

English

Welcome !

Congratulations on your purchase of this Sony Handycam® camcorder. With your Handycam, you can capture life's precious moments with superior picture and sound quality. Your Handycam 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.

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

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

Should the fuse in the plug supplied need to be replaced, a 5 AMP fuse approved by ASTA or BSI to BS1362 (i.e., marked with ⬠ 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.

êÛÒÒÍËË

ÑÓ· Ó ÔÓÊ†ÍÓ,†Ú, !

èÓÁ%_†,†Í†Í†,†ÒÒÒ ÈÓ· ÁÚÁÍÈÁÍ
%_†Í†ÍÓËË,È%_†ÁÓÍ†ÍÁ ° Handycam®
ÚÈ Í° Sony. è ÓÓÍÓ~ Ç†-ÁË
,È%_†ÁÓÍ†ÍÁ ° Handycam Ç° ÍÓËÁÚÁ
Á†ÔÁ~†ÚÍÁÚ, %_†Ó Ó,ÈÁ Ç†Í Í,†ÍÓ,†ÍÈ†
ÈÈÁÍÈ Ó Ó Á,ÓÓÍÓ%_†Í†ÍÁÓÚ,ÓÍ
ÈÁÓ· †ÈÁÍÈ† È Á,Ú†. Ç†-†
,È%_†ÁÓÍ†ÍÁ † Handycam ÓÓ†~Á†
ÚÓÓ.Á ÁÍÓÚ,Ó,†Í†ÍÈ ÚÚÍÈ†È†È, ÍÓ
, ÚÓ ÈÁ, Á†† ÁÁ Ó~ÁÍ ÍÁ,ÍÓ
ÈÓÓÓÍ,ÁÓ,†Ú. Ç° ÓÍÓ Á·Ú%_†ÁÚÁ
ÓÓÁ%_†,†Ú, ÓÁÍÁÈ†Á,È%_†ÁÓÁ†ÓÈÓÈ,
ÍÓÚÓ ÍÈ ÍÓËÁÚÁ Í†ÓÍ†È%_†Ú, Ó††,
ÓÓÓÍÁ%_†Ú,ÈÁ,,Ó%_†.

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Ñ†† Ó Á%_†ÓÚ, †ÁÍÈ†,ÓÁ,Ó †ÍÈ†È†È
ÓÓ†ÍÓÓÚÈ †ÁÍÚ ÈÁÓÍÓ,ÓÚ%_††ÍÁ
ÓÓ%_†,†Ú,†ÍÓ††Ú,ÓÁ%_†ÁÈÓÚÈ, %_†ÓÈ%_††
È†È ††È
ÇÓ ÈÁ·ÁÈ†ÍÈÁ ÓÓ †ÈÁÍÈ† †ÁÍÚ È~ÁÓÍÈ†
ÚÓÍÓÍ ÁÁ ÓÚÍ†,†Ú ÍÓ ÓÚÓ. á†
Ó·ÓÍÚÈÈ,†ÍÈÁÍ Ó· ††Ú,Ó†† ÚÓÍ,ÍÓ Í
Í,†ÍÈÚÈÈ Ó,†Í†ÍÓÍ Ó·ÓÍÚÈÈ,†~ÁÍÚ
ÓÁÓÓ†ÍÚ.



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é, î, ï, ð, ñ, ò, ó, ô, õ, ö, ù, ú, û, ü, ý, ÿ, ù, ú, û, ü, ý, ÿ

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Precautions on Camcorder Care

- Do not let the camcorder get wet. Keep the camcorder away from rain or sea water. It may cause a malfunction and sometimes the malfunction cannot be repaired. [a]
- 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. [b]
- Never leave the camcorder under temperatures above 60°C (140°F), such as in a car parked in the sun or under direct sunlight. [c]

ελληνικά

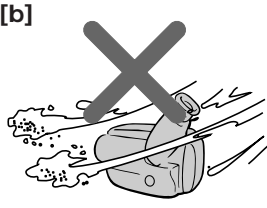
- Μην αφήνετε την κάμερα να βρεθεί βρεγμένη. Μην την αφήνετε να βρεθεί κάτω από τη βροχή ή τη θάλασσα. Μπορεί να προκαλέσει βλάβη και μερικές φορές η βλάβη δεν μπορεί να διορθωθεί. [α]
- Μην αφήνετε άμμο να εισέλθει στην κάμερα. Όταν χρησιμοποιείτε την κάμερα σε αμμώδη παραλία ή σε χώμα, προστατέψτε την από την άμμο ή το χυμ. Η άμμος ή το χυμ μπορεί να προκαλέσει βλάβη και μερικές φορές η βλάβη δεν μπορεί να διορθωθεί. [β]
- Μην αφήνετε την κάμερα να μείνει σε υψηλές θερμοκρασίες, όπως σε ένα αυτοκίνητο που είναι παρκαρισμένο στον ήλιο ή σε άμεσο ηλιακό φως. [γ]

Before You Begin

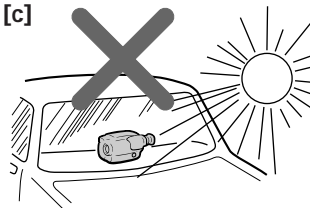
[a]



[b]



[c]



Charging and Installing the Battery Pack

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Battery Life CCD-TR401E

Battery pack	Typical recording time**	Continuous recording time***
NP-33 (supplied)	50	90
NP-65/67	85	155
NP-66H/68	105	180
NP-77H/78	135	235
NP-90/90D/98	175	305

CCD-TR402E

Battery pack	Typical recording time**	Continuous recording time***
NP-33 (supplied)	45	85
NP-65/67	85	155
NP-66H/68	100	175
NP-77H/78	130	230
NP-90/90D/98	170	300

** Approximate minutes when recording while you repeat recording start/stop, zooming and turning the power on/off. The actual battery life may be shorter.


*** Approximate continuous recording time indoors.

Important!

Use the battery completely before re-charging!

Before you recharge the battery, make sure the battery has been used up (discharged) completely.

Repeated charging while some capacity remains causes a lowering of battery capacity. However, the original battery capacity can be recovered if you use the battery completely and charge it fully again.

To use up the battery, remove the cassette and turn the POWER switch to CAMERA with the battery attached, and leave the camcorder until the  indicator and the red lamp flash rapidly in the viewfinder.

ë Óí ÒíÙÈ° ·±Ú± ÁÁí CCD-TR401E

Á±Ú± ÁÈí·È ·íÓí	Ç Áífl ÙÈÓÈíÓÈ Á±ÒÈÓÈ**	Ç Áífl íÁÒ Á °,íÓÈ Á±ÒÈÓÈ***
NP-33 (Ó Èí±,±ÁÚÓfl)	50	90
NP-65/67	85	155
NP-66H/68	105	180
NP-77H/78	135	235
NP-90/90D/98	175	305

CCD-TR402E

Á±Ú± ÁÈí·È ·íÓí	Ç Áífl ÙÈÓÈíÓÈ Á±ÒÈÓÈ**	Ç Áífl íÁÒ Á °,íÓÈ Á±ÒÈÓÈ***
NP-33 (Ó Èí±,±ÁÚÓfl)	45	85
NP-65/67	85	155
NP-66H/68	100	175
NP-77H/78	130	230
NP-90/90D/98	170	300

** è È·ÈÈÁÈÚÁí í±fl Ò Ó%ÓíÈÈÚÁí,íÓÓÚ, ,
íÈíÚÙ±íÒ ÈÁ±ÒÈÓÈ,íÓ%±Ç°
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Ú,±íÓÚÓí±È È,íí ±ÁÚÁ/
·íí ±ÁÚÁ,ÓÈÚ±íÈÁ. èÁí,íÈ Ò Óí,
ÓíÙÈ° ·±Ú± ÁÈÍÓ,,Ó ·íÓí± íÓÈÁÚ ·Ú,
íÓ ÓÁ.

*** è È·ÈÈÁÈÚÁí íÓÁ, Áífl íÁÒ Á °,íÓÈ
Á±ÒÈÓÈ,ÓÓíÁ·ÁíÈÈ.

Ç±ÈíÓ!

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ÈÓÓÓí ÁÓ,±í (íÓí ±Á flÈÁí).

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ÓÓÚ±·ÁÈÓfl ÁííÓÓÚÈ Ó È,Ó%ÈÚíÓÈÈÁíÈ,
ÁííÓÓÚÈ, è%í±íÓ ÓÁ Óí±±í±fl ÁííÓÓÚ,
·±Ú± ÁÈ íÓÈÁÚ ·Ú,ÓÓÓÚ±íÓ,íÁí±,ÁÓíÈ°
Ç°ÓÓííÓÓÚ,ÈÓÓÓí,ÁÚÁÚÁÁ± fl%·±Ú± ÁÈ

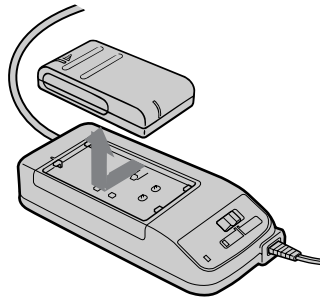
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Nífl ±Á fl%íÈ·±Ú± ÁÈÓíÈÈÚÁí±ÓÓÁÚÚÈ
ÓÁ Á%Èí ÚÁ ÓÁ Áíí ±ÚÁí, POWER,
ÓÓíÓÈÁíÈÁCAMERAÓÈÓÓ%ÓÓÁ%ÈíÁííÓÈ

·±Ú± ÁÁÈÓÓÚ±,ÚÁÈ%ÁÓí±íÁ Ú
·íí·ÁííÓÈ %Ó ÚÁí ÓÓ,ÓÓí±,
È%ÓÈÓí±ÚÁíÁ íÁ í±íÚÚ,ÓÚÓ íÈ,±Ú,
Èí%Èí±ÚÓ  È í±Óí±fl í±íÓÓí±.

To Remove the Battery Pack

Slide the battery pack in the direction of the arrow.

Slide the battery pack in the direction of the arrow.



Notes on charging the battery pack

- The POWER lamp will remain lit for a while even if the battery pack is removed and the mains lead is unplugged after charging the battery pack. This is normal.
- If the POWER lamp does not light, set the selector to VTR (DC OUT) and disconnect the mains lead. After about one minute, reconnect the mains lead cord and set the selector to CHARGE again.
- You cannot operate the camcorder using the AC power adaptor while charging the battery pack.

- The POWER lamp will remain lit for a while even if the battery pack is removed and the mains lead is unplugged after charging the battery pack. This is normal.
- If the POWER lamp does not light, set the selector to VTR (DC OUT) and disconnect the mains lead. After about one minute, reconnect the mains lead cord and set the selector to CHARGE again.
- You cannot operate the camcorder using the AC power adaptor while charging the battery pack.

Charging and Installing the Battery Pack

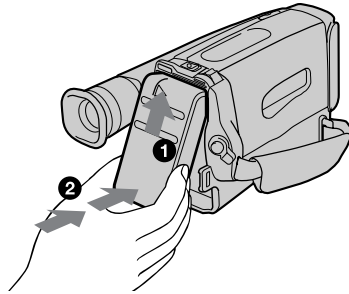
á± fl%Í± È ÙÒÚ±ìÓ,Í±
·±Ú± ÂÈìÓ,,Ó ·ìÓí±

Installing the Battery Pack

ìÒÚ±ìÓ,Í± ·±Ú± ÂÈìÓ,,Ó ·ìÓí±

- (1) Insert the top of the battery pack into the top of the battery mounting surface.
- (2) Push the battery pack so that it attaches firmly. Make sure that you hear clicks twice.

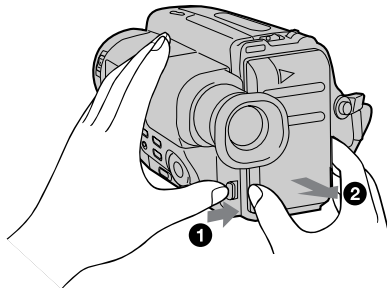
- (1) ÇÒÚ±, ÚÁ, Â ìÈÈ ìÓìÁ· ·±Ú± ÂÈìÓ,,Ó ·ìÓí±,,Á ìì,~±ÒÚ, ·±Ú± ÂÈìÓÈ ÙÒÚ±ìÓ,Ó·ìÓÈ ÒÓ,Â ìÒÓÚÈ.
- (2) ç±ÈìÈÚÁ·±Ú± ÂÈìÈ·ìÓí,Ú±í,~ÚÓ.° òì ·ì±%ÂÈìÓÓ ÈÒÓÁ%Èìì.ì.Á%ÈÚÁÒ,,~ÚÓÇ°%,,±È%° ÚÓì~±ìÈ~ÁìÓí.



To Remove the Battery Pack

Slide BATT, and then pull the lower part of the battery pack.

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è%Èì,ÚÁ·BATT·±Ú±ÁÒÓÚìÈÚÁ±
ìÈÈì,~±ÒÚ, ·±Ú± ÂìÓ,,Ó ·ìÓí±.



Inserting a Cassette

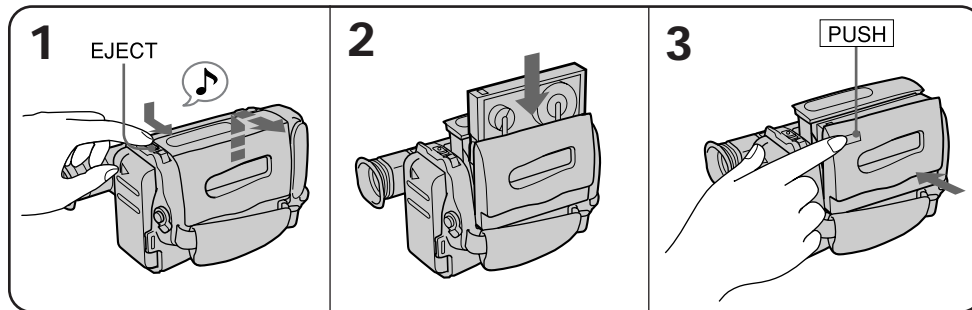
ÇÒÚ±,Í± Í±ÒÒÁÚ°

Make sure that a power source is installed.

- (1) While pressing the small blue button, slide EJECT in the direction of the arrow. The cassette compartment automatically opens.
- (2) Insert a cassette (not supplied) with the window facing out.
- (3) Press the PUSH mark on the cassette compartment to close it. The cassette compartment automatically closes.

í·Á%ÈÚÁÒ, ÒÓÈÒÓÓ·ÍÈÍÒÈÚ±ÈñÚÒÚ±ÍÓ,ÍÁÌ.

- (1) Ç±ÈÈÍ±ñÍ±ÍÁÌ,ÍÚ,ÒÈÌ,ÍÌÒÓÍÚ,Ò%ÈÌ,ÚÁÈJEC±Ò ±ÍÁÌÈÈÒÚ ÁÌÈÈ.ÒÚÒÁÍ Í±ÒÒÁÚ° ±,ÚÓÍ±ÚÈ·ÁÓÍÈÒÚÍ °,±ÁÚÒñ.
- (2) ÇÒÚ±, ÚÁÍ±ÒÒÁÚÚ(ÍÁÒ ÈÍ±,±ÁÚÒñ)ÓÍÒ·ÍÓÍ, Ó· ±·ÁÌ·Í Í± ÚÈÚ.
- (3) ±ÈÍÈÚÁÁÚÍÚPUSH±ÒÚÒÁÍÁ±ÒÒÁÚ°%ÍñÁ,ÒÁ±Í °ÚÈñ.ÈÚÒÁÍÍ±ÒÒÁÚ°±,ÚÓÍ±ÚÈ·ÁÓÍÈ Á±Í °,±ÁÚÒñ.



To Eject the Cassette

While pressing the small blue button, slide EJECT in the direction of the arrow.

To Prevent Accidental Erasure

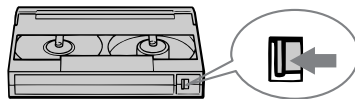
Slide the tab on the cassette to expose the red mark. If you insert the cassette with the red mark exposed and close the cassette compartment, the beeps sound for a while. If you try to record with the red mark exposed, the and indicators flash in the viewfinder, and you cannot record. To re-record on this tape, slide the tab back out covering the red mark.

ÑÍñ, °Ú±ÍÈ,±ÌÈñ Í±ÒÒÁÚ°

Ç±ÈÈÍ±ñÍ±ÍÁÌ,ÍÚ,ÒÈÌ,ÍÌÒÓÍÚ,Ò%ÈÌ,ÚÁÈJEC±Ò ±ÍÁÌÈÈÒÚ ÁÌÈÈ.

ÑÍñ, Ò·Á%ÒÓ, ±·ÁÌÈñ ÒÍÚ·±ÈÍÓ,ÓÒÚÈ ±ÌÈñ

è·Á·%ÈÌ,ÚÁÍÁÒÁÒÓÓÍÍ±Í±ÒÒÁÚÁ,ÒÓ·ÒÓñ,ÈÍ±Ò, Í±ÒÍ±ñ ÍÁÚÍ±.ÒÓÍÈÇ·,ÒÚ±,ÈÚÁÍ±ÒÒÁÚÚÒ È,°ÒÚ±,ÍÁÌÍÒÈÍ±ÒÍÒÈÁÚÍÁÈÁ±Í ÓÁÚÁÒÓÚÒÁÍ±ÒÒÁÚ°,ÚÓÁ±Á,Ú·ÈÚÁÚÍÁ Ì·ÈÒÈ,,Í±Í.ÒÓÍÈÇ·ÒÓÒ·Ú±ÁÚÁÒ,Á±ÒÈÒ°,±Ú,ÒÈ·,ÒÚ±,ÍÁÌÍÒÈ Í±ÒÍÒÈ ÍÁÚÍÁ,,È%ÒÈÒÍ±ÚÁÍÁ·Ú%ÚÚÍÈ,,±Ú,ÈÌ%ÈÍ±ÚÓ °È·Á·ÈÇ·ÍÁÒÍÒÈÁÚÁÒ ÓÈÁ,ÁÒÚÈÁ±ÒÈÒ,ÑÍñ ÓÁ ÁÁ±ÒÈÒÈ Í±%±ÍÚ,ÍÁÍÚÚÓÁ·Á%ÈÌ,ÚÁÍÁÒÁÒÓÓÍÍ±Á±%,ÒÓ· Á±Í °Ú,Í±ÒÍÚ,ÍÁÚÍÚ.



To Stop Recording Momentarily [a]

Press START/STOP again. The "REC" indicator in the viewfinder changes to the "STBY" indicator (Standby mode).

Νίπν , ΆίΆίίόΈ όóú±ιό,ίΈ Ά±ΌΈΌΈ [a]
 ç±ËËËÚÁ öóñú, ïíóóíú START/STOP. Ç
 ,Ë%óΈóí±úÁíÁËí%Ëí±úó "REC"ËÁíÁíËúòñì±
 Ëí%Ëí±úó "STBY"(ÁËËí,úóó,íóóúË).

To Finish Recording [b]

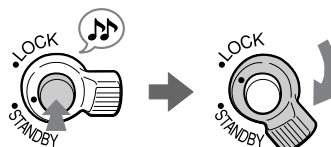
Press START/STOP. Turn STANDBY down, and set the POWER switch to OFF. Then, eject the cassette and remove the battery pack.

