Letting the subject monitor the shot

You can turn the LCD panel over so that it faces the other way and you can let the subject monitor the shot while shooting with the viewfinder.

Turn the LCD panel up vertically. When you turn the LCD panel 180 degrees, the ☺ indicator appears on the LCD screen (**mirror mode**) and the time code and remaining tape indicators disappear.

You can also use the Remote Commander.



To cancel mirror mode

Turn the LCD panel down toward the camcorder body.

Notes on mirror mode

- Using the mirror mode, you can record yourself while watching yourself on the LCD screen.
- The picture on the LCD screen appears as a mirror-image while recording in mirror mode. **II●** appears in Standby mode, and **●** during recording. Other indicators appear as mirror-image. Some indicators do not appear.
- While recording in mirror mode, you cannot operate the following functions: MENU, ZERO SET MEMORY on the Remote Commander.

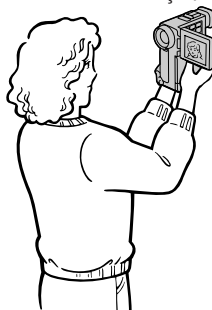
Ç° İÖÊÂÚÂ ÒÂ Â,Â İÜÜ, Ò±İÂİ, ÜaÑ, Ü±İ, ÜÓÖİ±.Ü%AUÖ. ±Âİ±, % Ü,Ü, ÖÜÖ ÖİÜÊ Ç° İÖÊÂÚÂ ÖÓÁ,ÖİÊÜ, ÖİÊİ±ÂİÖİÜ ~ÂİÖ,ÂİÜ İ±İ, %Ü, Ö ÂİİÜ, Ö ÖÊÁ,Ö%fl Â±ÖÊÖÊ Ö ÖÖİÖ~, ,Ê%ÖÊÖİ±ÜÂİfl.

Ç° İÖÊÂÚÂ ÒÂ Â,Â İÜÜ, ÜaÑ, Ü±İ, ÜÓÖİ±.Ü%AUÖ. ±Âİ±, % Ü,Ü, ÖÜÖ ÖİÜÊ Ç° İÖÊÂÚÂ ÖÓÁ,ÖİÊÜ, ÖİÊİ±ÂİÖİÜ ~ÂİÖ,ÂİÜ İ±İ, %Ü, Ö ÂİİÜ, Ö ÖÊÁ,Ö%fl Â±ÖÊÖÊ Ö ÖÖİÖ~, ,Ê%ÖÊÖİ±ÜÂİfl.

èÖ,Â İÊÜÂ Ò±İÂİ, ÜaÑ, Â ÜÊİ±İ,İÖ „Â İ. äÖ, % Ç° ÖÖ, Ö ±Ê, ±ÂÜÂ Ò±İÂİ, ÜaÑ İ± 180 „ ±%ÜÖÖ, Êİ%Êİ±ÜÖ ☺ ÖÖfl,ÊÜÖfl İ± İ±İ ÜaÑ (ÂÂ İ±İ,İ°Ê ÂÊÊİ) Ê Êİ%Êİ±ÜÖ ° , ÂİÂİÖ, Ö İÖ%± Ê ÖÖÜ, ÂÊÖfl İÂİÜ° ÊÖ~ÂÂİÜÜ. Ç° Ü±İÊÂ İÖÊÂÚÂ ÊÖÖÖİ,ÂÖ, ±Ü, ÖÜİ, Ü %ÊÖÜ±İÊÖİİÖ, Ö ÜÖ ±,İÂİÊfl.

Ñİfl ÖÜİÂİ° ÂÂ İ±İ,İÖ, Ö ÂÊÊİ± èÖ,Â İÊÜÂ Ò±İÂİ, ÜaÑ ,İÊÂ , İ±Ö ±,İÂİÊÊ İÖ ÖÜÖ± İ±İÂ °.

è ÊİÂ~±İÊfl Í ÂÂ İ±İ,İÖİÜ ÂÊÊİÜ
• àÖÖÖİ,ÂÜfl ÂÂ İ±İ,İ°Ê ÂÊÊİ, Ç° İÖÊÂÚÂ Â±ÖÊÖ±Ü, Ö±İÖ, ÖÖÂ-fl, ÖİÖÜ fl İ± Ö±İÖ, Ö ÖÂ-fl İ± İ± İ±İ ÜaÑ.
• àÁÖ. ±ÊÂİÊÂ İ± İ±İ ÜaÑ ÖÖfl,İflÂÜÖfl , ÂÂ İ±İ,İÖİ ÖÜÖ. ±ÊÂİÊÊ, Ö, Âİfl Â±ÖÊÖÊ , ÂÂ İ±İ,İÖİ ÂÊÊİÂ. **II●** ÖÖfl,İflÂÜÖfl , ÂÊÊİÂ, ÖÜÖ,İÖÖÜÊ Ê **●**, Ö, Âİfl Â±ÖÊÖÊ. Ñ Ü,ÊÂ Êİ%Êİ±ÜÖ ° ÖÖfl,İfl ÜÖfl , İ±~ÂÖÜ,Â ÂÂ İ±İ,İ° ÊÁÖ. ±ÊÂİÊÊ. ÇÂİÖÜÖ ° Â Êİ%Êİ±ÜÖ ° ÖÖfl,İfl Ü, Öfl İÂ. Ü%ÜÜ.
• ÇÖ, Âİfl , Â±ÖÊÖÊ , ÂÂ İ±İ,İÖİ ÂÊÊİÂ Ç° İÂ İÖÊÂÚÂ ÜÖ ±,İflÜ, ÖİÂ%Ü, ÊİÊ ÜÜİİÊflİÊ: MENU, ZERO SET MEMORY Ö ÖÜİ, Ü± %ÊÖÜ±İÊÖİİÖ, Ö ÜÖ ±,İÂİÊfl.

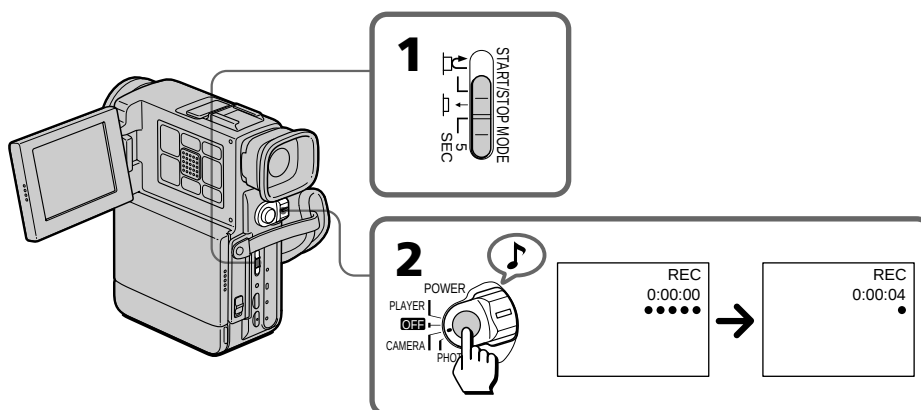


Shooting scenery in several short takes

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

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

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



To extend the recording time

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

To cancel 5-second recording

Set START/STOP MODE to **5**. If you set the switch while recording, recording continues.

Note on 5-second recording

You cannot use FADER function during 5-second recording.

5-SEC. REC (5-SECOND RECORDING) mode. The camcorder records for only 5 seconds and then switches to Standby mode, so that you will automatically take a series of quick shots resulting in a lively video.

(1) Set START/STOP MODE to **5SEC.** Five dots appear on the LCD screen or in the viewfinder. **(2)** Press START/STOP. Recording starts. The dots disappear at a rate of one per second. When 5 seconds elapse and all the dots disappear, the camcorder switches to Standby mode automatically.

(1) Set START/STOP MODE to **5SEC.** Five dots appear on the LCD screen or in the viewfinder. **(2)** Press START/STOP. Recording starts. The dots disappear at a rate of one per second. When 5 seconds elapse and all the dots disappear, the camcorder switches to Standby mode automatically.

5-SEC. REC (5-SECOND RECORDING) mode. The camcorder records for only 5 seconds and then switches to Standby mode, so that you will automatically take a series of quick shots resulting in a lively video.

(1) Set START/STOP MODE to **5SEC.** Five dots appear on the LCD screen or in the viewfinder. **(2)** Press START/STOP. Recording starts. The dots disappear at a rate of one per second. When 5 seconds elapse and all the dots disappear, the camcorder switches to Standby mode automatically.

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

Fade-in and fade-out

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

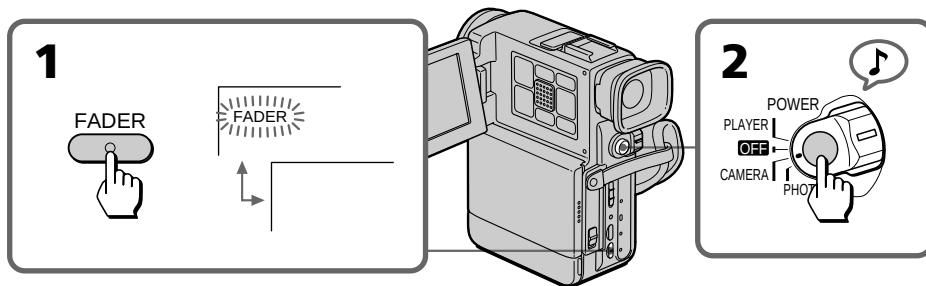
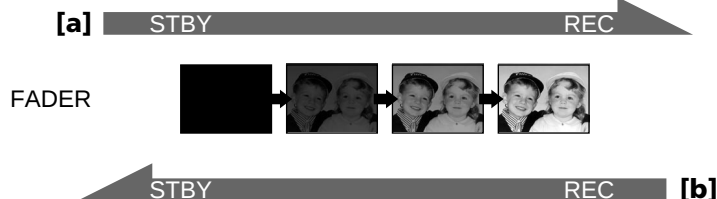
When fading in, the picture gradually fades in from black while the sound increases. When fading out, the picture gradually fades to black while the sound decreases.

When fading in [a]

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

When fading out [b]

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



To cancel the fade-in/fade-out function

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

When the START/STOP MODE control is set to $\frac{1}{2}$ or 5SEC

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

Ç, Â% ÂÏËÂ Ë, °, Â% ÂÏËÂ
ËÁÓ. ‡ÊÂÏËfl

Ç° ÌÖÊÂÚÂ ÔÏ, ÌÖ „Ö%ËÚ, Ë, °, Ö%ËÚ,
ËÁÓ. ‡ÊÂÏËÂ. Ö Ë%‡, fl Ç° ÂËÂ†ÖËÖË
Ô ÖÚÂÖÖËÖÏ†, Ì°Ë, Ë%.
è Ë, Â% ÂÏËËËÁÓ. ‡ÊÂÏËÂÖÖÖÚÂÖÂÏÏ
„Ö%ËÚÖfl ÖÚ~Â ÌÖ, Ö ËÏË ÌÖÁ†Ë~ÌÖ, Ö Ò
Ö%ÌÖ, ÂÏÂÏ°Ï ÖÖ, °~ÂÏËÂÏ Â, ÚÏ†. è Ë
°, Â% ÂÏËËËÁÓ. ‡ÊÂÏËÂÖÖÖÚÂÖÂÏÏ
°, Ö%ËÚÖfl %Ö~Â ÌÖ, Ö ËÏË ÌÖÁ†Ë~ÂÏÖ, Ö Ò
Ö%ÌÖ, ÂÏÂÏ°Ï ÖÖÏËËÂÏÂÏ Â, ÚÏ†.

ÑÏfl „Â% ÂÏËfl ËÁÓ. ‡ÊÂÏËfl [a]

(1) äÖ, %‡, Ë% ÂÖÏ†Â ‡ Ì†Ö%ËÚÖfl, ÂËËÂ
„ÖÚÖ, ÌÖÖÚË Ì†ËËËÚÂ FADER. àÌ%ËÏ†ÚÖ
„Â% ÂÏËfl Ì†ËË†ÂÚ ÌË, ‡Ú.

(2) Ç†ËËËÚÂ START/STOP %fl Ì††† Â†ÖËÖË.
àÌ%ËÏ†ÚÖ „Â% ÂÏËfl ÔÂ ÂÖÚ†ÂÚ ÌË, ‡Ú.

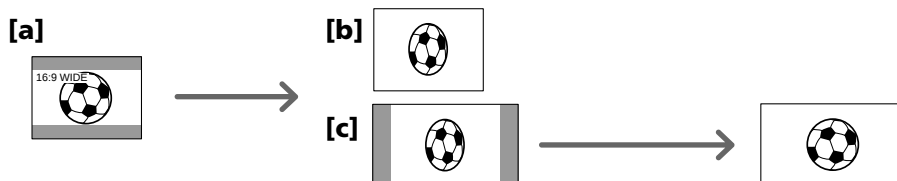
ÑÏfl, °, Â% ÂÏËfl ËÁÓ. ‡ÊÂÏËfl [b]

(1) ÇÖ, Âfl Â†ÖËÖË Ì†ËËËÚÂ
FADER. àÌ%ËÏ†ÚÖ „Â% ÂÏËfl Ì†ËË†ÂÚ
ÌË, ‡Ú.

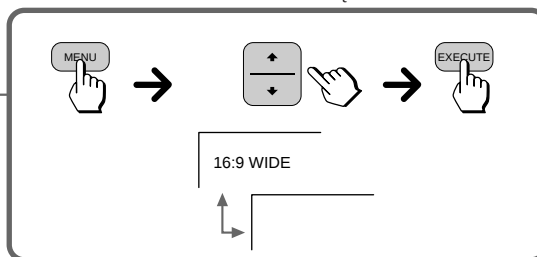
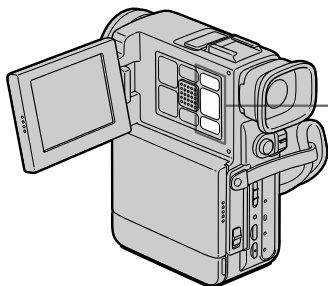
(2) Ç†ËËËÚÂ START/STOP %fl ÖÖÚ†Ö, ‡
Â†ÖËÖË. àÌ%ËÏ†ÚÖ „Â% ÂÏËfl ÔÂ ÂÖÚ†ÂÚ
ÌË, ‡Ú, Ë Â†ÖËÖ, ÖÖÚ††. ÌË, ‡ÂÚÖfl.

Using the wide mode function

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]**.



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



To cancel wide mode
Select OFF in the menu system.

To watch the tape recorded in wide mode

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

Note on wide mode

You cannot select or cancel the wide mode during recording.

ÀÒÔÔÎ ÁÓ, ÌÊÂ ÙÛÎÊÊ
Ê ÓÍÓÚÓ ÌÛÍÓ, Ó ÂÊÊÏ

Ç° ÌÓÊÂÛÂ Á±ÔÊ°±Ú, ÌÊ ÓÍÓÚÓ ÌÛÍÓÂ
ÊÁÓ. ÌÊÂÏÊÂ 16:9%Ï Ò ÓÒÍÓÚ ±Ì±
ÌÊ ÓÍÓÍ ÌÏÍÓ ÛÂÏÂ, ÊÁÓ Â (16:9 WIDE).
ÀÁÓ. ÌÊÂÏÊÂ Ò Â ÌÊÊ ÓÍÓÓ±ÊÊ Ò Â ÌÊ
ÒÏÊÂ Ì± Ì± Ì± Ì± ÛÂ ÌÊÊ , Ê%ÓÊÊ±ÛÂÏÂ
[a] ·Û%ÂÛ ÌÓ Ì± Ì± Ì±. ÀÁÓ. ÌÊÂÏÊÂ Ì±
Ó. ÌÊÊ ÛÂÏÂ, ÊÊÊÊÏÍÓ Ì± Ì±. **[b]** ·Û%ÂÛ
ÒÊ±ÚÓÓÓ, Ó ÊÁÓÍÛ±ÊÊ. Ç° ÌÓÊÂÛÂ
Ò ÓÒÍÓÚ ÂÛ, ÌÓ Ì± Ì± Ì± ÊÁÓ. ÌÊÂÏÊÂ Ì±
ÌÊ ÓÍÓÍ ÌÏÍÓ ÛÂÏÂ, ÊÁÓ Â **[c]**.

- (1) Ç±ÊÏÊÛÂ MENU %Ï ÒÓÚ. ÌÊÂÏÊÊ ÌÂÏ,
Ì± Ì± Ì± ÛÂ Ì±.
- (2) Ç±ÊÏÊÛÂ ± ÊÊÊ ± %Ï Ì±, °Ó ± 16:9 WIDE, ±
Â±ÛÂÏ Ì±ÊÏÊÛÂ EXECUTE. 16:9 WIDE
Òòí, ÊÛÒí Ì± Ì± Ì± ÛÊÊ.
- (3) Ç±ÊÏÊÛÂ ± ÊÊÊ ± %Ï Ì±, °Ó ± ON, ± Â±ÛÂÏ
Ì±ÊÏÊÛÂ EXECUTE.
- (4) Ç±ÊÏÊÛÂ MENU %Ï ÒÓÚ ÌÊÊ ÌÊÊ
ÒÓÚ. ÌÊÂÏÊÊ ÌÂÏ.

Ñíí ÒÓÍÂÏ ÌÊ ÓÍÓÚÓ ÌÛÍÓ, Ó
ÂÊÊÏ
Ç° Â ÊÛÂ OFF, ÒÊÛÂÏÂ ÌÂÏ.

Ñíí Ò ÓÒÍÓÚ ± ÌÂÛ°, Â±ÔÊ°±ÏÓÊ ,
ÌÊ ÓÍÓÚÓ ÌÛÍÓ ÂÊÊÂ
Ñíí Ò ÓÒÍÓÚ ± ÌÂÛ°, Â±ÔÊ°±ÏÓÊ , ÂÊÊÂ
16:9WIDE, ° Â ÊÛÂ ÓÓÍÓ ÂÊÊÏÏ,
ÛÓÚ±ÍÓ, Ì±. ÊÓ% Ó-ÍÓÚÊÊÊ, ÊÏÚ ÛÊÊÊÓ
ÌÊÊÊ±Û±ÊÊ Ç± Â, Ó ÛÂÏÂ, ÊÁÓ ±.
ÌÛÊÛÂ, ÛÓ ÊÁÓ. ÌÊÂÏÊÂ, Â±ÔÊ°±ÏÓÂ,
ÂÊÊÂ 16:9WIDE , Ì±%ÊÛ ÒÊ±Ú° ÌÊ
Ò ÓÒÍÓÚ Â Ì± Ì± Ì± Ó. ÌÊÊ, Ó ÛÂÏÂ, ÊÁÓ ±.

È ÊÏÂ±ÊÂ ÌÊ ÌÊ ÓÍÓÚÓ ÌÛÍÓ ÌÊ ÂÊÊÏ
Ç° ÌÂ ÌÓÊÂÛÂ , ±Ú, ÊÊÊ ÓÍÓÍÊÛ.
ÌÊ ÓÍÓÚÓ ÌÛÍÊ ÂÊÊÏ, Ó, ÂÏí Â±ÔÊ°Ê.

Photo recording

á†ÔËÒ, ÙÓÚÓ, ‡ÙËË

You can record a still picture like a photograph for about seven seconds. This mode is useful when you want to enjoy a picture such as a photograph or when you print a picture using a video printer (not supplied). You can record about 510 pictures on a 60-minute tape. Shutter speed is automatically adjusted up to 1/1000 depending on the exposure.

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

(2) Keep pressing START/STOP lightly until a still picture and "PHOTO CAPTURE" appear on the LCD screen or in the viewfinder. Recording does not start yet. To change the still picture, release START/STOP, select still picture again, and keep pressing START/STOP lightly again.

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

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

(3) Press START/STOP deeper.

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

Ç° ÌÖÊÁÚÁ Á†ÔËÒ° ‡Ú, ÌÄÖÓ%, ËËÌÖÁ
ÉÁÓ. ‡ÊÁÌËÁ, Ì† ÙÓÚÓ, ‡ÙË, ÙÁ~ÁÌËÁ
ÌÄÖÌÖÌ, ÌË ÒÁÌÙÌ%. ÙÓÚÓ ÁËËÌ ÌÌÁÚÖÌ
Ó~ÁÌ, ÖÖÌÁÁÌ°Ì, ÌÖ, % ‡ Ç° ÌÖËËÚÁ
Ì†ÖÌ†Ë% ‡Ú, ÖÌ ÉÁÓ. ‡ÊÁÌËÁ ÒÖÌÖËË Ì†
ÙÓÚÓ, ‡ÙË, ËË ÌÖ, % ‡ Ç° %ÁÌ†ÁÚÁ
†ÖÁ†ÙÌËÉÁÓ. ‡ÊÁÌËË, ËÖÖÖÌ, ÁÚÌ
Ë%ÁÖ ËÌÚÁ (ÌÄ ËÌ†, ‡ÁÚÖÌ). Ç° ÌÖÊÁÚÁ
Á†ÔËÒ†Ú, Ö ËËËÁËÚÁÌ, ÌÖ 510 ÉÁÓ. ‡ÊÁÌËË
Ì† 60-ÌËÌÙÌÙ, ÌÁÌÙÙ.

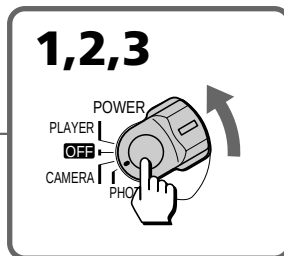
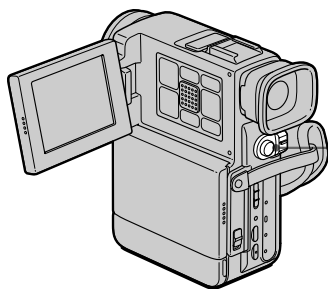
ËÌÖ ÖÖÚÁ†ÚÖ ‡Á, ÙÌË ÙÁÚÖÌ
†, ÙÖÌ†ÙË ÁÖÌË% Ö 1/1000, Á†, ËÖËÌÖÖÚË ÖÚ
ÌÖÖÖÁËËË.

(1) Ç†ËËÌ†Ì Ì†ÌÁÌ, ÌÙ, ÁÁÌÁÌÙ, ÌÌÖÖÌÙ Ì†
°Ì ~†ÚÁÌÁ POWER ÙÖÚ†ÌÖ, ËÚÁ Á, Ö,
ÖÖÌÖËÁÌËÁ PHOTO.

(2) È Ë%Á ËË, ‡ÊÁÚÁ ÖÌÁÌ, ‡ Ì†Ë†ÚÖË ÌÌÖÖÌÙ
START/STOP% ÖÚÁÌÖÖ, ÖÖÌ†
ÌÄÖÓ%, ËËÌÖÁ ÉÁÓ. ‡ÊÁÌËÁ Ë "PHOTO
CAPTURE" ÌÁ ÖÖÌ, ÌÌÁÚÖÌ, Ì† °Ì ‡ÌÁ ÙÁÑ
ËËË, Ë%ÖËÖÌ†ÚÁÌÁ. Á†ÔËÒ, ÖÖÌ† Á~Á ÌÁ
Ì†~†Ú.

ÑÌÌ ËÁÌÁÌÁÌË ÌÄÖÓ%, ËËÌÖ, Ö
ÉÁÓ. ‡ÊÁÌËË ÙÖÚÖÚÖÚÁ START/STOP,
° Á ÚÁ% Ù, ÖÁÌÄÖÓ%, ËËÌÖÁ
ÉÁÓ. ‡ÊÁÌËÁ ÖÖÌÖ, ‡Ö Ë%Á ËË, ‡ÊÁÚÁ
ÖÌÁÌ, Ì† Ì†Ë†ÚÖË ÌÌÖÖÌÙ START/STOP.
ÖÖÌË Ç° Ì†ËËÌ†ÁÚÁ ÌÌÖÖÌÙ Ëççéé Ì†
ÖÖÌ ÙÁ% ËÖÚ†ÌËÖÌÖ, Ö ÖÚ ‡ÌÁÌËÌ, ÌÖ, % ‡
ÌÄÖÓ%, ËËÌÖÁ ÉÁÓ. ‡ÊÁÌËÁ ÖÖÌ, ÌÌÁÚÖÌ Ì†
°Ì ‡ÌÁ ÙÁÑ ËËË, Ë%ÖËÖÌ†ÚÁÌÁ,
Ë%ÁÖÌ†ÌÁ ‡ Ù%ÁÚ Á†ÔËÒ° ‡Ú, °Ú
ÌÄÖÓ%, ËËÌÖÁ ÉÁÓ. ‡ÊÁÌËÁ, Ë%Ì†ÌÖ, Ç°
ÌÁ ÌÖÊÁÚÁ °. ‡Ú, % Ù, ÖÁ ÌÄÖÓ%, ËËÌÖÁ
ÉÁÓ. ‡ÊÁÌËÁ Ö ËÖÖÖÌ, ÁÖ, ‡ÌÁ % ÌÌÖË
ÌÌÖÖÌË.

(3) Ç†ËËËÚÁ START/STOP °ÌÙ.ËÁ.
"PHOTO REC" Ù%ÁÚ ÌË, ‡Ú, Ë
ÌÄÖÓ%, ËËÌÖÁ ÉÁÓ. ‡ÊÁÌËÁ Ì† °Ì ‡ÌÁ
ÙÁÑ ËËË, Ë%ÖËÖÌ†ÚÁÌÁ Ù%ÁÚ
Á†ÔËÒ° ‡Ú, ÖÌ Ö ËËËÁËÚÁÌ, ÌÖ, ÙÁ~ÁÌËÁ
ÖÁÌË ÖÁÌÙÌ%. Á, ÙÌ, Ö, ÁÌÌ °ÚË ÒÁÌË
ÖÁÌÙÌ% Ù†ÌËÁ Ù%ÁÚ Á†ÔËÒ° ‡Ú, ÖÌ.
ÁÚÌ ÙËÖÌËÌ†Ë ÒÖÌ, ÌÌÁÚÖÌ Ì† °Ì ‡ÌÁ
ÙÁÑ ËËË, Ë%ÖËÖÌ†ÚÁÌÁ, Ö, ÁÌÌ Á†ÔËÒË.
Ç° ÌÁ ÌÖÊÁÚÁ ÉÁÌÁÌËÚ, ÙÖÚ†ÌÖ, ÌÙ
°Ì ~†ÚÁÌÁ POWER ËË Ì†Ë†Ú, ÌÌÖÖÌÙ
START/STOP, Ö, ÁÌÌ Á†ÔËÒË.

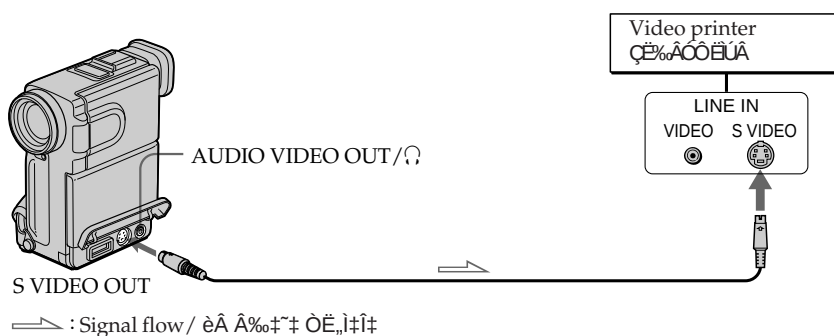


Note on the still picture

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

Printing the still picture

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



If the video printer is not equipped with S VIDEO input

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

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ËÄÖ· ðËÄÏË
äÖ,%,ìÄÖÖ%,ËËÏÖÄËÄÖ· ðËÄÏËÄ,
ÄäÖËcììÖÄ ì ð%ììÖË,Ë%ÄÖÏìÄ Ä,
ÖÖÖ ÖËÄ,Ö%ËÜÖflì%Ü,ÖÏäÇä,
ËÄÖ· ðËÄÏËÄ ÌÖËÄÜ ·°Ü, ðÄÏ°ÜÏ. ùÜÖ ÌÄ
fl,ÏflÄÜÖfl ÌÄËÖÖ ð,ìÖÖÜ,.

ê±ÖÖÄ~±ÜÍ± ÌÄÖÖ%,ËËÏÖ,Ö
ËÄÖ· ðËÄÏËfl

Ç° ÌÖËÄÜÄ ì±ÖÄ~±Ü±Ü, ÌÄÖÖ%,ËËÏÖÄ
ËÄÖ· ðËÄÏËÄ Ö ËÖÖÖÏ,ÄÖ,ðËÄÏ
Ë%ÄÖÖ ËÏÜÄ ð(ÌÄÖ ËÏ±,±ÄÜÖfl).
èÖ%ÖÖÄ%ËËÏÜÄ,Ë%ÄÖÏì:ÄÏ,Ë%ÄÖÖ ËÏÜÄ Ü
Ö ËÖÖÖÏ,ÄÖ,ðËÄÏ Ö ËÏ±,±ÄÏÖ,Ö
ÖÖÄ%ËËÏÜÄÏ,ìÖ,Ö Ì±·Äfl S-Ë%ÄÖ,ËÏÖÜ ËÜÄ
Ü±ÏËÄ ÜÏÖ,Ö%ÖÜ,ÖÖÖ ÌÖÖÏÜ±Ü±ËË
Ë%ÄÖÖ ËÏÜÄ±.

ÖÖÏË,Ë%ÄÖÖ ËÏÜÄ ÌÄ ÖÖÏ±ÄÏ,ìÖ%ÖÏ S-
Ë%ÄÖ
àÖÖÖÏ,ÄÜËÜÄ Ö ËÏ±,±ÄÏ° ÖÖÄ%ËËÏÜÄÏ,ÏË
Ì±·ÄÏ±Ü%ËÖ/Ë%ÄÖèÖ%ÖÖÄ%ËËÏÜÄ
Ö ËÏ±,±ÄÏ° ÖÖÄ%ËËÏÜÄÏ,ÏË Ì±·ÄÏ, ðÜ%ËÖ/
Ë%ÄÖ Ö Ì,ÌÄÄ%Ü AUDIO VIDEO OUT/,Ç°ÜÖÏ
ÖÏÜ~±Ä ÖÖ%ÖÖÄ%ËËÏÜÄ ËÄÏÜ°Ë ðÄ· ÄÏÏ
ìÖ%ÜVIDEOÏ±,Ë%ÄÖÖ ËÏÜÄ Ä.