Νίπν όíóì±íËñ Á±ΌΈΌΈ [b]
 ç±ËËËÚÁ ïíóóíú START/STOP. εó,Ά ìËÚÁ
 óÁ Áíí ±úÁí, STANDBY ìËÁ È úóú±ιό,ËÚÁ
 , íí, ±úÁí, POWER, óóíóËÁíËÁ OFF.
 á±úÁí, úóííËÚÁ ï±óóÁúúË È ú%±íËÚÁ
 ±ú± ÁËí°È ðíóí.

[a]



[b]



Note on Standby mode

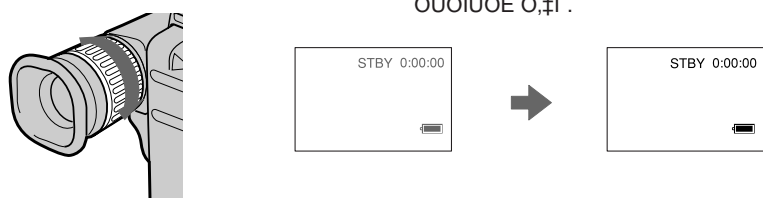
If you leave the camcorder for 5 minutes or more with a cassette inserted in Standby mode, the camcorder goes off automatically. This prevents wearing down the battery and wearing out the tape. To resume Standby mode, turn STANDBY down once and turn it up again. To start recording, press START/STOP.

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 ±ú± ÁË È ËÁíóó íÁíú°. Νίπν , óÁó.íó,íÁíËñ
 ÁËËí±, óóó,íóóúË È%Ëì ±Áóó,Á ìËÚÁ
 óÁ Áíí ±úÁí, STANDBY ìËÁ È óíó,±
 óó,Á ìËÚÁ Á,ó „Á. Νίπν ì±±í± Á±ΌΈΌΈ
 ì±ËËËÚÁ ïíóóíú START/STOP.

To Focus the Viewfinder Lens

If the viewfinder is not in focus at all or when you use the camcorder after someone else has used it, focus the viewfinder lens. Move the viewfinder lens adjustment ring so that the indicators in the viewfinder come into sharp focus.


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 óóóíúóË ó,±°.



Notes on the tape counter

- The tape counter indicates the recording time. Use it as a guide. There will be a time lag of several seconds from the actual time. To set the counter to zero, press COUNTER RESET.
- If the tape is recorded in SP and LP modes mixed, the tape counter shows incorrect recording time. When you intend to edit the tape using the tape counter as a guide, record in same (SP or LP) mode.

Note on 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 (p. 67). Note that the beep sound is not recorded on the tape. If you do not want to hear the beep sound, set BEEP to "OFF" (p. 34).

Note on the AUTO DATE feature

The clock is set to London for the United Kingdom models and Paris for other European models at the factory. You can reset the clock (p. 38).

The AUTO DATE feature shows the date automatically once a day. However, the date may automatically appear more than once a day when:

- you reset the date and time.
- you eject and insert the tape again.
- you stop recording within 10 seconds.

When moving from indoors to outdoors (or vice versa)

Turn STANDBY up and point the camcorder at a white object for about 15 seconds so that the white balance is properly adjusted.

è ÈÌÄ~tìÈñ í Ò~ÄÚ~ÉÍÚ ÌÄÌÚ°

- è~ÄÚ~ÉÍ ÌÄÌÚ° ÚÌÄ~tìÄÚ , Äñ ÄtÖÈÒÈ. àÒÒÓÍ,ÄÚÈÚÄÄ,Ó,Ìt~ÄÒÚ,Ä ÚÍÓ,Ó%ÒÚ,t. tìí .Ú%ÄÚ ÓÚÒÚt,tìÈÄ ÓÓ , ÄÌÄÌÈ Ìt ÌÄÒÍÓÍ,ÍÓ ÒÄÌÚ!%ÒÚ ÚtìÚÈ~ÄÒÍÓ,,Ó , ÄÌÄÌÈ. Ññ ÚÒÚtìÒ,ÌÈ Ò~ÄÚ~ÉÍt Ìt ÌÚÌ, ÌtÈÌÈÚÄ ÌÒÒÍÚ COUNTER RESET.
- ÖÒÍÈ ÌÄÌÚt ÄtÖÈÒtìt , Ó.ÓÈ: ÄÈÈtì, SP È LP, Ò~ÄÚ~ÉÍ ÌÄÌÚ° .Ú%ÄÚ ÖÓÍtÄ°,tÚ, ÌÄÒ t,ÈÌ,ÍÓÄ , Äñ. ÖÒÍÈ , ÌtìÄ Ä,tÄÚÄÒ Ö ÒÈÄ,ÄÒÚÈÍÓÍÚtÈ ÌÄÌÚ° Ò ÈÒÒÓÍ,ÄÓ,tìÈÄÌ Ò~ÄÚ~ÉÍt ÌÄÌÚ° , Ìt~ÄÒÚ,Ä ÚÍÓ,Ó%ÒÚ,t,ÒÈÄ,Ó%ÈÚÄÄtÖÈÒ, , ÚÓÍ ÈÄ ÄÈÈÌÄ (SP ÈÌÈ LP).

è ÈÌÄ~tìÈÄ í ÄÚÌÄ ÍÒÍÚ Ä,ÚÍÓ,ÓÍÚ ÖÈ,,ÌtìÚ

äpí ÚÌÄtìÓ Ò ÖÓÍÓ° . Ìt ÈÒÚÌtì, Ó%ÈÌ ÄÚÌÄ ÌÈ ÒÈ,,Ìtì Ä,Ú~ÈÚ, ÍÓ,,%t Ç° Ìt~ÈÌÄÚÄ ÄtÖÈÒ, È %,,t ÄÚÌÄ Ì° ÒÈ,,Ìtìt Ä,Ú~tÚ, ÍÓ,,%t Ç° ÄtìtìÈ,tÄÚÄ ÄtÖÈÒ,, ÖÓ%Ú,Ä È%tñ ÚÄÌ Òtìí t~ÓÚÚ. çÄÒÍÓÍ,ÍÓ ÄÚÌÄ Ì° ÒÈ,,ÌtìÓ, ÚtìÈÄ Ä,Ú~ÈÚ , Ìt~ÄÒÚ,Ä Ò Ä%ÚÒ ÄÈ%ÄÌÈñÌtìÓ,,Ó-ÌÈ-Ó ÌÄÌÓ Ìtì ÌÓ,,Ó ÒÒÒÚÓñÌÈñ,È%ÄÓÍtìÄ ° (ÒÚ . 67). ätìÄÚ ÚÄ, ~ÚÓ ÄÚÌÄ ÌÈ Ä,ÚÍÓ,ÓÈ ÖÈ,,Ìtì ÌÄ ÄtÖÈÒ,tÄÚÒñ Ìt ÌÄÌÚÚ. ÖÒÍÈ , ÌÄ ÌÓÚÈÚÄ ÒÌ~tÚ, ÄÚÌÄ ÌÈ ÒÈ,,Ìtì, ÚÓ ÚÒÚtìÓ,ÈÚÄ "BEEP",ÒÓÍÓÈÄÌÈÄ "OFF" (ÒÚ . 34).

è ÈÌÄ~tìÈÄ í ÚÚÌÈÈÈ AUTO DATE

ótÓ° ÚÒÚtìÓ,ÌÄÌ° Ät,Ó%ÓÍÈ-ÈÄ,ÓÚÓ,ÈÚÄÌÄÌ ÖÓÍÓÍ%ÒÍÓÍÓÍÚ , ÄÌÄÌÈ %ñ ÌÓ%ÄÌÄÈ èÒÄ%ÈÌÄÌÒ,,Ó äÓ ÓÍÄ,ÒÚ,tÈ ÒÓ Òt ÈÈÒÍÓÍÚ , ÄÌÄÌÈ %ñ Ì% Ú,ÈÌÄ, ÓÒÄÈÒÍÈ,ÌÓ%ÄÌÄÈ. Ç° ÌÓÈÄÚÄ , ÓÓÌÈÚ, ÓÓ,ÚÓ ÌÚ, ÚÒÚtìÓ,ÍÚ t~tÓÓ,(ÒÚ . 38).

ìÚÌÈÈñ AUTO DATE t,ÚÓÍtÚÈ~ÄÒÍÈ ÖÓÍtÄ°,tÄÚ %tÚÚ Ó%ÈÌ tÄ, %ÄÌ, .è%ÌtìÓ, %tÚtìÓÈÄÚ ÖÓñ,ÈÚ,Òñt,ÚÓÍtÚÈ~ÄÒÍÈ .ÓÍÄÄ Ó%ÒÓ,,Ó tÄt, %ÄÌ, , ÄÒÍÈ:

- Ç° Ö. ÒÒÈÚÄ%tÚÈÈ, Äñ.
- Ç° , ÚÓÌÌÄÚÄ ÌtÒÒÄÚÚ È , ÓÚt,ÈÚÄ ÄÄ ÓÍÓ,t.
- Ç° ÓÓÚtìÓ,ÈÚÄ ÄtÖÈÒ, , Ò Ä%ÄÌtì 10 ÓÄÌÚ!%.

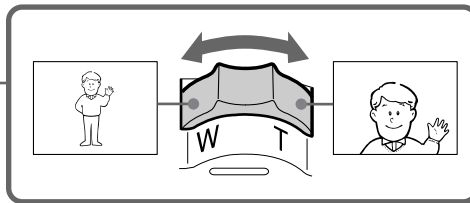
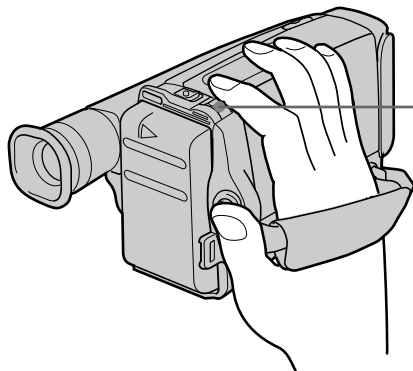
è È , ÌÓ%Ä ÈÄ ÖÓÍÄ~ÄÌÈñ Ìt ÚÍÈ~Ú (ÈÌÈ ÌtÓ.Ó ÚÚ)

èÓ,Ä ÌÈÚÄ ÒÄ ÄÌ~tìÚÄÌ, STANDBY ,,Ä Ì È Ìt,Ä%ÈÚÄ ,È%ÄÓÍtìÄ Ú Ìt .ÄÌÈ Ò.ÄÌÚ Ò È.ÌÈÄÈÚÄÌ,ÍÓ Ìt 15 ÒÄÌÚ!% Útì, ~ÚÓ° .ÄÌÈ .tìtìÒ° .í ÓÚ Ä,ÚÍÈ Ó,tì Ò t,ÈÌ,ÍÓ.

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 sparingly.

T side: for telephoto (subject appears closer)
W side: for wide-angle (subject appears farther away)



Zooming Speed

Turn the power zoom lever fully for a high-speed zoom. Turn it lightly for a relatively slow zoom.

When you shoot a subject using a telephoto zoom

If you cannot get a sharp focus while in extreme telephoto zoom, turn the power zoom lever towards the W side 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) in the wide-angle position.

àÖÖíÁ Ó,±iÈÄ Ùùíí~ÈÈ i±ÁÁ%o±
,É%oÁóí±iÁ °

ç±ÁÁ%o ,É%oÁóí±iÁ ° ñ,íñÁÙÒñ ÙÁìÈ~ÁóíÈí
Ò ÈÁíóíÁ±ÖÈÒÈ, íóúó °È ÖÓÁ,óíñÁÙ,±í
ÈÁíÁíñÚ, ±ÁíÁ Ó·ÁíÚ±, i±%o Á. çÁ
Áíóúóóú Á·íñÈÚÁ ~ÚÈí Ö ÈÁíóí, ÁóíÈ, íóúÈÚÁ,
~ÚÓ. ° Ç±È Á±ÖÈÒÈ °, íñ%oÁíÈ ·ÓíÁÁ
Ò ÓúÁóóÈóí±í, íó.
ëúÓ Óí±í: %oíñ ÙÁíÁÙóúó (Ó·ÁíÚ
Ó È·iÈÈ±ÁÙÒñ)
ëúÓ Óí±W: %oíñ È ÓíÓ, Ó Ù, i± Ó·ÁíÈ
(Ó·ÁíÚ Ù%o±íñÁÙÒñ)

ëíÓ ÓòÚ, i±ÁÁ%o± ,É%oÁóí±iÁ °
èóííóóú, ~ÓÓ,Á iÈÚÁ °±, Ó È,Ó%oíÓ,Ó
Ú ±íòúóí±úó ±%oíñ·óú Ó,Ó i±ÁÁ%o±
,É%oÁóí±iÁ °, ÓÓ,Á iÈÚÁ Á,Ó ÓíÁ,,i± %oíñ
iÁ%oíÁííÓ,,Ó i±ÁÁ%o± ÙÁíÁí±iÁ °

äó,,%o± ° òìÈí±ÁÚÁ Ó·ÁíÚ, ÈÖÖóí,ÁÙñ
i±ÁÁ%o, ÁÈÈíÁ ÙÁíÁÙóúó
ÖóíÈ ° iÁ íÖÈÁÚÁ ÓóíÚ·ÈÚ, ~ÁúíÓÈ
ÚóíúÓÈ Ó,íÈ,Ó, Áíñ í ±ÈiÁ,,Ó i±ÁÁ%o±,
ÁÈÈíÁ ÙÁíÁÙóúó, úó óó,Ó ±È,±ÈÚÁ °±,
Ò È,Ó%oíÓ,Ó Ù ±íòúóí±úó ±,ÓúÓ ÓíÚW,%oÓ
ÚÁíÓÓ, Óóí±iÁ ÓóíÚ·ÈÚÁ ~ÁúíÓÈ
ÚóíúÓÈ Ó,íÈ.
Ç·íÓÈÁÚÁ Ó ÓÈÁ,ÁóúÈ Ò Áííú Ö Á%oíÁÙ±,
íóúó °È ÖÓ íÁì, ~ÁÈ íÁ Á i±,Ó%oÈÚÓñ
Ó È·iÈÁÈÚÁí, íó i± ±òúóóñÈÈ 80 ÓíÓÚ
ÓÓ,Á ííóúÈ Ó·ÁíÚÈ,±, ÓóíÓÈÁíÈÈ
ÚÁíÁÙóúó, ÈíÈ 1 óí, ÓóíÓÈÁíÈÈ È ÓíÓ,,Ó
Ù,,i±.

Notes on Digital Zoom -CCD-TR402E only

You can select 13 x (optical) or 26 x (digital) of zooming.

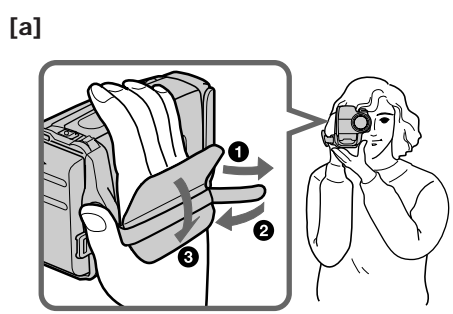
- More than 13 x zoom is performed digitally, and the picture quality deteriorates as you go toward the T side. If you do not want to use the digital zoom set the ZOOM function to x13 (p. 34).
- The right side [a] in the power zoom indicator shows the digital zooming zone, and the left side [b] shows the optical zooming zone. If you set the ZOOM function to x13, the [a] zone disappears.

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 Ú ±iÛÓi±ÚÓÚ
 – ÚÓi,ÍÓ %oññ iÖ%oÄiÈ CCD-TR402E
 Ç° iÓÉÁÚÁ ,° ±Ú, Ú ±iÛÓi±È, 13i
 (ÓÓÚÈ~ÁÓiÛ) ÈiÈ 26i (^ÈÙ Ó,Ú).
 • í ±iÛÓi±Èñ ·ÓiÁÁ, ^Ái 13i,
 Ô ÓÉÁ,Ó%ÈÚÓñ ÈÚ Ó, iÖÓÓÓ.Ói,È
 i± ÁÓÚ,ÓÉÁÓ. ±ÈÁiÈñÚiÚ%±ÁÚÓñÓÓiÁ Á
 ÓÁ ÁiÁ~ÁiÈñ , ÓÚÓ ÓiÛ í. ÓÓiÈ Ç° iÁ
 iÓÚÈÚÁÈÓÓi,ÁÓ,±Ú, ÈÚ Ó,ÓÈ
 Ú ±iÛÓi±ÚÓ ,ÚÓÚ±iÓ,ÈÚÁ ÚÚiÈ ZOOM
 ,ÓÓiÓÈÁiÈÁ i13 (ÓÚ . 34)
 • è ±±ñiÛÓÚ Ói± [a]Èi%Èi±ÚÓ ±Ô È.Ó%iÓ,Ó
 Ú ±iÛÓi±ÚÓ ±ÓÓi±Á,±ÁÚÁÓiÛ ÈÚ Ó,ÓÈ
 Ú ±iÛÓi±ÈÈ, ±iÁ,±ñiÛÓÚ Ói± [b]
 ÓÓi±Á,±ÁÚÁÓiÛÓÓÚÈ~ÁÓiÓÈ
 Ú ±iÛÓi±ÈÈ.ÓÓiÈÇ° ÚÓÚ±iÓ,ÈÚÁ
 ÚÚiÈ ZOOM i± i13, ÚÓ ÁÓi± [a]
 ÈÓ~ÁÁiÁÚ.

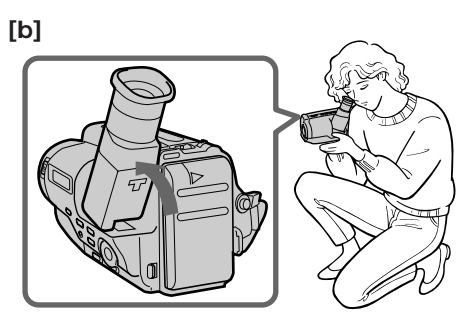


Hints for Better Shooting

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



Ññi±% Ó,Ô ÈÓÓ%oÄ ÈiÁ ÚiÓÈÇ°
 ÓÓiÛÈÚÁiÛ~ÉÁ ÁÁÚi,Ú±Ú°,Ú%oÄ ÈÈ,±ñ
 ,È%oÄÓi±iÁ Ú,ÓÓÓÚ,ÁÚÓÚ,ÈÈÓÓÓiÁ%Ú,ÈiÈ
 Úi±Á±iÈñÈÈ.



Hints for Better Shooting

ëÓ,ÂÚ° %óíñ îÛ~ÂÈ Ò`ÂÏË

- Hold the camcorder firmly and secure it with the grip strap so that you can easily manipulate the controls with your thumb. [a] (p. 17)
- Place your right elbow against your side.
- Place your left hand under the camcorder to support it. Do not cover the microphone with your fingers.
- Place your eye firmly against the viewfinder eyecup.
- Use the viewfinder frame as a guide to determine the horizontal plane.
- You can also record in a low position to get an interesting recording angle. Turn the viewfinder up for recording from a low position. [b] (p. 17)

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 the tripod screw is shorter than 6.5 mm (9/32 in.). Otherwise, the screw may damage the inner parts of the camcorder.

Cautions on the viewfinder

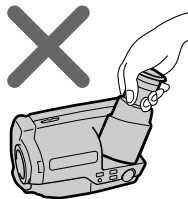
- Do not pick up the camcorder by the viewfinder. [c]
- Do not place the camcorder so as to point the viewfinder toward the sun. The inside of the viewfinder may be damaged. Be careful when placing the camcorder under sunlight or by a window. [d]

- ç±%ãÈíó%ã ÈÈÚÁ,È%ãÁóííÁ ÛÈ Ó`Á%óí ññÈÚÁ ÁÁ Ó`ÓÓÍÓ`... ÁíÁííÓ,,Ó Á±,±Ú± Û±í, ~ÚÓ Ç` ÓÍÓÈÁÚÁ ÍÁ,íÓ Í±ÍÈÓÚÍÈ Ó,±Ú, Á,ÚíñÚÓ ±ÍÈ Ó`ÓÓÍÓ`.. Ç±-Á,,Ó`-ÓÍ`-Ó`Ó`Ó`±. [a] (ÓÚ . 17)
- è±ÓÓÓÍÓÈÈÚÁ Ç±-Ó`±, È`ÍÓÍÓÚ, ì±Ó ÓÚÈ, Ç±-Á,,Ó`-Óí±.
- è±ÓÓÓÍÓÈÈÚÁ Ç±-Ú`ÍÁ,Ú, ÚÍÚ ÓÓ% ,È%ãÁóííÁ ÓÈ%ññÁÁÓÓ%ã ÈÍÈ . ÇÁ Á±Í ÓÈÚÁ ÍÈÍ ÓÚÓÍ Ç±-ÈÍÈ Ó±í, ±ÍÈ .
- è±ÓÓÓÍÓÈÈÚÁ Ç±, Í±Á ÚÓ`ÍÓ ì±Ó ÓÚÈ, ÓÍÚíñ ±,È%ãÓÈÓí±ÚÁíñ.
- àÓÓÓÍ,ÁÚÈÚÁ,ÈÁÈ ÍÚ, ±ííÚ,È%ãÓÈÓí±ÚÁíñ, Í±-ÁÓÚ,Á ÚÍÓ,Ó%ÓÚ,±%ññÓÓ`Á%ãÍÁÍÈíñ „Ó`ÈÁÓÍÚ±í,íÓ,,Ó`Óí±±.
- Ç` Ú±ÍÈÁ ÍÓÈÁÚÁ ÓÓÚ-ÁÓÚ,íñÚ, Á±ÓÈÈ, ÈÁ ÍÈÈÍÁ,,Ó`ÓÓÍÓÈÁÍÈíñ %óíñ ÓÓÍÚ-ÁÍÈíñ ÈÍÚÁ ÁÓÍÓ,ÓÚ,Í±±ÓÈÓÈ,èÓ`Á ÍÈÚÁ ,È%ãÓÈÓí±ÚÁí, „Á`í%ññ Á±ÓÈÈÈÈÁ ÍÈÈÍÁ,,Ó`ÓÓÍÓÈÁÍÈíñ. [b] (ÓÚ . 17)

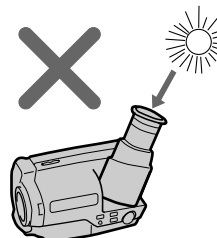
è±ÓÓÓÍ±,±ÈÚÁ,È%ãÁóííÁ Û ì± ÓÍÓÓÍÓÈ ÓÓ,Á`ííÓÓÚÈ ÈÍÈ ÈÓÓÓÍ,ÁÚÈÚÁ Û ÁíÓÈÍÈÍ ÈÚ± ±ÈÚÁÓ, ±ÓÓÍ±,±Ú, È%ãÁóííÁ Û ì± ÓÚÓÍÁÍÈÈ%Ú,ÓÈÓÍÓÓÍÓÈÓÓ,Á`ííÓÓÚÈ ÓÓ%óí%ññ`ÁÈ,`ÓÓÚ. ÓÓÍÈ Û Ç±ÓÈÍÁÁÚÓíñ Û ÁíÓÈÍÈÍ%ññÚÓÓÚ±ÓÓ± ±Ú±, Ç`ÍÓÈÁÚÁ ÈÓÓÓÍ,ÁÓ,±Ú, Á,Ó`È`ññ,È%ãÁóííÁ . è`È`Ó`ÈÍ ÁÓÍÁÍÈÍ Û ÁíÓÈÍÈÍÚ, ÓÚÍÈ`ÍÓÍÚ ÓÚ ÛÈ`Í` Sony Û-Á%ãÈÚÁÓ, ~ÚÓ Í`ÁÓÁÈÍ`È, ÈÍÚ Û ÁíÓÈÍÈÍ± ÍÓ`Ó`Á 6,5 íí. Ç` Ó`ÓÚÈ,ÍÓÍ ÓÍÚ-±Á, ÈÍÚ ÍÓÈÁÚ ÓÓ, Á%ãÈÚ, ,ÍÚÚ ÁííÈÁ %ãÁÚ±ÍÈ,È%ãÁóííÁ .

- àÂ` Ó`Á%ãÓÓÚÓ ÓÈÍÓÓÚÈ Ó`È`Ó` ±`ÁíÈÈ Ó ,È%ãÓÈÓí±ÚÁÍÁÍ
- ÇÁ`ÓÓ%íÈí±ÈÚÁ,È%ãÁóííÁ Û, %ã È±ÁÁÁ± ,È%ãÓÈÓí±ÚÁÍ, [c]
- ÇÁ`±ÓÓÓÍ±,±ÈÚÁ,È%ãÁóííÁ Û Û±ÍÈÍ Ó`±ÁÓÍ, ~ÚÓ. ,È%ãÓÈÓí±ÚÁÍ, .Í ì±Ó ±,ÍÁÍ, ÓÚÓ ÓÍÚ ÓÓíí±, ùÚÓ ÍÓÈÁÚ Ó`È,ÁÓÚÈÍ%ãÁÚÓ ì±ÈÈ,ÍÚÚ ÁííÈÍ,±ÓÚÁÈ ,È%ãÓÈÓí±ÚÁíñ.ÁÚ%ã,ÚÁ ÓÓÓÚ ÓÈÍ, ÓÓÚ±,íññ,È%ãÁóííÁ Û ì± ÓÓíí-Á`ÈÍÈ,ÓÁÍÁ Óíí±. [d]

[c]



[d]



Connections for Playback

èÓ%oÍÎ ~ÀÌËfl %oÍfl
,ÓÒÒ ÓËÁ,Â%oÀÌËfl

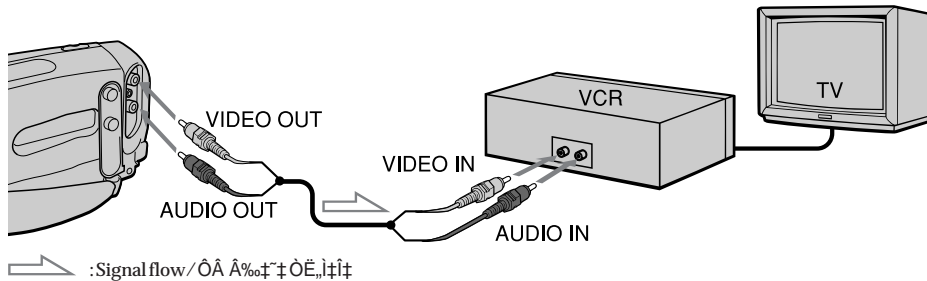
Connect the camcorder to your VCR or TV to watch the playback picture on the TV screen. It is recommended to use the mains as the power source (p. 25).

If a VCR is connected to a TV

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

èÓ%oÓÁ%oËiËÚÁ, È%oÁÓi±iÁ ÚíÇ±-ÁiÜ äÇá
ËiËÚÁiÁ,ÉÁÓ Ú%oflÓ ÓÓiÓÚ ±
,ÓÒÒ ÓËÁ,Ó%oËiÓ,,ÓËÁÓ. ±ËÁiËfl±
ÚÁiÁ,ÉÁËÓiìÓi í ±iÁ. èÁiÓiÁi%oÚÁÚÒfl
ÈÒÓÓi,ÁÓ,±Ú, íÁiÚ È-ÁÓiÚ, ÓÁÚ, ,
i±-ÁÓÚ,ÁËÓÚÓiËi±ÒËÚ±iËfl (ÓÚ .25).

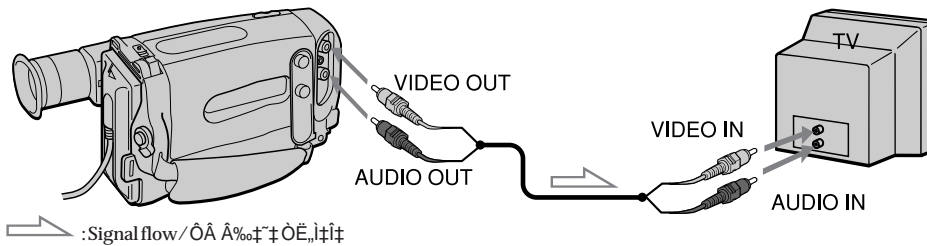
ÒÓiË äÇá ÓÓ%oÓÁ%oËiÁi ÚÁiÁ,ÉÁÓ Ú
éÚi ÓËÚÁi í-íÚ,,iÁÁ%o± È ÓÓ%oÍi ÒËÚÁ
,È%oÁÓi±iÁ Ú LINE in i± KBM, ÈÒÓÓi,ÁÚfl
Ó Èi±,,±Ái È ÓÓÁ%oËiËÚÁi iÈ i±.Ái, ±Ú%oËÓ/
,È%oÁÓ. iÓÚ±iÓ,ÉÚÁ,,Ó%oÍÓÈ ÓÁiÁiÚÓ i± í,
,ÓÓiÓËÁiËÁ LINE. iÓÚ±iÓ,ÉÚÁ ÓÁiÁiÚÓ TV/
VCR, ÓÓiÓËÁiËÁ VCR i± ÚÁiÁ,ÉÁÓ Á.



Connecting Directly to a TV

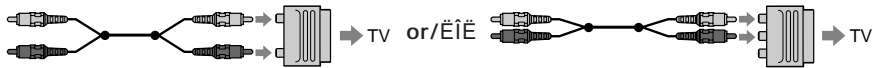
Open the jack cover and connect the camcorder to your TV by using the supplied A/V connecting cable. Set the TV/VCR selector to VCR on the TV.

èÓ%oÍi ~ÀiËÁ iÁÓÓÒ Á%oÓÚ,ÁiìÓ í
ÚÁiÁ,ÉÁÓ Ú
éÚi ÓËÚÁi í-íÚ,,iÁÁ%o± È ÓÓ%oÓÁ%oËiËÚÁ
,È%oÁÓi±iÁ Ú í, ±-ÁiÚ ÚÁiÁ,ÉÁÓ Ú,
ÈÒÓÓi,ÁÚfl Ó Èi±,,±Ái È ÓÓÁ%oËiËÚÁi iÈ
i±.Ái, ±Ú%oËÓ/,È%oÁÓ. iÓÚ±iÓ,ÉÚÁ ÓÁiÁiÚÓ
TV/VCR, ÓÓiÓËÁiËÁ VCR i± ÚÁiÁ,ÉÁÓ Á.



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

ÖÖÏË Ç±- ÚÂÏÄ,ËÁÓ /äÇå ËÏÄÂÚ 21-
-Ú° ,ÍÓ,°È ÖÓÄ%ÈÏËÚÄÏ,
(EUROCONNECTOR)
àÖÖÓÏ,ÁÚËÚÄ Ò ËÏ±,±ÄÏ°È 21-Ú° ,ÍÓ,°È
±%±ÖÚÄ.



To connect a TV or a VCR without Video/Audio input jacks
Use an RFU adaptor (not supplied).

ÑÏÏ ÖÓ%ÏÏ~ÄÏËÏ í ÚÂÏÄ,ËÁÓ Û ËÏË äÇå
·ÄÄ ,ÍÓ%Ï°Í/,ÍÓ%Ï°Í „ÏÄÄ% ,Ë%ÄÓ/
±Ú%ËÖ
Ç°ÖÓÏËÚÄ ÖÓ%ÏÏ~ÄÏËÄ Ò ËÖÖÓÏ,ÁÓ,±ÏËÄÏ
±%±ÖÚÄ ±RFU (ÏÄÖ ËÏ±,±ÁÚÖÏ).

Playing Back a Tape

Παίζοντας ταινία

You can monitor the playback picture in the viewfinder. You can also monitor on the TV screen, after connecting the camcorder to the TV/VCR (p. 20).

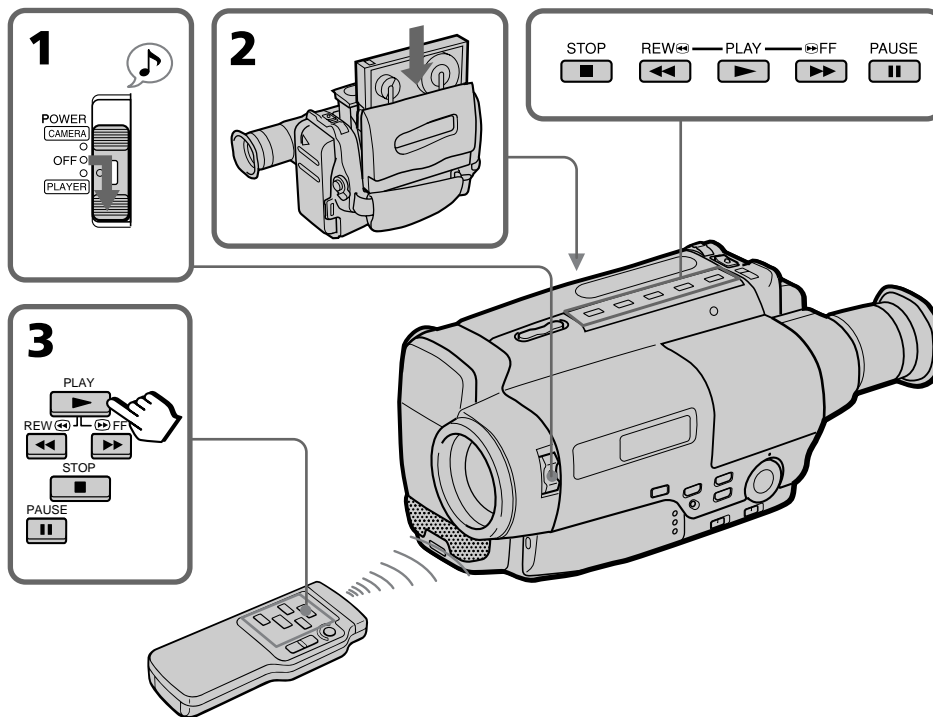
You can control playback using the supplied Remote Commander.

- (1) While pressing the small green button on the POWER switch, slide it to PLAYER. The tape transport buttons light up.
- (2) Insert the recorded tape with the window facing out.
- (3) Press ►. Playback starts.

Μπορείτε να παρακολουθήσετε την εικόνα στην οθόνη. Μπορείτε επίσης να παρακολουθήσετε στην οθόνη του τηλεοράστη ή του VCR, αφού συνδέσετε την κάμερα στο τηλεοράστη ή τον VCR (σ. 20).

Μπορείτε να ελέγξετε την αναπαραγωγή χρησιμοποιώντας τον παροχρηστούμενο τηλεχειριστήριο.

- (1) Πατώντας το μικρό πράσινο κουμπί στο διακόπτη ΠΡΟΒΟΛΕΥΣΗΣ, μετακινήστε το διακόπτη στο ΠΑΙΞΕΙΣ. Τα κουμπιά μεταφοράς ταινίας ανάβουν.
- (2) Εισάγετε την εγγραφισμένη ταινία με το παράθυρο προς τα έξω.
- (3) Πατήστε ►. Ξεκινάει η αναπαραγωγή.



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

Για να σταματήσετε την αναπαραγωγή, πατήστε ■.
Για να επαναπολιώσετε την ταινία, πατήστε ◀◀.
Για να προπολιώσετε την ταινία, πατήστε ▶▶.

Using the Remote Commander

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

Note on the lens cover

The lens cover does not open when the POWER switch is set to PLAYER. Do not open the lens cover manually. It may cause malfunction.

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 during fastforward or rewind (Skip Scan)

Keep pressing **◀◀** while rewinding or **▶▶** while advancing the tape. To resume normal playback, press **▶**.

Notes on playback

- Streaks appear and the sound is muted in the various playback modes.
- When still picture mode lasts for 5 minutes or more, the camcorder automatically enters stop mode.

àÒÒÓÍ,ÁÓ,†ÈÄ ÒÚÍ Ú†
 %ÈÓÚ†ÈÓÍÓ,Ó ÚÓ †,ÌÀÈ†
 Ç°ÍÓÈÁÚÁ ÚÓ †,†Ú, ÓÒÒ ÓÈÁ,Á%ÀÈÄ† Ò
 ÈÓÓÓÍ,ÁÓ,†ÈÄ† Ò È†,†Á†Ó,Ó ÒÚÍ,Ú†
 %ÈÓÚ†ÈÓÍÓ,Ó ÚÓ †,ÌÀÈ†. èÁ Á%Ú††ÍÓÍ
 ÈÓÓÓÍ,ÁÓ,†È†ÒÚÍ Ú†%ÈÓÚ†ÈÓÍÓ,Ó
 ÚÓ †,ÌÀÈ†,ÒÚ†,ÚÁ .†Ú† ÁÈÈ R6
 (†Á†Á Ó†Á).

è È†Ä~†ÈÄ Í Í °†Á Ó·ÁÍÚÈ,†
 ä °† Ó·ÁÍÚÈ,† ÍÁ ÓÚÍ°,†ÁÚÒ†, ÁÒÈÈ
 °Í†ÚÁ†, POWER ÚÒÚ†ÍÓ,ÌÁ†,
 ÓÓÍÓÈÁÈÄ PLAYER. çÁ ÓÚÍ°,†ÈÚÁ Í °ÍÚ
 Ó·ÁÍÚÈ,†, Ú†ÍÚ. ùÚÓ ÍÓÈÁÚ Ó È,ÁÓÚÈ Í
 ÍÁÈÓÓ †ÍÓÓÚÈ.

è†ÁÈÈ~ì°Á ÁÈÈ†°,ÓÒÒ ÓÈÁ,Á-
 %ÀÈÈ†%†ÍÓ ÓÓÍÓÚ †ÍÁÓÓ%,ÈÈÍÓ,Ó

àÁÓ. †ÈÄÈ†(Ò†ÚÁ†,ÓÒÒ ÓÈÁ,Á%ÀÈ†)
 ç†ÈÈÚÁ †ÍÓÓÍÚ **II**, Ó, Á††
 ,ÓÒÒ ÓÈÁ,Á%ÀÈÈ†. †††,ÓÁÓ-ÍÓ,ÌÀÈ†
 ,ÓÒÒ ÓÈÁ,Á%ÀÈÈ† ††ÈÈÚÁ †ÍÓÓÍÚ **II**ÈÈ▶.

††† ÓÚ°Ó††È† È††Á††Ó,Ó Ú †,ÌÀÍÚ†
 (ÓÓÈÓÍ ÈÁÓ. †ÈÄÈ†)
 †Á È†Ú, ††È†ÚÓÈ †ÍÓÓÍÚ **◀◀** ÈÈÈ **▶▶** Ó
 , Á††,ÓÒÒ ÓÈÁ,Á%ÀÈÈ†. †††,ÓÁÓ-ÍÓ,ÌÀÈ†
 †Ó ††ÍÓ,Ó,ÓÒÒ ÓÈÁ,Á%ÀÈÈ†ÓÚÓÚÓÚÈ,
 †ÍÓÓÍÚ.