Releasing the SteadyShot function

éÚÍÎ~ÀÌËÂ ÛÛÌÍ~ËË STEADYSHOT

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

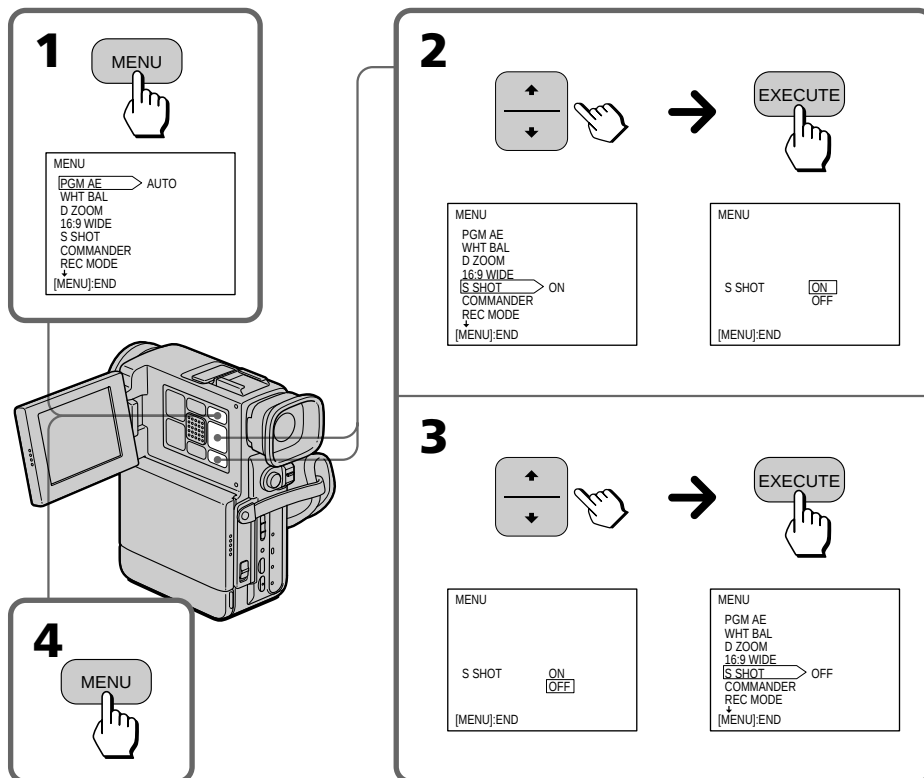
You can release the SteadyShot function when you do not need to use the SteadyShot function. Do not use the SteadyShot function when shooting a stationary object with a tripod.

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

äÖ,%, ° Ò ÓËÁ, Ö%ËÜÄ Ò ÄÏÜ, Èì%Ëí±ÜÓ
ÖÖí, íííÄÜÖí ì± Ñ ±íÄ ÜäÑ. ùÜÓ Üí±Ä°, ±ÄÜ
ì± ÜÓ, ÑÜÓ ÜÜÌÍ~ËË ÜÜÜÓË~Ë, ÖË Ò ÄÏË
±ÖÜ±ÄÜ %ííí ÍÖÍÖÄÍÖ±~ËË % ÖË±ËËí
Ë%ÄÖÍ±íÄ °.

Ç° ÍÖËÄÜÄ ÖÜÍÎ, ËÜ, ÜÜÌÍ~ËË, ÜÜÜÓË~Ë, ÖË
Ö ÄÏË, ÍÖ, %± Ç° ÍÄ ÌËË%±ÄÜÄÖ, ,
ËÖÖÖÍ, ÄÖ, ±ËË ÜÜÌÍ~ËË ÜÜÜÓË~Ë, ÖË Ò ÄÏË.
ÇÄ ËÖÖÖÍ, ÄÜËÜÄ ÜÜÌÍ~ËË, ÜÜÜÓË~Ë, ÖË Ò ÄÏË.
Ö Ë Ò ÄÏÄ ÍÄÖÖ%, ËËí° Ò ÄÏÜÖ, Ö
ÖÖÍÖ, Ë Ü ÄÍÖ, Ë.

- (1) Ç±ËËËÜÄ MENU %ííí ÖÜÖ ±ËÄËËí ÌÄì,
ì± Ñ ±íÄ ÜäÑ.
- (2) Ç±ËËËÜÄ  ËË  %ííí, ° Ö ± S SHOT, ±
Ä±ÜÄÏ Ì±ËËËÜÄ EXECUTE.
- (3) Ç±ËËËÜÄ  %ííí, ° Ö ± OFF, ± Ä±ÜÄÏ
Ì±ËËËÜÄ EXECUTE.
- (4) Ç±ËËËÜÄ MENU %ííí ÖÜË ±ËËí %ËÖÖÍÄí
Í Ä Ì.



Select ON in step 3, then press EXECUTE.

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

Nîfi ðíÚË,ÉÁ±ÊË ÒÙÍ~ËË ÒÒÓÔË~Ë,ÓÈ
Ò·ÁÍË ÒÌÓ,±
Ç°·Á ÉÚÂ ON , ÒÙÍÚÂ 3, ± Á±ÚÃÍ ÍÊÏÉÚÂ
EXECUTE.

• $\iota\hat{1}\hat{1}\hat{1}\hat{E}\hat{F}\hat{I} \hat{U}\hat{O}\hat{U}\hat{O}\hat{E}\hat{\sim}\hat{E}, \hat{O}\hat{E} \hat{O} \hat{A}\hat{I}\hat{I}\hat{E} \hat{I}\hat{A}$
 $\hat{O}\hat{U}\hat{I}\hat{O} \hat{A}\hat{I}\hat{U}\hat{E} \hat{U}\hat{A}\hat{U} \hat{A}\hat{A}\hat{I}\hat{A} \hat{I}\hat{O}, \hat{O}_{\%} \hat{O}\hat{E}\hat{\dagger}\hat{I}\hat{E}\hat{F}\hat{I}$
 $, \hat{E}_{\%} \hat{A}\hat{O}\hat{I}\hat{\dagger}\hat{I}\hat{A} \text{ } ^{\circ}.$

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ù % á.

Using the PROGRAM AE function

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

Selecting the best mode

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



/ SPORTS: Sports lesson mode

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

/ SUNSETMOON: Sunset & Moon mode

Recording sunset, night views, fireworks or neon signs

/ LANDSCAPE: Landscape mode

Recording a landscape through a window or wire net

Notes on focus setting

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

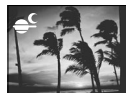
PROGRAM AE

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

PROGRAM AE, you can get a capture high-speed action, record night views, etc.

PROGRAM AE

PROGRAM AE, you can get a capture high-speed action, record night views, etc.



PROGRAM AE, you can get a capture high-speed action, record night views, etc.

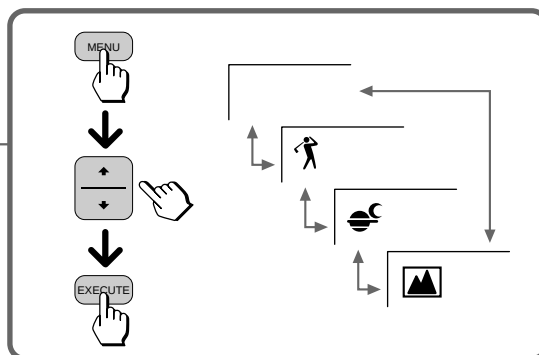
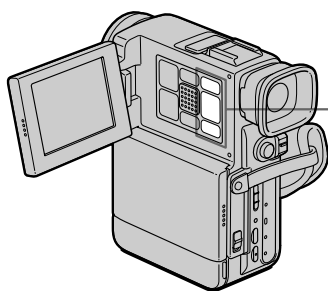
PROGRAM AE, you can get a capture high-speed action, record night views, etc.

PROGRAM AE, you can get a capture high-speed action, record night views, etc.

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

Using the PROGRAM AE function

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



To return to automatic adjustment mode

Select AUTO in the PGM AE menu. The symbol of the PROGRAM AE mode disappears.

Note on shutter speed

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

Note on locking the exposure

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

Notes on white balance setting

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

PROGRAM AE

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

While the camcorder is in recording or Standby mode press MENU to display the menu on the LCD screen.

Press $\blacktriangledown$ or $\blacktriangle$ to select PGM AE, then press EXECUTE.

Press $\blacktriangledown$ or $\blacktriangle$ to select the desired mode, then press EXECUTE. If you want to change the other modes, repeat steps 2 and 3. The symbol of the selected mode appears on the LCD screen.

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

Focusing manually

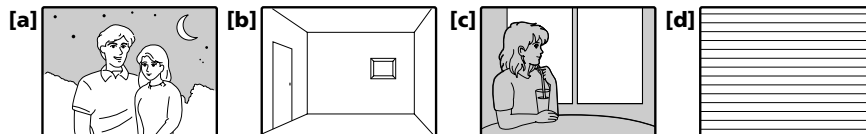
εὐκρίνως ὁρίσασθαι ὁ, ἰσχυρὰ

When to use manual focus

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

ἀλλὰ, ὅταν ἐπὶ τοῦ ὁρίσασθαι, ὁ ὁρίσας
ὁρίσας ὁ, ἰσχυρὰ

ὅταν ὁ ὁρίσας ὁ, ἰσχυρὰ ὁ ὁρίσας ὁ, ἰσχυρὰ
ὁ ὁρίσας ὁ, ἰσχυρὰ ὁ ὁρίσας ὁ, ἰσχυρὰ
ὁ ὁρίσας ὁ, ἰσχυρὰ ὁ ὁρίσας ὁ, ἰσχυρὰ



- 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

- ὅταν ὁ ὁρίσας ὁ, ἰσχυρὰ ὁ ὁρίσας **[a]**
- ὅταν ὁ ὁρίσας ὁ, ἰσχυρὰ ὁ ὁρίσας ὁ, ἰσχυρὰ **[b]**
- ὅταν ὁ ὁρίσας ὁ, ἰσχυρὰ ὁ ὁρίσας ὁ, ἰσχυρὰ **[c]**
- ὅταν ὁ ὁρίσας ὁ, ἰσχυρὰ ὁ ὁρίσας ὁ, ἰσχυρὰ **[d]**
- ὅταν ὁ ὁρίσας ὁ, ἰσχυρὰ ὁ ὁρίσας ὁ, ἰσχυρὰ
- ὅταν ὁ ὁρίσας ὁ, ἰσχυρὰ ὁ ὁρίσας ὁ, ἰσχυρὰ
- ὅταν ὁ ὁρίσας ὁ, ἰσχυρὰ ὁ ὁρίσας ὁ, ἰσχυρὰ
- ὅταν ὁ ὁρίσας ὁ, ἰσχυρὰ ὁ ὁρίσας ὁ, ἰσχυρὰ
- ὅταν ὁ ὁρίσας ὁ, ἰσχυρὰ ὁ ὁρίσας ὁ, ἰσχυρὰ
- ὅταν ὁ ὁρίσας ὁ, ἰσχυρὰ ὁ ὁρίσας ὁ, ἰσχυρὰ

Focusing manually

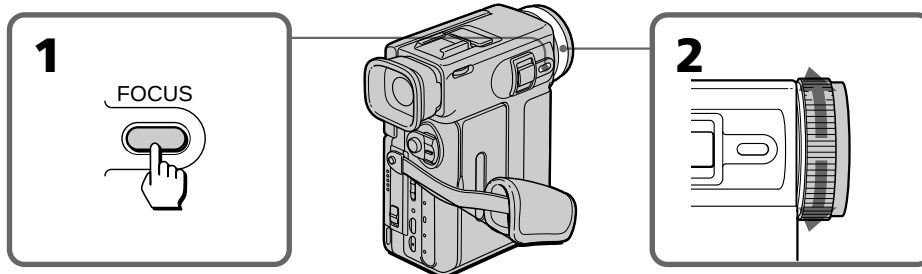
When focusing manually, first focus in telephoto before recording, and then reset the shot length.

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

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è È Ù~ìÓÈ ÙÓÍÛÒÈ Ó,íÁ ÒÒÁ ,ñ, °ÓÓñflÈÚÁ ÙÓÍÛÒÈ Ó,íÛ, ÁÈÈíÁÚÁíÁÙÓÚÓÓÁ Á% ÁñÓÈÖ,,ñÁñÁíÙÒÚñíÓ,ÈÚÁ ðÒÚÓñflÈÁ Ò ÁííÈ.

- (1) èíÁ,,íñ ìñÈÈÚÁ FOCUS. àì%ÈíñÚÓ  ÓÓfl,ÈÚÒfl ìñ Áí ñíÁ Ûáñ ÈíÈ , È%ÓÈÖíñÚÁíÁ.
- (2) èÓ,Á ìÈÚÁ íÓí, °Ó ÙÓÍÛÒÈ Ó,íÈ %ífl ÙÓÍÛÒÈ Ó,íÈ ìñ Ó Áíí.



To focus in infinity

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

To return to the autofocus mode

Press FOCUS lightly to turn off  or  indicator.

Shooting in relatively dark places

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

If lights up

Subject is too close.

ñífl ÙÓÍÛÒÈ Ó,íÈ ìñ ÁÓíÓíÁ~ìÓÒÚ, çñÈÈÚÁ ñíÓíÛ FOCUS %Ó íÓíñ. àì%ÈíñÚÓ  ÓÓfl,ÈÚÒfl ìñ í ñíÁ Ûáñ ÈíÈ , È%ÓÈÖíñÚÁíÁ.

ñífl ,ÓÁ, ñÁíÈfl í ÁÈÈíÙ ñ,ÚÓíñÚÈ~ÁÓíÓÈ ÙÓÍÛÒÈ Ó,íÈ çñÈÈÚÁ FOCUS %ífl , °íñ~ÁíÈfl Èì%ÈíñÚÓ ñ  ÈíÈ .

è Áííñ , ÓÚìÓÒÈÚÁí,íÓ ÚÁííÓí íÁÒÚÁ è ÓÈÁ,Ó%ÈÚÁ Ò ÁííÙ, ÓÓíÓÈÁíÈÈ È ÓíÓ,,Ó Û,,íñ ÓÓÒíÁ , °ÓÓñÁíÈfl ÙÓÍÛÒÈ Ó,íÈ , ÓÓíÓÈÁíÈÈÚÁíÁÙÓÚÓ.

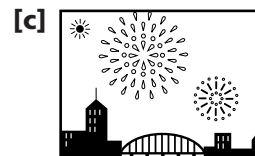
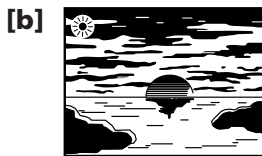
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Adjusting the white balance

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

Selecting the Appropriate Mode

Select the appropriate white balance mode under the following conditions.



☀ Indoor mode

- Lighting condition changes quickly. **[a]**
- Too bright place such as photography studios
- Under sodium lamps or mercury lamps

☀ Outdoor mode

- Under a colour matching fluorescent lamp
- Recording a sunset/sunrise, just after sunset, just before sunrise **[b]**, neon signs, or fireworks **[c]**

HOLD mode

Recording monochromatic subject or background

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·ÄÏÓ,,Ó

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·ÄÏ°Ä Ó·ÄÏÚ° ,,,Í±%ÄÏÚ ·ÄÏ°ÏË È
ÔÓÄ,ÔÏÄÛÔÓÏÛËÛ, Ä±ÔËÒ,Ò·ÔÏÄÄ
ÄÔÚÄÔÚ,ÄÏ°Ï°ÄÛÓ,°Ï·±Ï±ìÒÓÏ Ô È
Ò·ÄÏÄÄ ,È%ÄÔÏ±ÄÄ ÓË. é·~ÏÓ ·±Ï±ìÒ
·ÄÏÓ,,Ó Ä,ÛÏË ÚÄÛÒ±,ÚÓÏ±ÚË~ÄÔÏË. ÇÓ Ç°
ÏÓËÄÚÄ ÔÓÏÛËÛ, ÌÛ~ËÄ ÄÄÛÏ,Ú±Ú° ÔÚÚÄÏ
Ä,ÛÏË Ó,ÍË ·±Ï±ìÒ± ·ÄÏÓ,,Ó , Û~Û, ÌÓ,,%±
ÚÓÏÓ,È±,ÒÒ,Ä~ÄÏË± ·°ÚÓ Ó ÈÄÏÄÏ±,ÚÒ± ÈÏË
, ÛÔÏÓ,È± Ä±ÔËÒË Ì± ÛÏË~Ä, Ì±Ô ÈÏÄ ,
ÏÄÔÏÓ,°Ä ÄÏ±Ï°, ÚÄËÄ ,Ä ÏË.

Ç°Ó ÔÓ%ÄÏ°Ä~Ä,,Ó ÄËËÏ±

Ç°Ä ÈÚÄ ÔÓ%ÄÏ°Ä~ÄËË ÄËËÏ ·±Ï±ìÒ± ·ÄÏÓ,,Ó
%ÄÏ± ÔÏÄ%ÄÛ,È± ÛÔÏÓ,ÈË.

☀ êÄËËÏ Ò·ÄÏË , ÔÓÏÄ~ÄÏË

- ÏÔÏÓ,È±ÒÒ,Ä~ÄÏË± ·°ÚÓ Ó ÈÄÏÄÏ±,ÚÒ±.

[a]

- ÈÏË~ÏÓÏ± ÏËÄ ÏÄÔÚ±, Ï±Í Ì±Ô ÈÏÄ ,
ÚÓÚÓ,,±ÚË~ÄÔÏ±ÔÚÚ%È±.
- è È Ò,ÄÚÄ Ì±Ú ÈÄ,°Ï ÈÏË ÛÚÚÏ° Ì±ÏÔ.

☀ êÄËËÏ Ò·ÄÏË Ì± ÛÏË~Ä

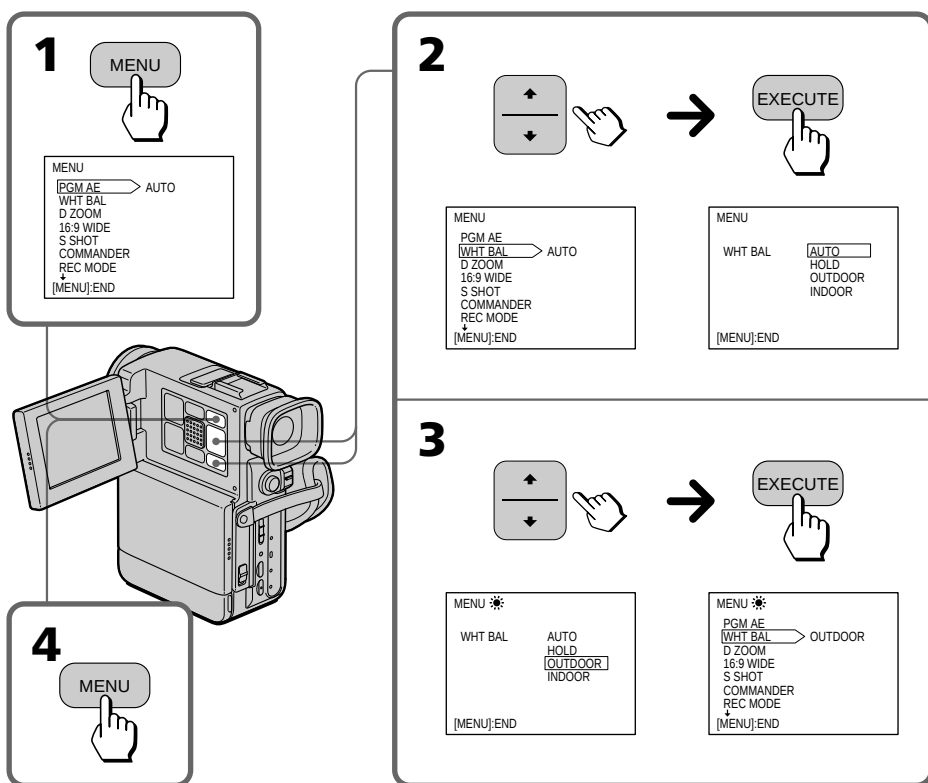
- è ÈÒÒ,Ä~ÄÏËË Ì±ÏÔ±ÏË %ÄÏÄ,ÏÓ,,Ó Ò,ÄÚ±.
- Ä±ÔËÒ,Ä±Ï°%±,ÔÒÏ°%±ÔÓÏ±Ô±ÄÛÔÔÏÄ
Ä±Ï°%±ÈÏËÄÄ%,,ÔÒÏ°%±ÔÏÔÏ± **[b]**,Ô È
ÏÄÔÏÓ,°Ä ÄÏ±Ï± ËÏË ÚÄËÄ ,Ä Ï± **[c]**.

êÄËËÏ HOLD

Ä±ÔËÒ, Ô%ÄÏ°ÄÛÏ° Ó·ÄÏÚÓ, ÈÏË Ì±
Ô%ÄÏÓ Ô%ÄÏÔÏÚÓÄ.

Setting the White Balance

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



To return to automatic white balance mode

Select AUTO in step 3, then press EXECUTE.

White Balance Indicator

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

Locking the exposure

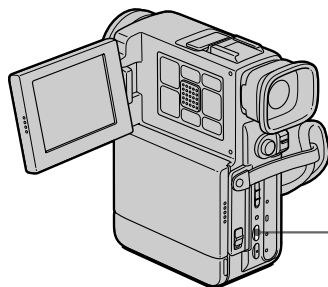
When to lock the exposure

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

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

Locking the exposure

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



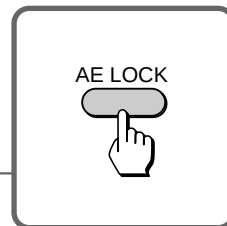
Locking the exposure

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

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

Locking the exposure

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



To return to automatic exposure mode

Press AE LOCK to turn off the AE LOCK indicator.

Shooting with the sun behind you

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

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

Shooting in the dark

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

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

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

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

Watching on a TV screen

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

If you connect directly to TV

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

Turn down the volume of the camcorder.

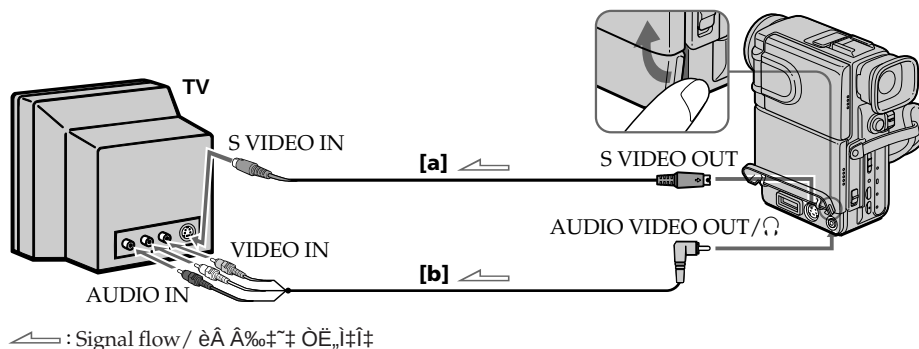
To get higher quality pictures in DV format, connect the camcorder to your TV using the S video connecting cable.

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

è òòíóú ì† ¸í ‡ìâ
úâîâ,ëáó ‡

è òòíóú ì† ¸í ‡ìâ úâîâ,ëáó ‡
ç° íòëáúâ ëòòóí, áó, ‡ú, , ë%áoí†ìâ ù ,
ì†-áóú, âçâ òúúâí òó%òóâ%ëìâíëí ãâ í
ç†-âíú úâîâ, ëáó ù%íí, òòò óëá, â%âíëí.
ëú-áòú, ù, ù óó â%âíâí°â íâúó%° %íí
òó%òóâ%ëìâíëí, ë%áoí†ìâ ° íúâîâ, ëáó ù.
è ëò òòíóú áóòò óëá, ó%ëíó, ó
ëáó. ‡ëâíëí òúúâí òó%òóâ%ëìâíëí
, ë%áoí†ìâ ° í ç†-âíú úâîâ, ëáó ù í°
áíóíâí%úâí ç†í ëòòóí, áó, ‡ú,
¸íâíú ë-áóíú, òáú, , ì†-áóú, â ëòúó-íëí†
òëúíëí.

òòíë ç° òó%òóâ%ëííâúâ ò ííó í
úâîâ, ëáó ù
éúí òëúâí °íú, íââ%úëòó%òóâ%ëìëúâ
, ë%áoí†ìâ ù í, íó%†í ù úâîâ, ëáó â ò
ëòòóí, áó, ‡íëâí ò ëí†, ‡âíó, ò
òóâ%ëìëúâí, íó, óí†-âíí†ú%ëó/, ë%áo.
ìòú†íó, ëúâ òâíâíúó TV/VCR ì† úâîâ, ëáó â
, òòíóëâíëâ VCR. è ò-â%ú ‡
, òòò óëá, â%âíëí ù†í†íëâ, í†íë ò ë
, òòò éóá, â%âíëí ì† ¸í ‡ìâ úâîâ ëíë ,
, ë%òëóí†úâîâ. ëòíëá, úâ, , òííóòú, ì†
, ë%áoí†ìâ â.
Ñííí òóíú-âíëí íú-â, ó í†-áóú, ‡
ëáó. ‡ëâíëí, úó í†úâíú, òó%òóâ%ëìëúâ
, ë%áoí†ìâ ù íúâîâ, ëáó ù ò ëòòóí, áó, ‡íëâí
ì†-âííí S-, ë%áo.
òòíëç° òó%òóâ%ëííâúâ, ë%áoí†ìâ ùò
ëòòóí, áó, ‡íëâí ò ëí†, ‡âíó, ò í†-âííí
S-, ë%áoòë, ì†íó, **[a]**, ç†í ìâ ìúëíó
òó%òóâ%ëííú, ëâíú°ë (ë%áo) ‡â-âí
òóâ%ëìëúâí, íó, óí†-âííí†ú%ëó/, ë%áo**[b]**.



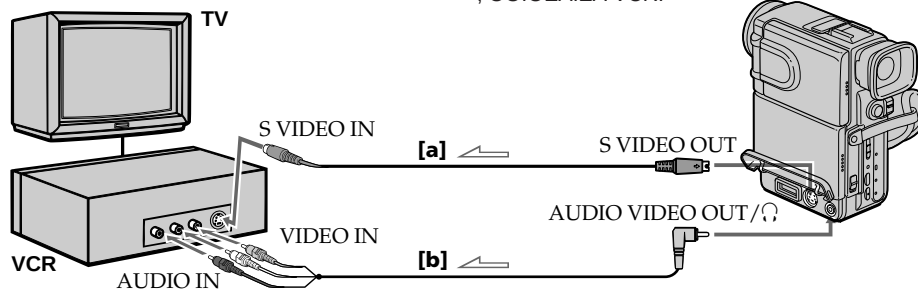
Watching on a TV screen

è ÓÒÍÓÚ ì† ˆ† ì†
ÚÁÎÄ,ÉÁÓ †

If your TV is already connected to a VCR

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

ÖÖÎË Ç†- äÇâ ÚËÄ ÖÓ%ÖÖÄ%ËÎÄ†
ÚÁÎÄ,ÉÁÓ Ú
éÚ† ÖËÚÁ† ˆ†Ú, ì†Ä%†ËÖÖ%ÖÖÄ%ËÎËÚÄ
,Ë%ÄÖ††Ä Ú†, ì†Ö%†† LINE IN ì† äÇâ Ö
ËÖÖÖ†, ÁÓ,†ËËÄ† ÖÖÄ%ËÎËÚÄ†, ì†Ö, Ö†·Ä††
†Ú%ËÖ/Ë%ÄÖ. ì†ÖÚ†ìÖ,ËÚÄ ÖÄ†Ä†ÚÖ, ì†Ö%††
ÖË, ì††ìÖ, ì† äÇâ, ÖÖ†ÖËÄ†Ä LINE.
ì†ÖÚ†ìÖ,ËÚÄ ÖÄ†Ä†ÚÖ TV/VCR ì† ÚÁÎÄ,ÉÁÓ Ä
, ÖÖ†ÖËÄ†Ä VCR.



↗ : Signal flow / èÄ Ä%†† ÖË, ì††

If your VCR or TV is a monaural type

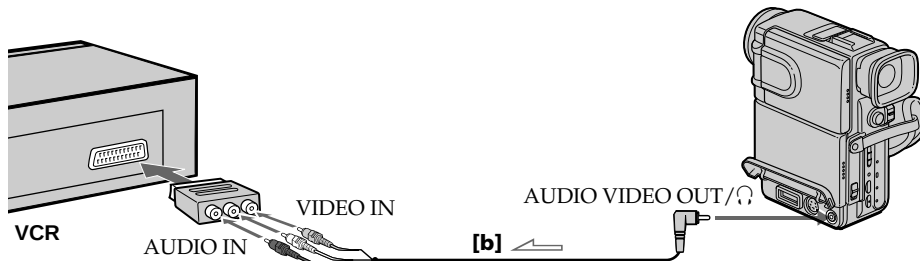
Connect the yellow plug of the A/V connecting cable for video to the VCR or TV. Connect only the white or red plug for audio to the VCR or TV. If you connect the white plug, the sound is L (left) signal. If you connect the red plug, the sound is R (right) signal.

ÖÖÎË Ç†- ÚÁÎÄ,ÉÁÓ ËÎË äÇâ
†Ö†ÖÚÖ†Ë-ÄÖ†Ö, Ö ÚËÖ†
èÖ%ÖÖÄ%ËÎËÚÄËÄ†Ú%Ë †Ä†Ä†
ÖÖÄ%ËÎËÚÄ†, ì†Ö, Ö†·Ä†††Ú%ËÖ/Ë%ÄÖ%††
,Ë%ÄÖÖË, ì††ìÖ, ì† ÚÁÎÄ,ÉÁÓ Ú ËÎË äÇâ.
èÖ%ÖÖÄ%ËÎËÚÄ ÚÖ†, ì†Ö·Ä†%Ë ËÎË ì†Ö†%Ë
†Ä†Ä††††Ú%ËÖÖË, ì††ìÖ, ì† ÚÁÎÄ,ÉÁÓ Ú ËÎË
äÇâ. ÖÖÎË Ç† ÖÖ%ÖÖÄ%ËÎËÚÄ·Ä†%Ë †Ä†Ä†,
ÚÖ Ä, Ú†·Ú%ÄÚ ÖÄ Ä%†,†Ú Ö†† L (†Ä,†)
ÖË, ì††ìÖ†. ÖÖÎË Ç† ÖÖ%ÖÖÄ%ËÎËÚÄ††Ö†%Ë
†Ä†Ä†, ÚÖ Ä, Ú†·Ú%ÄÚ ÖÄ Ä%†,†Ú, Ö†† R
(Ö†,†) ÖË, ì††ìÖ†.