††† ÍÓÍÚ Ó†† ÈÁÓ. †ÈÄÈÈ† ††, °ÓÓÍÓÈ
 ÓÍÓ ÓÓÚÈ,Ó, Á†† ÚÓÍÓ Á††ÈÈ ÓÁ Á††ÈÈ
 ÇÓÁ Á%ÈÈÈ†††% (ÓÓÈÓÍÍÁÚÓ%ÓÍ
 Ó Ó,Ó††)
 †Á È†Ú, ††È†ÚÓÈ †ÍÓÓÍÚ **◀◀**, Ó, Á††
 ÓÁ Á††ÈÈÈ †ÁÍÚ° †††% ÈÈÈ †ÍÓÓÍÚ **▶▶**, Ó
 , Á†† ÓÁ Á††ÈÈÈ †ÁÍÚ°, ÓÁ Á%. †††
 ,ÓÁÓ-ÍÓ,ÌÀÈÈ† †Ó ††ÍÓ,Ó
 ,ÓÒÒ ÓÈÁ,Á%ÀÈÈ† ††È†Ú, †ÍÓÓÍÚ ▶.

è È†Ä~†È† Í Í,ÓÒÒ ÓÈÁ,Á%ÀÈÈ,
 • Ç †ÁÈÈ~ì°, ÁÈÈÈ†,ÓÒÒ ÓÈÁ,Á%ÀÈÈ† ††
 ††ÍÁ †Ó,ÚÚ ÓÒ†,ÈÚ,Ó† ÓÓÍÓÓ È Á,ÚÍ
 .Ú%ÁÚÓ È,ÍÚ-Á†.
 • ÓÓÍÈ ÁÈÈ†ÍÁÓÓ%ÈÈÍÓ,ÓÈÁÓ. †ÈÄÈÈ†
 Ó Ó%ÓÍÈ†ÁÚÒ† ÓÍÓÍÓ 5 †ÈÍÚÚ ÈÈÈ. ÓÍ-Á,
 È%ÁÓ††ÍÁ ††.ÚÓ††ÚÈ-ÁÓÍÈ ÓÁ Á††ÈÈ,
 ÁÈÈÈ ÓÓÚ†ÍÓ,ÈÈ.

Advanced Operations

Using Alternative Power Sources

You can choose any of the following power sources for your camcorder: battery pack, the mains, alkaline battery, 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
Outdoor	Battery pack	Battery pack NP-33 (supplied), NP-65/67, NP-66H/68, NP-77H/78, NP-90/90D, NP-98
	LR6 (size AA) Sony alkaline battery	Battery case
In the car	12 V or 24 V	Sony DC pack DCP-77 car battery

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.



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

Using Alternative Power Sources

You can choose any of the following power sources for your camcorder: battery pack, the mains, alkaline battery, 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
Outdoor	Battery pack	Battery pack NP-33 (supplied), NP-65/67, NP-66H/68, NP-77H/78, NP-90/90D, NP-98
	LR6 (size AA) Sony alkaline battery	Battery case
In the car	12 V or 24 V	Sony DC pack DCP-77 car battery

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.

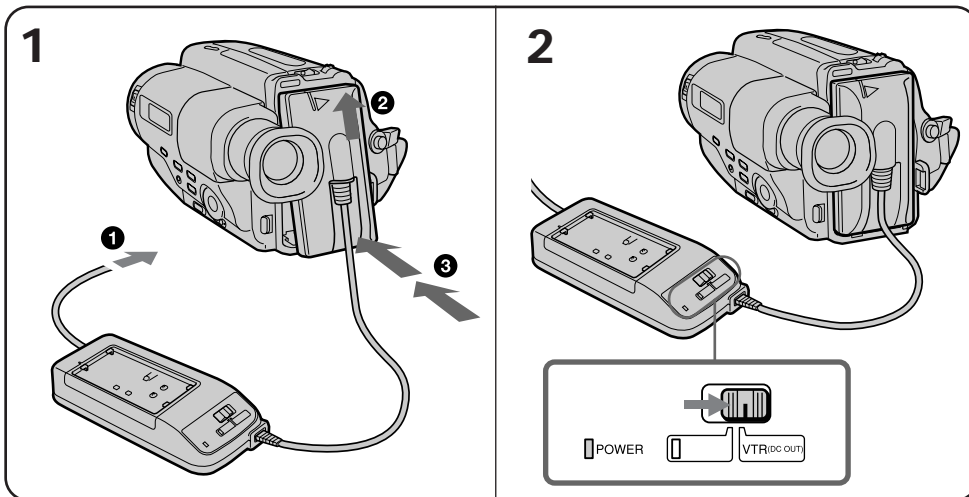


This mark indicates that this product is a genuine accessory for Sony video products. When purchasing Sony video products, Sony recommends that you purchase accessories with this "GENUINE VIDEO ACCESSORIES" mark.

Using the Mains

To use the supplied AC power adaptor:

- (1) Connect the mains lead to the mains. Insert the top of the connecting plate of the AC power adaptor into the top of the battery mounting surface. Push the connecting plate so that it attaches firmly. Make sure that you hear clicks twice.
- (2) Set the selector to VTR (DC OUT).



WARNING

Mains lead must only be changed at qualified service shop.

PRECAUTION

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

Notes on the POWER lamp

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

To remove the adaptor

The adaptor is removed in the same way as the battery pack (p. 10).

àÒÒÓÍ,ÁÓ,±ÈÄ ÌÁÍÚ È~ÀÓÍÓÈ ÒÀÚÈ

Ñíñ ÈÒÒÓÍ, ÁÓ, ±Èñ Ò Èì, ±ÁÍÓ,, ÒÒÀÚÁ, Ó, Ò
±%±ÒÚÁ ±ÒÁ ÁÍ, ÚÓì±:

- (1) ÈÒ%ÒÒÁ%ÈÈÚÁÒ Ó,Ò% ÌÁÍÚ ÒÒÈÚ±ÈñÍ
ÌÁÍÚ È~ÀÓÍÓÈ ÒÀÚÈ. ÇÓÚ±, ÚÁ, Á, ÌÈÈ
ÍÓÍÁ, ÒÒÁ%ÈÈÈÚÁÍ, ÌÓÈ Òì±ÒÚÈÍ, ÒÀÚÁ, Ó, Ò
±%±ÒÚÁ ±ÒÁ ÁÍ, ÚÓì±, Á, Ì, ±ÒÚ,
±Ú± ÁÈÍÓÈ ÚÓÚ±ÍÓ, ÒÍÓÈ ÒÒ, Á, ÌÓÓÚÈ,
ç±ÈÈÚÁ Ì± ÒÒÁ%ÈÈÈÚÁÍ, ÌÚ, Òì±ÒÚÈÍÚ, Ú±,
ÚÓ, Òì± Ò ÈÒÒÁ%ÈÈÈ±Ò Ì±%ÁÈÍÓ.
ì, Á%ÈÚÁÒ,, ~ÚÓ Ç° %,, ±È%° ÚÓì± ±È
ÁÍ, Òì.
- (2) ÌÓÚ±ÍÓ, ÈÚ, ÒÁÍÁÍÚÓ, ÒÓÍÓÈ ÁÍÈÄ VTR (DC
OUT).

èèÒÑìèèÒÜÑÒçàÒ
èÁÚÁ, ÒÈ Ò Ó,Ò% ÒÍÁ%ÚÁÚ Á±ÌÁñÍÚ, ÚÓÍ, ÌÓ,
Ì±ÒÚÁ ÒÍÓÈ Ì, ±ÈÈÈÈ È Ò, ±ÌÍÓ,, Ò Ò-ÒìÚÈÈ-
±Èñ.

èèÒÑèèìÒèÒÜÒçàÒ
Ñ±ÌÈ ±ÒÒ± ±Ú ÌÁ ÒÚÌ, ±ÁÚÒñ ÒÚ
ÈÓÚÓ ÌÈÍ±ÈÈÚ±Èñ ÒÁ ÁÍ, ÚÓì±, ÒÓì±Òì
ÒÒÁ%ÈÈÁì Ò ÌÁÍÚ È~ÀÓÍÓÈ ÒÀÚÈ,, %±ÈÄ, ÁÒÈÈ
Ò±ì ±ÒÒ± ±Ú ÒÚÌ, ±ÁÍ.

è ÈÌÁ~±Èñ Í Ì±ÍÓÓ~ÌÁ POWER

- ã±ÍÓÓ~Ì± POWER-Ú%ÁÚ ÒÓÚ±, ±Ú Òñ
„ Ò ñ~ÁÈ Ì±ÍÓÁ-ÚÓ, Áñ, %±ÈÄ, ÁÓÈÈ
±ÒÒ± ±Ú-Ú%ÁÚÓÓÒÁ%ÈÈÁÒÓÓÍÁ
ÈÒÒÓÍ, ÁÓ, ±Èñ. ùÚÓ ñ, ññÁÚÒñ ÌÓ Ì±ì, Ìì.
- ÒÓÈÈ Ì±ÍÓÓ~Ì± POWER ÌÁ Á±, Ò ±ÁÚÒñ,
ÓÚÒÒÁ%ÈÈÈÚÁÒÁÚÁÓÈ ÒÓ%ÒÁ ÁÁÓ%ÒÚ
ÌÈÍÚÚÚ ÒÍÓ, ±Ò%ÒÒÁ%ÈÈÈÚÁÒÁÚÁÓÈ
ÒÓÒ%Ò

Ñíñ ÒìñÚÈñ Ì±%±ÒÚÁ ±
Á%±ÒÚÁ, ÒÈÈÈ±ÁÚÒñ Ú±ÈÈÈÄ Ò, ±ÁÓÍ, Ì±ÈÈ
±Ú± ÁÈÈÈ-ÌÓÍ (ÓÚ . 10).

Using a Car Battery

Use Sony DCP-77 DC pack (not supplied). Connect the cord of the DC pack to the cigarette lighter socket of the car (12 V or 24 V). Connect the DC pack to the battery mounting surface of the camcorder.

To remove the DC pack
The DC pack is removed in the same way as the battery pack (p. 10).

Using a Car Battery

Use Sony DCP-77 Sony (iA) DC pack (not supplied). Connect the cord of the DC pack to the cigarette lighter socket of the car (12 V or 24 V). Connect the DC pack to the battery mounting surface of the camcorder.

To remove the DC pack
The DC pack is removed in the same way as the battery pack (p. 10).

Recording with the Date or Time

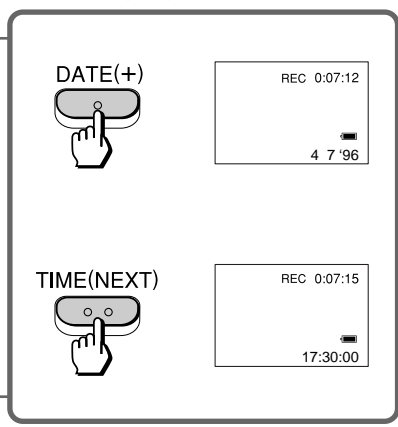
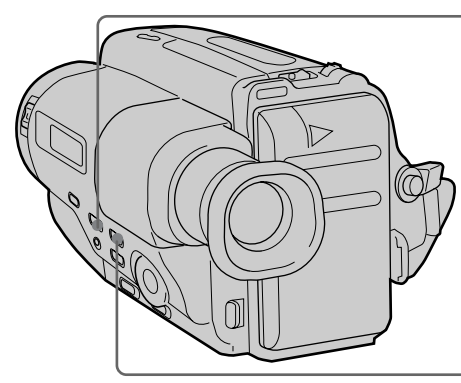
Before you start recording or during recording, press DATE(+) or TIME(NEXT). You can record the date or time displayed in the viewfinder with the picture. You cannot record the date and time at the same time. Except for the date or time indicator, no indicator in the viewfinder is recorded.

The clock is set to London for the United Kingdom models and Paris for other European models at the factory.

Recording with the Date or Time

Before you start recording or during recording, press DATE(+) or TIME(NEXT). You can record the date or time displayed in the viewfinder with the picture. You cannot record the date and time at the same time. Except for the date or time indicator, no indicator in the viewfinder is recorded.

The clock is set to London for the United Kingdom models and Paris for other European models at the factory.



To Stop Recording with the Date or Time
Press DATE(+) or TIME(NEXT) again. Recording continues.

Note
You cannot superimpose a title during recording the date or time.

Press DATE(+) or TIME(NEXT) again. Recording continues.

Note
You cannot superimpose a title during recording the date or time.

Using the PROGRAM AE Function

ÀÒÔÓÎ ÁÓ, ÌÈÄ ÙÛÍË PROGRAM AE

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

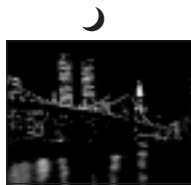
Ç° ÎÖÊÄÚÄ, °, ÌÚ, Ó%ÈÏ ÊÄ Ú ÄÏ, ÄÊËÏÓ, PROGRAM AE (Ì, ÚÓÍÌÚË~ÄÒÍÖÈ Ò ÄÏË), ÒÒÓÚ, ÄÚÓÚ, ÈÈÒÇ ÌÄÈÒÈÚÌ~ÈÄÈ. ÒÓÏÈÇ° ÈÒÓÓÍ, ÄÚÄÚÄ PROGRAM AE, Ç° ÎÖÊÄÚÄ ÄÌÄ~ÌÚÍÄÚ, °ÒÍÓÓÍÓ ÓÓÚÍÓÄ%ÄÈÒÚ, ÈÄËËÈ ÌÓ~ÌÄ, È%°.

Selecting the Best Mode

Ç° Ó ÌÈËÛ~Ä,, Ó ÄÊËÏÌ

Select the best mode by using the following examples.

Ç° Ä ÈÚÄ ÌÈËÛ~ÈÈ ÄÊËÏ, ÈÒÒÓÍ, ÄÚÏ ÓÍÄ%Ú, ÈÄ Ò ÈÏÄ °.



🏂 Sports mode

- Outdoor sports scenes such as football, tennis, golf or skiing
- A landscape in a moving car

🏏 Sports mode

- ÈÒÓ ÚË, ÌÄ ÒÄÏ°, ÌÄ ÒÓÍÄÄÏËÏ, ÌÌÒ ÈÏÄ, ÙÚÚ.ÓÍ, ÚÄÏËÈÒ, °ÓÍ, Ù ÈÏÈ Ì° ÈÈ
- ÄÌ%~ÌÚÚ ÈÄ %,, ÈÈÚ~Ä,, ÓÒÏ Ì, ÚÓÍÓ.ÈÏÏ

🏏 High-speed shutter mode

- A golf swing or a tennis match in fine weather with the ball captured clearly
- Playing back certain scenes with high-speed movements in clear, sharp picture

🏏 High-speed shutter mode

- ÄÊËÏ, °ÒÓÍÓÍÓ ÓÓÚÍÓ,, Ó ÄÌÚ, Ó Ì ÇÄÏÌÈ, Ó, ÄÏÏ È,, °, °ÓÍ Ù ÈÏÈ ÚÄÏËÈÒ, ÌÓ ÓÚ, ÓÓ,, Ó%Ú Ò ÄÚÍËÏ ÄÌÄ~ÌÚÍÄËÄÏ ÌÏ Ì
- ÇÓÓÓ ÓÈÄ, Ä%ÄÏÈÄÓÓ Ä%ÄÏÏÏ~ÒÄÏÒ, °ÒÓÍÓÍÓ ÓÓÚÍÈ %,, ÈÈÄÏËÏÈÈ Ò ÄÚÍËÏ, ÄÄÏÈÈ ÈÄÓ. ÌÈÄÏÈÄÏ

🌙 Twilight mode

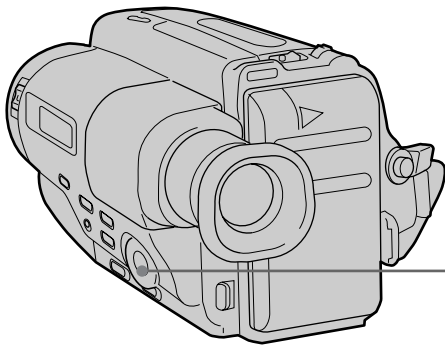
- Recording night views, neon signs or fireworks

🌙 Twilight mode

- ÄÌÈÈÈ, ÌÓ~Ì, È%Ó,, ÌÄÓÍÓ,, ÄÏÌÌ ÈÏÈ ÚÄÈÄ, Ä ÍÓ,

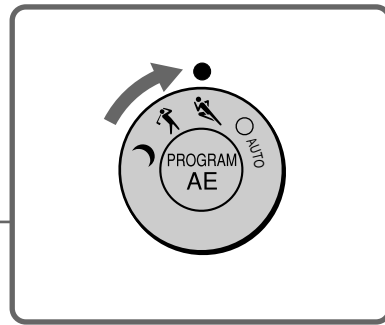
Using the PROGRAM AE Function

Set the mark of the desired mode to the ● mark above the PROGRAM AE dial.



PROGRAM AE

Set the mark of the desired mode to the ● mark above the PROGRAM AE dial.



Note on shutter speed

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

- Sports mode – between 1/50 to 1/500
- High-speed shutter mode – 1/4000
- Twilight mode – 1/50
- AUTO mode – 1/50

Set the mark of the desired mode to the ● mark above the PROGRAM AE dial. The shutter speed in each PROGRAM AE mode is as follows:


- Sports mode – between 1/50 to 1/500
- High-speed shutter mode – 1/4000
- Twilight mode – 1/50
- AUTO mode – 1/50


Shooting with Backlighting

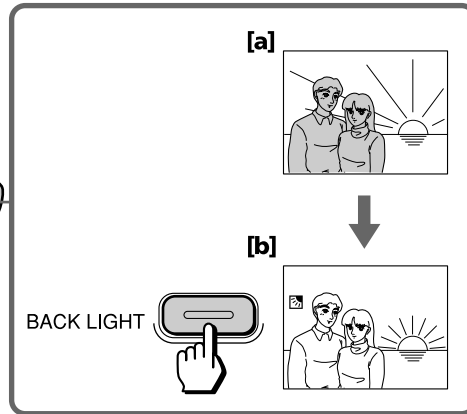
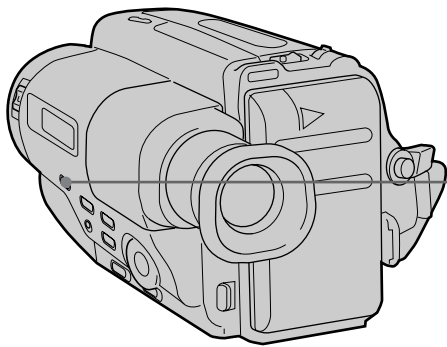
επιβάλλοντας φωτισμό από το πίσω μέρος

When you shoot a subject with the light source behind the subject or a subject with a light background, use BACK LIGHT.

Όταν φωτογραφίζετε ένα θέμα με το φως να βρίσκεται πίσω από το θέμα ή με ένα θέμα με φωτεινό φόντο, χρησιμοποιήστε την λειτουργία BACK LIGHT.

Press BACK LIGHT. The  indicator appears inside the viewfinder.


Πατήστε το κουμπί BACK LIGHT. Το  εμφανίζεται μέσα στο οπτικό πεδίο.




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

- [a] Το θέμα είναι πολύ σκοτεινό λόγω φωτισμού από το πίσω μέρος.
- [b] Το θέμα γίνεται φωτεινό λόγω φωτισμού από το πίσω μέρος.

After Shooting

Press BACK LIGHT again to let the  indicator go out under normal lighting condition. Otherwise, the picture will be too bright under normal lighting condition.