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

Use the supplied 21-pin adaptor.

ÖÖÎË Ç†- äÇâ/ÚÁÎÄ,ÉÁÓ ËÎÄÄÚ 21-
ˆ†, ì†Ö, %Ë ÖÖÄ%ËÎËÚÄ†,
(EUROCONNECTOR)
àÖÖÖ†, ÄÚËÚÄ Ö Ë†,†Ä†%Ë 21-ˆ†, ì†Ö, %Ë
†%†ÖÚÄ.

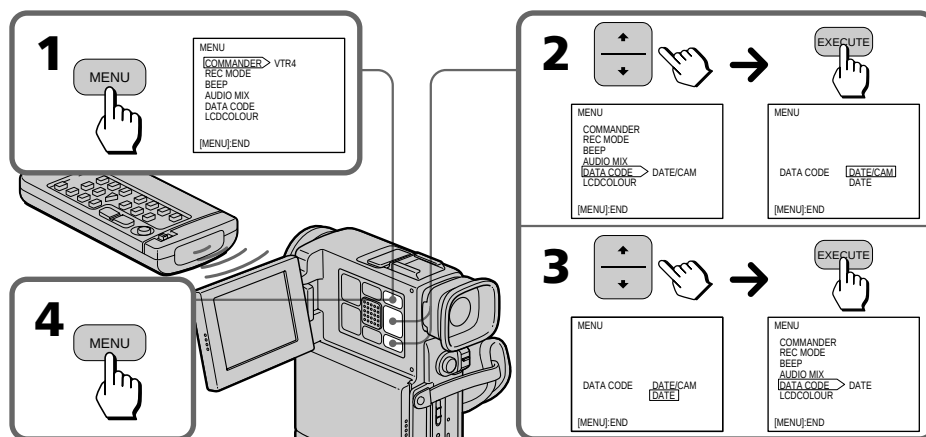


↗ : Signal flow / èÄ Ä%†† ÖË, ì††

Displaying recording data – data code function

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

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



To display recording data during playback

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

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

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

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

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

éÚÓ· ±ÊÀÏÊÂ %±ì° Á±ÔÈÒÈ – ÙÙÌÍÊÍ ÍÓ%± %±ì°

Ç° ÍÓÊÂÚÁÓÚÓ· ±ÁÊÚ· %±ì° Á±ÔÈÒÈ (%±ÚÚ/
, ÆÍÍ ÊÍÊ ±ÁÍÊ° Á ÙÙÙ±ÍÓ, ÍÊ,
ÈÒÒÍ, ÁÓ, ±ì° Á Ô È Á±ÔÈÒÈ) Ì± ° Í±Á ÙÆÑ
ÊÍÊ , È%±ÔÈÒÍ±ÚÁÍÁ , Ó , ÆÍÍ
, ÒÒÒ ÓÊÁ, Â%±ÁÍÊÍ (ÍÓ%± %±ì°). æÓ%± %±ì°
Ú±ÍÊÁÓÚÓ· ±Ê±ÁÚÒÍÊÍ±ÚÁÍÁ, ÊÁÓ Á.

- (1) Ç±ÊÍÊÚÁ MENU %±ÍÍ ÓÚÓ· ±ÊÀÏÊÍ ÍÁÌ,
Ì± ° Í±Á ÙÆÑ.
- (2) Ç±ÊÍÊÚÁ ± ÊÍÊ ± %±ÍÍ, ° Ó ± DATA CODE,
± Á±ÚÁÍ Ì±ÊÍÊÚÁ EXECUTE.
- (3) Ç±ÊÍÊÚÁ ± ÊÍÊ ± %±ÍÍ, ° Ó ± DATE/CAM
ÊÍÊ DATÖ, ± Á±ÚÁÍ Ì±ÊÍÊÚÁ EXECUTE.
- (4) Ç±ÊÍÊÚÁ MENU %±ÍÍ ÓÚÈ ±ÍÊÍ
ÓÚÓ· ±ÊÀÏÊÍ ÍÁÌ.

ÑÍÍÍ, ÒÒÒ ÓÊÁ, Â%±ÁÍÊÍ %±ì° Á±ÔÈÒÈ
, Ó , ÆÍÍ, ÒÒÒ ÓÊÁ, Â%±ÁÍÊÍ
Ç±ÊÍÊÚÁ DATA CODE Ì± ÓÚÍ, ÚÁ
%±ÈÒÚ±ÍÊÓÍÒ, Ó ÚÓ ±, ÍÁÍÊÍ. æ±Ê%± È ±Á
ÍÓ, %± Ç° Ì±ÊÍÊ±ÁÚÁ ÍÍÓÍÚ, ÈÍ%±ÊÍ±ÚÓ
ÊÁÍÁÍÍÁÚÒÍÍ ÓÍÁ%±Ú, ° ÊÍ Ó· ±ÁÓÍ:
ÒÒÍÊ ÙÙÙ±ÍÓ, Ì± DATE/CAM, ° ±Í±,
ÒÈÒÚÁÍÁ ÍÁÌ.

%±Ú± → ±ÁÍÊ° Á ÙÙÙ±ÍÓ, ÍÊ (AE LOCK,
±Í±ÍÓ· ÁÍÓ, Ó, ÙÒÊÍÁÍÊÁ, ÓÍÓ ÓÚÚ, Á±Ú, Ó ±,
±ÓÁ ÙÚ ÍÓÁÁÍ±ÁÍÊÁ) → ÌÁÚÈÍ%±ÊÍ±ÚÓ ±.
ÒÒÍÊ ÙÙÙ±ÍÓ, Ì± DATE, ° ±Í±, ÒÈÒÚÁÍÁ
Í Á Ì :

%±Ú± → ÌÁÚÈÍ%±ÊÍ±ÚÓ ±.

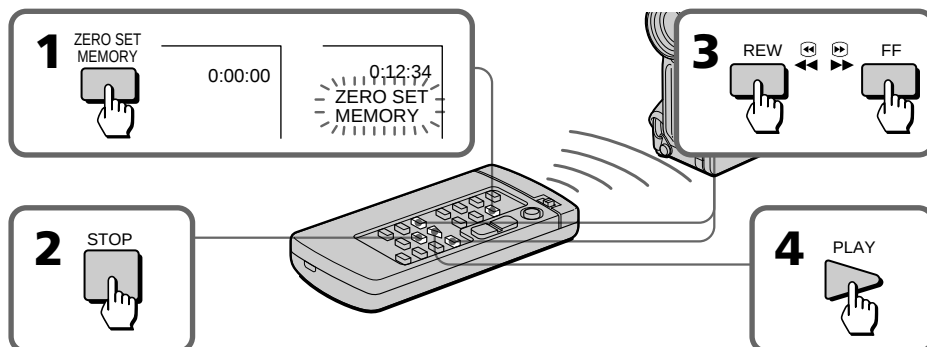
ÒÒÍÊ ÓÓÍÍ, ÍÍÁÚÒÍÍ ° Í±Í± (---:---)

- ÇÓÓÓ ÓÊÁ, Ó%±ÈÚÒÍÍÁ±ÔÈÒ±ÍÍ±ÍÚ,
ÍÁÍÚ°.
- æÁÍÚ±· ° Í± Á±ÔÈÒ±Í± Ì± È%±ÁÓÍ±ÍÁ Á· ÁÁ
ÙÙÙ±ÍÓ, ÍÊ %±Ú° È , ÁÍÁÍÊ.
- æÁÍÚ± ÍÁ ÍÓÊÂÚ· ° Ú, ÒÒÒ ÓÊÁ, Â%±ÁÍÊ ÊÁ-Á±
ÓÓ, ÁÊ%±ÁÍÊÍ ÍÁÍÚ° ÊÍÊ ÓÓÍÁÍ.

Returning to a pre-registered position

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

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



Note on the tape counter

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

Notes on ZERO SET MEMORY

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

ÇÓÁ, ‡ÚÍÔ Â%, ‡ È-
ÚÂÎ ÍÓÁ‡ Â, ÈÒÚ È Ó-
, ‡ÌÒÈ ÒÓÁÈÈÈ

àÒÒÓÍ, ÁÚÍÔÚÍ, Ú%ÈÒÚ‡ÈÈÒÍÓ, Ó ÚÓ ‡, ÍÂÎÈÍ
Ç° ÍÓÉÁÚÂ ÍÂ, ÍÓ, Á ÍÚÚ, ÒÍ Í ÈÂÍ‡ÂÍÓÈ
ÚÓÍÂ ÍÂÍÚ° ÒÓÒÍÂ, ÒÓÒ ÓÉÁ, Â%ÂÍÈÍ.

(1) ÇÓ, ÂÍÍ, ÒÓÒ ÓÉÁ, Â%ÂÍÈÍ Í‡ÈÍÈÚÂ ZERO
SET MEMORY, ÚÓÍÂ, ÍÓÚÓ Ú, ÒÓÚÓÍ Ç°
ÍÓÚÈÚÂ Ó-Í‡ ÚÈÈÚ, ÈÂÚÈÍ-Ú%ÂÚ
ÒÓÍ‡Â, ‡Ú, "0:00:00", È "ZERO SET
MEMORY" ÒÓÍ, ÍÍÂÚÓÍ Í‡ ÍÍÂ ÚÂÑ ÈÍÈ
, È%ÒÈÒÍ‡ÚÂÍÂ.

(2) Ç‡ÈÍÈÚÂ ■. ÍÓ, %‡ Ç° Á‡ÍÓÚÈÚÂ
ÒÓÚ‡ÍÓ, ÈÚ, ÒÓÒ ÓÉÁ, Â%ÂÍÈÍ.

(3) Ç‡ÈÍÈÚÂ ◀◀ %ÍÍ ÚÓÍÓ ÂÍÒÈ ÒÂ ÂÍÓÚÍÈ
ÍÂÍÚ° Í‡Â‡% ÈÍÈ ▶▶ %ÍÍ ÚÓÍÓ ÂÍÒÈ
ÒÂ ÂÍÓÚÍÈ ÍÂÍÚ°, ÒÂ Â% ÒÓ ÍÚÂ, ÒÈ
ÚÓÍÈ ÒÂÚÈÍ‡. ÂÂÍÚ‡ ÒÓÚ‡ÍÓ, ÈÚÓÍ
‡, ÚÓÍ‡ÚÈÂÓÍÈ, ÍÓ, %‡ ÒÂÚÈÍ%ÒÈ%ÂÚ
Ò È. ÍÉÁÈÚÂÍ, ÍÓ %Ó 0. "ZERO SET
MEMORY" ÈÒÂÂÍÂÚ È ÒÓÍ, ÈÚÓÍ, ÂÍÂÍÒÈ
ÍÓ%.

(4) Ç‡ÈÍÈÚÂ ▷.

È ÈÍÂ~ÍÈÈ Í ÒÂÚÈÍÚ ÍÂÍÚ°
ÂÓÈÂÚ ·Ú, ‡ÓÍÈ%ÂÍÈÂ Í‡ ÍÂÓÍÓÍ, ÍÓ
ÒÂÍÚÍ% Ò Ú‡ÍÚÈÂÓÍÈÍ, ÂÍÂÍÂÍ.

È ÈÍÂ~ÍÈÈ Í ZERO SET MEMORY

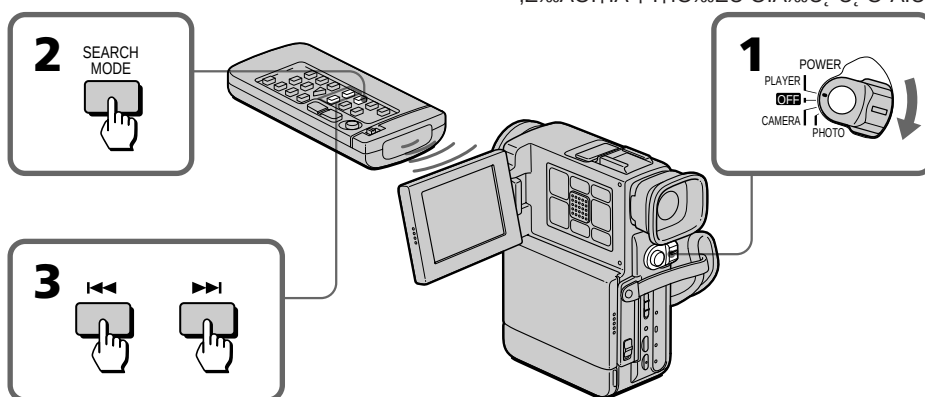
- äÓ, %‡ Ç° Í‡ÈÈÍ‡ÂÚÈ ZERO SET MEMORY,
Á‡ÓÓÍÈÍ‡ÂÚÓÍ ÍÚÂ, ‡Í ÚÓÍ‡ ÒÂÚÈÍ‡.
ÈÍÓ, ‡ Í‡ÈÍÈÚÂ ZERO SET MEMORY %Ó
, ÒÓÍÍÂÍÈÍ ÒÓÚÚ‡ 3 %ÍÍ ÒÓÚÂÍ° Ò‡ÍÍÚÈ.
- á‡ÓÓÍÈÍ‡ÈÂ ÍÚÂ, ÒÈ ÚÓÚ‡ÍÓ, ÍÈ ÍÂ
‡-ÓÚ‡ÂÚ, ÍÓ, %‡ ÍÂÈ%ÚÈÁÓ- ‡ÈÂÍÈÍÈÍ Í‡
ÍÂÍÚÂ ÈÍÂ, ÚÓÍ ÍÂÂ‡ÓÈÒ‡ÍÂ ~ÓÚÈ.
- ÍÚÍÈÍ Â‡ÓÓÍÈÍ‡ÈÈ ÍÚÍÍ ‡-ÓÚ‡ÂÚ, ,
ÂÈÈÍÂ, ÓÚÓ, ÍÓÚÈÂ‡ÓÈÈ.

Locating the beginning of each scene

é·ì± ÛÊÂìËÂ ì±~±î±
ì±Ê%ÓÈ Ò^Âì°

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

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



To stop searching

Press ■ STOP.

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

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

Note on cassette memory

The cassette memory function cannot be used with this camcorder.

Notes on searching

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

Ç° ÌÖÊÂÛÂ ì±ÊÛÊ ì±~±îÖ Á±ÖÊÖ±ììÖ, Ö
ÉÁÖ. ±ÊÂìÊííÖÖ Â%ÂìÂìÖÊ%±Û° Ö
ËÖÖÖÍ, ÁÖ, ±ìÊÂì ÖÛì, Û± %ÊÖÛ±ìÊÖììÖ, Ö
ÛÖ ±, ìÂìÊí. Ç° ÌÖÊÂÛÂ Û±ìÊÂ ÊÖì±Û
ÛÖì, ÌÖ ÛÖÛÖÊÁÖ. ±ÊÂìÊí, ì±Ö ±, ìÂìÊÊ
ì±Á±% ÊìÊ, ÖÂ Â% ÖÛ ÛÂìÛ, Á, ÖÖÖìÖÊÂìÊí.
(1) Ì. Â% ÊÛÁÖ, ~ÛÖ °í ~ÛÂì, POWER
ÛÖÛ±ìÖ, ìÂì, ÖÖìÖÊÂìÊÁ PLAYER.
(2) Ç±ÊìÊÛÂ SEARCH MODE ì± ÖÛì ÛÂ
%ÊÖÛ±ìÊÖììÖ, Ö ÛÖ ±, ìÂìÊí %íí, °. Ö ±
ÂÊÊì±ÖÖÊÖì±%±Û° (ÖÖÊÖìÖÖ Â%ÂìÂìÖÊ
%±Û°) ÊìÊ ÛÖÛÖ, ±ÛÊÊ (ÖÖÊÖì ÛÖì, ÌÖ
ÛÖÛÖÊÁÖ. ±ÊÂìÊÊ).
(3) Ç±ÊìÊÛÂ ►► ì±ìÖ ±, ìÂìÊí, ÖÂ Â%
ÊìÊ ◀◀ %íí ì±Ö ±, ìÂìÊí ì±Á±% ì± ÖÛì ÛÂ
%ÊÖÛ±ìÊÖììÖ, Ö ÛÖ ±, ìÂìÊí %íí, °. Ö ±
ÊÂì±ÂìÖ, Ö ÉÁÖ. ±ÊÂìÊí.
â±Ê%°Ê ±Á Ö Ê ì±Ê±ÛÊÊ. ►► ÊìÊ ◀◀
Ê%ÂÖì±ìÂ ± ì±ìÖ%ÊÛ ÖìÂ%Û, Û, Ö^ÂìÛ.

Ñííí ÖÖÛ±ìÖ, ± ÖÖÊÖì±
Ç±ÊìÊÛÂ ■ STOP.

âÖ, %± Ç° ÊÖÖÖì, ÁÛÂÛÂ Á±ÖÊÖ±ììÛ, ìÂìÛÛ,
ìÖÛÖ ±íí ÊìÂÛÛ ~ÊÖÛÂ ìÂÖÛ± ìÂÊ%Û
ÉÁÖ. ±ÊÂìÊííÊ
ÇÊ%ÂÖì±ìÂ ± ÌÖÊÂÛ ìÂ ì±ÊÛÊ Á±ÖÊÖ±ììÖÁ
ÉÁÖ. ±ÊÂìÊÁ Ê %±Û± ÌÖÊÂÛ ìÂ °Û,
Á±ÖÖììÂì±.

è ÊìÂ~±ìÊÁ í Á±ÖÖìÊì±ìÊìÖ ì±ÖÖÂÛ°
ìÛìíÊí Á±ÖÖìÊì±ìÊí ì±ÖÖÂÛ° ìÂ ÌÖÊÂÛ
°Û, ÊÖÖÖì, ÁÖ, ì± ì± %±ììÖÊ, Ê%ÂÖì±ìÂ Â.

è ÊìÂ~±ìÊí í ÖÖÊÖìÛ
• ÇÊ%ÂÖì±ìÂ ± ÌÖÊÂÛ ìÂ, °ÖÖìÊÛ, ÖÖÊÖì,
ÁÖìÊ ì±~±îÖ ÖìÊ~ìÖì. ìÊÁìÖ í ÛÂìÛ~ÂìÛ
ÖÖìÖÊÂìÊ, ìÂìÛ ì± ÖìÖ, ìÂ.
• âÖ, %± Ç°, °ÖÖìÊìÂÛÂ ÖÖÊÖì %±Û°,
Ê%ÂÖì±ìÂ ± ÖÖÖ ÖÊÁ, Ö%ÊÛì±Ê%ÂììÖÁ
ÉÁÖ. ±ÊÂìÊÁ, ± ÌÖ, %± Ç°, °ÖÖìÊìÂÛÂ
ÖÖÊÖìÛÖÛÖ, ±ÛÊÊ, Ê%ÂÖì±ìÂ ±, ÌÖ%ÊÛ,
ÂÊÊì Ö±ÛÂ, ÖÖÖ ÖÊÁ, Â%ÂìÊí, ì±Ê%ÂììÖÊ
ÛÖìÁ.

Editing onto another tape

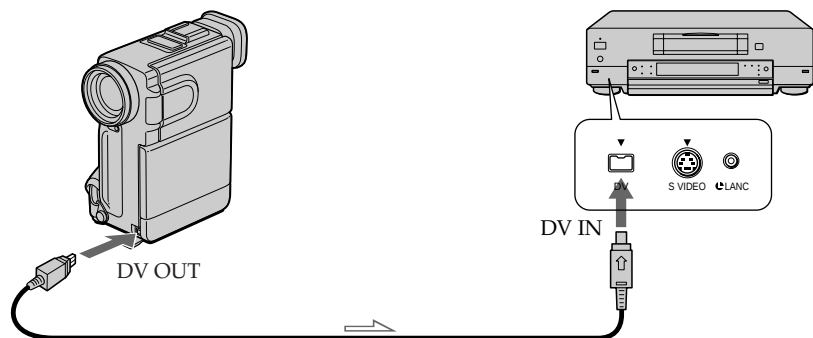
You can create your own video programme by editing with any other DV, mini DV, 8 mm, Hi8, Hi8, VHS, VHS, S-VHS, S-VHS, VHSC, S-VHSC or Betamax VCR that has audio/video inputs. You can edit with little deterioration of picture and sound quality when using the DV connecting cable.

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.



— : Signal flow / à Á%± ò È, ì ì

About DV connecting cable

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

à Á%± ò È, ì ì

Ç° ÌÓÉÁÚÀ ÒÓÁ%±Ú, Ç±Ú ÒÓ·ÓÚ,ÀìÙ, È%ÁÓÒ Ó, ììÙ ÒÓÚÀì ÌÒìÚ±È± Ò ÒÓìÓ, % Ú, Ó, Ò àÇà ÚÈÒ± DV, mini DV, 8 Ì, Hi8 Hi8, VHS VHS, S-VHS S-VHS, VHSC VHSC, S-VHSC S-VHSC or Ì Betamax, ÍÓÚÓ °È ÈìÁÁÚ, ÌÓ%° ±Ú%ÈÓ/È%ÁÓ. Ç° ÌÓÉÁÚÀ ÒìÒìÚÈ Ó, ±Ú, ÌÓ, Ò, ÌÁìÚÚ Ò ÌÁ·Óì, ÌÈ ÒìÚ% ÌÁìÈÀ Ì±·ÁÓÚ, ± ÉÁÓ· ±ÈÀìÈì È Á, Ò· ÌÈì Ò È ÈÒÒÓì, ÁÓ, ÌÈÈ ÒÓÁ%ÈìÈÚÀì, ÌÓ, Ó ·ÈÙ Ó, Ó, Ó, È%ÁÓì±·Àìì.

èÁ Á% ÌÒìÚ±ÈÀì

èÓ%ÒÓÁ%ÈìÈÚÀ, È%ÁÓì±Ú ÒìàÇà, ÈÒÒÓì, ÁÚì ÒÓÁ%ÈìÈÚÀì, ÌÈ ·ÈÙ Ó, ÓÈ È%ÁÓì±·Àì, VMC-2DV (ÌÁ Ò Èì±, ±ÁÚÒì) ÈìÈ ÈÒÒÓì, ÁÚì Ò Èì±, ±Áì È ÒÓÁ%ÈìÈÚÀì, ÌÈ Ì±·Àì, ±Ú%ÈÓ/È%ÁÓ. àÒÒÓì, ÁÚÈÚÀ %ììÙ, È%ÁÓì±Ú Ò, Ì±·ÁÓÚ, À, È%ÁÓì±ÚÈÀ ±.

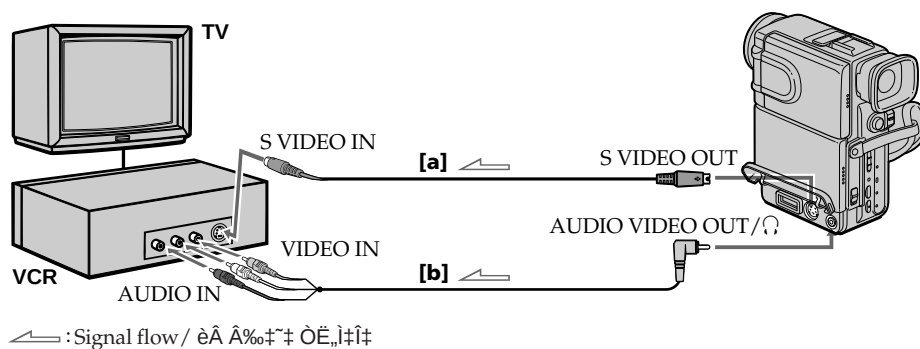
àÒÒÓì, ÁÓ, ÌÈÈ ÒÓÁ%ÈìÈÚÀì, ÌÓ, Ó ·ÈÙ Ó, Ó, Ó, È%ÁÓì±·Àìì ò ÒÓÚÒÒÁ%ÈìÈÚÀÒÓÁ%ÈìÈÚÀì, ÌÈ ·ÈÙ Ó, ÓÈ, È%ÁÓì±·Àì, VMC-2DV (ÌÁ Ò Èì±, ±ÁÚÒì) c, ÌÁÁ%Óì DV OUT È, ÌÁÁ%Óì DV IN·ÈÙ Ó, ÓÈ, È%ÁÓì ÒÓÚÈÈ.

é ÒÓÁ%ÈìÈÚÀì, ÌÓì ·ÈÙ Ó, Óì, È%ÁÓì±·Àìì Ç° ÌÓÉÁÚÀ Á±ÒÈÒ±Ú, ÉÁÓ· ±ÈÀìÈÀ, Á, Òì È ÒÈÒÚÀì·Á %ìì·Á Ò%ìÓ, ÀìÀìÒ Ì± ·ÈÙ Ó, ÓÈ, È%ÁÓì±·ÁÚ ÌÁÚÓì, ÌÒÒ ÈÒÒÓì, ÁÓ, ÌÈÈ ÒÓÁ%ÈìÈÚÀì, ÌÓ, Ó ·ÈÙ Ó, Ó, Ó, È%ÁÓì±·Àìì.

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

Set the input selector on the VCR to LINE.

àÒÔÓÎ,ÁÓ,†ÌËÂ ÒÓÂ%ÈÌËÚÂÎ,ÌÓ,,Ó
 Í†·ÂÎ† S-,Ë%ÂÓ [a] ËË
 ÒÓÂ%ÈÌËÚÂÎ,ÌÓ,,Ó Í†·ÂÎ† †Ú%ËÓ/,Ë%ÂÓ
 [b]
 ìÖÚ†ìÓ,ËÚÂ ÒÂÎÂÎÚÓ ,ìÓ%ì° ÒË,,ì†ìÓ, ì†
 àÇâ , ÔÓìÓËÂËÂ LINE.



Advanced operations / ìÖÓ,Â_ÂÌÖÚ,Ó,†Ì"Â ÖÓÂ †·ËË

Editing onto another tape

ãÓÌÚ±Ê Ì± % Û„Û ĨÀÌÚ

Starting editing

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

To edit more scenes

Repeat steps 2 to 4.

To stop editing

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

Notes on editing when using the DV connecting cable

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

Notes on editing when using the A/V connecting cable

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

ç±~±ÍÓ ĨÓÌÚ±Ê±

- (1) ÇÒÚ±, ÚÀ ~ÈÒÚÚ, ĨÀÌÚ (ÈĒ ĨÀÌÚÚ, ÍÓÚÓ Û, Ç° ÍÓÚÈÚÀ ÒÀ ÁÀ±ÔÈÒ±Ú), àÇà È, ÒÚ±, ÚÀ Ç±~Ú Á±ÔÈÒ±ÌÚ, ĨÀÌÚÚ, È%ÀÓÍ±Ĭ Û.
- (2) ÇÓÒÒ ÓÈÀ, Ó%ÈÚÀÁ±ÔÈÒ±ÌÚ, ĨÀÌÚÚ, È%ÀÓÍ±Ĭ Á%Ó ÚÀÍ ÓÓ, ÓÓÍ± Ç° ĬÁ Ó-Ĭ ÚÈÈÚÀÚÓ-ÍÚ, ÓÚÍÚ%± Ç° ÍÓÚÈÚÀ Ĭ±~±Ú, ĨÓÌÚ±Ê, ± Á±ÚÀĬ Ĭ±ÈĒÈÚÀ Ĭ%Ĭ ĨÓÚ±ÍÓ, ĬÈ È%ÀÓÍ±Ĭ Ĭ± ÁÈÈĬ Ó±ÚÀ° ÓÓÓ ÓÈÀ Á%ĬÈĬ.
- (3) Ç±È%ÈÚÀ Ĭ± àÇà ÚÓ-ÍÚ ÚÓ-ÍÚ Ĭ±~±Ĭ Á±ÔÈÒÈ È ÚÓÚ±ÍÓ, ÈÚÀ àÇà Ĭ± ÁÈÈĬ Ó±ÚÀ° Á±ÔÈÈ.
- (4) é%ĬÓ, ÁĬĬÍÓ Ĭ±ÈĒÈÚÀ Ĭ%Ĭ Ĭ± È%ÀÓÍ±Ĭ Á È Ĭ± àÇà %ĬĬ Ĭ±~±Ĭ ĨÓÌÚ±Ê±.

ÑĬĬ ĨÓÌÚ±Ê± % Û„È Ĩ~ÀĬ
èÓ, ÚÓ ÈÚÀ ÓÚĬÚ° ÓÓ2ÓÓ4.

ÑĬĬ ÓÒÚ±ÍÓ, ± ĨÓÌÚ±Ê±
ç±ÈĒÈÚÀ ■ È Ĭ± È%ÀÓÍ±Ĭ Á È Ĭ± àÇà.

è ÈĬÁ~ĬÈĬ Ĭ ĨÓÌÚ±ÊÚ Ò È
ÈÒÓÓĬ, ĬÁÓ, ĬÈÈ ÓÓÁ%ÈĬÈÚÀĬ, ĬÓ, Ó
~ÈÚ Ó, Ó, Ó È%ÀÓÍ±Ĭ ÁĬĬ

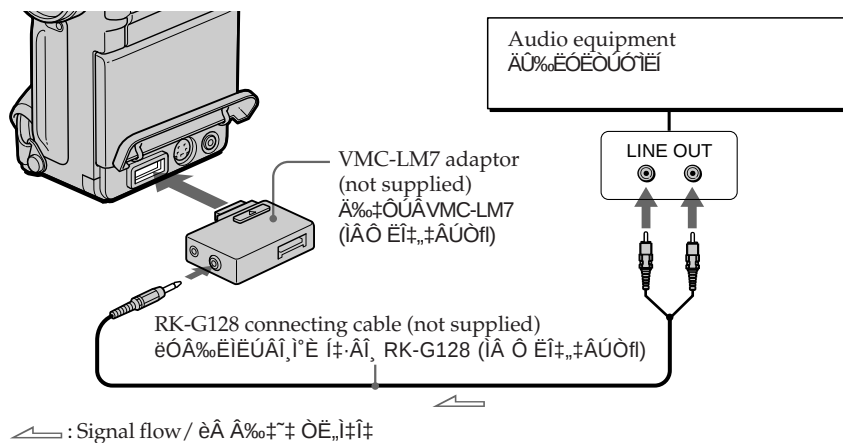
- Ç° ĨÓÈÁÚÁÓÓ%ÓÓÁ%ÈĒÈÚ, ÚÓÍ, ÍÓÓ%ÈĬ àÇà.
- ÓÓĬÈ Ç° Á±ÔÈÒ°, ±ÁÚÀ ÈÁÓ· ±ÈĬÈÁ, ĨÓĬĬÚÓ±ÚÀ°, ÓÓÓ ÓÈÀ, Á%ĬÈĬ ĬÁ ÁÁ „ĬÁÁ%ÓDV, Á±ÔÈÒ±ÌÓÈÁÓ· ±ÈĬÈÁ·Ú%ÁÚ ĬÁ~ÁÚÍÈĬ.

è ÈĬÁ~ĬÈÁ Ĭ ĨÓÌÚ±ÊÚ Ò È ÈÒÓÓĬ ÁÓ, ĬÈÈ ÓÓÁ%ÈĬÈÚÀĬ, ĬÓ, Ó Ĭ± ÁĬĬ ±Ú%ÈÓ/È%ÁÓ

- Ç±ÈĒÈÚÀ ĬÓÓÍ± DATA CODE %ĬĬ °ĬĬ ~ÁĬÈĬ ÈĬ%ÈĬ±ÚÓ Ó, %ÈÒÓĬĬĬ. Ç Ó ÓÚÈ, ĬÓÍÓĬÚ~±ÁÈĬ%ÈĬ±ÚÓ °·Ú%ÚÚ Á±ÔÈÒ±Ĭ Ĭ± ĨÀÌÚÚ.
- èÓ%ÓÓÁ%ÈĬÈÚÀÈĬÚ° È ±ÁĬĬ ÓÓÁ%ÈĬÈÚÀĬ, ĬÓ, Ó Ĭ± ÁĬĬ ±Ú%ÈÓ/È%ÁÓ%ĬĬ È%ÁÓÓÈ, Ĭ±ÍÓ, Ĭ ÚÀĬÁ, ÈÁÓ Û ÈĒÈ àÇà. èÓ%ÓÓÁ%ÈĬÈÚÀ ÚÓÍ, ÍÓ·ÁĬÈ ÈĒÈ Ĭ±ÒĬÈ ±ÁĬĬ %ĬĬ ±Ú%ÈÓÓÈ, Ĭ±ÍÓ, Ĭ ÚÀĬÁ, ÈÁÓ Û ÈĒÈ àÇà. ÓÓĬÈ Ç° ÓÓ%ÓÓÁ%ÈĬÈÚÀ·ÁĬÈ ±ÁĬĬ, ÚÓÁ, ÚÍ·Ú%ÁÚÓÁ Á%±, ±Ú, ÒĬĬ (ĬÁ, °Ĭ) ÒÈ, Ĭ±ÍÓÍ. ÓÓĬÈ Ç° ÓÓ%ÓÓÁ%ÈĬÈÚÀ Ĭ±ÒĬÈ ±ÁĬĬ, ÚÓÁ, ÚÍ·Ú%ÁÚ ÓÁ Á%±, ±Ú, ÒĬĬ R (Ò ±, °Ĭ) ÒÈ, Ĭ±ÍÓÍ.
- Ç° ĨÓÈÁÚÀ, °ÓÓĬÈÚ, ÚÓ-Ĭ°È ĨÓÌÚ±Ê ÓÚÚÁÓÓ%ÓÓÁ%ÈĬÈĬ±%±ÓÚÀ ±VMC-LM7 (ĬÁ Ó ÈĬ±, ±ÁÚÓĬ) È Ĭ± ÁĬĬ LANC Ĭ%±ĬÍÈ È%ÁÓÍ±Ĭ Á%± Û, ÓÈÈ%ÁÓ±ÓÓ± ±ÚÚÁ, ÈĬÁ, ~ÁÈ ÚÚĬĬÈ, ÚÓ-ÍÓ, Ó ÒÈĬ, ÓĬÍÓ, Ó ĨÓÌÚ±Ê±, ÈÒÓÓĬ, ÁÚĬ %±ĬÚ, È%ÀÓÍ±Ĭ Á Û, Ĭ±ÁÓÚÁ, È%ÁÓÓĬÈÁ ±.

Audio dubbing

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



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

Notes on audio dubbing

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

Ç° ÍÓÉÁÚÁ Á±ÖÈÒ°,±Ú, Á,ÚÍÓ,ÓÁ
ÓÓÓ Ó,ÓÈ%ÁíÈÁ%íí%Ó±,íÁíÈíí ÈÒíÓ%íÓíÚ
Á,ÚÍÚí±íÁíÚÁ ÖÚÚÁíÓÓ%ÓÓÁ%ÈíÁíÈí
±Ú%ÈÓ±ÓÓ± ±ÚÚ ° ÈíÈ íÈí ÓÚÓí±. ÖÖíÈ Ç°
ÈÖÖÓí,ÁÚÁÚÁ±%±ÓÚÁ VMC-LM7(íÀ
Ö Èí±,±ÁÚÒíí)%ííÓÓ%ÓÓÁ%ÈíÁíÈí
±Ú%ÈÓ±ÓÓ± ±ÚÚ °,Ç°ÍÓÉÁÚÁÁ±ÖÈÒ±Ú,Á,ÚÍ
í± Ç±Ú Á±ÖÈÒ±ííÚ, íÁíÚÚ ÖÚÚÁí Úí±Á±íÈí
í±±í,íÓÈ È íÓíÁííÓÈ ÚÓíÈ. àÒíÓ%í"È Á,ÚÍ
íÁ·Ú%ÁÚ ÓÚÁ Ú. Ç° ÍÓÉÁÚÁ ÚÖ ±ííÚ, ÚÓí,ÍÓ
Ö ÖÖíÓ~ ÖÚí,Ú± %ÈÖÚ±í"ÈÖííÓ,Ó
ÚÖ ±,íÁíÈíí.

è È ÈÖÖÓí,ÁÓ,±íÈÈ,íÁíÁ,,Ó íÈí ÓÚÓí±
ÓÓ%ÓÓÁ%ÈíÉÚÁÁ,ÓíÁÁ%ÚMIC±%±ÓÚÁ ±
VMC-LM7.
ÖÖíÈ Ç° Á±ÖÈÒ°,±ÁÚÁ Á,ÚÍ Ò ÈÖÖÓí,ÁÓ,±íÈÁí
,ÓÚ ÓÁííÓ,Ó íÈí ÓÚÓí±, Ç±í íÁíÚÈíÓ
ÓÓ%ÓÓÁ%ÈííÚ±%±ÓÚÁVMC-LM7.

è ÈíÁí±íÈí í ÓÁ ÁÁ±ÖÈÒÈ Á,ÚÍÓ,Ó,Ó
ÓÓÓ Ó,ÓÈ%ÁíÈí

- ÇÓ°,È Á,ÚÍ íÁ ÍÓÉÁÚ·Ú, Á±ÖÈÒ±í í±
íÁíÚÚ, Ö Á%,± ÈÚÁí,ÍÓ Á±ÖÈÒ±ííÚ, 16-
·ÈÚÓ,Óí ÁÈÈíÁ (32 íÈ°, 44, 1 íÈ° ÈíÈ 48
íÈ°).
- äÓ,,%± ,íÁíÈÈ íÈí ÓÚÓí íÁ ÓÓ%íí~Áí,
Á±ÖÈÒ·Ú%ÁÚ,°ÓííííÚ,Óíí~Á ÁÁ
,ÓÚ ÓÁíí"È íÈí ÓÚÓí,È%ÁÓí±íÁ°.
- ÇÓ°,È Á,ÚÍ íÁ ÍÓÉÁÚ·Ú, Á±ÖÈÒ±í í±
íÁíÚÁ, Ö Á%,± ÈÚÁí,ÍÓ Á±ÖÈÒ±ííÓÈ,
ÁÈÈíÁ LP.
- ÖÖíÈ Ç° %Ó±,íííÁÚÁ íÓ°,È Á,ÚÍ í± íÁíÚÚ,
Á±ÖÈÒ±ííÚ, í± %Ú,ÓÈ,È%ÁÓí±íÁ Á
(íí~±íí DCR-PC7E), í±~ÁÓÚ,Ó Á,ÚÍ±
ÍÓÉÁÚ ÖÚ±Ú, íÚÈÁ.

Audio dubbing

èÂ ÂÁ±ÔÈÒ, Á,ÚÍÓ,Ó,,Ó
ÓÓÓ Ó,ÓÈ%ÂÌÈfl

Adding an audio sound on a recorded tape

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

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

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

To change the end point

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

To play back the new recorded sound

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

ÑÓ·±,ÎÂÌÈÂ Á,ÚÍÓ,Ó,,Ó ÓÓÓ Ó,ÓÈ%Â-
ÌÈfl Ì± Á±ÔÈÒ±ÌÌÚ, ÎÂÌÚÚ

- (1) ÇÒÚ±, ÚÂ Ç±Ú Á±ÔÈÒ±ÌÌÚ, Ì±ÒÒÁÚÚ, È%ÂÓÍ±ÌÂ Ú.
- (2) Ç±ÈÈÌ±fl Ì±ÎÂÌ,ÌÚ, ÁÂÎÂÌÚ, ÌÒÒÓÍÚ Ì±, °Ì,~±ÚÂÎÂ POWER ÚÓÚ±ÌÓ,ÈÚÂ Â,,Ó, ÓÓÍÓÈÂÌÈÂ PLAYER.
- (3) Ç±ÈÈÚÂ ▷ Ì±,È%ÂÓÍ±ÌÂ Â %Ìfl ÚÓÚ±ÌÓ,ÌÈÂÂÌ± ÂÈÈÌ,ÓÓÓ ÓÈÁ,Â%ÂÌÈfl, ±Á±ÚÂÌ±È%ÈÚÂÚÓÚÚ ÓÍÓÚ±ÌÈfl Á±ÔÈÒÈ ÚÓÚÂÌ Ì±È±ÚÈfl ◀◀ ÈÌÈ ▶▶. á±ÚÂÌ Ì±ÈÈÚÂ || %Ìfl ÚÓÚ±ÌÓ,ÌÈ, È%ÂÓÍ±ÌÂ ° Ì± ÂÈÈÌ Ó±ÚÂ°,ÓÓÓ ÓÈÁ,Â%ÂÌÈfl.
- (4) Ç±ÈÈÚÂ ZERO SET MEMORY Ì± ÒÚÌ,ÚÂ %ÈÓÚ±ÌÈÓÌÓ,ÓÚÓ ±,ÎÂÌÈfl.àÌ%ÈÌ±ÚÓ ZERO SET MEMORY ·Ú%ÂÚ ÌÈ,,±Ú, È ÍÓÂÎ±fl ÚÓÚ± Á±ÔÈÒÈ Á±ÍÓÈÚÓfl, Ó±ÌflÚ.
- (5) Ç±È%ÈÚÂÚÓÚÚ,,%ÂÁ±ÔÈÒ,%ÓÌÈÈ± Ì±~±Ú,Ófl ÚÓÚÂÌ Ì±È±ÚÈfl ◀◀ ÈÌÈ ▶▶ Ì±,È%ÂÓÍ±ÌÂ Â. á±ÚÂÌ Ì±ÈÈÚÂ || %Ìfl ÚÓÚ±ÌÓ,ÌÈ,È%ÂÓÍ±ÌÂ ° Ì± ÂÈÈÌ Ó±ÚÂ°,ÓÓÓ ÓÈÁ,Â%ÂÌÈfl.
- (6) Ç±ÈÈÚÂ AUDIO DUB Ì± ÒÚÌ,ÚÂ %ÈÓÚ±ÌÈÓÌÓ,ÓÚÓ ±,ÎÂÌÈfl.
- (7) Ç±ÈÈÚÂ || Ì±,È%ÂÓÍ±ÌÂ Â È Ó%ÌÓ,ÂÌÂÌÓÌ±ÌÈÚÂ,ÓÓÓ ÓÈÁ,Ó%ÈÚ, ±Ú%ÈÓÈÓÚÓÚÈÌ,ÍÓÚÓ °ÈÇ°ÍÓÚÈÚÂ Á±ÔÈÒ±Ú, ÇÓ°,È Á,ÚÍ ·Ú%ÂÚ Á±ÔÈÒ±Ì, ÓÚÂ ÁÓ ÂÈÈÌÂ 2. á±ÔÈÒ±ÌÈ° È Á,ÚÍ, ÓÚÂ ÁÓ ÂÈÈÌÂ 1 ÓÚ~ÂÌ ÌÂ ·Ú%ÂÚ. á±ÔÈÒ, ÓÓÚ±Ì,ÌÈ,±ÁÚÓfl ±,ÚÓÍ±ÚÈ~ÂÓÍÈ,·ÌÈÁÈ ÌÚÌÂ,ÓÈ ÚÓÚÈ Ò~ÁÚ~ÈÌ±. Ç±ÈÈÚÂ ■ %Ìfl ÚÓÚ±ÌÓ,ÌÈ,È%ÂÓÍ±ÌÂ ° Ì± ÂÈÈÌ ÓÓÚ±ÌÓ,±. Ç° ÍÓÈÁÚÂ Á±ÔÈÒ°,±Ú, Á,ÚÍ ·ÂÁ ÈÓÓÓÍ,ÁÓ,±ÌÈfl ÚÚÌ~ÈÈ Á±ÓÓÈÌ±ÌÈfl ÌÚÌÂ,ÓÈ ÚÓÚ±ÌÓ,ÌÈ.

ÑÌfl ÈÂÌÂÌÈfl ÍÓÂ~ÍÓÈ ÚÓ~ÌÈ Ç±ÈÈÚÂ ZERO SET MEMORY Ì± ÒÚÌ,ÚÂ %ÈÓÚ±ÌÈÓÌÓ,ÓÚÓ ±,ÎÂÌÈfl Ú±Ì,~ÚÓ° ÈÌ%ÈÌ±ÚÓ ZERO SET MEMORY ÈÓ~ÂÁ È Ì±ÈÈÚÂ ÓÓflÚ, Ò ÓÚÌÚ± 3.

ÑÌfl,ÓÓÓ ÓÈÁ,Â%ÂÌÈfl ÍÓ,Ó,,Ó Á±ÔÈÒ±ÌÌÓ,Ó Á,ÚÍ± ÈÚ Á,ÚÍÈ ÚÈÚÂ ·Ì±ÌÓ ÍÂÈ%Ú ÈÒÍÓ%Ì°Í Á,ÚÍÓÍ (ÓÚÂ ÁÓ ÂÈÈÌ 1) È ÍÓ°,Í Á,ÚÍÓÍ (ÓÚÂ ÁÓ ÂÈÈÌ 2) ÓÚÚÂÌ,°Ó ± AUDIO MIX, ÒÈÓÚÂÌÂ ÎÂÌ.

Additional information

Charging the vanadium-lithium battery in the camcorder

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

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

When disposing of the camcorder

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

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

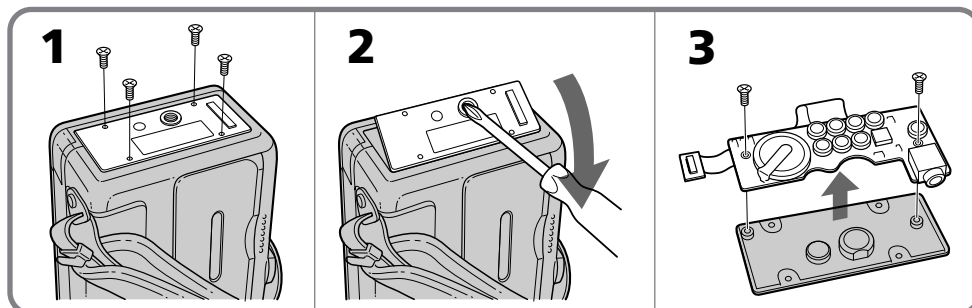
Additional information / NÓÓÓÍËÚÁÍ, Í+Í ËÌÙÓ Í+^ËÍ

á± fl%Í±, ±ì±%ËÁ, Ó- ÍËÚËÁ, ÒË ±Ú± ÁËÍË , Ë%ÁÓÍ±íÁ Á

Ç±±, Ë%ÁÓÍ±íÁ ± ÓÒì±^Áì±, ±ì±%ËÁ, Ó-
ÍËÚËÁ, ÒË ±Ú± ÁËÍË %íí ÓÒì, ±íÁÍËÍ %±Ú° Ë
, ÁíÁÍË Ë Ù.%., íÁÁ±, ËÒËÍÓ ÓÚ ÓÚÓ±ÍÓ, ÍË
, °Íí, ~±ÚÁÍÍ POWER. Ç±ì±%ËÁ, Ó-ÍËÚËÁ, ±Í
±Ú± ÁËÍ±, ÒÁ, %±ÓÓ%Á± ÍË±ÁÚÓÍ, ÓÒì±Ç°
ËÓÓÓÍ, ÁÚÁÚÁ, Ë%ÁÓÍ±íÁ Ù. é%ì±ÍÓ,
±Ú± ÁËÍ±ÓÓÓÚÁÓÁÍÍÓ-Ú%ÁÚ ±Á ÍË±Ú, ÓÍ,
ÁÓÍË Ç° ËÓÓÓÍ, ÁÚÁÚÁ, Ë%ÁÓÍ±íÁ Ù Í±ÍÓ
, ÁíÁÍË. éí± ÓÒÍÍÓÓÚ, ±Á Í%ËÚÓÍ
Ó Ë-ÍËÁËÚÁÍ ÍÓ Á± ÓÓÍ, Ó%±, ÁÓÍË Ç° íÁ
Ú%ÁÚÁ ËÓÓÓÍ, ÁÓ, ±Ú, Ë%ÁÓÍ±íÁ Ù, ÚÁ-ÁíËÁ
%ÍËÚÁÍ, ÍÓ, ÓÓÁ ËÓ%±. Í±ËÁÁÓÍË, ±ì±%ËÁ, Ó-
ÍËÚËÁ, ±Í ±Ú± ÁËÍ± íÁ Á± ÍËÁì±, ~ÚÓ íÁ
Ú%ÁÚ, ÍËÍÚ, í± ±ÓÚÚ, Ë%ÁÓÍ±íÁ °. ÍíÍ
ÓÓì ±íÁÍËÍ %±Ú° Ë, ÁíÁÍË Ë Ù.%., Á± ÍË±ËÚÁ
±Ú± ÁËÍÚ, ÁÓÍË ±Ú± ÁËÍ± ±Á ÍËÁì±.
èÇ-ÁÓÚ, Ù Ù ÓíÁ%Ú, ~ËÁ íÁÚÓ%° Á± Í%íË:
• èÓ%ÓÓÁ%ËÍËÚÁË%ÁÓÍ±íÁ Ùí
~íÁíÚ Ë-ÁÓÍË ÓÁÚË Ó ËÓÓÓÍ, ÁÓ, ±íËÁÍ
Ó Ëí±, ±ÁíÓ, ÓÓÁÚÁ, Ó, ±%±ÓÚÁ ±ÓÁ Áí.
ÚÓí±ËÓÓÚ±, ÚÁ, Ë%ÁÓÍ±íÁ ÙÓ Ë
, °Íí ~ÁííÓÍ, °Íí ~±ÚÁÍÁ POWER
ÓíÁÁ, ~Áí í± 24 ~±Ò±.
• íÓÚ±ÍÓ, ËÚÁ ÓÓÍÍÓÓÚ, Á± ÍËÁì±Ë
±Ú± ÁËÍ°Ë-ÍÓÍ, Ë%ÁÓÍ±íÁ Ù Ë ÓÓÚ±, ÚÁ
Ë%ÁÓÍ±íÁ Ù Ó Ë, °Íí ~ÁííÓÍ
, °Íí ~±ÚÁÍÁ POWER ÓíÁÁ, ~Áí í± 24 ~±Ò±.

è Ë ÍËÍ, Ë%±^ËË, Ë%ÁÓÍ±íÁ °

í%±ÍËÚÁ, ±ì±%ËÁ, Ó-ÍËÚËÁ, Ù ±Ú± ÁËÍÚ Ë
ÍËÍ, Ë%Ë ÚËÚÁ, Ë%ÁÓÍ±íÁ Ù Ë, ±ì±%ËÁ, Ó-
ÍËÚËÁ, Ù ±Ú± ÁËÍÚ, ÓÓÓÚ, ÁÚÓÚ, ËË Ó
ÓËÓÚÁÍÓË ÍËÍ, Ë%±^ËË, Ç± ^ÁË ÓÚ ±íÁ.
Ç±ì±%ËÁ, Ó-ÍËÚËÁ, ±Í ±Ú± ÁËÍ± ÓÚÓ±ÍÓ, íÁì±
, íÓÓÁÚÍÓÍ ÓÚÓÁíÁ.
(1) éÚÍ ÓÚËÚÁ ~ÁÚ° Á, ËìÚ± í± %ÍË^Á.
(2) èÍËÍËÚÁ Ó±íÁÍ, Ó ËÓÓÓÍ, ÁÓ, ±íËÁÍ ÓÚ, Á ÚÍË.
(3) éÚÍ ÓÚËÚÁ %, ±í±íÁÍ, ÍËÍ, ËìÚ± í±
ÍÓÍÚ±ÍÍÓË Óí±ÚÁ Ë ÍËÍ, Ë%Ë ÚËÚÁ, íÁÓÚÁ Ó
±ì±%ËÁ, Ó-ÍËÚËÁ, ÒË ±Ú± ÁËÍË.



Resetting the date and time

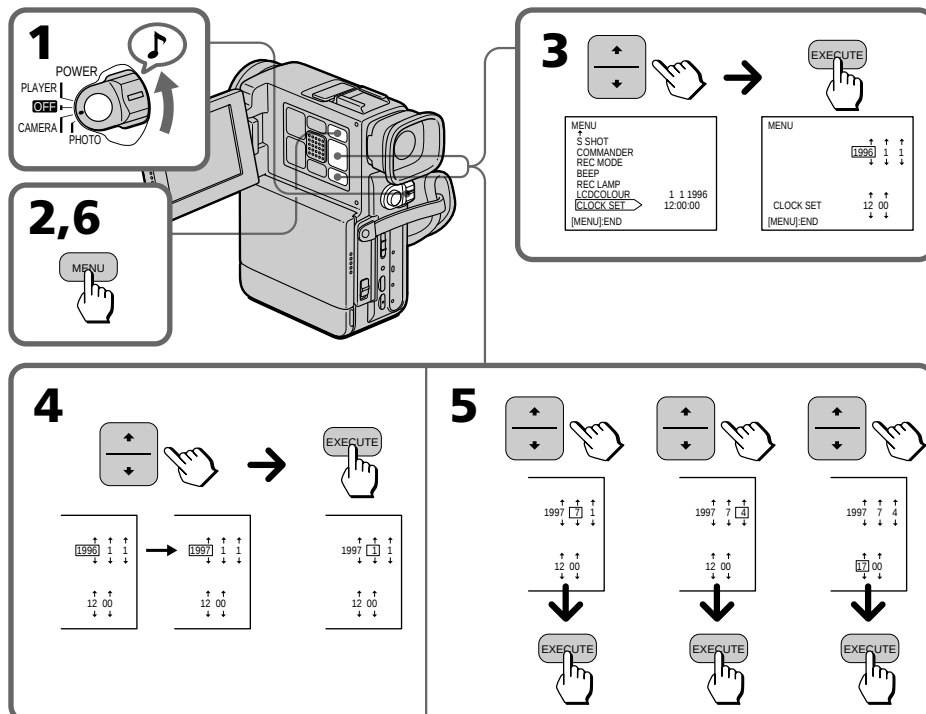
Resetting the date and time

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

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

Resetting the date and time. If you do not use the camcorder for about a year, the date and time settings may be released (bars may appear) because the vanadium-lithium battery installed in the camcorder will have been discharged. In this case, first charge the vanadium-lithium battery, then reset the date and time.

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



To correct the date and time setting

Repeat steps 2 to 5.

The year indicators changes as follows:

1996 → 1997 → ... 2000 ... → 2029
↑

Note on the time indicator

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

Ńîfi íó ĀíúĚ ó,íĚ Űòú†ìó,óí %ó†ú° Ě
, ĀîĀîĚ
èó,úó ĚúĀôŰîŰ° òó2ôó5.

àì%Ěí†úó „ó%† ĚĀîĀîfiĀúòfi òîĀ%Ű ĚĚ
ó. †Āóî:

1996 → 1997 → ... 2000 ... → 2029
↑

è ĚîĀ~†îĚĀ í Ěì%Ěí†úó Ű , ĀîĀîĚ
çòú óĀîî°Ā ~†ò° %ó†ììóĚ ,Ě%Āóí†Ā °
†·óú†, Ű , 24-~†òó,óî ^ĚîĀ.

Usable cassettes and playback modes

Selecting cassette types

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

When you play back

Copyright signal

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

Audio mode

12-bit mode: The original sound can be recorded in stereo 1, and the new sound in stereo 2 in 32 kHz. The balance between stereo 1 and stereo 2 can be adjusted by selecting AUDIO MIX in the menu system during playback. Both sounds can be played back.

16-bit mode: A new sound cannot be recorded but the original sound can be recorded in high quality. Moreover, it can also play back sound recorded in 32 kHz, 44.1 kHz or 48 kHz. When playing back a tape recorded in the 16-bit mode, 16BIT indicator appears on the LCD screen or in the viewfinder.

You cannot record in the 16-bit mode using this camcorder.

Recording mode

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

Note on cassette memory

The cassette memory function cannot be used with this camcorder.

àÒÒÓÎ,ÁÛÂÎ°Â Í±ÒÒÂÛ° È
ÂÊÊÎ°,ÒÒÒ ÓÊÁ,Â%ÂÎÊÎ

Ç°·Ó ÛÊÒÓ, Í±ÒÒÂÛ

Ç° ÍÓÊÂÛÂ ÈÒÒÓÎ,ÁÓ,±Ú, ÛÓÎ,ÍÓ Í±ÒÒÂÛ° mini DV. Ç° ÎÂ ÍÓÊÂÛÂ ÈÒÒÓÎ,ÁÓ,±Ú, Í±ÒÒÂÛÚ Í±ÍÚ, ÍÊ·Ó % Û, Û, Í±ÒÒÂÛÚ **8** Î, **Hi8** Hi8, **VHS** VHS, **S-VHS** S-VHS, **VHS-C** VHSC, **S-VHS-C** S-VHSC ÊÊÊ **B** Betamax.

äÓ,%±Ç°,ÓÒÒ ÓÊÁ,Ó%ÊÛÂ

èÊ,Î±Í ±,ÚÓ ÒÍÓ,Ó Ò ±,±
àÒÒÓÎ,ÁÛÎ %±ÎÎÚ, È%ÂÓÍ±ÎÂ Û Ç° ÎÂ
ÍÓÊÂÛÂ,ÒÒÒ ÓÊÁ,ÂÒÛÊ ÎÂÎÛÚ, ÍÓÚÓ ±Î·Í±
Á±ÔÊÒ±Î Ò ÈÒÒÓÎ,ÁÓ,±ÊÂÎ ÍÓÍÚ ÓÎ,Î¹
ÒÊ,Î±ÍÓ, ±,ÚÓ ÓÍÓ,Ó Ò ±,± %±Î Á±ÊÛ°
±,ÚÓ ÓÍÓ,Ó Ò ±,± Ò Ó, ±ÎÎ°. "COPY
INHIBIT" ÓÓÎ,ÎÎÂÛÓÎ Î± "Í ±ÎÂ ÛäÑ, ,
È%ÓÊÒÍ±ÚÂÎÂ ÊÊÊ Î± "Í ±ÎÂ ÛÂÎÂ,ÊÁÓ ±,
ÂÓÎÊ Ç° Ó·Ú±ÁÚÂÓ, ÓÒÒ ÓÊÁ,ÂÒÛÊ Û±ÍÚ,
ÎÂÎÛÚ. Ñ±ÎÎ±Î, È%ÂÓÍ±ÎÂ ± ÎÂ Á±ÔÊÒ°,±ÁÚ
ÍÓÍÚ ÓÎ,ÎÂ ÒÊ,Î±Í° ±,ÚÓ ÓÍÓ,Ó Ò ±,± Î±
ÎÂÎÛÂ,Ó, ÂÎÎ Á±ÔÊÒÊ.

ÄÛ%ÊÓ ÂÊÊÎ

12-ÊÛÓ,°È ÂÊÊÎ: àÒÍÓ%Î°È Á,ÛÍ ÍÓÊÂÛ
·Ú, Á±ÔÊÒ±Î, ÒÚÂ ÁÓ ÂÊÊÎÂ 1, ± ÍÓ,°È
Á,ÛÍ, ÒÚÂ ÁÓ ÂÊÊÎÂ 2 Î± "ÒÚÓÚÂ 32 ÍÊ".
Á±ÔÊÒ±ÎÂ È%Ú ÒÚÂ ÁÓ ÂÊÊÎÓÎ 1 È
ÒÚÂ ÁÓ ÂÊÊÎÓÎ 2 ÍÓÊÂÛ·Ú, ÒÚÂ Á,ÛÍÊ Ó,±
ÒÚÚÂÎ, °·Ó ± AUDIO MIX, ÒÊÒÚÂÎÂ ÎÂÎ,Ó
, ÂÎÎ,ÓÒÒ ÓÊÁ,Â%ÂÎÊÎ. è·± Á,ÛÍÓ,Î
ÒÒÒ Ó,ÓÊ%ÂÎÊÎÎÓ,ÛÚ·Ú,ÓÒÒ ÓÊÁ,Â%ÂÎ°.
16-ÊÛÓ,°È ÂÊÊÎ: ÇÓ,°È Á,ÛÍ ÎÂ ÍÓÊÂÛ
·Ú, Á±ÔÊÒ±Î, ÍÓ ÈÒÍÓ%Î°È Á,ÛÍ ÍÓÊÂÛ·Ú,
Á±ÔÊÒ±Î Ò,°ÓÍÊÎ Î±ÁÓÚ,ÓÎ. äÓ,ÒÂÎÛ,
È%ÂÓÍ±ÎÂ ±ÍÓÊÂÛ,ÒÒÒ ÓÊÁ,Ó%ÊÛ,Á,ÛÍ,
Á±ÔÊÒ±ÎÊ Î± "ÒÚÓÚÂ 32 ÍÊ", 44,1 ÍÊ ÊÊÊ
48 ÍÊ. è Ê,ÓÒÒ ÓÊÁ,Â%ÂÎÊÊ ÎÂÎÛ°,
Á±ÔÊÒ±ÎÓÊ, 16-ÊÛÓ,ÓÎ ÂÊÊÎÂ ÊÎ%ÊÎÚÓ,
16BIT ÓÓÎ,ÎÎÂÛÓÎ Î± "Í ±ÎÂ ÛäÑ ÊÊÊ,
È%ÓÊÒÍ±ÚÂÎÂ.
Ç° ÎÂ ÍÓÊÂÛÂ Ò ÓÊÁ,Ó%ÊÛ, Á±ÔÊÒ°, 16-
ÊÛÓ,ÓÎ ÂÊÊÎÂ Ò ÈÒÒÓÎ,ÁÓ,±ÊÂÎ %±ÎÓÊ
È%ÂÓÍ±ÎÂ°.