επιβάλλοντας φωτισμό από το πίσω μέρος
 Πατήστε ξανά το κουμπί BACK LIGHT, το  θα σβήσει σε κανονικές συνθήκες φωτισμού. Διαφορετικά, η εικόνα θα είναι πολύ φωτεινή σε κανονικές συνθήκες φωτισμού.

This function is also effective under following conditions:

- On the snow e.g. at the ski resort
- At the beach under strong sunshine
- A subject with a light source nearby or a mirror reflecting light
- A white subject against a white background.
 Especially when you shoot a person wearing shiny clothes made of silk or synthetic fiber, his or her face tends to become dark if you do not use this function.

- Σε χιόνι π.χ. στα σκι
- Στην παραλία με έντονο ηλιακό φως
- Ένα θέμα με πηγή φωτός κοντά ή με καθρέφτη που αντανακλά το φως
- Ένα λευκό θέμα με λευκό φόντο.
 Ειδικά όταν φωτογραφίζετε ένα άτομο που φοράει λαμπερά ρούχα από μεταξένιες ή συνθετικές ίνες, το πρόσωπό του μπορεί να γίνει σκοτεινό αν δεν χρησιμοποιήσετε αυτή τη λειτουργία.

Selecting the START/STOP Mode

START/STOP

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

(1) Set START/STOP MODE to the desired mode.

ANTI GROUND SHOOTING : Recording starts when you press START/STOP, and stops when you press it again (normal mode).

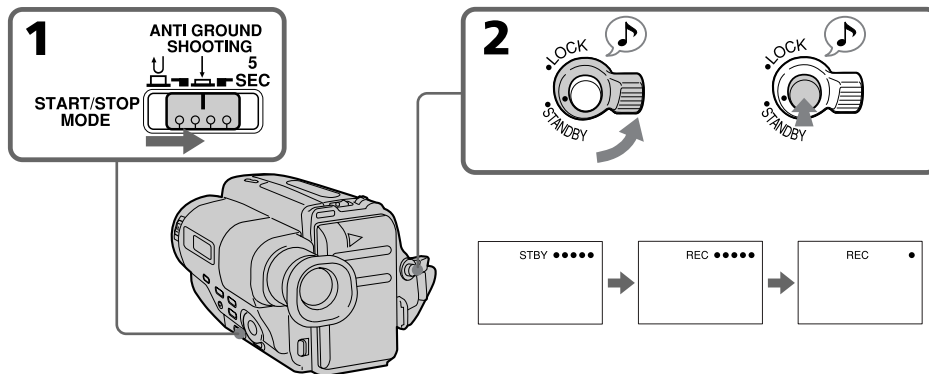
ANTI GROUND SHOOTING : The camcorder records only while you press down START/STOP so that you can avoid recording unnecessary scenes.

5 SEC : When you press START/STOP, the camcorder records for about 5 seconds and then stops automatically.

(2) Turn STANDBY up and press START/STOP. Recording starts.

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

If you selected **ANTI GROUND SHOOTING**, the camcorder records as long as you hold down START/STOP.



To Extend the Recording Time in 5 SEC Mode

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

(1) Set START/STOP MODE to the desired mode.

ANTI GROUND SHOOTING : Recording starts when you press START/STOP, and stops when you press it again (normal mode).

ANTI GROUND SHOOTING : The camcorder records only while you press down START/STOP so that you can avoid recording unnecessary scenes.

5 SEC : When you press START/STOP, the camcorder records for about 5 seconds and then stops automatically.

(2) Turn STANDBY up and press START/STOP. Recording starts.

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

Superimposing a Title

You can select from ten preset titles to superimpose it on the picture during recording. Each time you press TITLE, the preset titles appear one by one.

To Superimpose from the Beginning

- (1) Set the POWER switch to CAMERA.
- (2) Turn STANDBY up.
- (3) Press TITLE repeatedly until the desired title appears. The title flashes.
- (4) Press START/STOP to start recording.
- (5) Press TITLE when you want to turn off the title.

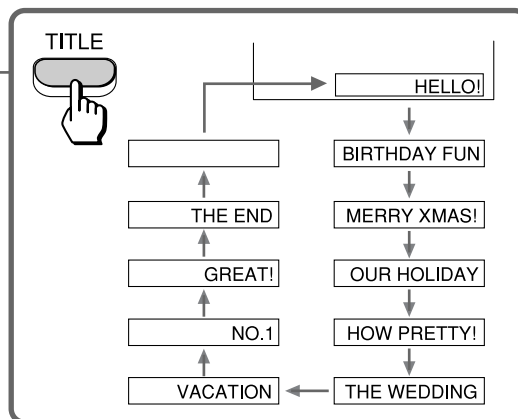
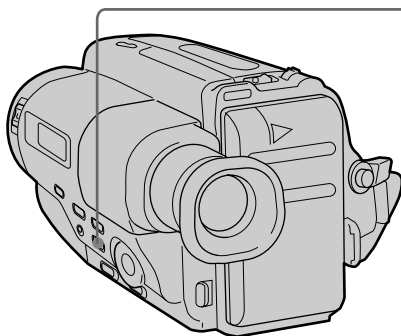
To Superimpose On the Way of Recording

- (1) Press TITLE repeatedly until the desired title appears. The title flashes.
- (2) When the title stops flashing, press TITLE. The title disappears.
- (3) Press START/STOP to start recording.
- (4) Press TITLE when you want to superimpose the title.
- (5) Press TITLE when you want to turn off the title.

Ç° İÖÊÀÚÀ, ìÉ ±Ú, ÈÁ %ÀÒÍÚË
 Ó Á%± ÈÚÀÏ İÓ ÚÓÚ±İÓ, İÀİİ° İ±%ÔËÒÀË
 %İİ İ±İÖÊÀİËİİ Èİ İ± ÈÁÓ. ±ÈÀİËÀ, Ó, Àİİ
 Á±ÔËÒË. ä±È%È ±Á, İÓ, %± Ç° İ±ÈËİ±ÁÚÀ
 İİÓÍÚ TITLE, Ó Á%± ÈÚÀÏ İÓ
 ÚÓÚ±İÓ, İÀİİ° Á İ±%ÔËÒË ÓÓİİ, İİ, ÚÒİİ Ó%İ± Á±
 %Ú, ÖË

- Ñİİİ İ±İÖÊÀİËİİ ÓÚ İ±~±İ±
- (1) ÈÁ Á%± Èİ ÚÀ ÓÀ Áİİ, ±ÚÀİ, POWER, ÓÓİÖÊÀİËÀ CAMERA.
 - (2) èÓ, Á İËÚÀ STANDBY, „Á İ.
 - (3) ÇÁÓ%İÓÍ ±ÚİÓ İ±ÈËİ±ÈÚÀ TITLE, ÓÓİ± İÀ ÓÓİİ, ÈÚÒİİ ÈÁİ±Áİ±İİ İ±%ÔËÒ, Ç±%ÔËÒ, Ú%ÀÚİË, ±Ú.
 - (4) Ç±ÈİËÚÀ START/STOP %İİ İ±~±İ± Á±ÔËÒË.
 - (5) Ç±ÈİËÚÀ TITLE, İÓ, %± Ç° Á±İÓÚÈÚÀ, İİ, ÈÚ, İ±%ÔËÒ.

- Ñİİİ İ±İÖÊÀİËİİ, Ó Ó°ÀÒÒÀ Á±ÔËÒË
- (1) ÇÁÓ%İÓÍ ±ÚİÓ İ±ÈËİ±ÈÚÀ TITLE, ÓÓİ± İÀ ÓÓİİ, ÈÚÒİİ ÈÁİ±Áİ±İİ İ±%ÔËÒ, Ç±%ÔËÒ, Ú%ÀÚİË, ±Ú.
 - (2) èÓ, %± İ±%ÔËÒ, ÓÀ ÁÓÚ±İÀÚİË, ±Ú, İ±ÈİËÚÀ TITLE. Ç±%ÔËÒ, ÈÒ ÁÀİÀÚ.
 - (3) Ç±ÈİËÚÀ START/STOP %İİ İ±~±İ± Á±ÔËÒË.
 - (4) Ç±ÈİËÚÀ TITLE, İÓ, %± Ç° ÓÓÈÁİ±ÁÚÀ İ±İÖËËÚ, İ±%ÔËÒ.
 - (5) Ç±ÈİËÚÀ TITLE, İÓ, %± Ç° Á±İÓÚÈÚÀ, İİ, ÈÚ, İ±%ÔËÒ.



Note on selecting a title
 You cannot select a title during recording.

è ÈİÄ~±İËÀ İ, °Ó Ú İ±%ÔËÒË
 Ç° İÀ İÖÊÀÚÀ, ìÉ ±Ú, İ±%ÔËÒ, Ó, Àİİ
 Á±ÔËÒË

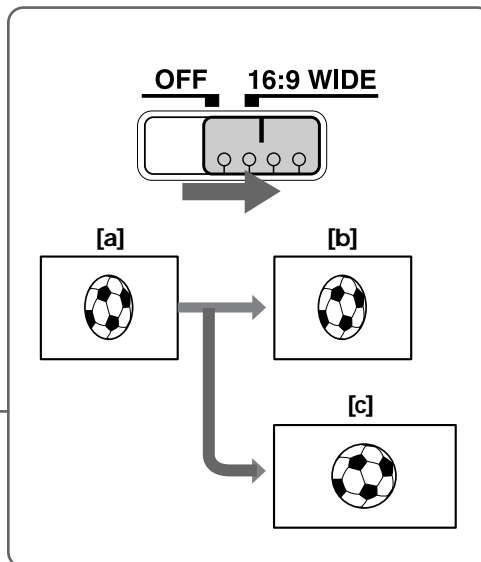
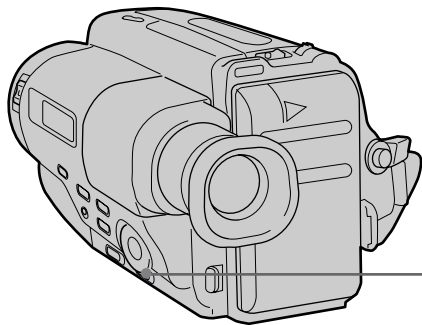
Using the Wide Mode Function

- CCD-TR402E only

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

Using the Wide Mode Function

Set 16:9 WIDE to 16:9 WIDE.
The picture in the viewfinder [a] or on a normal TV [b] is horizontally compressed. You can watch the picture of normal images on a wide-screen TV [c].



To Release the Wide Mode
Set 16:9 WIDE to OFF.

Notes on wide mode

- When you record in 16:9 WIDE mode, the date or time indicator will be widened on the wide-screen TV.
- If you dub a tape, the tape is copied in the same mode as the original recording.

Using the Wide Mode Function

- CCD-TR402E

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

Using the Wide Mode Function

Set 16:9 WIDE to 16:9 WIDE.
The picture in the viewfinder [a] or on a normal TV [b] is horizontally compressed. You can watch the picture of normal images on a wide-screen TV [c].

To Release the Wide Mode
Set 16:9 WIDE to OFF.

- When you record in 16:9 WIDE mode, the date or time indicator will be widened on the wide-screen TV.
- If you dub a tape, the tape is copied in the same mode as the original recording.

Changing the Mode Settings

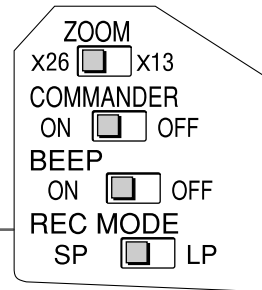
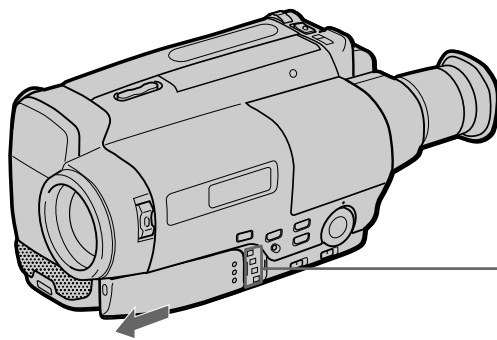
ÀÁÏÀÏÀÏÈÄ ÄÈËÏ° ÙÒÙ±ÍÓ,ÓÍ

You can change the mode settings to further enjoy the features and functions.

- (1) Slide the cover to the left. You will find the mode switches.
- (2) Set the mode switches to the desired mode.
- (3) Close the cover.

Ç° ÌÓÈÄÚÄ ÈÁÏÀÏÍÙ, ÙÒÙ±ÍÓ,ÏÈ ÄÈËÏ°, %òíñ Ì±ÒÍ±È%òíñ Ì±ÓÓÒÍÈÙÄÏ,ÏÈÈ Ò,ÓÈÓÙ,±ÈÈ È ÙÒÍÏÈÏÈÈ.

- (1) èÄ Ä%ò,ÈÏ ÙÄ Í°ÍÙ, ÏÄ,Ó. Ç° Ù,È%ÈÙÄ ÓÄ ÁÏ,±ÙÄÏÈ ÄÈËÏ°,.
- (2) ÌÒÙ±ÍÓ,ÈÙÄ ÓÄ ÁÏ,±ÙÄÏÈ ÄÈËÏ°, Ì± ÈÁÏ±ÁÏÈ ÄÈËÏ°.
- (3) áÍ ÓÈÙÄ Í°ÍÙ.



Selecting the Mode Setting of Each Item

ZOOM <x26/x13> (CCD-TR402E only)

- Set to x26 to activate digital zooming.
- Set to x13 otherwise. The zooming ability becomes x13.

COMMANDER <ON/OFF>

- Set to ON when using the supplied Remote Commander for the camcorder.
- Set to OFF when not using the Remote Commander for the camcorder.

BEEP <ON/OFF>

- Set to ON to turn the beep sound on.
- Set to OFF to turn the beep sound off.

REC MODE <SP/LP>

- Select SP to record a tape in SP (standard play) mode.
- Select LP to record a tape in LP (long play) mode.

Ç°Ó ÙÒÙ±ÍÓ,ÏÈ ÄÈËÏ± ÓÓ Ì±È%òíÙ ÒÙÍÍÙÙ

ZOOM <x26/x13> (ÙÒÍ,ÍÓ %òíñ ÌÓ%ÄÏÈ CCD-TR402E)

- ÌÒÙ±ÍÓ,ÈÙÄ, ÓÓÍÓÈÄÏÈÄ Ì26, ±ÙÓ° Ä±%ÄÈÓÙ,Ó,±Ù, ±ÈÙ Ó,Ù, Ù ±ÌÒÙÓÍ±ÈÈ.
- Ç° Ù,ÈÏ ÓÍÙ±Ï, ÙÒÙ±ÍÓ,ÈÙÄ, ÓÓÍÓÈÄÏÈÄ Ì13, ÇÓÁÏÓÈÏÓÙ, Ù ±ÌÒÙÓÍ±ÈÈ ÓÙ±ÍÓ,ÈÙÓÏ Ì13.

COMMANDER<ON/OFF>

- ÌÒÙ±ÍÓ,ÈÙÄ, ÓÓÍÓÈÄÏÈÄ ON Ò È ÈÓÓÓÍ,ÁÓ,±ÈÈ Ò ÈÏ,±ÁÏÓ,ÓÓÙÍ,Ù± %òÈÓÙ±ÈÈÓÍ,ÓÓÙÓ ±,ÏÄÏÈñ %òíñ È%òÁÓÍÄ°.
- ÌÒÙ±ÍÓ,ÈÙÄ, ÓÓÍÓÈÄÏÈÄ OFF, ÁÓÈÈ ÓÙÍ,Ù %òÈÓÙ±ÈÈÓÍ,ÓÓÙÓ ±,ÏÄÏÈñ ÌÄ ÈÓÓÓÍ,ÁÙÄÙÓÏñ %òíñ,È%òÁÓÍÄ°.

BEEP<ON/OFF>

- ÌÒÙ±ÍÓ,ÈÙÄ, ÓÓÍÓÈÄÏÈÄ ON %òíñ ÏÏ,±ÁÏÈñ ÁÙÏÄ ÌÓ,Ó Á,ÙÍÓ,Ó,Ó ÒÈ,,Ì±Ï±.
- ÌÒÙ±ÍÓ,ÈÙÄ, ÓÓÍÓÈÄÏÈÄ OFF %òíñ ÏÏ,±ÁÏÈñ ÁÙÏÄ ÌÓ,Ó Á,ÙÍÓ,Ó,Ó ÒÈ,,Ì±Ï±.

REC MODE <SP/LP>

- Ç° Ä ÈÙÄ SP %òíñ Ä±ÓÈÈÈ ÌÄÍÙ°, ÄÈËÏÄ SP(ÓÙ±±%± ÙÍÓ,Ó,ÓÓÓ ÓÈÄ,Ä%òÄÏÈñ).
- Ç° Ä ÈÙÄ LP %òíñ Ä±ÓÈÈÈ ÌÄÍÙ°, ÄÈËÏÄ LP(Ù%òÈÏÄÏÍÓ,Ó,ÓÓÓ ÓÈÄ,Ä%òÄÏÈñ).

Editing onto Another Tape

αΌΙΰ±Ê ì± %ο Û,,Û, Ì
ÎÀΙΰÛ

You can create your own video programme by editing with any other 8 mm, Hi8 Hi8, VHS VHS, S-VHS S-VHS, VHS-C VHSC, S-VHS-C S-VHSC, Betamax VCR that has video/audio inputs.

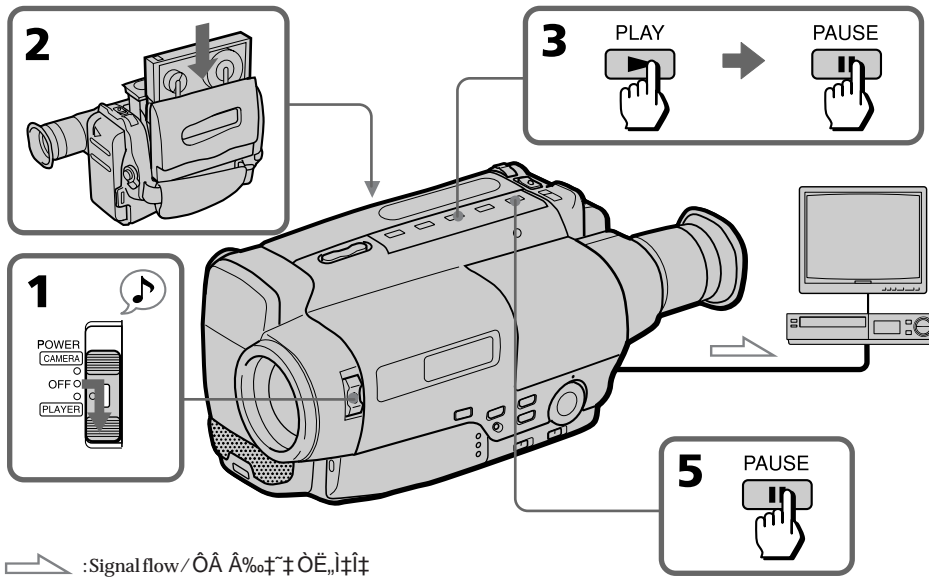
After connecting the camcorder to the VCR,

- (1) Slide the POWER switch to PLAYER.
- (2) Insert a blank tape (or a tape you want to record over) into the recording VCR. Then insert your recorded tape into the camcorder.
- (3) 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 to playback pause mode.
- (4) Set the recording VCR to recording pause mode.
- (5) Press **II** on the camcorder and then on the VCR to start editing.

Ç° İÓÊÁÛÂ ÓÓÁ%±Û, Ç±Û ÓÓ·ÓÛ,ÁìÛ, Ë%ÁÓÓ Ó,, ±ÛÛ ÓÛÛÁìÛÛ±Ê±±%Û,ÓÊ àÇà Ò 8-Ì ÎÀΙΰÓÊ, Hi8 Hi8, ÎÀΙΰÓÊ VHS VHS, S-VHS S-VHS, VHS-C VHSC, S-VHS-C S-VHSC ÊÏÊ ÎÀΙΰÓÊ 8 Betamax, ÍÓÛÓ °Ê ÊÏÁÁÛ,ìÓ%°,Ë%ÁÓ±Û%ÊÓ.

èÓÓÏÁ ÓÓ%ÓÓÁ%ÊÏÀÏÏ,Ë%ÁÓÏ±Ï° ÌaÇà.

- (1) èÁ Á%Ê, ÛÁ ÓÁ Áì, ±ÛÁì, POWER, ÓÓÏÓÊÏÊÁ PLAYER.
- (2) ÇÓÛ±, ÛÁ ÎÁ±ÓÊÓ±ÛÛ, ÎÀΙΰÛ (ÊÏÊ ÎÀΙΰÛ, Ì±ÍÓÛÓ Û, Ç° İÓÛËÛÁ Ó ÓÊÁ,ÁÓÛË Á±ÓÊÓ), Á±ÓÊÓ° ± ÊË àÇà, à±ÛÁì ÓÛ±, ÛÁ Ç±Û Á±ÓÊÓ±ÛÛ, ÎÀΙΰÛ, Ë%ÁÓÏ±Ï Û.
- (3) ÇÓÓ ÓÊÁ,Ó%ËÛÁ Á±ÓÊÓ±ÛÛ, ÎÀΙΰÛ Ì± Ë%ÁÓÏ±Ï Á, ÓÓÏ±Ï ÓÛ° ÁÛÁÏÁÓÛÓ, %Á Ç° İÓÛËÛÁ Ì±±Û, ÍÓÛÛË, à±ÛÁì Ì±ËËÛÁ **II** %òÏ ÛÓÛ±Ï,ÏË, Ë%ÁÓÏ±Ï°, ÁËËÏ Ó±ÛÁ°.
- (4) İÓÛ±ÏÓ,ËÛÁ Á±ÓÊÓ°, ± ÊË àÇà, ÁËËÏ Ó±ÛÁ Á±ÓÊÓË.
- (5) Ç±ËËÛÁ **II** Ì±, Ë%ÁÓÏ±Ï Á, ± Á±ÛÁì Ì± àÇà %òÏ Ì±±Û ÍÓÛÛË±.



To Edit More Scenes

Repeat steps 3 to 5.

To Stop Editing

Press **II** on the camcorder and VCR.


ÑÏÏ ÌÛÛ±Ê± ·ÓÏ, Á,, Ó ÍÓÏÊ~ÁÓÛ, ± Ó ÊÁÛÓ, èÓ,ÛÓ ÊÛÁ ÓÛÛÛ° Ò 3 ÓÓ 5.

ÑÏÏ ÓÓÛ±Ï,ÏË ÌÛÛ±Ê± Ç±ËËÛÁ ÌÓÓÏÛ **II** Ì±, Ë%ÁÓÏ±Ï Á Ê àÇà.

Additional Information

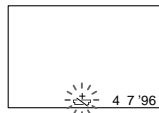
Changing the Lithium Battery in the Camcorder

NOÓÓÏËÜÄÏ, Ì†fl ÈÏÚÓ Ì†·Èfl á†IAI† ÌEUEA, OE ·†Ú† ÁÈËÈ , È%ÁÓÍ†IÁ Â

Your camcorder is supplied with a lithium battery installed. When the battery becomes weak or dead, the  indicator flashes in the viewfinder for about 5 seconds when you set the POWER switch to CAMERA. In this case, replace the battery with a Sony CR2025 lithium battery. Use of any other battery may present a risk of fire or explosion.

The lithium battery for the camcorder lasts for about 1 year under normal operation. (The lithium battery that comes installed at the factory may not last 1 year.)

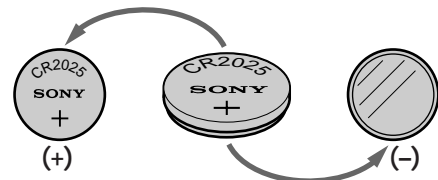
Ç†† ,È%ÁÓÍ†IÁ † Ò†·ÈÄ† ÚÓÚ†ÍÓ,ÏÄÏÒÈ ÌEUEA,OE ·†Ú† ÁÈËÈÈ. ÒÓÏÈ ·†Ú† ÁÈËÈÓÚ†IÁÚ Ò†·ÈÈ ÈËÈ ÓÓÏÓÓÚ, †Á flÈÄÏÒÈ, ÈÌ%ÈË†ÚÓ Ì·Ú%ÁÚËÈ,†Ú ,È%ÒÈÒ†ÚÄÏÄ, ÚÁ ÄËÈÁ5ÓÄÏÚÌ%Ó,ÌÓ,%†Ç·ÚÓÚ†ÍÓ,ÈÚÁ ,ÍÌ·†ÚÄÏ, POWER , ÓÓÏÓÈÄËÈÄ CAMERA. Ç Ú†ÍÓÏ ÒÏÚ·Á Á†IAIÈÚÁ ·†Ú† ÁÈËÈ Ì† ÌEUEA,Ú. ·†Ú† ÁÈËÈ Sony CR2025. àÒÓÓÏ,ÁÓ,†IÈÁ % Ú,ÒÈ ·†Ú† ÁÈËÈ ÌÓÈÁÚ Ò È,ÁÓÚÈ Ì ÈÓÏÚ ,ÓÓÓÏ†IAIÄÏfl ÈËÈ , Á ,†. àÈÚÈÄ,†fl ·†Ú† ÁÈËÈ %fl,È%ÁÓÍ†IÁ ° †·ÓÚ†ÁÚÓ ÈÈÄÈÚÄÏ,Ï,ÚÁ ÄËÈÁ 1,0%† Ò È ÌÓ Ì†Ì† Ì ÚÓÏÓ,Èfl, ÌÓÏÚÚ†Ú†ÈÈ. (àÈÚÈÄ,ÒÈ ·†Ú† ÁÈËÈ, ÌÓÚÓ fl, Ì† ÚÓÚ†ÍÓ,ÏÄÏ Ì† Á†,0%Á, ÌÓÈÁÚ ÌÄ Ì,†ÚÈÚ, Ì† 1,0%.)



Notes on Lithium Battery

- Keep the lithium battery out of the reach of children. Should the battery be swallowed, immediately consult a doctor.
- Wipe the battery with a dry cloth to assure a good contact.
- Do not hold the battery with metal tweezers, otherwise a short-circuit may occur.
- Note that the lithium battery has a positive (+) and a negative (-) terminal as illustrated. Be sure to install the lithium battery so that terminals on the battery match the terminals on the camcorder.

- è ÈÏÄ·†IÈÄ ÓÓ ÌEUEA,OE ·†Ú† ÁÈËÄ ÌÈÚÈÄ,Ï ·†Ú† ÁÈËÈ , ÌÁÓÚÁ, ÌÄ %ÓÓÓÚÓÚÓÏÓfl%ÁÚÁÈ.ÇÓÏÚ·Á Ò Ó,Ì†Ú·,†IÈfl ·†Ú† ÁÈËÈ ÌÄÏÄ%ÏÄÏÒ Ó·†ÚÈÚÁÓ, Ì, †Ú.
- è ÓÚ ÈÚÁ ·†Ú† ÁÈËÈÓÚÏ,ÒÈÚ†Ì, %flÚÓ,Ó, ~ÚÓ· Ó·ÁÓÓÁ·ÈÚ, ÌÓ ÓÈÈ ÌÓÏÚ†ÍÚ.
- çÁ%Á ÈÈÚÁ ·†Ú† ÁÈËÈÓ ÓÓÏÓ ÌÁÚ†ÌÈ·ÁÓÏÓ,Ó ÒÈÏ·ÁÚ†, ÈË·Á ÌÓÈÁÚ Ó ÓÈÁÓÈÚÈÏÓ ÓÚÏÓÁÁ†Ì†IÈÄ.
- é·†ÚÈÚÁ ÌÈËÈÈÄ, ~ÚÓ ÌEUEA,†fl ·†Ú† ÁÈËÈ ÈÏÄÁÚ ÓÓÏÓÈÈÚÄÏ ÌÈÈ (+) È ÓÚÈ·†ÚÄÏ,ÌÈÈ (-) ÓÓÏÓ, Ì†Ì ÓÓÏÁ†ÍÓ Ì† ÈÓÚÏÏÄ. çÁ Á†·Ú%ÚÁ ÚÓÚ†ÍÓ,ÈÚ, ÌEUEA,Ú ·†Ú† ÁÈËÈÚ Ú†Ì, ~ÚÓ· ÓÓÏÓ Ì† ·†Ú† ÁÈËÈÄ ÓÓÓÚ,ÁÚÓÚ,Ó,†IÈ ÓÓÏÓ†Ì Ì† ,È%ÁÓÍ†IÁ Â.



WARNING
The battery may explode if mistreated. Do not recharge, disassemble, or dispose of in fire.

èèÑÏèèÓÚÑÒçàÓ
ÓÓÏÈ Ó ·†Ú† ÁÈËÈÈ ÌÁÓ †,ÈË,ÌÓ Ó· †·Ú,Òfl, ÓÏ†ÍÓÈÁÚ,ÁÓ,†Ú,Òfl.çÁÓÁ ÁÁ† flÈ†Ú, ÌÄ †Á·È †Ú, ÈÏÄ· ÓÓ†Ú, ·†Ú† ÁÈËÈÚ, Ó,ÓÏ,.

Changing the Lithium Battery

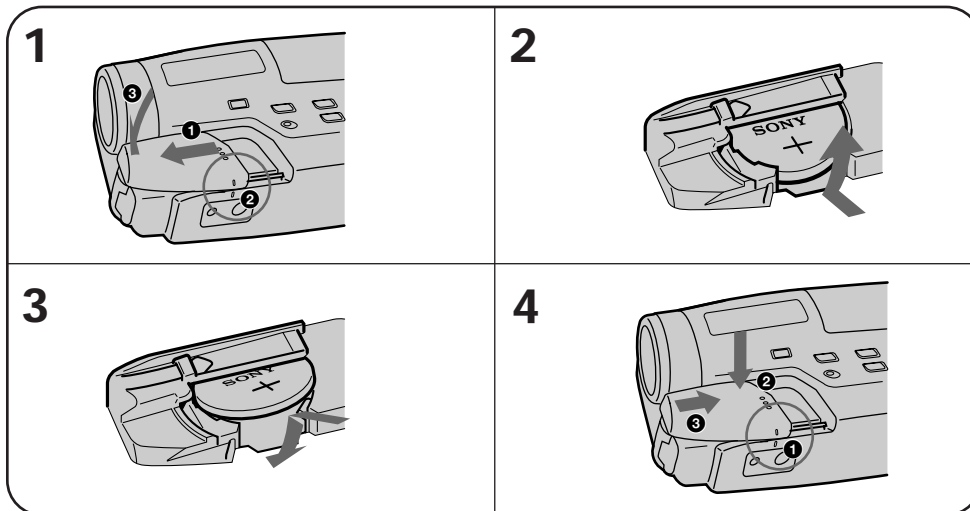
When replacing the lithium battery, keep the battery pack or other power source attached. Otherwise, you will need to reset the date and time.

- (1) Slide the cover and align the mark of the cover to that of the body. Press down the cover.
- (2) Push the battery in once and pull it out from the holder.
- (3) Install the lithium battery with the positive (+) side facing out.
- (4) Align the mark of the cover to that of the body. Press the cover until it clicks and slide the cover.

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è È Á†ÏÄì† ÌËÚËÄ,ÓË ·†Ú† ÄËÏË%Ä ÈËÚÄ ·†Ú† ÄËÏË·È·ÍÓÍËË%Ú,ÓË ÈÓÚÓÍËÏ ÓËÚ†ËË Ò ÈÓÓÄ%ÈÏÏ·Ï. à†Ä Ç†Ï Ó È%ÄÚÓÏÓÄ ÁÚÓÚ††,ÏË,†Ú,%†ÚÚË, ÄÏ.

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- (2) ç†ËÏËÚÄ ·†Ú† ÄËÏÚ Ó%ÈÏ †Ä È ,Ï,ÚÄ ÄÄ ÈÄ%Ä È†ÚÄÏ.
- (3) ÏÓÚ†ÏÓ,ËÚÄ ÏËÚËÄ,Ú ·†Ú† ÄËÏÚ ÓÓÍÓËËÚÄÏÏË(+),ÓÚÓ ÓÍÓË†ÚËËÚ.
- (4) èÓ,ÏÄÓÚËÚÄ ÏÄÚÍÚ Ì·ÏË Ò ÏÄÚÍÓË ÏÓ ÓÚÓ†. ç†ËÏËÚÄ Ì·ÍÚ, ÓÓÏ† ÓÏ† ÏÄ Á†ÄÏÏÄÚÓÏ È Ó%È,Ë,ÚÄ Ì·ÍÚ.



Resetting the Date and Time

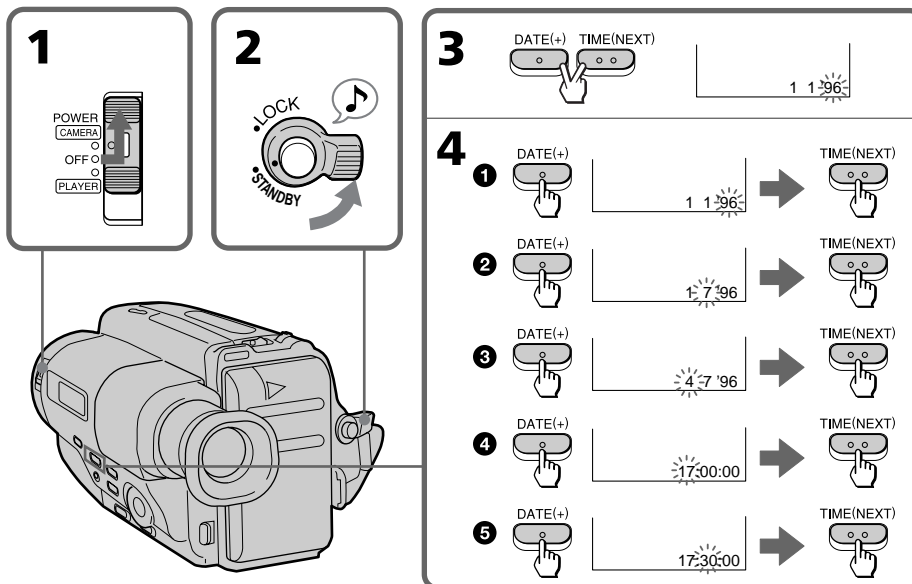
Επαναφορά Ημερομηνίας και Ώρας

Reset the date and time using the DATE(+) and TIME(NEXT) buttons.

- (1) Slide the POWER switch to CAMERA.
- (2) Turn STANDBY up.
- (3) Press DATE(+) and TIME(NEXT) simultaneously until the year indicator flashes in the viewfinder.
- (4) Set year, month, day, time, minute by pressing DATE(+) and TIME(NEXT). Note that when you keep DATE(+) pressed, the digits advance faster.

Επαναφέρετε την ημερομηνία και την ώρα χρησιμοποιώντας τα κουμπιά DATE(+) και TIME(NEXT).

- (1) Σηκώστε το διακόπτη ΠΡΩΤΟΒΑΡΙΑΣ στην κατάσταση ΚΑΜΕΡΑ.
- (2) Περιστρέψτε το κουμπί STANDBY προς τα πάνω.
- (3) Πιέστε τα κουμπιά DATE(+) και TIME(NEXT) ταυτόχρονα μέχρι να κλάψουν τα ψηφία του έτους στον οπίσθιο φακό.
- (4) Ρυθμίστε έτος, μήνα, ημέρα, ώρα, λεπτά πιέζοντας τα κουμπιά DATE(+) και TIME(NEXT). Παρατηρήστε ότι όταν κρατάτε το DATE(+) πατημένο, τα ψηφία προχωρούν πιο γρήγορα.



To Correct the Date and Time Setting
Repeat steps 3 and 4.

To Check the Date and Time
Press DATE(+) to display the date indicator in the viewfinder. Press TIME(NEXT) to display the time indicator. When you press the same button again, the indicator goes out.

Νίφη ημερομηνία ή ώρα που έχετε ρυθμίσει, επαναλάβετε τα βήματα 3 και 4.

Νίφη να ελέγξετε την ημερομηνία ή την ώρα που έχετε ρυθμίσει, πιέστε το DATE(+) για να εμφανιστεί ο δείκτης ημερομηνίας στον οπίσθιο φακό. Πιέστε το TIME(NEXT) για να εμφανιστεί ο δείκτης ώρας. Όταν πιέσετε ξανά το ίδιο κουμπί, ο δείκτης σβήνει.

Tips for Using the Battery Pack

ΕΠΙΧΕΙΡΙΣΤΙΚΕΣ ΣΥΜΒΟΥΛΕΣ ΧΡΗΣΗΣ ΤΗΣ ΜΠΑΤΑΡΙΑΣ

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 Cold Environment

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

To Save Battery Power

Turn **STANDBY** down when not recording to save battery power.

A smooth transition between scenes can be made even if recording is stopped and started again. While positioning the subject, selecting an angle, or looking through the viewfinder lens, the lens moves automatically and the battery is used. The battery is also used when a cassette is inserted or removed.

Χρησιμοποιήστε αρκετά μπαταρίες, ίσως 2 ή 3 φορές περισσότερο από ό,τι σχεδιάζετε να καταγράψετε.

επιχειριστικές συμβουλές χρήσης μπαταρίας

Ποτέ μην έχετε μόνο μία μπαταρία. Έχετε πάντα 2 ή 3 μπαταρίες επιπλέον. Η μπαταρία λειτουργεί λιγότερο αποτελεσματικά σε κρύο περιβάλλον και θα χρησιμοποιηθεί γρηγορότερα.

Για να εξοικονομήσετε μπαταρία, βάλτε το **STANDBY** σε κατάσταση χαμηλής κατανάλωσης ενέργειας όταν δεν καταγράφετε. Η μετάβαση από μία σκηνή στην επόμενη μπορεί να γίνει ομαλά ακόμα και αν η καταγραφή έχει σταματήσει. Όταν θέλετε να τοποθετήσετε ή αφαιρέσετε μια ταινία, η μπαταρία θα χρησιμοποιηθεί.

Να θυμάστε ότι η μπαταρία θα χρησιμοποιηθεί και όταν θέλετε να τοποθετήσετε ή αφαιρέσετε μια ταινία, να θέλετε να εστιάσετε ή να αλλάξετε γωνία, ή να κοιτάξετε από το φακό. Η μπαταρία θα χρησιμοποιηθεί επίσης όταν θέλετε να αλλάξετε σκηνή ή να ξεκινήσετε να καταγράφετε. Η μπαταρία θα χρησιμοποιηθεί επίσης όταν θέλετε να αλλάξετε γωνία ή να θέλετε να κοιτάξετε από το φακό. Η μπαταρία θα χρησιμοποιηθεί επίσης όταν θέλετε να αλλάξετε σκηνή ή να ξεκινήσετε να καταγράφετε.