èÂÊÊÎ Á±ÔÊÒÊ

è Ê,ÓÒÒ ÓÊÁ,Â%ÂÎÊÊ ÎÂÎÛ° ÊÎ%ÊÎÚÓ SP/
LP Î± "Í ±ÎÂ ÛäÑ ÊÊÊ", È%ÓÊÒÍ±ÚÂÎÂ
ÓÓÍ±Á,±ÁÚ ÂÊÊÎ Á±ÔÊÒÊ SP/LP.

è ÊÎÂ±ÊÂ Í Á±ÔÓÎÊÎ±ÎÊÓ Í±ÒÒÂÛ°
ÎÛÎ°ÊÎ Á±ÔÓÎÊÎ±ÎÊÎ Í±ÒÒÂÛ° ÎÂ ÍÓÊÂÛ
·Ú, ÈÒÒÓÎ,ÁÓ,±± Î± %±ÎÓÊ, È%ÂÓÍ±ÎÂ Á.

Notes on the mini DV cassette

To prevent accidental erasure

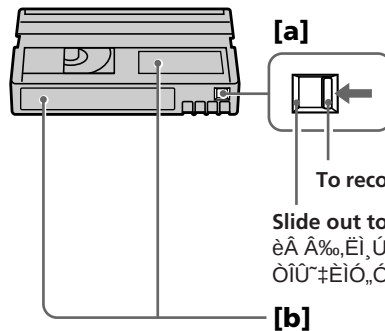
Slide out the protect tab on the cassette so that the red portion is visible. [a]

When affixing a label on the mini DV cassette

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

After using the mini DV cassette

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



è ÈÏÄ~ìÈfl í Í±ÒÒÄÚÂ mini DV

Ñîfl Ô Ä%ÓÚ, ±ÄìÈfl ÔÏÛ~ÈÌÖ,Ó
ÒÚÈ ±ìÈfl
èÄ Ä%,Èì,ÚÄ Ä±ÈÛìÈ ÌÄÖÄÖÚÓí Ì±Í±ÒÒÄÚÄ
Ú±í, ~ÚÖ.° °Í±,È%ì± í ±ìÒì±fl ÍÄÚí±. [a]

è È Ô ÈÏÄÈ,±ìÈÈ ~ÚÈÍÄÚÍÈ Ì±
Í±ÒÒÄÚÚ mini DV
é·flÄ±ÚÄì,ìÓ Ì±ÍÄÈÚÄ ~ÚÈÍÄÚÍÚ ÚÓí,íÓ Ì±
ÍÄÖÚÓ,Úí±Ä±ììÓÄ ÌÈÈÄ ± ÈÖÚìÄ,Ú±í,
~ÚÖ.° ÍÄ,°Ä,±Ú, ÔÖ, ÄÈ%ÄìÈÄ
,È%ÄÖí±Ä°. [b]

èÖÒÍÄ ÈÖÖÓí,ÁÓ,±ìÈfl í±ÒÒÄÚ° mini
DV
èÄ ÄÏÖÚ±ÈÚÄ ÍÄìÚÚ Ì±Ä±% Ì± Ì±~ÍÖ,
ÔÖÍÖÈÈÚÄ Ì±ÒÒÄÚÚ,ÄÄ ÚÚÚfl È Ì±ÈÚÄÄÄ,
,Ä ÚÈí±í,ìÓí ÔÖÍÖÈÄìÈÈ.

[a]

To record/Ñîfl Ä±ÔÈÒÈ

Slide out to prevent accidental erasure./
èÄ Ä%,Èì,ÚÄ %ìfl Ô Ä%ÓÚ, ±ÄìÈfl
ÒÏÛ~ÈÌÖ,Ó ÒÚÈ ±ìÈfl.

[b]

We recommend to use an ME cassette

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

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

â° ÄíÖíÄì%ÚÄì ÈÖÖÓí,ÁÓ,±Ú, í±ÒÒÄìÚ
âÖ
Ç° ÍÖÈÄÚÄ ÔÖÏÛ~ÈÚ, Ì±È,°Ô~ÄÄ Í±~ÄÖÚ,Ó
ÈÄÖ. ±ÈÄìÈfl Ì± Ç±~ÄÈ,È%ÄÖí±Ä Ä Ô
ÈÖÖÓí,ÁÓ,±ìÈÄí í±ÒÒÄÚ° âÖ,íÖÚÓ ±fl
Ó·Í±%±ÄÚ Ì±È,°Ô~Èí Í±~ÄÖÚ,Óí.
Ç° ÍÄ ÍÖÈÄÚÄ ÔÖÏÛ~Ú, íÓ Ô~Ö,Ô Í±~Ä,ÖÚ,±
Ô ÈÈÖÖÓí,ÁÓ,±ìÈÈ ÌÚ%~Èí í±ÒÒÄÚ.

Tips for using the battery pack

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.

• Turn off the camcorder when not in use.
• Use the battery pack in a warm environment.

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When to replace the battery pack

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

The remaining time in minutes also appears.



When the remaining battery indicator reaches the lowest point, the  indicator appears and starts flashing in the viewfinder.

When the  indicator in the viewfinder changes from slow flashing to rapid flashing while you are recording, set the POWER switch to OFF on the camcorder and replace the battery pack. Leave the tape in the camcorder to obtain a smooth transition between scenes after the battery pack has been replaced.

Depending on conditions, the  indicator may flash, even if there are 5 to 10 minutes remaining.

Notes on the rechargeable battery pack

Caution

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

The battery pack heats up

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

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Tips for using the battery pack

"InfoLITHIUM" battery pack

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

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

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

Battery pack care

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

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The life of the battery pack

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

Charging temperature

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

Notes on charging

A brand-new battery pack

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

Recharge the battery pack whenever you like

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

Notes on the terminals

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

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

Be sure to observe the following

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

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Maintenance information and precautions

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Moisture condensation

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

Inside the camcorder

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

On the lens

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

How to prevent moisture condensation

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

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

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Video head cleaning

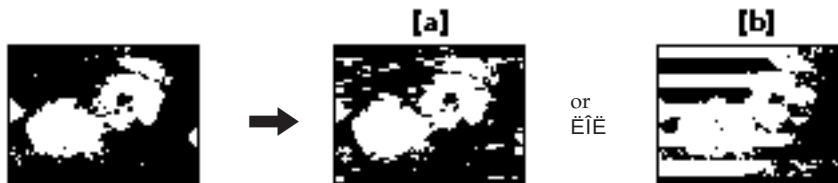
To ensure normal recording and clear pictures, clean the video heads.

The video heads may be dirty when:

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

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ŐÂ ÂİÂ~Â†,ÚŐřř.
• ÇŐŐŐ ŐÈÁ,Ő%ÈİŐÈÁŐ- †ÈÂİÈÂ
ÚŐ%İŐŐ ŐŐİ†Ú È,†ÂİŐÂ.
• ÇŐŐŐ ŐÈÁ,Ő%ÈİŐÈÁŐ- †ÈÂİÈÂİÂ
ŐŐřř,İřřÂÚŐřř.
• âİ%Èİ†ÚŐ  È ŐŐŐ~ÂİÈÂ "  CLEANING
CASSETTE" ŐŐřř,İřř,ÚŐřř % Ő,, Â† % Ő,,Őİ ÈİÈ
 Èİ%Èİ†ÚŐ İÈ,,†ÂÚ İ† ‐İ†İÂ ÚâŇ ÈİÈ ,
,È%ŐÈŐ†ÚÂİÂ.



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.

ŐŐİÈ ~ÚŐŐİŐ~ÈÚŐřř ŐŐŐŐŐŐřřİÈÂ [a] ÈİÈ [b],
Ő~ÈŐŐŐŐŐ, È%ÂŐ,,ŐİŐ,İÈ Ő ŐŐİŐ~
Ő~ÈŐŐŐŐŐİ†, İŐÈ İ†ŐŐÂŐ~ Sony DVM12CL (İÂ
Ő Èİ†,,†ÂÚŐřř). èŐŐİÂŐ Ő,Â İÈÈÁŐ- †ÈÂİÈřř,
ÂŐİÈ ŐİŐ ,ŐÂ Â~Â "Â†~ÚİİÂİŐ", ŐŐ,ÚŐ ÈÚÂ
Ő~ÈŐŐŐİŐ. (ÇÂŐŐ,ÚŐ řİÈÚÂŐ~ÈŐŐŐİŐ-ŐİÂÂ5 †Â
Â†Ő%ÈİŐ ÈÂİ.)

è ÈİÂ~İÈÂ
ŐŐİÈ Ő~ÈŐŐŐŐŐİ†, İŐÈ İ†ŐŐÂŐ~ DVM12CL (İÂ
Ő Èİ†,,†ÂÚŐřř) İÂÚ, Ő Ő%†ÈÂ, Ç†~ÂÈ Ő-İ†ŐŐÈ,
Ő ŐŐİŐŐŐİ†,ÚÈ ÚÈÚÂŐ, Ú Ç†~Â,,Ő-İÈÈ†È~Â,,Ő
%ÈİÂ †Sony.

Maintenance information and precautions

àìÙÓ Ì±Êñ ÒÓ ÙìÓ%Ù Á±
±ÒÒ± ±ÙÓÈÒ Æ%ÒÓÙÓ ÓÈìÒÙÈ

Precautions

Camcorder operation

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

On handling tapes

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

Camcorder care

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

èÂ%ÒÓÙÓ ÓÈìÒÙÈ

ùìÒÒìÙ±Ù±Êñ ,È%ÀÓì±Ì °

- ùìÒÒìÙ±ÙÈ ÙÈÙÀ,È%ÀÓì±Ì ÙÓÙ7,2Ç (-±Ù± ÆÈìÒ,Ò -ìÒì±) ÈìÈ 8,4 Ç (ÒÀÙÀ,Ò,Ó ±%±ÒÙÀ ±ÒÀ ÆìÙÒì±)
- ÒÒìÈ Ì±ìÈÒÈ-ìÈ-Ù% Ù,À %°È Ò Æ%ÌÀÙ ÈìÈ ÈÈ%ìÒÒÙ, ÒÒÒ±ìÈ, ÌÒ ÒÙÒ, ÙÒ, °ì, ÙÈÙÀ ,È%ÀÓì±Ì ÙÈÒ Ò,À, ÙÀÀÀÙ%ÈÌÀ ±Sony ÒÀ Æ%±ì ÌÀÈ ÆÈÀ ÌÒÒìÙ±Ù±ÈÀÈ.
- àÀ-À,±ÈÙÀ,, Ù,Ò,Ò Ò-± ÆìÈ ÆìÈ ÌÀì±ìÈ ÆÒìÈ Ù%± Ò,, ÆÙ% ÙÀ ÒÒÒ-ÀìÒ ÒÒÙìÒ ÒÈì° Ò Ò- ÆìÙÈ,Òì.
- ÑÀ ÈÈÙÀ,, °ì Ì±ÙÀì, POWER, ÒÒìÒÈÀìÈÈ OFF, ÌÒ,,±, È%ÀÓì±Ì ± ÌÀ ÈÒÒÒìÀÙÀÙÒì.
- çÀ Á±,Ò ±È,±ÈÙÀ,È%ÀÓì±Ì Ù È ÌÀ ÌÒÒìÙ±ÙÈ ÙÈÙÀÀÀ, Ù±ìÒìÒÒÙÒìÈÈ, Ù± Ì±ìÒÈÀÙ Ò ÒÈÀÒÈÙÈ, ìÙÙ ÆìÀÀ ÒÒ, °- ÆìÈÀ ÙÀìÒÀ ±ÙÙ °.
- ÑÀ ÈÈÙÀ,È%ÀÓì±Ì ÙÒÒ%±ì ÆÒÙ ÒÈì, Ì°, Ì±, ÌÈÙì°, ÒÒìÀÈ ÈìÈ ÌÀì±ìÈ ÆÒìÒÈ, È- ±ÈÈ.

éùìÒÒÈÙÀì, ÌÒ Ò- ± ÆìÈ Ò ÌÀìÙ±ìÈ

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

ììÒ% Á±,È%ÀÓì±Ì ÒÈ

- äÒ,±, È%ÀÓì±Ì ± ÌÀÈÒÒÒìÀÙÀÙÒì, ÙÀ ÆìÈÀ%ìÈÙÀì ÌÒ,Ò, ÆìÀìÈ, ÒÙÒÒÀ%ÈìÈÙÀ ÈÒÙÒìÈìÒÈÙ±ìÈ Ù%±ìÈÙÀìÀìÙÙ.
- èÀ ÈÒ%È ÆÒìÈ, Ì Ì±ÈÙÀ ÒÈÙ±ìÈÀ, ±-ÒÙ±ÈÙÀ Ò ÒÀìÈñ Ì±ÌÀ ° È ÒìÀÈÀ ± È, ÒÒÒ ÒÈÀ,Ò%ÈÙÀìÀìÙÙ Ò È-ìÈÀÈÙÀì, ÌÒ, ÙÀ ÆìÈÀ 3-ì ÌÈìÙÙ.
- éÈ-±ÈÙÀ Ò- ÆìÙÈ, Ò ÒÒìÒ° Ìñ, ÌÒÈ ÌÈÒÙÒìÈ %ìñ Ù%±ìÀìÈñ, ÌÀÈ. ÒÒìÈ ÈìÀ, ÙÒì ÒÙÒÀ ÆìÈ Ò±ì, Æ, Ì± Ò- ÆìÙÈ, Æ, ÙÒ Ù%±ìÈÙÀ Èì Ò ÒÒìÒ° Ìñ, ÌÒÈ Ùì±ìÈ.
- éÈ-±ÈÙÀ ÌÒ ÒÙÒ ÆÒÒ± Ù± Ò ÒÒìÒ° ÒÙìÒÈ Ìñ, ÌÒÈ Ùì±ìÈ ÈìÈ Ìñ, ÌÒÈ Ùì±ìÈ, ÒìÀì, ± ÒìÒ-ÀìÒÈ ±ÒÙ, Ò Òì ÙìÀ ÆìÒ, Ò ÌÒ, Æ, Ò Ò Æ%ÒÙ, ±. çÀ ÈÒÒÒì, ÀÙÈÙÀ Ì±ìÈ-ìÈ-ÒÙÈÒÒ, ±ÒÙ, Ò ÈÙÀìÈ, ÌÒÙÒ ° ÆìÒ, ÙÙ ÒÒ, Æ%ÈÙ, ÒÙ% ÆìÙ.

AC power adaptor

Charging

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

Others

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

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

ēĀŪĀ, ŌĒ†%†ŌŪĀ ŌĀ ĀĪ. ŪŌĪ†
ā† fl%††

- àŌŌŌĪ, ĀŪĒŪĀ ŪŌĪ, Ī. †Ū† ĀĒĪ°Ē. ĪŌĪ NP-F100/NP-F200 ĪĒŪĒĀ, Ō-ĒŌĪŌ, Ō ŪĒŌ†.
- ē†ĀĪĀŌŪĒŪĀ. †Ū† ĀĒĪ°Ē. ĪŌĪ Ī† ŌĪŌŌĪŌĒ ŌŌ, Ā ĪŌŌŪĒ. ĀĀ, Ē. †ĒĒĒ, Ō, ĀĪfl Ā† fl%†Ē.
- Ā†Ū† ĀĒĪ°Ē. ĪŌĪ. Ū%ĀŪ Ī†, Ā, †Ū, Ōfl, Ō, ĀĪfl Ā† fl%†Ē. ŪŪŌ fl, Īfl ĀŪŌfl ĪŌ Ī†Ī, Ī°Ī.

è ŌĀĀ

- ēŪŌŌĀ%ĒĪĒŪĀ†ŌŌ† †ŪŌŪĪĀĪŪ ĒĀŌĪŌĒ ŌĀŪĒ, ĀŌĪĒ ŌĪĪĒŌŌŌĪ, ĀŪĀŪŌfl%†ĒŪĀĪ, ĪŌĀ, Āfl, Īfl ŌŪŌŌĀ%ĒĪĪĒfl ŌĀŪĀ, Ō, ŌŌ Ō, Ō%†, †Ū†ĒŪĀ Ā, Ō Ā† †ĀĀĪ. ĒĒĪŌ, %† ĪĀ ŪflĒŪĀĀ†Ō†ĪŌ Ō, Ō%.
- ĒĀĪŌŌĪŪ†ŪĒ ŪĒŪĀ†ŌŌ† †ŪŌ ŌŌ, ĀĒ%ĀĪĪ°Ī Ō Ō, Ō%ŌĪ, ĒĪĒ ĀŌĪĒ †ŌŌ† †Ū ŪŌ†Ī ĒĪĒ. °Ī ŌŌ, ĀĒ%ĀĪ.
- ĒĀŌ, Ē. †ĒŪĀŌĀŪĀ, ŌĒŌ Ō, Ō%ŌĒĪŌĒĒĪĀ ŌŪ†, ŪĀ Ī† ĪĀ, Ō ŪflĒĀĪ°Ā Ō Ā%ĪĀŪ°. ŪŪŌ ŌŌ, Ā%ĒŪŌ Ō, Ō%ĒĪŌĒĀŪŌ ĒĀŪĒĪ ŌŌĒ† Ū ĒĪĒ Ū%† Ū °ĪĀĪŪ ĒĀŌĪĒĪ ŪŌĪŌĪ.
- ĪĀ%ĒŪĀŌ, °ŪŌ ĪĒĪĒĒĀ ĪĀŪ†ĪĒĒĀŌĪĒĀ Ō Ā%ĪĀŪ°ĪĀŌŌŌ ĒĪŌ† ŪŌfl Ō ĪĀŪ†ĪĒĒĀŌĪĒĒĒ †ŪŌflĒĒ ŌŌĀ%ĒĪĒŪĀĪ, ĪŌĒ ŌĪ†ŪĒĪ°. ŌŌĪĒ °ŪŌ ŌĪŪĒŪŌfl, ĪŌĒĀŪ Ō ŌĒĀŌŪĒĪŌ ŌŪĪŌĀ†Ī†ĪĒĀ, Ē†ŌŌ† †Ū ĪŌĒĀŪ. °Ū, ŌŌ, ĀĒ%ĀĪ.
- ĒŌĀ, %†ŌŌ%ĀĒ ĒĒ, †ĒŪĀĪĀŪ†ĪĒĒĀŌĪĒĀ ĪŌĪ†ĪŪ°, °ŌŪŌŪĀ.
- ĒĀ†ĀĒĒĒŪĀ†ŌŌ† †Ū.
- ĒĀŌŌ%Ā, Ā, †ĒŪĀ†ŌŌ† †ŪĪ†ĪĒĒĀŌĪŌĒ, Ē. †ĒĒĒ ĒĪ ŌĪflĒŪĀ Ā, Ō.
- āŌ, %††ŌŌ† †ŪĒŌŌŌĪ, ĀŪĀŪŌfl, ŌŌŌ-ĀĪŌ, Ō, Āfl Ā† fl%†Ē, %ĀĒ ĒĒŪĀĀ, ŌŌŌ%†Ī, ĀŌŪ †%ĒŌŌ ĒĀĪĒĪŌ, ĀĀĒ, Ē%ĀŌ†ŌŌ† †ŪŪ°, ŌŌŪŌĪŪ °ŪŌ ŌĪ. Ū%ĀŪ Ī† Ū†Ū, Ō ĒĀĪĀĀ Ē†ŪŪĒ%ĀŌ†ŌŌ† †ŪŪ°.
- ĀŌŌ† †Ū ŌŪ†ĪŌ, ĒŪŌfl ŪĀŌĪ°, Ō, Āfl Ā† fl%†Ē. ŪŪŌ ŌŪ†ĪŌ, ĒŪŌfl ĪŌ Ī†Ī, Ī°Ī.
- ĒĀ †ĀĪĀ†ĒŪĀ†ŌŌ† †Ū, ĪĀŌŪ†Ī, ĪŌŪŌ °Ā:
 - ō ĀĀĪĀ ĪŌ, Ō flĒĒĀ ĒĪĒ ĪŌĪŌ%†ĪĀ
 - ē°ĪĪ°Ā ĒĪĒ, flĀĪ°Ā
 - ē°ĀĪ, Ī†ĒĪ°Ā
 - èŌ%, ĀĒĀĪ°, Ē. †ĒĒĒ

Ē ŌĪŪ†Ā, ŌĀĪĒĪŌ, ĀĪĒfl Ī†ĒĪĪ-ĪĒ. Ō ŪŪ%ĪŌŪĀĒ, ŌŪfl, †ĒŪĀ†ŌŌ† †ŪĒŌ. †ŪĒŪĀŌ, Ī Ē†ĀĪŪ. ĪĒĒ†ĒĒĒ ĀĪŪ %ĒĪĀ Ū Sony.

Using your camcorder abroad

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

Power sources

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

Difference in colour systems

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

PAL system countries

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

PAL-M system country

Brazil

PAL-N system countries

Argentina, Paraguay, Uruguay

NTSC system countries

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

SECAM system countries

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

àÒÒÓÎ ÁÓ, ÷ÈÊ Ç÷-ÂÈ
È%ÂÓÍ÷ÌÀ ° Á÷ „ ÷ÈÊ-ÂÈ

ä÷Ê%÷fl ÒÚ ÷÷ ÈÌÀÁ Ò, ÒÈ ÒÓ-ÒÚ, ÀÌ°À
ÒÈÒÚÀÌ° ÌÌÀÌÚ È-ÀÒÌÒÈ ÒÀÚÈ È-ÀÚÌÓ, Ò
ÚÀÌÀ, È%ÀÌÈfl. èÀ Á% ÈÒÒÓÎ ÁÓ, ÷ÈÊÇ÷-ÂÈ
È%ÂÓÍ÷ÌÀ ° Á÷ „ ÷ÈÊ-ÂÈ Ò Ó, Á, ÚÀ
ÒÌÀ%Ú, ÈÀ ÒÚÌÚ°.

àÒÚÓ÷ÌÈÈ ÒÈÚ÷Èfl

Ç ÌÒÈÀÚÀ ÈÒÒÓÎ ÁÓ, ÷Ú, È%ÂÓÍ÷ÌÀ Ò,
Ì-ÒÈ ÒÚ ÷ÌÀ Ò ÒÓÌÓ°, Ò ÈÌ÷, ÷ÀÌÓ, Ò
ÒÀÚÀ, Ò, Ò÷%÷ÒÚÀ ÷ÒÀÌÌ. ÚÓÌ÷, Ò Á%ÀÌ÷ÒÚ
100 Ç %Ò 240 Ç ÒÀÌÌ. ÚÓÌ÷ 50/60 È°.

ê÷ÁÌÈ-Èfl, ÒÈÒÚÀÌ÷ ÷, ÀÚÌÓ, Ò
ÚÀÌÀ, È%ÀÌÈfl

Ñ÷Ì÷fl, È%ÂÓÍ÷ÌÀ ÷ ÒÒÌÓ, ÷÷ ÷ ÒÈÒÚÀÌÀ
PAL. ÒÒÌÈÇ°, ÒÚÈÚÀ Ò ÒÒÌÓÚ ÀÚ,
ÒÒ ÒÈÀ, Ò%ÈÌÒÀÈÁÓ. ÷ÈÀÌÈÀ÷ÚÀÌÀ, ÈÁÓ Á,
ÚÓ ÷ÚÓ %ÒÌÈÀÌ °Ú, ÚÀÌÀ, ÈÁÓ, ÒÒÌÓ, ÷Ì°È
÷ ÒÈÒÚÀÌÀ PAL.
è Ó, Á, ÚÀ ÒÓ ÒÌÀ%Ú, ÌÌÚ ÒÀ Ì°.

ÈÚ ÷÷ Ò ÒÈÒÚÀÌÒÈ PAL
À, ÒÚ ÷Èfl, À, ÒÚ Èfl, ÀÀÌ, Èfl,
ÇÀÌÈÍÓ-ÈÚ÷Èfl, ÈÁ ÷Èfl, ÈÓÌ÷÷%Èfl,
ÈÓÌÍÒÌ, Ñ÷Èfl, àÒÒ÷Èfl, àÚ÷Èfl, àÈÚ÷È,
àÚ, ÀÈÚ, à÷÷ÈÀÈfl, ÇÓ, ÷fl àÀÌ÷÷%Èfl,
ÇÓ, À, Èfl, èÓ ÚÚ, ÷Èfl, èÈÌ, ÷ÒÚ, ÷ÈÌ÷÷%,
ÌÈÌfl÷%Èfl, ò, ÀÈ÷÷ Èfl, ò, À-Èfl È Ú.%.

ÈÚ ÷÷ Ò ÒÈÒÚÀÌÒÈ PAL-M
À ÷ÈÈfl

ÈÚ ÷÷ Ò ÒÈÒÚÀÌÒÈ PAL-N
À „ÀÌÚÈÌ÷, è÷ ÷, ÷È, ÷ Ú, ÷È

ÈÚ ÷÷ Ò ÒÈÒÚÀÌÒÈ NTSC
À÷, ÷ÌÒÈÀ ÒÒÚ Ò, ÷, ÀÓÌÈ, Èfl, ÇÀÌÀÒÚ÷÷,
à÷÷%÷, àÒÌÚÌ-Èfl, àÓ Àfl, àÀÌÒÈÌ÷, èÀ Ú,
èÚ ÈÌ÷Ì, èÒÀ, ÷È, ÷Ì, ÒÈÌÈÒÒÈÌ°,
ñÀÌÚ ÷Ì, ÷fl ÀÌÀ ÈÌ÷, òÈÈ, ùÌ, ÷%Ò,
ùÌ÷ÈÌ÷, ùÒÒÌÈfl È Ú.%.

ÈÚ ÷÷ Ò ÒÈÒÚÀÌÒÈ SECAM
ÀÓÌ, ÷ Èfl, ÇÀÌ, Èfl, È÷Èfl÷, à ÷Ì, à ÷Ì,
àÒÌ÷ÍÓ, èÒÌ, ÷, èÒÒÒÈfl, èÌÓ, ÷÷÷fl
èÀÒÒÚ-ÌÈÌ÷, ÌÌ ÷ÈÌ÷, ÷ ÷Èfl, òÀ-ÒÌ÷fl
èÀÒÒÚ-ÌÈÌ÷ÈÚ.%.

Trouble check

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

Camcorder

Power

Symptom	Cause and/or corrective actions
The power is not on.	- The battery pack is not installed. → Install the battery pack. (p. 10) - The battery is dead. → Use a charged battery pack. (p. 7) - The AC power adaptor is not connected to mains. → Connect the AC power adaptor to mains. (p. 25) - If the power is still not on after you tried the corrective actions above, press the RESET button on the back of the cassette compartment lid using a sharp-pointed object. (If you press the RESET button, all the settings including the date and time return to the default.) (p. 82)
The power goes off.	- While being operated in CAMERA mode, the camcorder has been in Standby mode for more than 5 minutes. → Set the POWER switch to OFF, then to CAMERA. (p. 13) - The battery is dead. → Use a charged battery pack. (p. 7)
The battery pack is quickly discharged.	- The ambient temperature is too low. (p. 62) - The battery pack has not been charged fully. → Charge the battery pack again. (p. 7) - The battery pack is completely dead, and cannot be recharged. → Use another battery pack. (p. 25)
The battery pack cannot be installed.	Only an NP-F100/NP-F200 battery pack can be used.

Operation

Symptom	Cause and/or corrective actions
START/STOP does not operate.	- The tape is stuck to the drum. → Eject the tape. (p. 11) - The tape has run out. → Rewind the tape or use a new one. (p. 21) - The POWER switch is set to PLAYER. → Set it to CAMERA. (p. 12) - The tab on the cassette is out (red). → Use a new tape or slide the tab. (p. 11)
The cassette cannot be removed from the holder.	The battery is dead. → Use a charged battery pack or the AC power adaptor. (p. 7, 25)
and indicators flash and no function except for cassette ejection works.	Moisture condensation has occurred. → Remove the cassette and leave the camcorder for at least 1 hour. (p. 66)
"CLOCK SET" appears when the camcorder is turned on.	Reset the date and time. (p. 58)

Continued to the next page

Trouble check

Operation

Symptom	Cause and/or corrective actions
The End Search function does not activate.	The cassette was ejected after you recorded on it. → The End Search function will not activate until you make a new recording after reinserting the cassette.
The tape does not move when a tape transport button is pressed.	- The POWER switch is set to CAMERA or OFF. → Set it to PLAYER. (p. 21) - The tape has run out. → Rewind the tape or use a new one. (p. 21)
No sound or only a low sound is heard when playing back a tape.	The volume is turned to the minimum. → Open the LCD panel and press VOLUME +. (p. 21)
The SteadyShot function does not activate.	S SHOT is set to OFF in the menu system. → Set it to ON. (p. 38)
Recording stops at once.	The POWER switch is set to PHOTO. → Set it to CAMERA.
Recording stops in a few seconds.	The START/STOP MODE switch is set to 5SEC or 1. → Set it to 1/2. (p. 18)
The autofocus function does not activate.	- Focus is set to the manual mode. → Set it to autofocus. (p. 43) - Shooting conditions are not suitable for autofocus. → Set focus to manual mode to focus manually. (p. 43)
The fader function does not work.	The START/STOP MODE switch is set to 5SEC or 1. → Set it to 1/2. (p. 18)

Picture

Symptom	Cause and/or corrective actions
The image on the viewfinder screen is not clear.	The viewfinder lens is not adjusted. → Adjust the viewfinder lens. (p. 13)
A vertical band appears when a subject such as lights or a candle flame is shot against a dark background.	The contrast between the subject and background is too high. The camcorder is not malfunctioning. → Change locations.
The picture is "noisy" or does not appear.	The video heads may be dirty. → Clean the heads using the Sony DVM12CL (not supplied) cleaning cassette. (p. 67)
⊗ indicator flashes on the LCD screen or in the viewfinder.	The video heads may be dirty. → Clean the heads using the Sony DVM12CL (not supplied) cleaning cassette. (p. 67)
The picture is too bright or too dark.	LCD BRIGHT is not adjusted properly. → Press + or – to obtain the brightness you want. (p. 16)
A vertical band appears when shooting a very bright subject.	The camcorder is not malfunctioning.
The picture does not appear in the viewfinder.	The LCD panel is open. → Close the LCD panel.
The picture does not appear on the LCD screen or in the viewfinder.	Incorporated fluorescent tube is worn out. → Please contact your nearest Sony dealer.