When to Replace the Battery


While you are using your camcorder in **CAMERA** mode, the remaining battery indicator decreases gradually as battery power is used up.

απόδειξη αντικατάστασης μπαταρίας

Όταν χρησιμοποιείτε την κάμερα σε λειτουργία **CAMERA**, ο δείκτης της απομείνουσας μπαταρίας μειώνεται σταδιακά καθώς η μπαταρία εξαντλείται.



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

When the  indicator in the viewfinder disappears and the battery lamp flashes rapidly, turn the POWER switch to OFF on the camcorder and replace the battery pack. Leave the tape in the camcorder to obtain smooth transition between scenes after the battery pack has been replaced.

Note on the remaining battery indicator

The remaining battery indicator of the camcorder may indicate a different remaining capacity from that of the battery pack with the remaining battery indicator (not supplied). The indicator of the battery pack is more accurate.

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 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.

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 right before using the camcorder.

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Additional Information

Tips for Using the Battery Pack

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How to Use the Switch on the Battery Pack

When the switch is supplied with the battery pack ([a] on p. 43) you can use it to find whether the battery pack is charged or not. Set the switch to the "nomark" position when charging is completed. Set the switch to the "redmark" position when the battery is used up (or in whichever direction you want to remind yourself).

The Life of the Battery Pack

If the battery lamp 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

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

Before Recharging a Used Battery Pack

- Make sure to use up the battery before recharging.
- If recording is completed before the  indicator appears in the viewfinder, you should remove the tape, turn the POWER switch to CAMERA, turn STANDBY up, and leave the camcorder until the  indicator flashes rapidly.
- Charging the usable battery causes a lowering of battery capacity. Battery capacity can be recovered if you fully discharge and charge the battery again.

After Long Storage

Recharge the battery pack after a long period of storage. If the battery pack is charged fully but not used for a long time (about 1 year), it becomes discharged. Charge it again, but in this case the battery life will be shorter than normal. After several charging and discharging cycles, the battery life will recover its original capacity.



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ÒÓÈ, ±Ú± ÀÈÌ°È ·ÌÓ± ÒÒÌ±ÄÌ ÒÂ ÄÌ,±ÚÄÌ,±ÚÄÌ ([a] Ì± ÒÚ, 43), ÒÓ Ç° ÌÓÈÁÚÄ ËÒÒÓÎ,ÁÓ,±Ú, Ä,Ó% ÌÒÒ Ä%ÄÌÄÌÈ,Ä± ÌÈÄÌ ÌÈ, ±Ú± ÀÈÌ°È ·ÌÓ± ÈÌÈ ÌÁÚ, ÌÓÚ±ÌÓ,ÈÚÄ ÒÂ ÄÌ,±ÚÄÌ, ÒÓÄÈ°È, "ÄÄ ÌÁÚÌÈ, ÁÓÈÈ ±Ú± ÀÈÌ°È ·ÌÓ± ÒÒÌÒÓÚ, Ä± ÌÈÄÌ, ÌÓÚ±ÌÓ,ÈÚÄ ÒÂ ÄÌ,±ÚÄÌ, ÒÓÄÈ°È "Ì ±ÌÓÌÈ ÌÁÚÌÈ" ÁÓÈÈ Ä± ÌÒ, ±Ú± ÀÈÌ°È ·ÌÓ± ÈÄ ±ÌÓ,Ó% Ò ±Ì (ÈÌÈ ÈÄ, Ì±ÌÓÄ-ÌÈ-Ó % Ò, ÒÂ ÒÓÌÓÈÄÌÈÄ % Ì Ì±ÒÓÌÈ Ì±ÈÈÈ).

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ÌÄÌÒÄ ±ÚÚ ±Ä± Ì%ÒÌÈ Ç±Ì ÒÁÄ%ÒÁÚ Ä± ÌÈ±Ú, ±Ú± ÀÈÌ°È ·ÌÓ± Ò È ÒÁÌÒÄ ±ÚÚ ÄÒÚ 10°È% Ò 30°È (ÒÚ 50°È% Ò 86°È), è È ·ÒÌÄÄÌÈÄÌÓÈ ÒÁÌÒÄ ±ÚÚ Ä Ò Á·ÄÚÒÈÈ,ÒÌÄÄ%ÈÚÄÌ,ÌÒÄ, ÄÌÄÄ± Ì%ÒÌÈ.

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Tips for Using the Battery Pack

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Notes on Alkaline Batteries

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

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

If battery leakage occurred

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

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Maintenance Information and Precautions

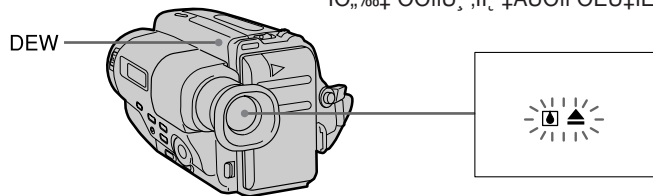
αὐτὸ ἰσχυρὸ ὑπόθεσις
 ἰσοθεσις ὑποθέσῃ

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 unit may not operate correctly. To prevent possible damage under these circumstances, the camcorder is furnished with moisture sensors. Please, take the following precautions.

Inside the Camcorder

If there is moisture inside the camcorder, the beep sounds and the DEW lamp or 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 the  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. The camcorder can be used again if the  indicator does not appear when the power is turned on again.



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 has reached the temperature surrounding it (after about 1 hour).

αὐτὸ ἰσχυρὸ ὑπόθεσις

Ὅταν ἡ συσκευή φέρῃ ἀπὸ κρύου τοῦ χώρου καὶ μεταφερθῆτε ἐν θερμῷ, ἡ υγρασία δύναται νὰ συμπυκνωθῆτε ἐντὸς τῆς συσκευῆς, ἐπὶ τῆς ἐπιφάνειας τῆς ταινίας, ἢ ἐπὶ τοῦ φακοῦ. Ἐν τῇ κατάστασει αὗτη, ἡ ταινία δύναται νὰ κολληθῆτε ἐπὶ τὸ κεφάλαιον τῆς κεφαλῆς καὶ νὰ φθαλεῖ, ἢ ἡ συσκευή δύναται νὰ λειτουργήσει ἀσφύτως. Ἐν τῇ κατάστασει αὗτη, ἡ συσκευή ἐφορτισμένη μετὰ ἀπορροφητῶν υγρασίας. Παρακαλοῦμεν νὰ ἐπιληφθῆτε τῶν ἀποφειδῶν αὐτῶν.

Ὑγρασία ἐντὸς τῆς συσκευῆς
 Ἐάντις ἡ συσκευή εἴη ἐν κρύῳ καὶ μεταφερθῆτε ἐν θερμῷ, ἡ υγρασία δύναται νὰ συμπυκνωθῆτε ἐντὸς τῆς συσκευῆς, ἐπὶ τῆς ἐπιφάνειας τῆς ταινίας, ἢ ἐπὶ τοῦ φακοῦ. Ἐν τῇ κατάστασει αὗτη, ἡ ταινία δύναται νὰ κολληθῆτε ἐπὶ τὸ κεφάλαιον τῆς κεφαλῆς καὶ νὰ φθαλεῖ, ἢ ἡ συσκευή δύναται νὰ λειτουργήσει ἀσφύτως. Ἐν τῇ κατάστασει αὗτη, ἡ συσκευή ἐφορτισμένη μετὰ ἀπορροφητῶν υγρασίας. Παρακαλοῦμεν νὰ ἐπιληφθῆτε τῶν ἀποφειδῶν αὐτῶν.

ἐπὶ τοῦ φακοῦ
 Ἐάντις ἡ υγρασία συμπυκνωθῆτε ἐπὶ τοῦ φακοῦ, οὐκ ἔσται ἰσχυρὸ ἠχηρὸν, ἀλλὰ τὸ εἶδος τῆς εἰκόνης δύναται νὰ γίνει ἀσφύτων. Ἐν τῇ κατάστασει αὗτη, ἀποσβέστε τὸν κινητὸν ἀπορροφητῶν υγρασίας καὶ μὴ χρῆσασθε τὴν συσκευήν ὑποὺς αὗτην περίστασειν ὑποὺς ἀπὸ 1 ὥραν.

Ὅπως νὰ ἐπιληφθῆτε τῆς ὑγρασίας
 Ἐάντις μεταφέρῃτε τὴν συσκευήν ἀπὸ κρύου τοῦ χώρου ἐν θερμῷ, ἐπιληφθεὶς τῆς συσκευῆς ἐν πλαστικῷ σακίῳ καὶ ἐπιτρέψτε τῇ συσκευῇ νὰ ἀναρροφηθῆτε ἐν τῇ ἀτμοσφαιρῇ τοῦ χώρου ὑποὺς ἀπὸ 1 ὥραν.


- (1) Βεβαιώσατε νὰ ἐπιληφθῆτε τῆς πλαστικῆς σακίῳ ἀπὸ κρύου τοῦ χώρου καὶ νὰ ἐπιληφθῆτε τῆς συσκευῆς ἐν τῇ ἀτμοσφαιρῇ τοῦ χώρου.
- (2) Ἐξάλειψτε τὸ σακίον ἀπὸ τὴν συσκευήν ὅταν ἡ ἀτμοσφαῖρα ἐντὸς τοῦ σακίου ἔσται ἐν τῇ ἀτμοσφαιρῇ τοῦ χώρου (ὑποὺς ἀπὸ 1 ὥραν).

Additional Information No. 0011EUA11H EU0011-EH


Maintenance Information and Precautions

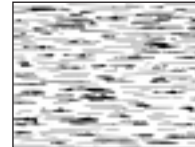
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Video Head Cleaning

To ensure normal recording and clear pictures, clean the video heads. When the  indicator appears in the viewfinder in CAMERA mode or playback pictures are "noisy" or hardly visible, the video heads may be contaminated.

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[a]  [b]

[a] Slightly contaminated
[b] Critically contaminated

If this happens, clean the video heads with the Sony V8-25CLH cleaning cassette (not supplied). After checking the picture, if it is still "noisy", repeat the cleaning. (Do not repeat cleaning more than five times in one session.)

Caution

Do not use a commercially available wet-type cleaning cassette. It may damage the video heads.

Note

If the V8-25CLH cleaning cassette is not available in your area, consult your nearest Sony dealer.

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[b] ä ÈúÈ~ÀòíóÁÁ±, ñìÁìÈÈÁ

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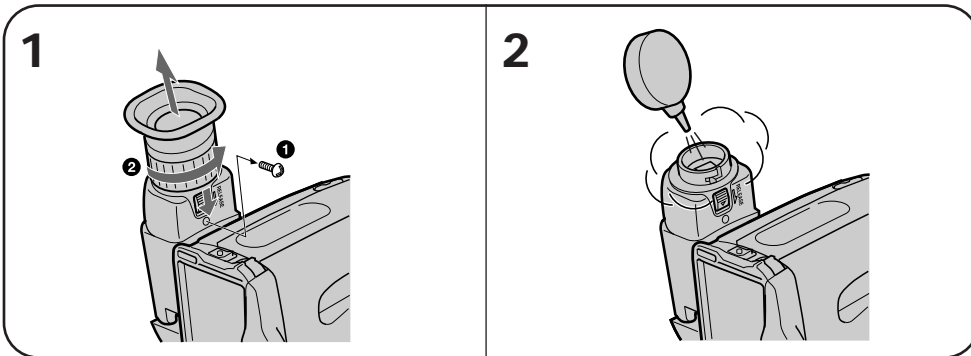
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Removing Dust from inside the Viewfinder

- (1) Remove the screw with a screwdriver (not supplied). Then, while sliding the RELEASE knob, turn the eyecup in the direction of the arrow and pull it out.
- (2) Clean the surface with a commercially available blower.

Εξάλειψη σκόνης από το εσωτερικό του οπίσθιου φακωτήρα

- (1) Αφαιρέστε το βίδιο με βιδωτήρα (δεν παρέχεται). Στη συνέχεια, κινώντας το κουμπί RELEASE, στρέψτε το φακωτήριο στην κατεύθυνση της βελόνας και τραβήξτε το προς τα έξω.
- (2) Καθαρίστε την επιφάνεια με βLOWER που είναι εμπορεύματα.

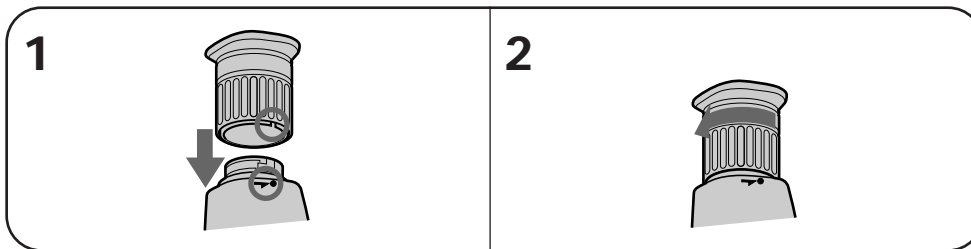


To Reattach the Eyecup

- (1) Align the groove on the eyecup with the mark on the barrel.
- (2) Turn the eyecup in the direction of the arrow. Then, replace the screw.

Νέαντας η επανατοποθέτηση του φακωτήρα

- (1) εναρμόνωση του φακωτήρα με το σημάδι που υπάρχει στο κανάλι.
- (2) εναρμόνωση του φακωτήρα στην κατεύθυνση της βελόνας. Στη συνέχεια, αντικαταστήστε το βίδιο.



Caution

Do not remove any other screws. You may remove only the screw to remove the eyecup.

Προσοχή

Μην αφαιρείτε άλλα βίδια. Μπορείτε να αφαιρέσετε μόνο το βίδιο για να αφαιρέσετε το φακωτήριο.

Additional Information Νοοοίεφαί ηη εινύό ίτ-εη

Precautions

Camcorder Operation

- Operate the camcorder using 6.0V (battery pack), or 7.5V (AC power adaptor).
- For DC or AC operation, use only the recommended accessories.
- Should any solid object or liquid fall into the casing, unplug the camcorder and have it checked by your nearest 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 camera.
- 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 rear of the cassette. These holes are used to sense the type of tape, thickness of tape and if the recording tabs is out or in.

Camcorder Care

- When the camcorder is not to be used for a long time, disconnect the power source and remove the cassette. 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 soft dry cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent which may damage the finish.

AC Power Adaptor

Charging

- Use only for the specified battery pack. This unit cannot be used to charge a lithium ion type battery.
- Attach the battery pack firmly.
- Place the battery pack on a flat surface without vibration during charging.

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- à Æ. ÆÙÈ. Û.Ó.Ó.Ç. ± ÆÈñ Ó. È%ÀÓÌ±ÌÀ ÓÈÈÈÈ ÆÌ Æ ÓÌÓ. Ó Û%± ÌÓ. Ó. Ó Æ% ÆÈÙ.Èñ. ÆÙ%° ÛÀ ÓÓÓ. ÆÌ ÓÓÓÓ ÒÈÌ° Ó. Ó. ÆÌ ÛÈ.ÓÌ.
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Others

- Unplug the unit from the wall (mains) outlet when not in use for a long time. To disconnect the cord (mains lead), pull it out by the plug. Never pull the cord itself.
- Do not operate the unit with a damaged cord or if the unit has been dropped or damaged.
- Do not bend the AC power cord (mains lead) 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

The battery charger for this camcorder is designed to charge Sony Ni-Cd batteries and should only be used for such purpose, or for the purpose of charging batteries that are compatible therewith and allow it to function safely. This battery charger should not be used with Ni-MH batteries as it may cause excessive rise in temperature of Ni-MH batteries. Sony does not warrant the compatibility or safety of this battery charger for use with batteries other than Sony Ni-Cd batteries. Before using this battery charger for charging batteries other than Sony Ni-Cd batteries, confirmations should be obtained from the battery manufacturer that such batteries are compatible with this charger and may be used safely therewith.

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

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á± ñ%ÁÓÁÚÓÚ ÓÈÓÚ.Ó ±ÍÍÚÍÚñÚÓ Í.Í. ±Ú± ÁÁÍ %ññ %±ÍÓÈ.È%ÁÓÍ±ÍÁ. Ó Á%ÁÚ±ÁÍ±.ÁÍÓ %ññ Á± ñ%ÁÈ ÈÈÁÍ.Í±%ÁÈÁ.Í. ±Ú± ÁÁÍ Ni-Cd ÚÈÈ. Sony È %ÁÓÈÈÍÓ. 'Ú. ÈÓÓÓÍ.ÁÓ.±ÍÓ ÚÓÍ.ÍÓ. 'ÚÈ. Áññ. ÈÈÈ. Áññ. Á± ñ%ÁÈ. ±Ú± ÁÁÍ. ÍÓÚÓ.Á ñ.ñ ÚÓñ ÓÓ.ÍÁÓÚÈÍÈÈ Ó. 'ÚÓÓññÚÚ.ÍÈ È Ó.ÁÓÓÁ.È.±.Ú. ÁÁÓÓ±ÓÍÓÁ ÚÚÍ.ÈÓÈÈ Ó.±ÈñÚÓÚ ÓÈÓÚ.±. NñÍÓÁÁ± ñ%ÁÓÁ ÚÓÚ ÓÈÓÚ.Ó ±ÍÍÚÍÚñÚÓ Í.Í. ±Ú± ÁÁÍ ÍÁ. ÓÍÁ%ÁÚÁÚ ÈÓÓÓÍ.ÁÓ.±Ú. %ññ Á± ñ%ÁÈ. ±Ú± ÁÁÍ Ni-MH. Ú±Í±Í 'ÚÓ ÍÓÈÁÚ.Ó È.ÁÓÚÈ Í. ÁÁÍÁ ÍÓÍÚ ÓÓ. 'ÁÈ. ÚÁÍÓÁ ±ÚÚ. ±Ú± ÁÁÍ Ni-ác. íÈ Í± Sony ÍÁ. ± ±ÍÚÈ ÚÁÚ ÓÓ.ÍÁÓÚÈÍÓÓÚ. ÈÈÈ. ÁÁÓÓ±ÓÍÓÚ. %±ÍÓ. ÓÁ± ñ%ÁÓ. ÓÚÓÚ ÓÈÓÚ. ± ±ÍÍÚÍÚñÚÓ Í.Í. ±Ú± ÁÁÍ Ó ÈÈÈ. ÓÓÓÍ.ÁÓ.±ÈÈ. Á.Ó.Ó. ±Ú± ÁÈÈ±ÈÈ. ÓÚÈÈ.ÍÈÈ ÓÚ ÍÈÁÍ. -Í±%ÁÈÁ.Í. ±Ú± ÁÁÍ Ni-Cd ÚÈÈ. Sony. èÁ Á%ÈÓÓÓÍ.ÁÓ.±ÈÁÍ%ññ.ÓÁ± ñ%ÁÓ. ÓÚÓÚ ÓÈÓÚ. ± ±ÍÍÚÍÚñÚÓ Í.Í. ±Ú± ÁÁÍ %ññ Á± ñ%ÁÈ %Ú.È.Í. ÓÚÈÈ.Í. ÓÚ ÍÈÁÍ.Í±%ÁÈÁ.Í. ±Ú± ÁÁÍ Ni-Cd ÚÈÈ.Í. Sony. %ÁÓÈÈÍÓ. 'Ú. ÓÓÍÚ.ÁÍÓ ÓÓ%Ú.Á È%ÁÈÁÓÚÈÁ.ÓÚÓ.ÈÚÁÍÁÈ. ±Ú± ÁÁÍ. 'ÚÓ. ±Ú± ÁÈÈÈ. ñ.ñ. ÚÓñ ÓÓÍÁÓÚÈÍÈÈ Ó %±ÍÍ.Í. Á± ñ%ÁÓ.ÍÚÓÚ ÓÈÓÚ.ÓÍÈÍÓ. ÚÚ ÓÍÈÍ. ÁÁÓÓ±ÓÍÓ ÈÓÓÓÍ.ÁÓ.±Ú.Óñ.