Picture

Symptom	Cause and/or corrective actions
While editing using the DV connecting cable, recording picture cannot be monitored.	Remove the DV connecting cable, and connect it again.

Others

Symptom	Cause and/or corrective actions
The camcorder becomes warm.	If the power of the camcorder is on for a long time, it becomes warm, which is not malfunction.
The supplied Remote Commander does not work.	- COMMANDER is set to OFF in the menu system. → Set it to VTR4 or ID. (p. 86) - Something is blocking the infrared rays. → Remove the obstacle. - The battery is not inserted with the correct polarity. → Insert the battery with the correct polarity. (p. 86) - The batteries are dead. → Insert new ones. (p. 86)
The CHARGE lamp flashes after you charge the battery pack installed in the camcorder.	The camcorder is not malfunctioning.
No function works though the power is on.	Disconnect the connection plug on the battery pack or on the AC power adaptor, then reconnect it in about 1 minute. Turn the power on. If the functions still do not work, press the RESET button on the back of the cassette compartment lid using a sharp-pointed object. (If you press the RESET button, all the settings including the date and time return to the default.) (p. 82)

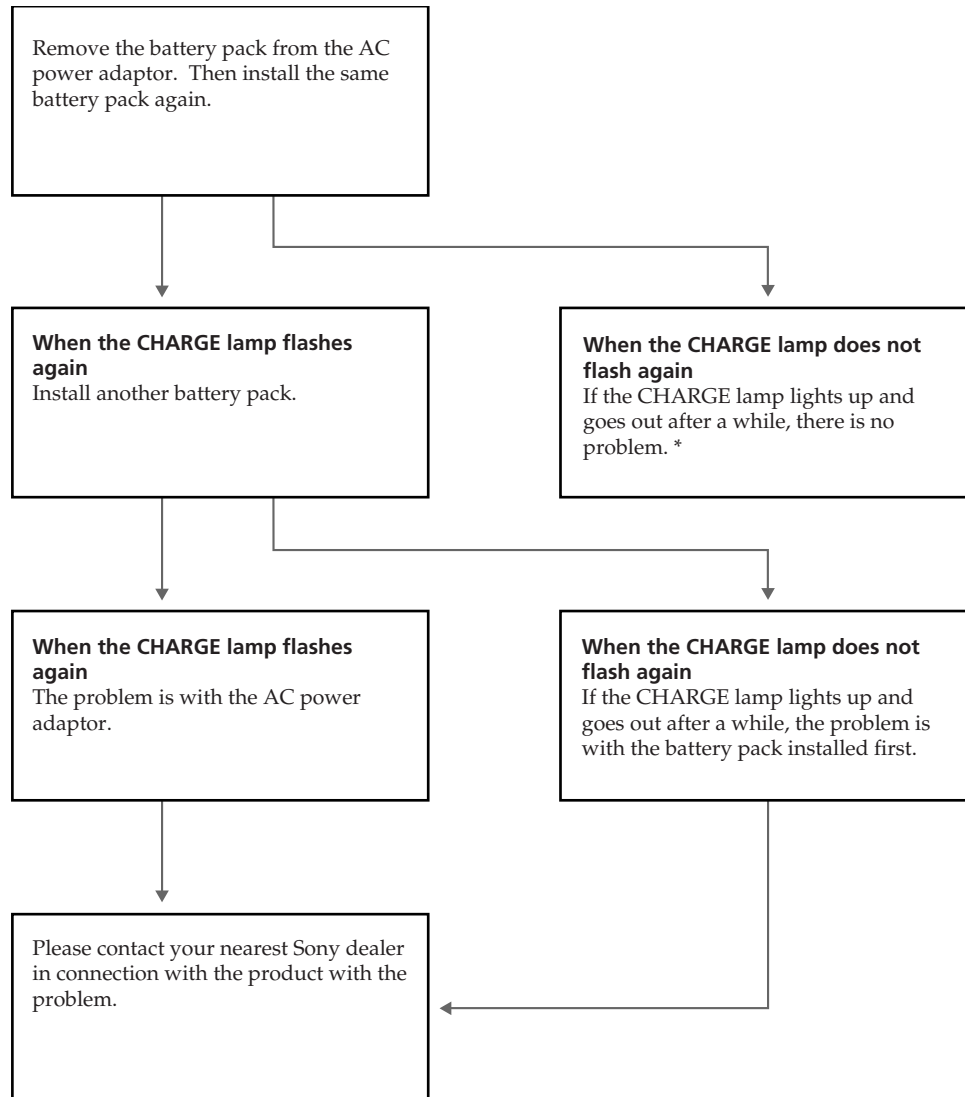
AC power adaptor

Symptom	Corrective actions
The VTR/CAMERA or CHARGE lamp does not light.	Disconnect the mains lead. After about 1 minute, reconnect the mains lead. (p. 7)
The CHARGE lamp flashes.	See the chart on the next page.

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.

ΕΛΛΗΝΙΚΗ

ΟΟΙΕ ΰ Ç±Ô, ÔΑΙΕΠ± Ι±Ι±Ι-ΙΕ-Ô Ô Ô-ΙΑΙ± Ô ÈÈÔÔÍ, ΑÔ,±ΙΕΕ, È%ΑΟÍ±ΙΑ °, ,ÔÔÔÔÍ, ΑΰΕΰΑÔ, ÔÍΑ%Ô, ΑΕ ΰ±-ΙΕ-ΑΕ %ΠΙ ÔΰÔÍ±ΙΕΠ È ΰÔΰ ±ΙΑΙΕΠ Ô Ô-ΙΑΙ. ÔÔΙΕΰ ΰ%ÔÔÔΕ,ÔΑΑ-ΑÔÔΰ±,ΰÔΠ,ΰÔÔΰÔÔΑ%ΕΙΕΰΑΕÔΰÔ-ΙΕΙÔΕΰ±ΙΕΠΕÔ. ±ΰΕΰΑÔ, ÍÇ±-ΑΙΰ %ΕΙΑ ΰ Sony ΕΙΕ Ι± ΙΑÔΰΙÔΑ ΰÔÔΠΙÔÍÔ-ΑΙΙÔΑ Ô Α%Ô ΕΠΙΰΕΑ ÔÔ Ô-ÔΰΕΕ,±ΙΕ, Sony.

ÇÈ%ΑΟÍ±ΙΑ ±

ÈÈΰ±ΙΕΑ

È ÈΑΙ±Í	È È-ÈΙ± È/ΕΙΕ %ΑΕÔΰ,ΕΠ ÔÔ ÈÔÔ ±,ΙΑΙΕ
ÇΑ, ΙΙ,~±ΑΰÔΠ ÔÈΰ±ΙΕΑ.	- ÇΑ ΰÔΰ±ΙÔ,ΙΑΙ ±ΰ± ΑΕΙ°È-ÍÔÍ. → ΙÔΰ±ΙÔ,ΕΰΑ ±ΰ± ΑΕΙ°È-ÍÔÍ. (Ôΰ . 10) - Α±ΰ± ΑΕΙ°È-ÍÔÍ ÔÔΠÔÔΰ, ±Α Π%ΕΙÔΠ. → àÔÔÔÍ,ΑΰΕΰΑ Α± ΠΕΑΠ°È-±ΰ± ΑΕΙ°È-ÍÔÍ. (Ôΰ . 7) - ÈΑΰΑ,ÔÈ±%±ÔΰΑ ÔΑ ΑΙ.ΰÔÍ±ΙΑÔÔ%ÔÔΑ%ΕΙΑΙ - ÍΑΙΰ È-ΑÔΙÔÈÔΑΰΕ. → ÈÔ%ÔÔΑ%ΕΙΕΰΑÔΑΰΑΰΑ,ÔÈ±%±ÔΰΑ ÔΑ ΑΙ.ΰÔÍ± - ÍΑΙΰ È-ΑÔΙÔÈÔΑΰΕ. (Ôΰ . 25) - ÔÔΙΕ ÔÈΰ±ΙΕΑ,ÔΑ Α-Α ΙΑ,ΙΙ,~±ΑΰÔΠ ÔÔÔÍΑ ΰÔ,Ô, Í±Í Ç° °ÔÔΠΕΙΕ °-ΑÔÔÈÔ±Ι±Α %ΑΕÔΰ,ΕΠ ÔÔ ÈÔÔ ±,ΙΑΙΕ, , ±ÈΙΕΰΑ ΠÔÔΰ RESET Ι± Α±%ΙΑÈ ÔΰÔ ÔΙΑ Í °-ΙΕ - Ι±ÔÔΑΰÔ,ÔÔÔÔΑΙ±ÔÈÔÔÔÍ,ΑÔ,±ΙΕΑΙÔÔΰ ÔÍÔΑ-ÍÔ,Ô - Ô Α%ΑΰΑ, (ÔÔΙΕ Ç° Ι±ÈÈ±ΑΰΑ ΠÔÔΰ RESET, ÔΑ - ΰÔΰ±ΙÔ,ΙΕ, ,ΙΙ,~±Π ΰÔΰ±ΙÔ,ΙΕ %±ΰ° È, ΑΙΑΙΕ, - ÔΑ, ±±,ΰÔΠ,ÈÔÔ%ÔΑÔÔÔΰΠΕΑ.) (Ôΰ . 82)
ÈÈΰ±ΙΕΑ, °ΙΙ,~±ΑΰÔΠ.	- È È ±ÔΰΑ, ΑÈÈΙΑ CAMERA,È%ΑΟÍ±ΙΑ ± Ι±Ô%ΕΙ±Ô, - ΑÈÈΙΑ,ÔΰÔ,ΙÔΰΕ-ÔΙΑΑ 5 ΙΕΙΰΰ. → ΙÔΰ±ΙÔ,ΕΰΑ, °ΙΙ,~±ΰΑΙ, POWER, ÔÔÍÔÈΑΙΕΑ OFF, ± - Α±ΰΑΙ, ÔÔÍÔÈΑΙΕΑ CAMERA. (Ôΰ . 13) - Α±ΰ± ΑΕΙ°È-ÍÔÍ ÔÔΠÔÔΰ, ±Α Π%ΕΙÔΠ. → àÔÔÔÍ,ΑΰΕΰΑ Α± ΠΕΑΠ°È-±ΰ± ΑΕΙ°È-ÍÔÍ. (Ôΰ . 7)
Α±ΰ± ΑΕΙ°È-ÍÔÍ °Ôΰ Ô ±Α ΠΕΑΰÔΠ.	- ΙΑΙÔΑ ±ΰΰ ± ÔÍ ΰÈ±,~ΑÈ Ô Α%Ô ÔΙΕ-ÍÔÍ ΙΕΑΙ±Π. (Ôΰ . 62) - Α±ΰ± ΑΕΙ°È-ÍÔÍ °Í Α± ΠΕΑΙ ΙΑ ÔÔΠÔÔΰ, .. → ÈΙÔ,± Α± Π%ΕΰΑ ±ΰ± ΑΕΙ°È-ÍÔÍ. (Ôΰ . 7) - Α±ΰ± ΑΕΙ°È-ÍÔÍ ÔÔΠÔÔΰ, ±Α Π%ΕΙÔΠ È ΙΑ ΙÔÈΑΰ °ΰ, ÔΑ ΑΑ± ΠΕΑΙ. → àÔÔÔÍ,ΑΰΕΰΑ%Ô,ÔÈ-±ΰ± ΑΕΙ°È-ÍÔÍ. (Ôΰ . 25)
Α±ΰ± ΑΕΙ°È-ÍÔÍ ΙΑ ΙÔÈΑΰ °ΰ, ΰÔΰ±ΙÔ,ΙΑΙ.	ΔÔÈΙÔ ÈÔÔÔÍ,ΑÔ,±ΰ, ΰÔÍ,ΙÔ-±ΰ± ΑΕΙ°È-ÍÔÍ NP-F100/ NP-F200.

È±-Ôΰ±

È ÈΑΙ±Í	È È-ÈΙ± È/ΕΙΕ %ΑΕÔΰ,ΕΠ ÔÔ ÈÔÔ ±,ΙΑΙΕ
ÇΑ ΰΰΠΕÔΙΕ ΰΑΰ START/STOP.	- ΔΑΰΰ Ô ÈΙΕÔÍ Í ± ±.±ΰ. → Ç°ΰÔΠΠΕΰΑ ΙΑΰΰ. (Ôΰ . 11) - ΔΑΰΰ Α±ÍÔÍ-ΕΙ±Ô, → ÈΑ ΑΰÔΰ±ΕΰΑ ΙΑΰΰ Ι±Α±%ΕΙΕ ÈÔÔÔÍ,ΑΰΕΰΑ ΙÔ,ΰ. (Ôΰ . 21) - Ç°Í,~±ΰΑΙ, POWER ΰÔΰ±ΙÔ,ΙΑΙ, ÔÔÍÔÈΑΙΕΑ PLAYER. → ΙÔΰ±ΙÔ,ΕΰΑ Α,Ô, ÔÔÍÔÈΑΙΕΑ CAMERA. (Ôΰ . 12) - ΔΑÔΑÔΰÔÍ±ÔÔΑΰ°ÔΰÔΰΰÔΰ,ΰΑΰ (Í ±Ô±ΠΙΑΰ±). → àÔÔÔÍ,ΑΰΕΰΑ ΙÔ,ΰ ΙΑΰΰ ΕΙΕ ÔΑ Α%Ô,ΕΙ,ΰΑ ΙΑÔΑÔΰÔÍ. (Ôΰ . 11)
Δ±ÔÔΑΰ± ΙΑ ΙÔÈΑΰ °ΰ, ,ΰÔΰ± ÈΑ %ΑÈ±ΰΑΠ.	- Α±ΰ± ΑΕΙ°È-ÍÔÍ ÔÔΠÔÔΰ, ±Α ΠΕΑΙ → àÔÔÔÍ,ΑΰΕΰΑ Α± ΠΕΑΠ°È-±ΰ± ΑΕΙ°È-ÍÔÍ ΕΙΕ - ÔΑΰΑ,ÔÈ±%±ÔΰΑ ÔΑ ΑΙ.ΰÔÍ±. (Ôΰ . 7,25)

È Ô%ÔÍÈ±ΑΰÔΠ Ι± ÔΙΑ%Ô,~ΑÈ Ôΰ ±ΙΕ-Α

è Ó,Â Í± ÎÄËÒÒ ±,ÌÓÒÚÂÈ

è ±·ÓÚ±

è ÈÄÌ±Í	è È~ÈÌ± È/ÈÌÈ %ÄÈÒÚ,ÈÌ ÒÓ ÈÒÒ ±,ÌÄÌÈ
âÈ,± Û ÈÌ%ÈÌ±ÚÓ °  È  È ÌÈÌ±ÈÄ ÛÙÌÌÈÈ, Ä± ÈÒÌÌ~ÄÌÈÄÌ, °Ù±ÌÈ,±ÌÈÌ Ì±ÒÒÄÚ°, ÌÄ ±·ÓÚ±,Ú.	• è ÓÈÄÓ~Ì± ÌÓÌ%ÄÌÒ±~ÈÌ, Ì±,È. → Ì%±ÌÈÚÄÌ±ÒÒÄÚÈÒÒÚ±, ÛÄ,È%ÄÓÌ±ÌÄ ÛÒÒ ÌÄÌ, ÄÈ ÌÄ Ä Ì± 1 ~±Ò. (ÒÚ . 66)
èÓÒÌÄ, ÌÌ,~ÄÌÈÌ,È%ÄÓÌ±ÌÄ ° ÒÓÌÌÌÄÚÒÌ "CLOCK SET".	• èÌÓ,± ÛÒÚ±ÌÓ,ÈÚÄ %±ÙÈÈ, ÄÌÌ. (ÒÚ . 58)
çÄ±ÌÙÈ,ÈÄÈ ÛÄÚÒÌ ÛÙÌÌÈÈ ÒÓÈÒÌ± ÌÓÌ~±.	• ä±ÒÒÄÚ± °Ì±, °ÙÒÌÌÙÚ± ÒÓÒÌÄ, °ÒÌÌÄÌÈÌ Ä±ÒÈÒÈ. → ÌÙÌÌÈÈ ÒÓÈÒÌ± ÌÓÌ~± ÌÄ ·Ù%ÄÚ ±ÌÙÈ,ÈÄÈ Ó,±Ù,ÒÌÌ %Ò ÛÄÌ ÒÒ, ÒÓÌ± Ç° ÌÄ Ò%ÄÌ±ÄÚÄÌÓ, ÛÄ±ÒÈÒ, ÒÓÒÌÄ, ÒÚ±,ÌÈ Ì±ÒÒÄÚ°.
âÄÌÚ± ÌÄ ÒÄ ÄÌÄ~ÄÚÒÌ Ò È Ì±È±ÙÈÈ ÌÌÓÓÌÈ ÒÄ ÄÌÄ~ÄÌÈÌ ÌÄÌÚ°.	• Ç°ÌÌ,~±ÚÄÌ, POWER ÛÒÚ±ÌÓ,ÌÄÌ, °ÒÌÓÈÄÌÈÄ CAMERA ÈÌÈ OFF. → ÌÒÚ±ÌÓ,ÈÚ, Ä,Ó, °ÒÌÓÈÄÌÈÄ PLAYER. (ÒÚ . 21) • âÄÌÚ± Ä±ÌÓÌ~ÈÌ±Ò, . → èÄ ÄÌÓÚ±ÈÚÄÌÄÌÚÌ±Ä±%ÈÌÈÈÒÒÓÌ,ÄÚÈÚÄ ÌÓ,Ú, . (ÒÚ . 21)
çÄÚ Ä,ÙÌ± ÈÌÈ ÛÓÌ ÌÓ ÌÈÄÌÈÈ Ä,ÙÌ ÒÌ~ÄÌ Ò È, ÒÒÒ ÒÈÄ,Ä%ÄÌÈÈ ÌÄÌÚ°.	• È ÒÌÌÓÒÚ, ÛÒÚ±ÌÓ,ÌÄÌ±, ÌÈÌÈÌ±Ì ÌÓÄ ÒÓÌÓÈÄÌÈÄ. → èÚÌ ÒÈÚÄ Ò±Ì±, ÛÄÑ È Ì±ÈÌÈÚÄ VOLUME+, (ÒÚ 21)
çÄ±ÌÙÈ,ÈÄÈ ÛÄÚÒÌ ÛÙÌÌÈÈ ÛÒÚÓÈÈ,ÒÈ Ò~ÄÌÈÈ.	• ÌÙÌÌÈÈÌ S SHOT ÛÒÚ±ÌÓ,ÌÄÌ± Ì± OFF, ÒÈÒÚÄÌÄ ÌÄ Ì, . → ÌÒÚ±ÌÓ,ÈÚÄ ÄÄ Ì± ON. (ÒÚ . 38)
â±ÒÈÒ, Ò ±ÄÚÈÄ ÒÒÚ±Ì±,ÌÈ,±ÄÚÒÌ.	• Ç°ÌÌ,~±ÚÄÌ, POWER ÛÒÚ±ÌÓ,ÌÄÌ, °ÒÌÓÈÄÌÈÄ PHOTO. → ÌÒÚ±ÌÓ,ÈÚÄ Ä,Ó, °ÒÌÓÈÄÌÈÄ CAMERA.
â±ÒÈÒ, ÒÒÚ±Ì±,ÌÈ,±ÄÚÒÌ~Ä ÄÄ ÌÄÒÌÓÌ,ÌÓ ÒÄÌÚÌ%.	• èÄ ÄÌÌ,~±ÚÄÌ, START/STOP MODE Ì±ÌÓ%ÈÚÒÌ, °ÒÌÓÈÄÌÈÈ 5SEC ÈÌÈ  . → ÌÒÚ±ÌÓ,ÈÚÄ Ä,Ó, °ÒÌÓÈÄÌÈÄ  . (ÒÚ . 18)
çÄ ±ÌÙÈ,ÈÄÈ ÛÄÚÒÌ ÛÙÌÌÈÈÌ ±,ÙÓÌ±ÙÈ~ÄÓÌÓÈ ÛÓÌÙÒÈ Ó,ÌÈ.	• ÌÓÌÙÒÈ Ó,Ì± ÛÒÚ±ÌÓ,ÌÄÌ± Ì± ÛÌÓÈ ÄÈÈÌ. → ÌÒÚ±ÌÓ,ÈÚÄ ÄÈÈÌ±, ÛÓÌ±ÙÈ~ÄÓÌÓÈ ÛÓÌÙÒÈ Ó,ÌÈ. (èÚ . 43) • ÌÒÌÓ,ÈÌ Ò~ÄÌÈ ÌÄ ÒÒ%ÌÓ%ÒÌÌÚ %ÒÌÌ ±,ÙÓÌ±ÙÈ~ÄÓÌÓÈ ÛÓÌÙÒÈ Ó,ÌÈ. → ÌÒÚ±ÌÓ,ÈÚÄ ÛÓÌÙÒÈ Ó,ÌÚ Ì± ÛÌÓÈ ÄÈÈÌ %ÒÌÌ, °ÒÒÌÄÌÈÈÌ ÛÌÓÈ ÛÓÌÙÒÈ Ó,ÌÈ. (ÒÚ . 43)
ÌÙÌÌÈÈÌ ÒÌ±,ÌÓ,Ó, Ä%ÄÌÈÈÌ ÈÄÓ· ±ÈÄÌÈÈÌ ÌÄ ±·ÓÚ±ÄÚ.	• èÄ ÄÌÌ,~±ÚÄÌ, START/STOP MODE Ì±ÌÓ%ÈÚÒÌ, °ÒÌÓÈÄÌÈÈ 5SEC ÈÌÈ  . → ÌÒÚ±ÌÓ,ÈÚÄ Ä,Ó, °ÒÌÓÈÄÌÈÄ  . (ÒÚ . 18)
àÄÓ· ±ÈÄÌÈÄ	
è ÈÄÌ±Í	è È~ÈÌ± È/ÈÌÈ %ÄÈÒÚ,ÈÌ ÒÓ ÈÒÒ ±,ÌÄÌÈ
çÄ~ÄÚÌÓÄ ÈÄÓ· ±ÈÄÌÈÄ Ì± 1 ±ÌÄ,È%ÒÈÒÌ±ÚÄÌÌ.	• çÄ ÒÚ Ä,ÙÌÈ Ó,Ì± Ó· ÄÌÚÈ, È%ÒÈÒÌ±ÚÄÌÌ. → èÚ Ä,ÙÌÈ ÛÈÚÄÓ· ÄÌÚÈ,È%ÒÈÒÌ±ÚÄÌÌ. (ÒÚ . 13)
ÇÄ ÛÈÌ±Ì Ì±Ì ÒÓÌÓÒ± ÒÓÌÌÌÄÚÒÌ,ÄÒÌÈ Û±ÌÈÄ Ó· ÄÌÚ°, Ì±Ì ÈÒÚÒ~ÌÈÈÈ Ò,ÄÚ± ÈÌÈ ÒÌ±ÌÌ Ò,Ä~È, ÒÈÌÌ±,ÙÒÌ Ì± ÛÄÌÌÓÌ ÛÓÌÄ.	• èÌÈ~ÌÓÌ, °ÒÓÌÈÈ ÌÓÌÚ ±ÒÚ ÌÄÈ%Ú Ò· ÄÌÚÓÌ È ÛÓÌÓÌ. â±ÌÄ ± ÌÄ ÌÌÌÄÚÒÌ ÌÄÈÒÒ ±,ÌÓÈ. → âÄÌÄÌÈÚÄ ÒÓÄÈ~È, Ò~ÄÌÈÈ.
àÄÓ· ±ÈÄÌÈÄ "Ä±~ÙÌÄÌÓ" ÈÌÈ ÌÄ ÒÓÌÌÌÄÚÒÌ.	• ÇÓÄÌÓÈÌÓ Ä±, ÌÄÌÄÌ" È%ÄÓ,ÒÌÓ,ÌÈ. → è~ÈÒÚÈÚÄ,È%ÄÓ,ÒÌÓ,ÌÈ Ò ÈÒÒÓÌ,ÄÓ,±ÌÈÄÌ Ò~ÈÒÚÈÚÄÌ,ÌÓÈ Ì±ÒÒÄÚ° Sony DVM12CL. (ÌÄ Ò ÈÌ±,±ÄÚÒÌ)(ÒÚ . 67)

àÁÓ. ¢ÊÀÏÊÀ

è ÊÀÏI	è Ê~ÊI ¢ Ê/ÊË %ÀÊÒÚ,ÊI ÓÓ ÊÒÒ ¢,ÏÀÏË
àÏ%ÊI ¢ ÚÓ × ÌÊ,, ¢ÁÚ I ¢ ¢IÀ ÚaÑ ÊÏË ,Ê%ÓÊÓI ¢ ÚÀÏÀ.	• ÇÓÁÍÓÊÍÓ Á ¢,, ¢IÀÏÀ° ,Ê%ÀÓ,,ÓÍÓ,ÏË. → ¢~ÊÓÚÊÚÀ,Ê%ÀÓ,,ÓÍÓ,ÏË Ò ÊÒÒÓÍ,ÁÓ, ¢ÏÊÀÏ Ó~ÊÓÚÊÚÀÏ,ÏË I ¢ÒÒÁÚ° Sony DVM12CL (ÏÀ Ò ÊI ¢,, ¢ÁÚÓI). (ÓÚ .67)
àÁÓ. ¢ÊÀÏÊÀ ÓÏË ¢ÓÍ ÚÀÏÏÓÀ.	• IÚÏÏÊI LCD BRIGHT ÓÚ Á,,ÚÏË Ó, ¢I ¢ ÏÀÒ ¢,ÊÏ,ÏÓ. → ¢ ¢ÏËÚÀ + ÊÏË – %I ¢ ÓÓÍÚ~ÀÏÊI ÊÀÏ ¢ÁÏË ¢IÓÓÚË. (ÓÚ .16)
ÇÀ ÚÊI ¢I ¢I ¢ÓÓÍÓ ¢ÓÓI, ¢IÁÚÓI Ò Ê Ó~ÀÏÀ Ó~ÀÏ, ¢I ÍÓ,,Ó Ó~ÀÏÚ.	• ÇÊ%ÀÓI ¢IÀ ¢ ÏÀ ¢I, ¢IÁÚÓI ÏÀÊÒÒ ¢,ÏË.
àÁÓ. ¢ÊÀÏÊÀ ÏÀ ÓÓI, ¢IÁÚÓI, , ,Ê%ÓÊÓI ¢ ÚÀÏÀ.	• ¢ÚÏ °Ú ¢ ¢IÀÏ, ÚaÑ. → ¢ ¢Í ÓÊÚÀ Ó ¢IÀÏ, ÚaÑ.
àÁÓ. ¢ÊÀÏÊÀ ÏÀ ÓÓI, ¢IÁÚÓI I ¢ ¢IÀ ÚaÑ.	• ÇÓÚ ÓÁÏ ¢I ¢I ÏÀÒ~ÀÏÚI ¢I ¢IÓ ¢, ¢~ ¢Á ÓÚ ÓI. → ¢, ¢ÏËÚÀÒ, Ò Ç ¢ ÊÏË ÊÏË ÊÏË ÊÏË ÓI Sony.
ÇÓ, ÁI ¢IÓÚ ¢Ê ¢ ÊÒÒÓÍ,ÁÓ, ¢ÏÊÀÏ ÓÓÁ%ÊÏÚÀÏ,ÏÓ,Ó ÊÚ Ó,Ó,,Ó,Ê%ÀÓI ¢ ÁI ¢I ÏÀ,ÓÁÍÓÊÍÓ Ó ÓÓI ¢Ú Ê, ¢Ú Á ¢ÓÊÓ°, ¢ÁÍÓÁ ÊÁÓ. ¢ÊÀÏÊÀ.	• ¢ÚÓÓÁ%ÊÏÚÀÒÓÁ%ÊÏÚÀÏ, ¢Ê~ÊÚ Ó,ÓÊ ,Ê%ÀÓI ¢ ÁI, Ê ÓÓ%ÓÓÁ%ÊÏÚÀÁ,,ÓÓÍÓ, ¢.

è Ó~ÀÀ

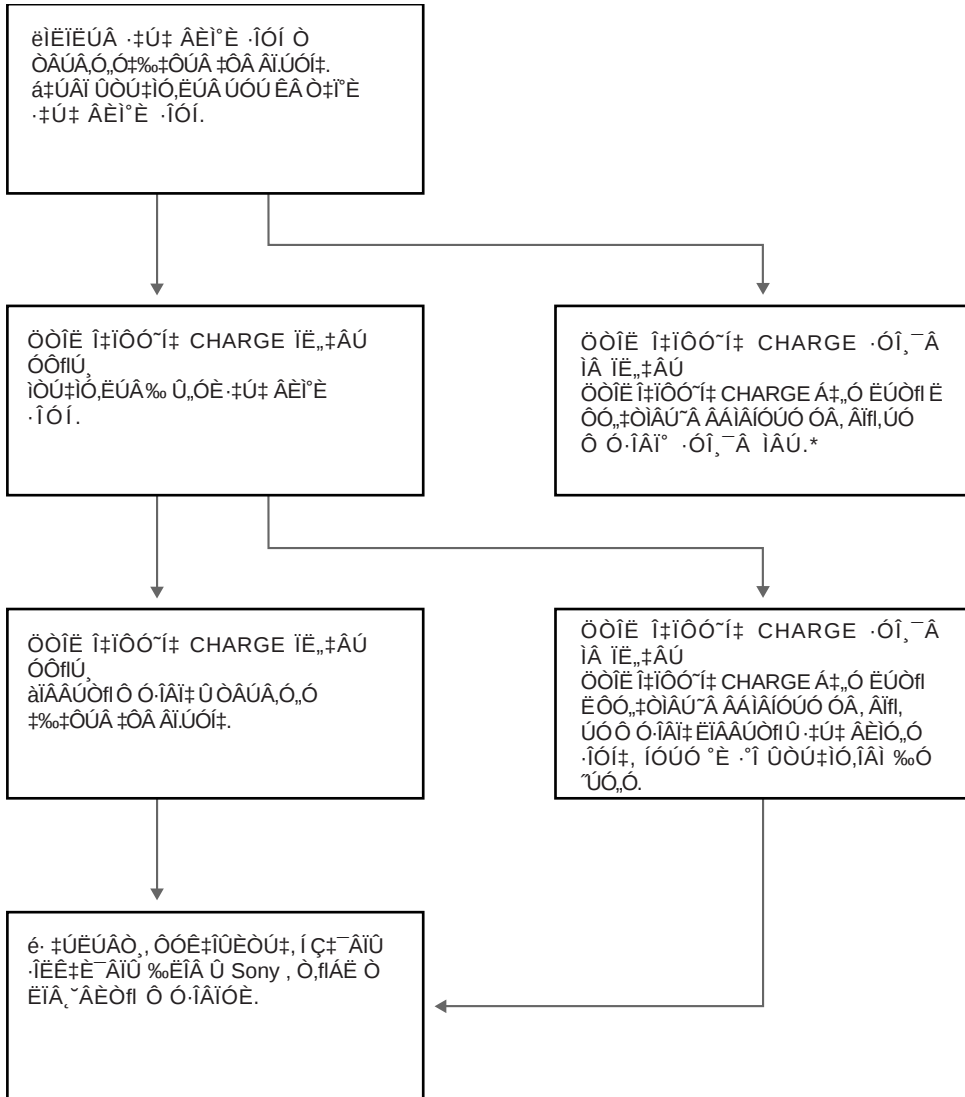
è ÊÀÏI	è Ê~ÊI ¢ Ê/ÊË %ÀÊÒÚ,ÊI ÓÓ ÊÒÒ ¢,ÏÀÏË
ÇÊ%ÀÓI ¢IÀ ¢ÓÚ ¢ÍÓ,ÊÚÓI ÚÀÓÍÓË.	• ÓÓÏË ÊÊÚ ¢ÏÊÀ ,Ê%ÁI ¢IÀ °~ ¢Í, ¢I, ¢~ÀÍÓ, ÚÀ~ÀÏÊÀ %ÏÊÚÀÏ,ÏÓ,ÓÓÁ ÊÓ% ¢, ÁIÀÏÊÓI ¢ÓÚ ¢ÍÓ,ÊÚÓI ÚÀÓÍÓË, ÍÓ ~ÚÓ ÏÀ ¢I, ¢IÁÚÓI ÏÀÊÒÒ ¢,ÏÓÚ,,.
ÇÀ ¢ÓÚ ¢ÁÚ Ó ÊI ¢, ¢ÁÏË ÓÚÏ, Ú %ÊÓÚ ¢I ÊÓÍÓ,,ÓÚÓ, ÏÀÏË.	• IÚÏÏÊI COMMANDER ÚÓÚ ¢ÍÓ, ÏÀÏ ¢I OFF, ÓÊÓÚÀÏÀ ÏÀÏ,. → ÏÓÚ ¢ÍÓ,ÊÚÀ ÁÀ ¢I VTR4 ÊÏË ID. (ÓÚ .86) • ÓÚÓ-ÚÓ Á ¢I °, ¢ÁÚ ÓÚÚ, ÊÚ ¢I ¢ÓI, IÚ~ÀË. → I% ¢ÏÊÚÀÒ ÁÓI ÚÓÚ,ÊÀ. • Á ¢Ú ¢ ÁÊI ¢, ÓÚ ¢, ÏÀÏ ¢ ÏÀÒ ¢,ÊÏ,ÏË ÓÓÍI ÏÓÚ,,. → ÇÓÚ ¢, ÚÀ ¢Ú ¢ ÁÊIÚ Ò Ó ¢,ÊÏ,ÏË ÓÓI ÏÓÚ,,. (ÓÚ .86) • Á ¢Ú ¢ ÁÊI Ê ÓÓÍÓÚÓÚ,, ¢Á ¢ÊÀÏ°. → ÇÓÚ ¢, ÚÀ ÏÓ,°Á ¢Ú ¢ ÁÊÏË. (ÓÚ .86)
ã ¢ÍÓÓ~I ¢ CHARGE ÏË, ¢ÁÚ ÓÓÓÏÀ Á ¢I ¢IÊ ¢Ú ¢ ÁÊÍÓ,,Ó~ÍÓI ¢, ÚÓÚ ¢ÍÓ, ÏÀÏ,Ó,,Ê%ÀÓI ¢IÀ Á.	• ÇÊ%ÀÓI ¢IÀ ¢ ÏÀ ¢I, ¢IÁÚÓI ÏÀÊÒÒ ¢,ÏË.
ÇÊI ¢IÊÀ ÚÓÏÏÊË ÏÀ ¢ÓÚ ¢, Ú, ÏÀÓÍÓÚ ¢I ¢ÚÓ, ÚÓÓÊÚ ¢ÏÊÀ , ¢I, ¢~ÀÍÓ.	• ¢ÚÏ, ¢ÊÚÀ ÓÓÁ%ÊÏÚÀÏ, ¢Ê ¢Á ÁÏ ¢Ú ¢ ÁÊÍÓ,Ó ~ÍÓI ¢ÏË ÓÁÚÀ,Ó,Ó ¢% ¢ÓÚÀ ¢ ÓÁ ÁÏ. ÚÓI ¢, ¢Á ¢ÚÀÏ ÓÓ%I ¢ÊÚÀ Á,,Ó ÓÍÓ, ¢ Ó ÊÏÊÀÊÚÀÏ,ÏÓ~À ÁÀ 1 ÏËÚÓÚ. ÇÏ, ¢ÊÚÀ ÊÊÚ ¢ÏÊÀ. ÓÓÏË ÚÓÏÏÊË, ÓÁ Á~À ÏÀ ¢ÓÚ ¢, Ú, ¢ÏÊÚÀ ÏÓÓÍÚ RESET ¢I Á ¢%ÏÀÊ ÓÚÓ ÓÏÀ Í °~ÏË I ¢ÒÒÁÚÓ,Ó ÓÚÓÁI ¢ Ó ÊÒÒÓÍ,ÁÓ, ¢ÏÊÀÏ Á ¢ÓÚ ÁÏÍÓ,Ó Ó Á%ÏÀÚ. (ÓÓÏË Ç ¢I ÊÊI ¢ÁÚÀ ÏÓÓÍÚ RESET, ,ÓÁ ÚÓÚ ¢ÍÓ,ÏË, ¢I, ¢I % ¢ÚÚ Ê, ÁI ¢I, ,ÓÁ, ¢ ¢, ÚÓI, ÊÓÍÓ%ÏÀ ÓÓÓÚÓI ÊÀ.) (ÓÚ .82)

èÁÚÀ,ÓÊ ¢% ¢ÓÚÀ ÓÀ ÁÏ.ÚÓI ¢

è ÊÀÏI	ÑÀÊÒÚ,ÊI ÓÓ ÊÒÒ ¢,ÏÀÏË
ã ¢ÍÓÓ~I ¢ VTR/CAMERA ÊÏË CHARGE ÏÀ,ÓÊÚ.	• ¢ÚÓÓÁ%ÊÏÚÀÒÁÚÀ,ÓÊÓ Ó,Ó%è ÊÏÊÀÊÚÀÏ,ÏÓ~À ÁÀ 1ÏËÚÓÚÓÍÓ, ¢ÓÓ%ÓÓÁ%ÊÏÚÀÒÁÚÀ,ÓÊÓ Ó,Ó%.(ÓÚ .7)
ã ¢ÍÓÓ~I ¢ CHARGE ÏË, ¢ÁÚ.	• ÊÍÓÚ ÊÚÀ ÓI ÁÏÚ ¢I ÓIÀ%Ú, ¢Ê ÓÚ ¢ÏÊ~À.

è Ó,Â Í† ÎÄËÒÒ ‡,ÍÓÒÚÄÈ

äÖ,,%‡ ÌË,,‡ÂÚ Í†ÎÖÓ~Í‡ CHARGE
è Ó,Â ,ÚÄ ÓÓ ÒÎÄ%Ú,~ÄÈ ÒÎÄÎÄ.



* ÖÒÎË Ç° ÈÖÖÓÍ,ÄÚÄÚÄ ·‡Ú‡ ÄÈÌ°È ·ÍÓÍ, ÍÓÚÓ °È Ç° ÚÓÍ,ÍÓ ~ÚÓ ÍÜÖÈË, ÈËÈ ÍÓÚÓ °È ·Í ÚÓÚ‡,ÎÄÌ Í‡
%ÌËÚÄÎ,ÍÓÄ, ÄÍÍ·ÄÈÖÖÓÍ,ÁÓ,ÍËÍ, ÚÓ Í†ÎÖÓ~Í‡ CHARGE ÍÓÈÄÚ ÌË,,‡Ú, Ó È ÓÄ,ÓÈ Á‡ Í%ÍÄ. ùÚÓ ÌÄ
ÚÍ‡Â,‡ÂÚ Í‡ Ì‡ËÈÄÄ Ò Ó·ÎÄÎ. èÌÓ,‡ ÓÓ,ÚÓ ÈÚÄ Á‡ Í%ÍÜ Ò ÚÄÎ ÈÄ Ò‡Í°È ·‡Ú‡ ÄÈÌ°È ·ÍÓÍÍ.

English

Specifications

Video camera recorder

System

Video recording system

Two rotary heads, Helical scanning system

Audio recording system

Rotary heads, PCM system

Video signal

PAL colour, CCIR standards

Usable cassette

Mini DV cassette with logo printed

Tape speed

SP: Approx. 18.83 mm/s

LP: Approx. 12.57 mm/s

Recording/playback time

SP mode: 1 hour (DVM60)

LP mode: 1.5 hours (DVM60)

Fastforward/rewind time

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

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

Image device

CCD (Charge Coupled Device 1/3")

Viewfinder

Electric viewfinder (colour)

Lens

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

Focal distance

f = 4.0 to 40 mm

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

F 1.8 – 2.6

TTL autofocus system inner focus wide macro system

Colour temperature

Auto

Minimum illumination

3 lux at F 1.8

Illumination range

3 to 100,000 lux

Recommended illumination

More than 100 lux

LCD screen

Picture

2.5 inches measured diagonally
50.05 x 37.1 mm

On-screen display

TN LCD/TFT active matrix method

Total dot number

84,480 (384 x 220)

Input and output connectors

S video output

4-pin mini DIN

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

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

Audio/Video output/Headphones jack

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

327 mV, (at output impedance more than 47 k Ω)

Output impedance with less than 2.2 k Ω /Stereo minijack ($\varnothing$ 3.5 mm)

DV output

4-pin special connector

Speaker

Piezo-electric-speaker

Connection

26-pin connector

General

Power requirements

7.2 V (battery insertion input)

8.4 V (26-pin connector)

Average power consumption

5.0 W during camera recording using viewfinder

6.0 W during camera recording using LCD screen

Operating temperature

0°C to 40°C (32°F to 104°F)

Storage temperature

-20°C to 60°C (-4°F to 140°F)

Dimensions

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

Mass

Approx. 500 g excluding the battery

pack, lithium battery and cassette

Approx. 620 g including the battery

pack NP-F100, lithium battery and cassette DVM60

Microphone

Electret condenser microphone, Stereo type

Supplied accessories

See page 6.

AC power adaptor

Power requirements

100 to 240 V AC, 50/60 Hz

Power consumption

25 W

Output voltage

DC OUT: 8.4 V, 1.8 A in operating mode

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

Application

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

Operating temperature

0°C to 40°C (32°F to 104°F)

Storage temperature

-20°C to 60°C (-4°F to 140°F)

Dimensions (Approx.)

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

Mass (Approx.)

190 g

Design and specifications are subject to change without notice.

Additional Information / NOO0IEUAI j+H EU00 I+*EII

ēūōōīēē

īāīlē~āōīēā ī† †īúā ēōúēīē

çē%āōī†īā †

ēēōūāī†
ēēōūāī†,ē%āōā†ōēōē
N,Ā, †~†,~ēāōī,ōīō,īē,
ōēōūāī† ī†īōīōē
īāīlē~āōīē †ā,ā ūīē
ēēōūāī†ū%ēōā†ōēōē
ç †~†,~ēāōī,ōīō,īē, ōēōūāī†
ā ā ā
çē%āōōē,ī†
ñ,āūō,ōēōē,ī†PAL, ōū†ī%† ū
CCIR
āōōōī,āūāī~ā ††ōōāū°
ā†ōōāū° mini DV ō
ī†ōā~†ū†ī† ūē īāīlē
āī†īōī
ēīō ōōū, īāīū°
ēāēēī SP: ō ē.īēā. 18,83 īī/ō
ēāēēī LP: ō ē.īēā. 12,57 īī/ō
ç āīā†ōēōē/
ōōō ēēā,ā%āīē
ēāēēī SP: 1 ~†ō (DVM 60)
ēāēēī LP: 1,5 ~†ō† (DVM 60)
ç āīī ūōīō āīōē āā āīōūīē
ōā ā%ī†ā%
ē ē.īēā. 2 īēī. 30 ō (DVM 60)
(ō ēēōōōī,āō,†īēē †ū† āēīō,ō
īōī†)
ē ē.īēā 1 īēī. 45 ō. (DVM 60)
(ō ēēōōōī,āō,†īēēōāūā,ō,ō
†%†ōūā†)
īō īē ō,†ūāī, ēāō. †ēāīēī
CCD(ē ēō ōā† ī%ō,ōē
ō, īā,)
çē%ōēōī†ūāī,
ñ,āūīōē †īāīū ē~āōīēē
ē%ōēōī†ūāī,
ē.~āīūē,
āōī.ēīē ō,†īē ō.~āīūē, ō
ō ē,ō%ī†ī ū †īōūōī†ūō ōī,
20ī (ēū ō,ōē), 10ī (ōōūē~āōīēē)
īōīūōīōā †ōōūōīēā
f = 4,0 – 40 īī
(38 – 380 īī ō ēō āō. †āō,†īēē
, 35 īī ōūōō-ī†%)
F = 1,8 – 2,6
ōē ōī†ī†ī† ōēōōūāī†
īūū āīīāē ūōīūōē ōīē ō
ōēōūāīōē†ūōī†ūē~āōīōē
ūōīūōē ōīē ~ā āā ō.~āīūē,
ñ,āūō,†īūāīōā †ūū †
āūō ā,ūīē ō,†īēā
āēīēī†ī, ī†ī ōō,ā~āīīōōū,
3 īī ō ē F = 1,8
Nē†ō†āōī ōō,ā~āīīōōūē
ēū 3 īī %ō 100 000 īī
ēāīōīāī%ūāī†ī ōō,ā~āīīōōū,
āōīāā 100 īī

ūī †ī ūāñ
āāō. †ēāīēā
2,5 %,ēī† ōō %ē†,ōī†īē
50,05 × 37,1 īī
āīūō ī†~ēōīē ē ~ī †ī
āīūē,īō-ī†ū ē~ī†ī ūāīōīō,ēī
TN LCD/TFT (Ūāñ/
ūōīōīōīōī~ē ū †īāēōūō)
ē.~āā ~ēōīō ~āīāīāīūō,
ēāō. †ēāīēī
84 480 (384 × 220)

çīō%ō~ā ē, °īō%ō~ā
„īāā%†
ç°īō% S-,ē%āōōē,ī††
4~ū°,īō,ōā īēīē,īāā%ō ōō
DIN
ēē,ī†ī īōōūē: 1 ç ōō %,ōēīōē
†īōīēūū%ā, 75 ēī,
īāōēīā ē~ī°ē, ō
ōū ē~†ūāī,īōēōēī, ōīēā†~ēāē
ēē,ī†ī~,āūīōōūē: 0,3 ç ōō
%,ōēīōē †īōīēūū%ā, 75 ēī,
īāōēīā ū ē~ī°ē
ç°īō% †ū%ēō/,ē%āō/,ōīō,ī°
ūā āūōīō,
ēōā~ē†ī,īōā īēīē,īāā%ō, 1 ç ōō
%,ōēīōē †īōīēūū%ā, 75 ēī,
īāōēīā ū ē~īōā, ō
ōū ē~†ūāī,īōēōēī, ōīēā†~ēāē
327 īç, (ō ē, °īō%ōīō ōōīōī
ōōō ōūē,īāīēē. ōīāā 47 īēī)
ç°īō%īōāōōīōāōōō ōūē,īāīēā
īāīāā 2,2 īēī/
ōūā āōūōīē~āōīōāīēīē,īāā%ō(8
3,5 īī)
ñēū ō,ōē, ē%āō,°īō%
4~ū°,īō,ōā ōōā~ē†ī,īōā
īāā%ō
ē ōīō,ō,ō ēūāī,
ē,āāō īāīū ē~āōīēē
„ōīō,ō,ō ēūāī,
ēōā%ēīāīēā
26~ū°,īō,°ē ōōā%ēīēūāī,
ē.~āā

ē.~āā
ī ā.ō,†īēī ī ōēū†īē,
7,2 ç (ōū†,īāīē~ †ū† āēī°ē
īōī)
8,4 ç (26~ū°,īō,°ē
ōōā%ēīēūāī)
ē ā%ī†ī ōōū ā.ī†ī†ī
īō~īōōū,
5,0 çū,ō, āīī ā†ōēōē
ē%āōī†īā ōē ōēōōī,āō,†īēāī
ē%ōēōē†ūāī
6,0 çū,ō, āīī ā†ōēōē
ē%āōī†īā ōē ōēōōī,āō,†īēāī
~ī †ī† ūāñ
ē†.ō~†ī ūāīōā †ūū †
ēū 0°ē%ō 40°ē (ōū 32°F%ō 104°F)

īāīōā †ūū † ī †īāīēī
ēū–20°ē%ō 60°ē (ōū–4°F%ō
140°F)
ē†āīā °
ē ē.īēā. 59 × 129 × 118 īī (†/„)
ā†ōō†
ē ē.īēā. 500 „, īā, īī,~†ī
~†ū† āēīō,ō.īōī†, īēūēā,ōē
~†ū† āēīē ē†ōōāū°
ē ē.īēā. 620 „, „ī,~†ī
~†ū† āēī°ē.īōī NP-F100,
īēūēā,ū.~†ū† āēīū, ī†ōōāūū
DVM 60
āēī ōūōī
ūīāīū ē~āōīēē īōī%āīō~†ūō ī°ē
īēī ōūōī,ōūā āōūōīē~āōīō,ō
ūēō†
ē ēī†,†āī~ā ō ē††%īāēīōōūē
ēī. ōū. 6.

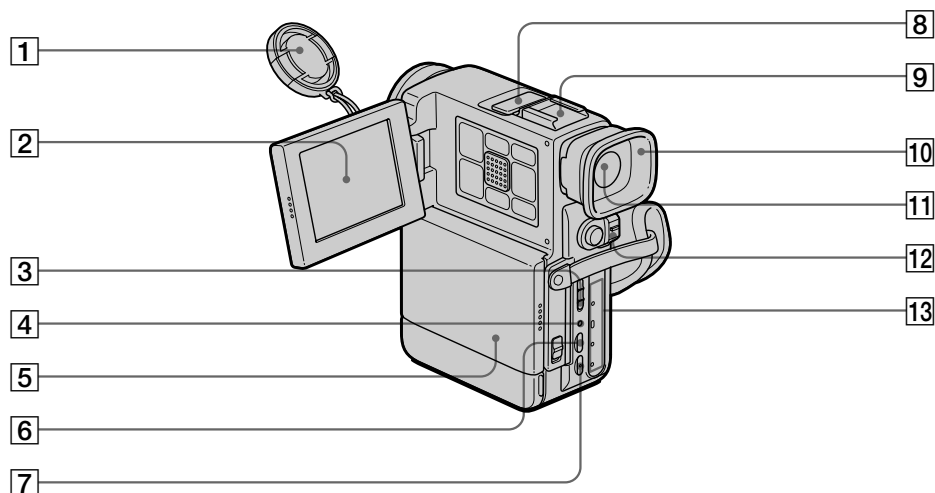
ēāūā,ōē†%†ōūā ōā āī. ūōī†

ī ā.ō,†īēī ī ōēū†īē,
100 – 240 ç ōā āī. ūōī†, 50/60 ē°
ēōū ā.ī†ī†ī īō~īōōū,
25çū
ç°īō%īōā ī†ō īēāīēā
DC OUT: 8,4 ç, 1,8 ā, †~āī
āēēīā
ç°īō%ī†īā† ī%īē~†ū† āēīō,ō
īōī†: 8,4 ç, 1,4 ā, āēēīā
ā†ī%ē
ē ēīāīāīēā
ā†ū† āēī°ā.īōīē Sony NP-
F100/NP-F200, īēūēā,ō~ēōīō,ō
ūēō†
ē†.ō~†ī ūāīōā †ūū †
ēū 0°ē%ō 40°ē (ōū 32°F%ō 104°F)
īāīōā †ūū † ī †īāīēī
ēū–20°ē%ō 60°ē (ōū–4°F%ō
140°F)
ē†āīā ° (ō ē.īēā.)
57 × 44 × 107 īī (†/„)
ā†ōō† (ō ē.īēā.)
190 „

āōīōū ūīēī ē ūāīē~āōīēā
ī† †īúā ēōūēīē īō,ūū.~ū,
ēāīāīāī° .āā ū,ā%ōīīāīēī.

Identifying the parts

εὐὸόΑἰ†,†ἰἔÂ ~†òÚÂÈ



1 Lens cap (p. 12)

2 LCD screen (p. 16)

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

4 CHARGE lamp (p. 7, 26)

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

6 AE LOCK button (p. 46)

7 FADER button (p. 34)

8 Built-in microphone

9 Accessory shoe (p. 18)

10 Eyecup (p. 20)

11 Viewfinder (p. 89)

12 POWER switch (p. 12, 21)

13 Tape transport buttons (p. 21)

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

1 ἄ °-†† ὀ··ÂἰÚÈ,† (òÚ . 12)

2 ὕ†† ÛäÑ (òÚ . 16)

3 ἔÂ Âἰ†,~†ÚÂἰ, START/STOP MODE
(òÚ .18,33)

4 ἄ†ἰòó†† CHARGE (òÚ . 7, 26)

5 ἄ °-†† ·†Ú† ÂÈ†ἰ ἰòἰÚ†ἰÚó, (òÚ . 10)
èἰἔἰἔÚÂ ἰ °-†† ἰἰ ὕòÚ†ἰó,ἰÈ
·†Ú† ÂÈἰó,ó ·ἰó††.

6 ἰἰóἰ† AE LOCK (òÚ . 46)

7 ἰἰóἰ† FADER (òÚ . 34)

8 ÇòÚ ὀÂἰ°È ἰἔἰ ὀÚἰ

9 Ç°,ó% ἰἰ,òòóἰó,†ÚÂἰ,ἰó,ó
ó-ó ὕ%ó,†ἰἔἰ (òÚ .18)

10 éἰἰἰ (òÚ . 20)

11 ÇÈ%óÈἰ†ÚÂἰ, (òÚ .89)

12 Ç°ἰ†,~†ÚÂἰ, POWER (òÚ . 12, 21)

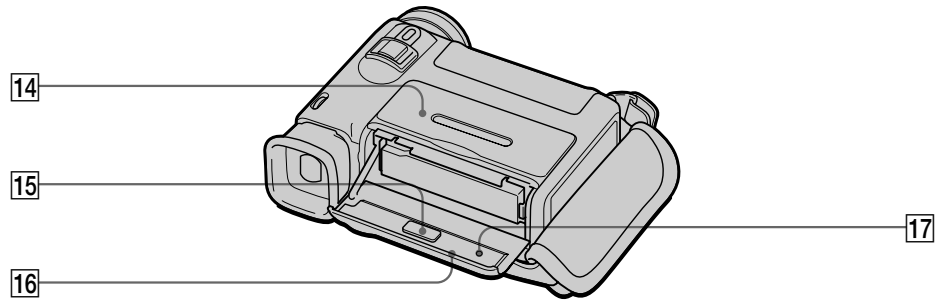
13 ἰἰóἰἔ ὀÂ ÂἰÂ~Âἰἔἰ ἰÂἰ° (òÚ . 21)

- STOP (òòÚ†ἰó,)
- ◀◀ REW (ὀÂ Âἰóἰ† ἰ†Â†%)
- ▶▶ PLAY (òòó ὀÈÂ,Â%ÂἰÈÂ)
- ▶▶ FF (ὀÂ Âἰóἰ†,ὀÂ Â%)
- || PAUSE (ò†ÚÂ†)

Additional information / ΝΟΟΟἰἔÚÂἰ ἰἰ ἔἰò ἰ†ἔἰ

Identifying the parts

εὐὸὸἂί†,†ìĒÂ ~†òÚÂÈ



14 Cassette compartment (p. 11)

15 ▲ EJECT button (p. 11)

16 Cassette compartment lid (p. 11)

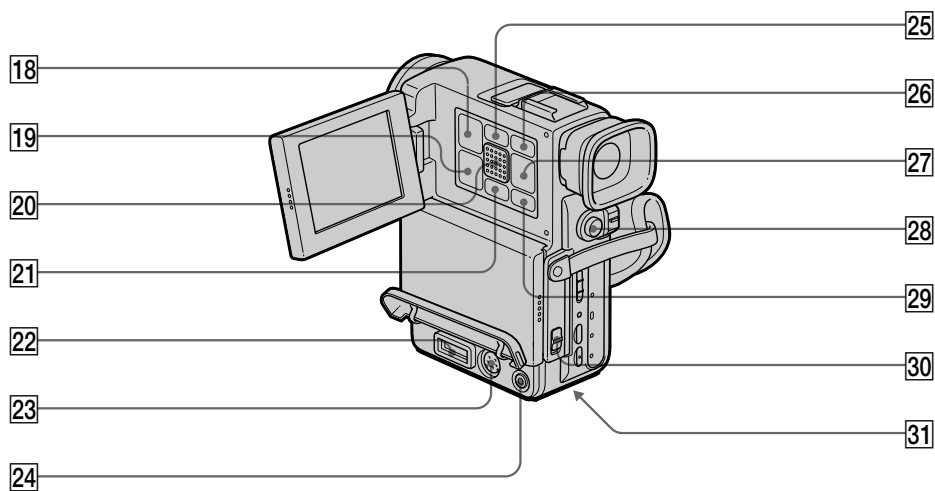
17 RESET button (p. 71)

14 ἄ†òòἂί†È óÚòἂί (òÚ . 11)

15 ἂìóôí† ▲ EJECT (òÚ . 11)

16 ἄ °~í† í†òòἂίò„ó óÚòἂί† (òÚ . 11)

17 ἂìóôí† RESET (òÚ . 75)



18 LCD BRIGHT button (p. 16, 21)

19 VOLUME button (p. 21)

20 Speaker

21 DISPLAY button (p. 21)

22 26-pin connector (p. 25)

23 S VIDEO jack (p. 47, 53)

24 AUDIO VIDEO OUT/ (headphones) jack
(p. 22, 47, 53)

25 END SEARCH button (p. 24)

26 MENU button (p. 28)

27 ▲/▼ buttons (p. 28)

28 START/STOP button (p. 12)

29 EXECUTE button (p. 28)

30 BATT(battery) LOCK/RELEASE switch (p. 10)

31 Tripod receptacle (p. 20)

18 àlÓÔí LCD BRIGHT (ÒÚ . 16, 21)

19 àlÓÔí VOLUME (ÒÚ . 21)

20 É ÓííÓ„Ó„Ó ÈÚÂÎ,

21 àlÓÔí DISPLAY (ÒÚ . 21)

22 26-Ú° , ÍÓ„È ÒÓÂ%ÈìÈÚÂÎ, (. 25)

23 ÈìÂÁ%Ó S VIDEO (ÒÚ . 47, 53)

24 ÈìÂÁ%Ó AUDIO VIDEO OUT/ („ÓÍÓ„ì°
ÚÂÎÂÚÓÍÓ„) (ÒÚ . 22, 47, 53)

25 àlÓÔí END SEARCH (ÒÚ . 24)

26 àlÓÔí MENU (ÒÚ . 28)

27 àlÓÔí ▲/▼ (ÒÚ . 28)

28 àlÓÔí START/STOP (ÒÚ . 12)

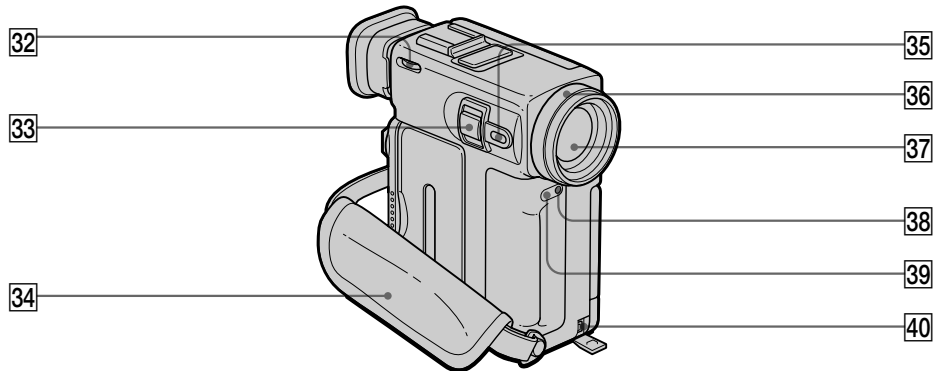
29 àlÓÔí EXECUTE (ÒÚ . 28)

30 èÂ ÂÎ„~±ÚÂÎ„ BATT (·±Ú± ÂÈìÓ„Ó
·ÍÓí) LOCK/RELEASE (ÒÚ . 10)

31 ÑÂ Ê±ÚÂÎ„ Ú ÂìÓ„È (ÒÚ . 20)

Identifying the parts

εὐὸὸΑἰ†,†ἰἘἈ ~†ὸὸῦἈἘ



32 Viewfinder lens adjustment dial (p. 13)

33 Zoom switch (p. 15)

34 Grip strap (p. 19)

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

36 Focus ring (p. 43)

37 Lens

38 Recording lamp (p. 12)

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

40 DV OUT jack (p. 52)

32 ἸἘὸÍ Ἀ,ῶἰἘ Ὀ,ἰἘ Ὀ·ἈἰῦἘ,†
,Ἐ%ὈἘὸÍ†ῦἈἰἰ (ὸῦ . 13)

33 ἔἈ Ἀἰ, ~†ῦἈἰ, ῦ †ἰὸῦὸÍ†ῦὸ † (ὸῦ . 15)

34 ἔἈἰἈἰὸἘ Ἀ†,†ῦ (ὸῦ . 19)

35 ἰὸὸÍ† FOCUS/(INFINITY) (ὸῦ . 43)

36 ἰὸÍ, °ὸ ῦὸÍῦὸἘ Ὀ,ἰἘ (ὸῦ . 43)

37 ἔ·· ἈἰῦἘ,

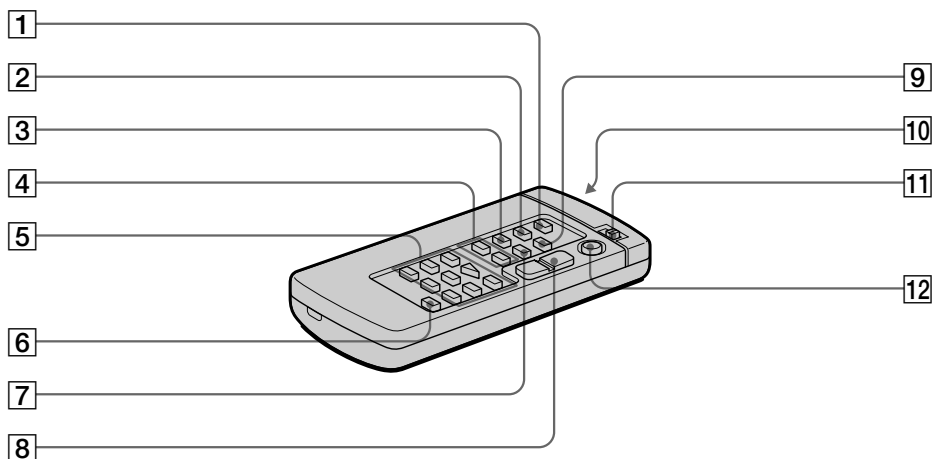
38 ἰἰὸÍ† Ἀ†ὈἘὸἘ (ὸῦ . 12)

39 ἸἘὸῦ†ἰἘὸἰ°Ἐ %†ῦἘἰ
ç†·Ἀἰ, ῦἈ Ὀῦἰ, ῦ %Ἐὸῦ†ἰἘὸἰ°, Ὀ
ῦὸ †, ἰἈἰἘἰ Ὀ, %† %ἰἰ Ὀὸῦ·Ἀὸῦ, ἰἈἰἘἰ
%Ἐὸῦ†ἰἘὸἰ°, Ὀἰὸἰῦ Ὀἰἰ.

40 ἘἰἈἈ%ὈDVOUT (ὸῦ . 52)

Remote Commander

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



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

èÛî, Û %ÈÒÚ†ì`ÈÓìÒ,, Ó
ÛÔ ‡, îÀìÈfl

àìÓÔíÈ ÒÛî, Û† %ÈÒÚ†ì`ÈÓìÒ,, Ó ÛÔ, îÀìÈfl,
íÓÚÓ °À ÈíÀ, Û Ó%Èì†íÓ, °À ì†ÈíÀìÓ, ‡ìÈfl Ò
ììÓÔí†ìÈ ì†, È%ÀÓí†íÀ À, ÛÛî†ÈÓìÈ Û, Û
È%ÀìÚÈìÓ.

- 1 àìÓÔí† PHOTO (ÒÚ . 36)
- 2 àìÓÔí† DISPLAY (ÒÚ . 21)
- 3 àìÓÔí† SEARCH MODE (ÒÚ . 51)
- 4 àìÓÔíÈ ◀◀/▶▶ (ÒÚ . 51)
- 5 àìÓÔíÈ ÒÀ ÀìÀ~ÀìÈfl îÀìÚ° (ÒÚ . 21)
- 6 àìÓÔí† AUDIO DUB (ÒÚ . 56)
- 7 àìÓÔí† DATA CODE (ÒÚ . 49)
- 8 àìÓÔí† Ò È, Ó%ìÓ,, Ó Û ‡ìÒÚÓí†ÚÓ ‡
(ÒÚ . 15)
- 9 àìÓÔí† ZERO SET MEMORY (ÒÚ . 50)
- 10 èÀ À%†Ú`Èí
ç†`Àì, ÛÀ, ì†Ô ‡, îÀìÈÈ %ÈÒÚ†ì`ÈÓìÒ,, Ó
%†Ú`È† %ìfl ÛÔ ‡, îÀìÈfl, È%ÀÓí†íÀ ÒÈ
ÒÓÒîÀ ÀÀ, îì, ~ÀìÈfl.
- 11 èÀìÀìÚÓ VTR4/ID/VTR2 (ÒÚ . 87)
Ç°·À ÈÚÀ ÛÒÚ†íÓ, ìÚ VTR4 ÈÈ ID
Ó%Èì†íÓ, Û Ò ÛÒÚ†íÓ, íÓÈ COMMANDER,
ÒÈÒÚÀìÀ îÀì. Ç°·À ÈÚÀ VTR2, Ó, Àìfl
ÈÒÒÓí, ÁÓ, ‡ìÈfl Ò 8ìfl, È%ÀÓí†íÀ ÒÈ.
- 12 àìÓÔí† START/STOP (ÒÚ . 12)

Identifying the Parts

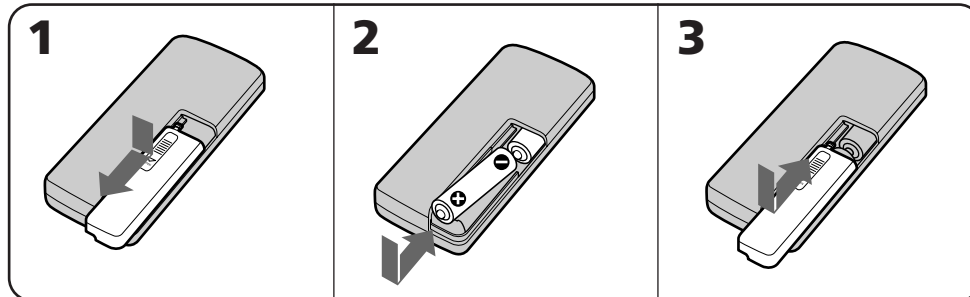
εΟΟΑΙ,~ΙΕΑ ~ΦΟΥΑΕ

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.

- Νίηι ΟΟ%,ΟΥΟ,ΙΕ ΟΥΙ,Ú±
%ΕΟΥ~Ι~ΕΟΙΙΟ,,Ο ÚÔ ±,ΙΑΙΕη
Νίηι ΕΟΟΟΙ,ΑΟ,~ΙΕη ΟΥΙ,Ú± %ΕΟΥ~Ι~ΕΟΙΙΟ,,Ο
ÚÔ ±,ΙΑΙΕη Ç° %ΟΙΕΙ°,ΟΥ±,ΕÚ, %Α,
~Ú± ΑΕΙΕ R6 (~ΑΙΑ ΟΙ ΑΑ).αΟΟΟΙ,ΑΥΕÚΑ
Ο ΕΙ±,~ΑΙ~Α ~Ú± ΑΕΙΕ R6 (~ΑΙΑ ΟΙ ΑΑ).
(1)εΙΕΙΕÚΑ ~Ú± ΑΕΙÚ, í °~ΙÚ Ò ΟΥΙ,Ú±
%ΕΟΥ~Ι~ΕΟΙΙΟ,,ΟÚÔ ±,ΙΑΙΕη.
(2)ÇΟΥ±, ÚΑ Ó-Α ~Ú± ΑΕΙΕ R6 (~ΑΙΑ ΟΙ ΑΑ)
Ò Ò ±,ΕΙ,ΙΟΕ ΟΟΙη ΙΟΟÚ,.,
(3)έ- ~ÚΙΟ ÚΟΥ~ΙΟ,ΕÚ ~Ú± ΑΕΙÚ, í °~ΙÚ
ì± ΟΥΙ,Ú %ΕΟΥ~Ι~ΕΟΙΙΟ,,Ο ÚÔ ±,ΙΑΙΕη.



Note on battery life

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

To avoid damage from possible battery leakage

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

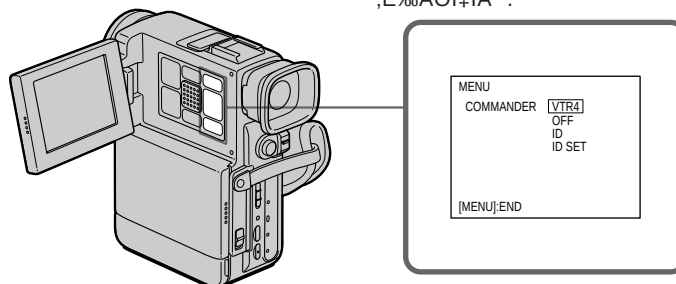
To use the Remote Commander

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

ε ΕΙΑ~ΙΕΑ í Ò ΟΙÚ ΟΙÚΕ°. ~Ú± ΑΑÍ
Α~Ú± ΑΑÍ%ηι ΟΥΙ,Ú± %ΕΟΥ~Ι~ΕΟΙΙΟ,,Ο
ÚÔ ±,ΙΑΙΕη í,~Ú±ΑÚ Ò Ε-ΙΕΑΕÚΑΙ,ΙΟ ì± 6
ΙΑΟη~Α, Ò Ε ΙΟ ì±ì,ì ÚΟΙΟ,Εη
~ΟΟΙÚ~Ú± ΕΕ.αΟ,%,~Ú± ΑΕΙΕΟΥ~ΙÚÚ
Οί±.°ΙΕ ΕΙΕ ΟΟΙΙΟÚ, ~Α η%ηι ÚΟη, ΟΥΙ,Ú
%ΕΟΥ~Ι~ΕΟΙΙΟ,,ΟÚÔ ±,ΙΑΙΕη ΙΑ-Ú%ΑÚ
~ΟΥ±Ú,.

ÇÓ ΕΑ-ΑΕ~ΙΕΑ ΟΟ, ΑΕ%ΑΙΕη ΕΑ-Α±
,ΟΑΙΟΕΙΟΕ ÚÚΑ~ΙΕ ΕΑ ~Ú± ΑΑÍ.
ì%~ΙΕÚΑ ~Ú± ΑΕΙΕ, ΑΟΙΕ Ç° ÌΑ-Ú%ΑÚΑ
ΕΟΟΟΙ,ΑΟ,~Ú, ΟΥΙ,Ú %ΕΟΥ~Ι~ΕΟΙΙΟ,,Ο
ÚÔ ±,ΙΑΙΕη, ÚΑ~ΑΙΕΑ %ΙΕÚΑΙ,ΙΟ,,Ο, ΑιΑΙΕ.

Νίηι ΕΟΟΟΙ,ΑΟ,~ΙΕη ΟΥΙ,Ú±
%ΕΟΥ~Ι~ΕΟΙΙΟ,,Ο ÚÔ ±,ΙΑΙΕη
ì-Α%ΕÚΑΟ,,~ÚÓ ÚÚΙ~Εη COMMANDER
ÚΟΥ~ΙΟ,ΙΑΙ± ì± VTR4 ΕΙΕ ID, ÒΕΟΥΑΙΑ ÌΑì,
Ε%ΑΟÍ~ΙΑ °.



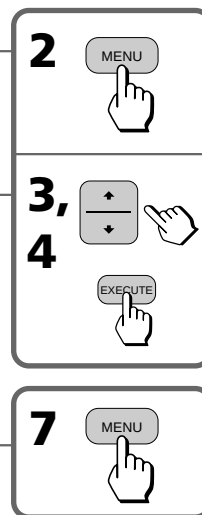
You can avoid misoperation from other remote commanders by setting the VTR4/ID/VTR2 selector to ID. Use the supplied Remote Commander when you set the selector to ID. When you use the Remote Commander for the first time, register the ID following the procedure below. Once you register the ID, you do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

-
- 5** VTR 4 ID VTR 2
- 6** STOP

The beep does not sound at step 6.

Ç' İÖÊÂÛÂ ÊÂ-ÂÊ±Ú, İÂÖ ±,Êİ,İÖÊ ±.Ô.ÖÚ
 ÊÂ-Â±ÔÊ,İ±İÖ,ÖÖÚ%Ö,Êİ,ÖÜİ,ÜÖ,%ÖÖÜ±İ'ÊÖİ-
 İÖ,ÖÜÖ ±,İÂİÊİ ÖÜÜÂİ ÖÜÖ±İÖ,İÊ ÖÂİÂİÜÖ ±
 VTR4/İD/VTR2, ÖÖİÖÊÂİÊ İD. äÖÖÖ,ÂÜÊÜÂ
 Ö Êİ±,İÂİ'Ê ÖÜİ Ü %ÖÖÜ±İ'ÊÖİİÖ,Ö
 ÜÖ ±,İÂİÊİ ÖÖÖİÂ ÜÜÖİÖ,İÊ ÖÂİÂİÜÖ ±,
 ÖÖİÖÊÂİÊ İD. äÖ,Ú%Ç' Ö.ÜÖÂÜÂ ÊÖÖÖİ,ÂÖ,±Ü,
 ÖÜİ, Ü.Ü. %ÖÖÜ±İ'ÊÖİİÖ,Ö ÜÖ ±,İÂİÊİ, ÖÂ, 'Ê
 ±Â.Â±Â,ÊÖÜ Ê ÜÊÜÂİDÖİÊÊÊÖİÂ%Ö.Ü 'ÂÊ
 Ö Ö'Â%Ö.Ü Â.ÊÖÖİÂ Â,ÊÖÜ ±ÊÊİDÇ±İÂ
 İÜÊİÖ.Ü%Ö.ÂÜ %ÖÂİ±Ü, 'ÜÖ ÖİÖ,±.
(1)ÊÜİ ÖÊÜÂ ÖİÂİ ÜÂÊ.

- (2) Ç±ÊÏËÛÄ MENU %îfl ÓÚÓ. ±ÊÄÏËfl ÎÄl,
l± ˆl ±lÄ UÄN.
- (3) Ç±ÊÏËÛÄ ± ÊÏ ± %îfl , ° Ó ±
COMMANDER, ± Ä±ÜÄl ±ÊÏËÛÄ EXECUTE.
- (4) Ç±ÊÏËÛÄ ± ID SET.
- (5) IOÜ±IO,ËÛÄ ÖÄlÄlÜÖ VTR4/ID/VTR2 l±
ÖÜl, ÜÄ %ÖÖÜ±ÊÏÖlÖ, Ö ÜÖ ±,lÄlËfl ,
ÖÖlÖÊÄlËÄ ID.
- (6) ÇÖÖ ±, ÜÄ ÖÜl, Ü %ÖÖÜ±ÊÏÖlÖ, Ö
ÜÖ ±,lÄlËfl l±, Ë %ÖÖÄÖl±l Ü Ê l±ÊÏËÛÄ ■
STOP l± ÖÜl, ÜÄ %ÖÖÜ±ÊÏÖlÖ, Ö ÜÖ ±,lÄlËfl.
ÈÖÖlÄ ÄÜlÄ lÖ, Ö Ä, ÜlÖ, Ö, Ö ÖÊl±l ID
(Ë %ÄlÜËÜÊl±Êfl) Öyl, Ü ± %ÖÖÜ±ÊÏÖlÖ, Ö
ÜÖ ±,lÄlËfl. Ü %ÖÖÄ± Ä, ÖÖÜ Ê Ö, ±l, Ë
COMMANDER ÜÖÜ±l, lË, ±ÄÜÖfl l± ID ,
ÖÖÜÜÄlÄ lÄl.
- (7) Ç±ÊÏËÛÄ MENU %îfl ÖÜÊ ±Êfl
ÖÜÖ, ±ÊÄÏËfl ÎÄl.



ãõ,º± ùòì"ëñ BEEP ùòú±íó,îâ± ì± OFF
 òëóúâîâ îâì
 áúîîâ ì"ë òë,ìî, òùìíúâ 6 á,û±ú, îâ
 û%âú.

Identifying the parts

εὐὸὸἈἰτ,τῖἘἈ ~τῖὈὐἈἘ

Remote control direction

Aim the Remote Commander to the remote sensor.

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

Notes on the Remote Commander

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

çτῖ Ὀ τῖ,ἰἈἰἘἈ Ὀὐἰ,ὐτ %ἘὈὐτῖῖἘὸἰἰ,Ὀ Ὀ Ὀ τῖ,ἰἈἰἘἰ

çτῖ Ἀἰ,ὐἈ Ὀὐἰ,ὐτ %ἘὈὐτῖῖἘὸἰἰ,Ὀ Ὀ Ὀ τῖ,ἰἈἰἘἰ ἰτ %ἘὈὐτῖῖἘὸἰἰῖῖ %τῖὔῖῖ.

êτῖ.ὈῖἘἘ %ἘτῖὈτῖἈὸἰ Ὀὐἰ,ὐτ %ἘὈὐτῖῖἘὸἰἰ,Ὀ Ὀ Ὀ τῖ,ἰἈἰἘἰ ὈὈὈτῖ,ἰἰἈὔ Ὀ Ἐ.ἰἘἈἘὔἈἰ,ἰὸ 5 ἰ, ὈὈἰἈῖἈἰἘἘ. Ç Ἀτῖ,ἘὈἘἰὸὈὈἘ Ὀὐ Ὀ,ἰτ Ὀὐἰ,ὐτ %ἘὈὐτῖῖἘὸἰἰ,Ὀ Ὀ Ὀ τῖ,ἰἈἰἘἰ ἰὸἘἈὔ ἰἈ Ὀ Ὀ τῖ,ἰἰἰ, ,Ἐ %ἈὸἰτῖἈ ὈἘ.

è ἘἰἈῖῖἈ ἰ Ὀὐἰ,ὐτ %ἘὈὐτῖῖἘὸἰἰ,Ὀ Ὀ Ὀ τῖ,ἰἈἰἘἰ

- ἰ τῖἘὔἈ %ἘὈὐτῖῖἘὸἰἰῖῖ %τῖὔῖῖ ὈὈ %τῖ,ῖἈ Ὀὐ ὈἘἰ,ἰῖ ἘὈὐτῖῖἘἰ, Ὀ.Ἀὔτῖ, ἰῖ ἰτὈ ἘἰἈ, Ὀ ἰἰῖἈ ὈὈἰἈῖῖἈ ἰὔῖἘ ἘἰἘ Ἐἰἰ,ἰἘἰτῖῖἘἰ. Ç Ὀ ὈὐἘ,ἰὸἰ ὈἰὔῖἈ %ἘὈὐτῖῖἘὸἰἰἈ Ὀ Ὀ τῖ,ἰἈἰἘἈ ἰὸἘἈὔ .°ὔ, ἰἈῖὔὔἈἰὔἘ,ἰὸ.

- ἰ.Ἀ %ἘὔἈὈ, ,ῖὔ ἰἈἘ %ὔ %ἘὈὐτῖῖἘὸἰἰῖῖ %τῖὔῖῖἰἰ ἰτ,Ἐ %ἈὸἰτῖἈ Ἀ Ἐ Ὀὐἰ,ὐὸἰ %ἘὈὐτῖῖἘὸἰἰ,Ὀ Ὀ Ὀ τῖ,ἰἈἰἘἰ ἰἈὔ Ὀ ἈὈἰὔὈἘἰ.

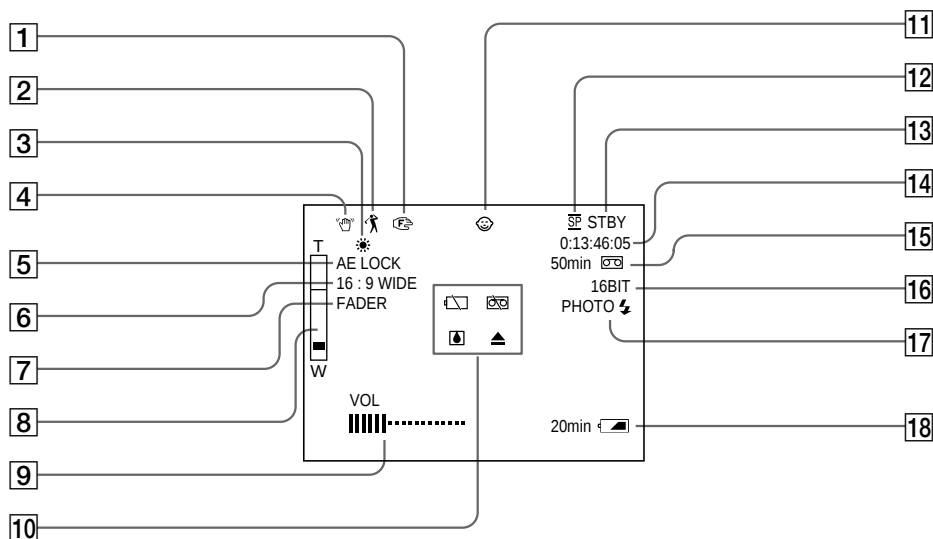
- ÇἘ %ἈὸἰτῖἈ τῖ τῖ.ὈὐτῖἈὔ, ἈἘἘἰἈ Ὀὐἰ,ὐτ %ἘὈὐτῖῖἘὸἰἰ,Ὀ Ὀ Ὀ τῖ,ἰἈἰἘἰ VTR4 ἘἰἘ ID. êἈἘἘἰῖ Ὀὐἰ,ὐτ %ἘὈὐτῖῖἘὸἰἰ,Ὀ Ὀ Ὀ τῖ,ἰἈἰἘἰ (VTR4 ἘἰἘ ID) ἘὈὈἰἰ,Ἀὔ,ὐὸἰ %ἰἰἰ ὈὈὈἈἰτῖ,ἰἘἘἰ %τῖἰἰ,Ὀ Ὀὐἰ,ὐτ Ὀὐ %ὔ,Ἐἰ ἈÇἈ Sony ,Ὀ ἘἈ.ἈἘτῖἈ ἰἈὈ τῖ,Ἐἰ,ἰὸἘ τῖ.Ὀὐῖ Ὀ Ἐ %ἘὈὐτῖῖἘὸἰἰἰ Ὀ Ὀ τῖ,ἰἈἰἘἘ. ὈὈἰἘ Çῖ ἘὈὈἰἰ,ἈὔἈὔἈ %ὔ,ὈἘ ἈÇἈ Sony , ἈἘἘἰἈ %ἘὈὐτῖῖἘὸἰἰ,Ὀ Ὀ Ὀ τῖ,ἰἈἰἘἰ ID, ἰῖ ἈἰὸἰἈἰ %ὔἈἰ, ῖὔὈ.° Çῖ ἘἈἰἈἰἘἰἘ ἈἘἘἰ %ἘὈὐτῖῖἘὸἰἰ,Ὀ Ὀ Ὀ τῖ,ἰἈἰἘἰ ἘἰἘ Ἀἰῖ ῖἘ %ἘὈὐτῖῖἘὸἰἰῖῖ %τῖὔῖῖἰἰ ἈÇἈ ῖἈ ἰὸἘ .ὔἰτῖ,ὈἘ.

- ÇτῖἰἈ ὐ Ἀ.ὐἈὔὈἰ Ἀ,ἘὈὐ Ἐ Ὀ,τῖ, ID clὸ,τῖ ὈὈὈἰἈὔὈ,Ὀ,ἰῖῖ Çῖ Ὀ %ἈἰτῖἈὔἈ ῖὔὈ Ὀ %Ἐἰ τῖ. ἰὈὐτῖἰὈ,ἘὔἈ COMMANDER ἰτ ID , ὈἘὈὔἈἰἈ ἰἈἰ, Ἐ ὐὈὐτῖἰὈ,ἘὔἈ ὈἈἰἈἰὔ ὐ VTR4/ID/VTR2 ἰτ Ὀὐἰ,ὐἈ %ἘὈὐτῖῖἘὸἰἰ,Ὀ Ὀ Ὀ τῖ,ἰἈἰἘἰ, ὈὈἰὈἘἈἰἘἈ ID.

- Ἀτ Ἀ,ἘὈὐ Ἐ Ὀ,τῖἰτῖἰ Ἐ %ἈἰὔἘὔἘἰτῖῖῖ ID ἰἈ ὈὔἘ τἈὔὈἰ, %τῖἘἈἈὸἰἘ,Ὀὔ ὈἈἰἰτῖἰ, τῖτῖ %ἘἈ,Ὀ-ἰἘὔἘἈ,τῖἰ.τῖὔτ ἈἘἰτῖ τἈ ἰἰ %ἘὔὈἰ.

Operation indicators

ê±·Ó~ÊÂ Êì%Êí±ÚÓ °



Additional information / ΝΟΟΟΠΕΥΑΓ]±Η ΕΙΥΟ Í±ÊΠ

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

- 1 àì%Êí±ÚÓ ÙìÓÈ ÙóíÙò Ó,íÊ/·ÂòíÔÂ~íóòÚÈ (òÚ . 43)
- 2 àì%Êí±ÚÓ PROGRAM AE (òÚ . 40)
- 3 àì%Êí±ÚÓ ·±í±ìò± ·ÂíÓ„Ó (òÚ . 44)
- 4 àì%Êí±ÚÓ ÙòúóÈ~È,ÓÈ Ò·ÂíÊ (òÚ . 38)
- 5 àì%Êí±ÚÓ AE LOCK (òÚ . 46)
- 6 àì%Êí±ÚÓ 16:9 WIDE (òÚ . 35)
- 7 àì%Êí±ÚÓ FADER (òÚ . 34)
- 8 àì%Êí±ÚÓ Ù ±ìòùóí±~ÈÈ (òÚ . 15)
- 9 àì%Êí±ÚÓ BRT (íí íóòúÈ) (òÚ . 16) / àì%Êí±ÚÓ VOL („ óííóòúÈ) (òÚ . 21)
- 10 è Â%Ûò ÂÊ%±,~ÈÈÈì%Êí±ÚÓ (òÚ . 91)
- 11 àì%Êí±ÚÓ ÁÁ í±ì,ìó„Ó ÂÊÈí± (òÚ . 32)

Continued to the next page

è Ó%óíÊ±ÁÚòíì±òíÂ%Û,~ÂÈòÚ ±ìÊ~Â

89

Identifying the parts

εἰδωλὸν, ἡ εἰδωλὸν

12 Recording mode indicator (p. 14)

12 εἰδωλὸν ἡ εἰδωλὸν ἡ εἰδωλὸν (ὅ. 14)

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

13 εἰδωλὸν ἡ εἰδωλὸν, ὅ. 12 /
εἰδωλὸν ἡ εἰδωλὸν ὅ. 12

14 Time code indicator (p. 14)

14 εἰδωλὸν, ἡ εἰδωλὸν, ὅ. 14

15 Remaining tape indicator (p. 14)

15 εἰδωλὸν ὅ. 14, ἡ εἰδωλὸν (ὅ. 14)

16 Audio mode indicator (p. 60)

16 εἰδωλὸν ἡ εἰδωλὸν, ὅ. 60

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

17 εἰδωλὸν ἡ εἰδωλὸν, ὅ. 36 /
εἰδωλὸν ἡ εἰδωλὸν, ὅ. 36

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

18 εἰδωλὸν ὅ. 63, ἡ εἰδωλὸν, ὅ. 63 /
εἰδωλὸν ὅ. 63, ἡ εἰδωλὸν, ὅ. 63



Warning indicators

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

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

Warning indicators

ÖÖİÊ Èİ%Öİ±ÚÓ ° İÊ.± Ú İ± İ±İÄ ÜäÑ
ÈİÊ.È%ÖÖİ±ÜÄİÄÈİÊ Ö Ä%ÜÖ ÄÊ%± ĘÄ
ÖÖÖ.ÄİÊİİ ÖÖİİİİ ÜÖİİ, ÖİÖ İÄ %ÖÖÖİÄİİ, ÜÖ
Ö ÖÄ, ÜÄÖİÄ%Ü. ÄÄ:
♪ :Ç. İÖÊÄÜÄ Öİ±±Ü. ÄÜİÄ İ°È
Ä,ÜİÖ,ÖÊ ÖÊ.İ±İ, İÖ,%± ÜÜİİÊİİ BEEP
ÜÖÜ±İÖ,İÄİ± İ± ON, ÖÊÖÜÄİÄ İÄİ.

1		2		3	
4		5		6	
7		8		9	

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

- Ä±Ü± ÄÊİ°È İÖİ Öİ±.°È ÈİÊ
ÖÖİİÖÖÜ. ±Ä İÊÄİİ°È.
äÄ%İÄİÖÄ İÊ.±İÊÄ: Ä±Ü± ÄÊİ°È İÖİ Öİ±.°È.
Ä°ÖÜ ÖÄ İÊ.±İÊÄ: Ä±Ü± ÄÊİ°È İÖİ
ÖÖİİÖÖÜ. ±Ä İÊÄİİ°È.
ÇÄ±ÈÖÊİÖÖÜÈÖÜÜÖİÖ,ÈÈÈİ%Èİ±ÜÖ
İÖÊÄÜ İÊ.±Ü, %±ÊÄ ÄÖİÊ Ä~Ä ÖÖÜ±İÖÖ, 5
ÈİÊ 10 İÊİÜÜ.
- äÄİÜ± Ö È.İÊÊ±ÄÜÖİ İ İÖİ~Ü.
äÄ%İÄİÖÄ İÊ.±İÊÄ.
- äÄİÜ± Ä±İÖİ~Èİ±Ö.
äÊ.±İÊÄ ÖÜ±İÖ,ÈÜÖİİ. °ÖÜ °İ.
- äÄİÜ± İÄ, ÖÜ±,İÄİ±.
- Ç± İ±ÖÖÄÜÄ İÄÜ İÄÖÄÖÜİ± (İ ±Öİ±İ İÄÜİ±).
- è ÖÊÄÖ İ± İÖİ%ÄİÖ±Êİİ,İ±,È. (ÖÜ. 66)
- ÇÈ%ÄÖ,ÖİÖ,İÊ, ÖÄİÖÊİÖ Ä±, İÄİÄİ°.
(ÖÜ.67)
- ó±Ö° İÄ ÜÖÜ±İÖ,İÄİ°.
ÖÖİÊ ~±Ö° İÄ ÜÖÜ±İÖ,İÄİ°, İÖ,%± Ç°
İ±ÊÊİ±ÄÜÄ İİÖÖİÜ START/STOP, ÄÊÊİÄ
CAMERA, ÖÖÖ.ÄİÊÄ, °ÖÄ°È,±ÄÜÖİİ,
ÜÄ~ÄİÊÄ5ÖÄİÜ%.
- äİÄÄÜÖİİ İ±İ±İİÊ°Ö % Ü,±İİ Ö Ö.İÄİ±.
éÜÖÄ%ÈİÊÜÄÈÖÜÖİÊİÖÊÜİÊİÊ
Ö,İÊÊÜÄÖ, Ö Ç± Èİ %ÈİÄ Öİ Sony ÈİÊ
İÄÖÜİ°İ ÜÖÖİİÖİÖ~Äİİ°İ Ö Ä%Ö ÈİÜÊÄİ.