ÇÓÍÚ±ÁÚ Ú%ÁÓÓÚÁÈÓÚÓÓÁ%ÈÈÈÚÁ±ÓÓ± ±ÚÈÈ Ó. ±ÈÚÈÁÓ. Ç±Á. ÍÈÈÈÈ. ÁÁ. ±.ÁÍÚÓÚ.Ó. Sony.

Using Your Camcorder Abroad

àÒÓÍ ÁÓ, ìÈÄ Ç±ÄÈ
, È%ÁÓÍ±Ä ° Á± Û·ÄÈÓÍ

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

Power Sources

You can use your camcorder in any country or area with the supplied AC power adaptor within 110 V to 240 V AC, 50 / 60 Hz.

Difference in Colour Systems

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

PAL system

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

Brazil

PAL-N system

Argentina, Paraguay, Uruguay

NTSC system

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

SECAM system

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

ä±È%±fl ÒÚ ±± ÈÏÈ Ó·Ï±ÓÙ ÈÏÄÄÙ Ò, Ó
ÒÓ·ÓÙ, ÄÏÛ, ÒÈÓÙÄÏÛ ÌÄÏÛ È·ÄÓÍÓÈ ÒÄÙÈÈ
ÒÈÓÙÄÏÛ·ÄÏÛÓ, ÓÙÄÏÄ, È%ÄÏÈfl. èÄ Ä%
ÈÒÓÓÍ ÁÓ, ìÈÄÏ Ç±ÄÈ , È%ÁÓÍ±Ä ° Á±
Û·ÄÈÓÍ Ò Ó, Ä , ÚÄ ÓÍÄ%Ù, ÈÄ ÓÙÏÛ:

àÒÓÍ ÁÓ, ìÈÄ Ç±ÄÈ

Ç· ÌÓÈÄÙÄ ÈÒÓÓÍ ÁÓ, ìÈÄ Ç±ÄÈ , È%ÁÓÍ±Ä Ó
, Ì·ÓÈ ÓÙ ±Ä ÈÏÈ Ó·Ï±ÓÙÈ Ò Ó ÈÏ±, ±ÄÏÏ
ÒÄÙÄ, Ì±%±ÓÙÄ ÓÍÒÄ ÄÏ. ÚÓÏ±, Ó Ä%ÄÏ±
ÓÙ 110 Ç% Ó 240 Ç ÓÄ ÄÏ. ÚÓÏ±, 50/60 È·.

È±ÄÏÈÈÈfl , ÒÈÓÙÄÏ± , ÄÏÛÓ, Ó ÙÄÏÄ, È%ÄÏÈfl

Ñ±ÏÏ±fl , È%ÁÓÍ±Ä ± ÓÓÍÓ, ±± Ì± ÒÈÓÙÄÏÄ
PAL, ÓÓÏÈ Ç·, ÓÙÈÙÄ, ÓÓÒ ÓÈÄ, Ó%ÈÙ
ÈÄÓ· ±ÈÄÏÈÄ Ì± ÚÄÏÄ, ÈÄÓ Ó, ÓÍ %ÓÍÈÄÏ · Ó·
ÓÓÍÓ, Ì± Ì± ÒÈÓÙÄÏÄ PAL ÈÏÈ ÈÄ Ì± ÒÈÓÙÄÏÄ
SECAM ÓÙ ±ÍÓÍ%Ä ÓÏPAL-SECAM.
è Ó, Ä , ÚÄ ÓÍÄ%Ù, ÈÈÈÓÈÓÓÍ,
ÓÓÓÙ±, ÄÏÏÈÈ , ±ÏÛ±, ÈÛÍÓÍ ÓÓ fl%ÍÄ.

ÈÈÓÙÄÏ± PAL
Ä, ÓÙ ±ÏÈfl, Ä, ÓÙ Èfl, ÄÄÏ, Èfl,
ÇÄÏÈÍÓ· ÈÙ±ÏÈfl, ÈÄ Ì±ÏÈfl, ÈÓÏÏ±%Èfl,
ÈÓÍÍÓÍ, Ñ±ÏÈfl, àÒÓÏÈfl, àÙ±ÏÈfl, àÈÙ±È,
àÙ, ÄÈÙ, à±Ï±ÈÄÈfl, ÇÓ, ±fl áÄÏ±%Èfl,
ÇÓ, Ä, Èfl, èÓ ÚÙ, ±ÏÈfl, èÈÏ, ±ÓÙ, Ì±ÈÏ±%
ÏÈÏÏfl%Èfl, ò, ÄÈfl, ó, ÄÈ±ÈÈfl, È %.

ÈÈÓÙÄÏ± PAL-M Ä ±ÄÈÈÈfl

ÈÈÓÙÄÏ± PAL-N Ä , ÄÏÛÈÏ±, è± ±, ±È, Ì Ó, ±È

ÈÈÓÙÄÏ± NTSC
Ä±, ±ÍÓÍÈÄ ÓÓÙ Ó, ±, ÄÓÍÈÈfl, ÇÄÏÄÒÙÏ±,
ä±±%±, äÓÍÛÈÈfl, äÓ Äfl, äÄÍÓÈÏ±, èÄ Ó,
èÙ ÈÏ±Ï, èóÄ, Ì±È, ±Ï, ÏÈÏÈÓÓÈÏ,
ñÄÏÛ ±Ï, Ì±fl ÄÏÄ ÈÏ±, óÈÈÈ, ùÏ, ±%Ó,
ÛÏ±ÈÏ±, ùÓÓÍÈÈÈ %.

ÈÈÓÙÄÏ± SECAM
ÄÓÍ, ±ÈÈfl, ÇÄÏ, Èfl, È±È±Ï±, à ±Ï, à ±Ï,
äÓÍ±ÍÓ, èÓÍ, ±, èÓÓÓÈÈfl, èÍÓ, ±Ï±fl
èÄÒÓÙ·ÏÈÏ±, ÏÏ ±ÈÏ±, Ï ±ÏÈÈfl, óÄ·ÓÏ±fl
èÄÒÓÙ·ÏÈÏ±È%.

Trouble Check

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

Camcorder

Power

Symptom	Cause and/or Corrective Actions
The power is not on.	<ul style="list-style-type: none"> • The battery pack is not attached or not attached firmly. → Attach the battery pack firmly by pushing the lower part of the battery pack. (p. 10) • The battery is dead. → Use a charged battery pack. (p. 7) • The AC power adaptor is not connected to the mains. → Connect the AC power adaptor to the mains. (p. 25)
The power goes off.	<ul style="list-style-type: none"> • While being operated in CAMERA mode, the camcorder has been in the Standby mode for more than 5 minutes. → Turn STANDBY down once and turn it up again. (p. 13) • The battery is dead. → Use a charged battery pack. (p. 7)
The battery pack is quickly discharged.	<ul style="list-style-type: none"> • The ambient temperature is too low. (p. 40) • 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. 24)

Operation

Symptom	Cause and/or Corrective Actions
START/STOP does not operate.	<ul style="list-style-type: none"> • The tape is stuck to the drum. → Eject the cassette. (p. 11) • The tape has run out. → Rewind the tape or use a new one. (p. 22) • The POWER switch is set to PLAYER. → Set to CAMERA. (p. 12) • The tab on the cassette is out (red). → Use a new cassette or slide the tab. (p. 11)
The cassette cannot be removed from the holder.	<ul style="list-style-type: none"> • The battery is dead. → Use a charged battery pack or the AC power adaptor. (p. 7, 25)
No function except for cassette ejection works.	<ul style="list-style-type: none"> • Moisture condensation has occurred. → Remove the cassette and leave the camcorder for at least an hour. (p. 45)
The tape does not move when a tape transport button is pressed.	<ul style="list-style-type: none"> • The POWER switch is set to CAMERA or OFF. → Set it to PLAYER. (p. 22) • The tape has run out. → Rewind the tape or use a new one. (p. 22)

(to be continued)

Trouble Check

Symptom	Cause and/or Corrective Actions
The date or time indicator is flashing.	<ul style="list-style-type: none"> You pressed DATE(+) and TIME(NEXT) together for more than 2 seconds. <ul style="list-style-type: none"> → The camcorder is not malfunctioning. You may start recording. Flashing will stop soon.
The date or time indicator disappears.	<ul style="list-style-type: none"> → Reset the date and time. (p. 38)
Recording stops in a few seconds.	<ul style="list-style-type: none"> START/STOP MODE is set to $\frac{1}{2}$ or 5 SEC. <ul style="list-style-type: none"> → Set it to $\frac{2}{3}$. (p. 31)

Picture

Symptom	Cause and/or Corrective Actions
The image on the viewfinder screen is not clear.	<ul style="list-style-type: none"> The viewfinder lens is not adjusted. <ul style="list-style-type: none"> → 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.	<ul style="list-style-type: none"> The contrast between the subject and background is too high. <ul style="list-style-type: none"> → The camcorder is not malfunctioning. Change locations.
The picture is "noisy".	<ul style="list-style-type: none"> The video heads may be dirty. <ul style="list-style-type: none"> → Clean the heads using the Sony V8-25CLH cleaning cassette. (p. 46)

Others

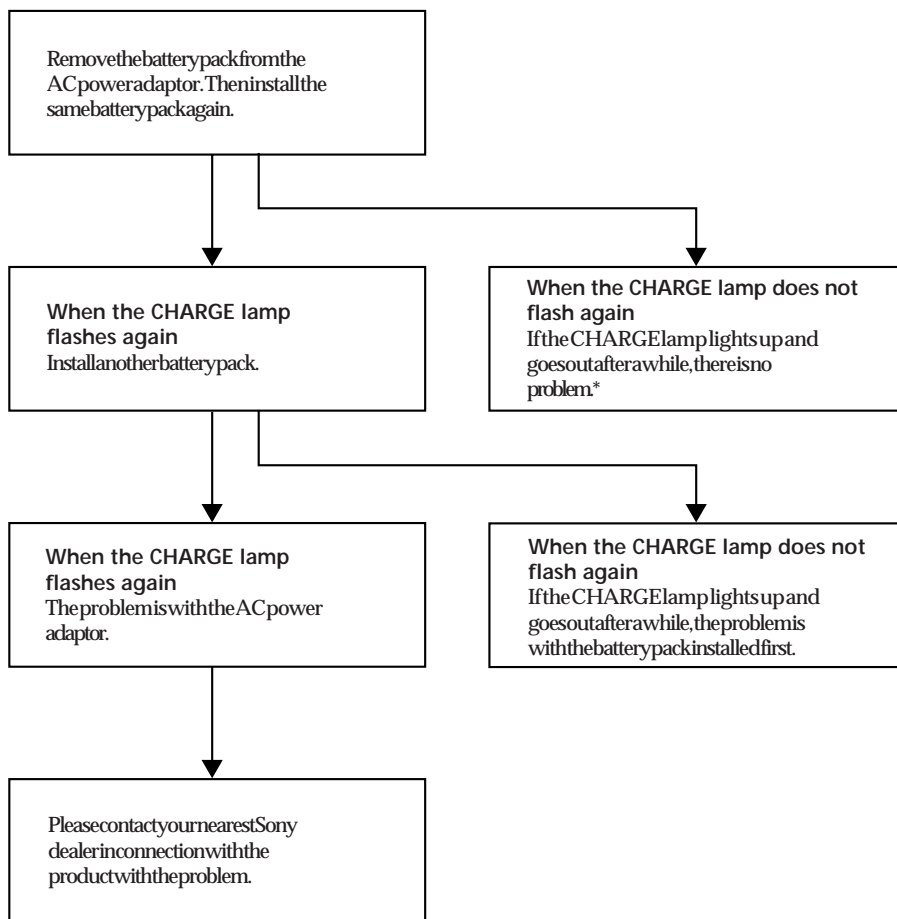
Symptom	Cause and/or Corrective Actions
The supplied Remote Commander does not work.	<ul style="list-style-type: none"> COMMANDER is set to OFF. <ul style="list-style-type: none"> → Set it to ON. (p. 34) Something is blocking the infrared rays. <ul style="list-style-type: none"> → Remove the obstacle. The battery is not inserted with the correct polarity. <ul style="list-style-type: none"> → Insert the battery with the correct polarity. (p. 63) The batteries are dead. <ul style="list-style-type: none"> → Insert new ones. (p. 63)
There is dust in the viewfinder.	<ul style="list-style-type: none"> → Detach the eyecup and clean the viewfinder lens. (p. 47)

AC Power Adaptor

Symptom	Cause and/or Corrective Actions
The POWER lamp does not light.	→ Set the selector to VTR (DC OUT) and disconnect the mains lead. After about one minute, try again. (p. 9)
The CHARGE lamp flashes.	• See the following chart.

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 into charge with the same battery pack.

è ÈÀì±í	è ÈÈì± È /ÈÌÈ %ÀÈÒÙ,Èñ ÒÓ ÙÒÙ ±ÌÀÌÈ.
ãÈ,±ÁÙ Èì%Èí±Èñ %±Ù ÈÌÈ, ÁÌÀÌÈ.	<ul style="list-style-type: none"> • Ç° ì±È±È ÌÒÓÌÈ DATE(+) È TIME(NEXT) ,ÌÀÒÙÀ ·ÓÌÀÀ, ÁÌ ì± 2 ÒÁÌÙÌ%. → ÇÈ%ÀÓÌ±Ì ±, ÈÒÒ ±,ÌÒÒÙÈ. Ç° ÌÓÈÁÙÀ ì±±Ù, Á±ÒÈÒ, ãÈ,±ÌÈÀ, ÒÍÓ Æ Ò ÁÌ ±ÙÈÙÒñ.
àÕ·ÁÁ±ÁÙÈÌ%Èí±ÙÒ %±Ù ÈÌÈ, ÁÌÀÌÈ.	→ èÌÓ,±ÙÒÙ±ÌÓ,ÈÙÀ%±ÙÙÈ, Áññ. (ÒÚρ. 38)
á±ÒÈÒ, ÒÒÙ±ì,ÌÈ,±ÁÙÒñ ·Á ÁÁÌÁÒÍÓÌ,ÌÓ ÒÁÌÙÌ%.	<ul style="list-style-type: none"> • èÁ ÁÌí ·±ÙÁÌ, START/STOP MODE ìÙÒÙ±ÌÓ,ÌÁÌ, ÒÓÍÓÈÁÌÈÀ ⏏ ÈÌÈ 5 SEC. → ìÙÙ±ÌÓ,ÈÙÀ·Ò, ÒÓÍÓÈÁÌÈÀ ⏏ . (ÒÚρ. 31)
àÁÓ· ±ÈÁÌÈÀ	
è ÈÀì±í	è ÈÈì± È /ÈÌÈ %ÀÈÒÙ,Èñ ÒÓ ÙÒÙ ±ÌÀÌÈ.
àÁÓ· ±ÈÁÌÈÀ ì± Ì±ÌÀ ·È%ÒÈÒÌ±ÙÁÌñÌÁ·ÁÙÌÒÁ.	<ul style="list-style-type: none"> • çÁ ÒÙ Á, ÙÌÈ Ò,±Ì Ò·ÁÌÙÈ, È%ÒÈÒÌ±ÙÁÌñ. → èÙ Á, ÙÌÈ ÙÈÙÁ Ò·ÁÌÙÈ, È%ÒÈÒÌ±ÙÁÌñ. (ÒÚρ. 13)
èÒñ,ÌñÁÙÒñ, Á ÙÈÌ±Ì,Ì±ñ ÒÓÍÓÒ±, ÀÒÌÈ Ù±ÌÈÀ Ò·ÁÌÙ, ±Ì Ò,ÁÙ ÈÌÈ Òì±ñ Ò,Á·È ÒÌÈì±, ÙÒñ ì± ÙÁÌÒÌ ÙÒÌÁ.	<ul style="list-style-type: none"> • èÌÈ·ÌÓÌ ·ÓÌ·ÒÈ ÌÓÌÙ ±ÒÙ ÌÁÈ%Ù Ò·ÁÌÙÓÌ È ÙÒÌÓÌ. → ÇÈ%ÀÓÌ±Ì ± ±·ÓÙ±ÁÙ ÌÒ ì±Ì,ÌÓ. àÁÌÁÌÈÙÁ ÒÓÁÈ·È, Ò·ÁÌÈ.
àÁÓ· ±ÈÁÌÈÀ “Á±·ÙÌÌÁÌÓ”.	<ul style="list-style-type: none"> • ÇÓÁÌÓÈÌÓ Á±, ñÁÌÁÌ°, È%ÁÓ, ÒÍÓ,ÌÈ. → è·ÈÒÙÈÙÁ, ÒÍÓ,ÌÈ, ÈÒÓÓÌ, ÁÙñ%ññ “ÙÓ, ÒÓ·ÈÒÙÈÙÁÌ, ÌÙ ì±ÒÒÁÙÙ V8-25CLH. (ÒÚρ. 46)
è Ó·ÁÀ	
è ÈÀì±í	è ÈÈì± È /ÈÌÈ %ÀÈÒÙ,Èñ ÒÓ ÙÒÙ ±ÌÀÌÈ.
è ÈÌ±,±ÁÌÈ ÒÙÌ Ù %ÈÒÙ±ÌÈÒÌÒ, ÒÙÒ ±ÌÁÌÈñ ÌÁ ±·ÓÙ±ÁÙ.	<ul style="list-style-type: none"> • COMMANDER ÙÒÙ±ÌÓ,ÌÁÌ, ÒÓÍÓÈÁÌÈÀ OFF. → ìÙÙ±ÌÓ,ÈÙÀ·Ò, ÒÓÍÓÈÁÌÈÀ ON. (ÒÚρ. 34) • óÙÓ-ÙÓ Ò Á, ±È%±ÁÙ ÒÙÙ, ÈÌÙ ±Ì ±ÒÌ·ÌÌÙ·±Ì. → ÙÙ ±ÈÙÁ Ò Á, ±%Ù. • Á±Ù± ÁÈÌÈ, ÒÙ±,ÌÁÌ ò ìÁÒ ±,ÈÌ,ÌÒÈ ÒÓñ ÌÓÒÙ. → ÇÒÙ±, ÙÁ ·±Ù± ÁÈÌÈ, ÒÓ·Ì%±ñ Ò ±,ÈÌ,ÌÙ, ÒÓññ ÌÓÒÙ. (ÒÚρ. 63) • á± ñ%·±Ù± ÁÁÌÈÀ ±ÒÌ%Ò,±Ì. → ÇÒÙ±, ÙÁ ÌÓ,·Á·±Ù± ÁÈÌÈ. (ÒÚρ. 63)
á±·ÌÈÌÒñ, È%ÒÈÒÌ±ÙÁÌ,	→ èÙÒÒÁ%ÈÌÈÙÁÒÌÙñ È Ò·ÈÒÙÈÙÁ·ÁÌÙÈ, È%ÒÈÒÌ±ÙÁÌñ. (ÒÚρ. 47)

(Ò Ó·%ÓÌÈÁÌÈÀ ÒÌÁ%ÙÁÙ)

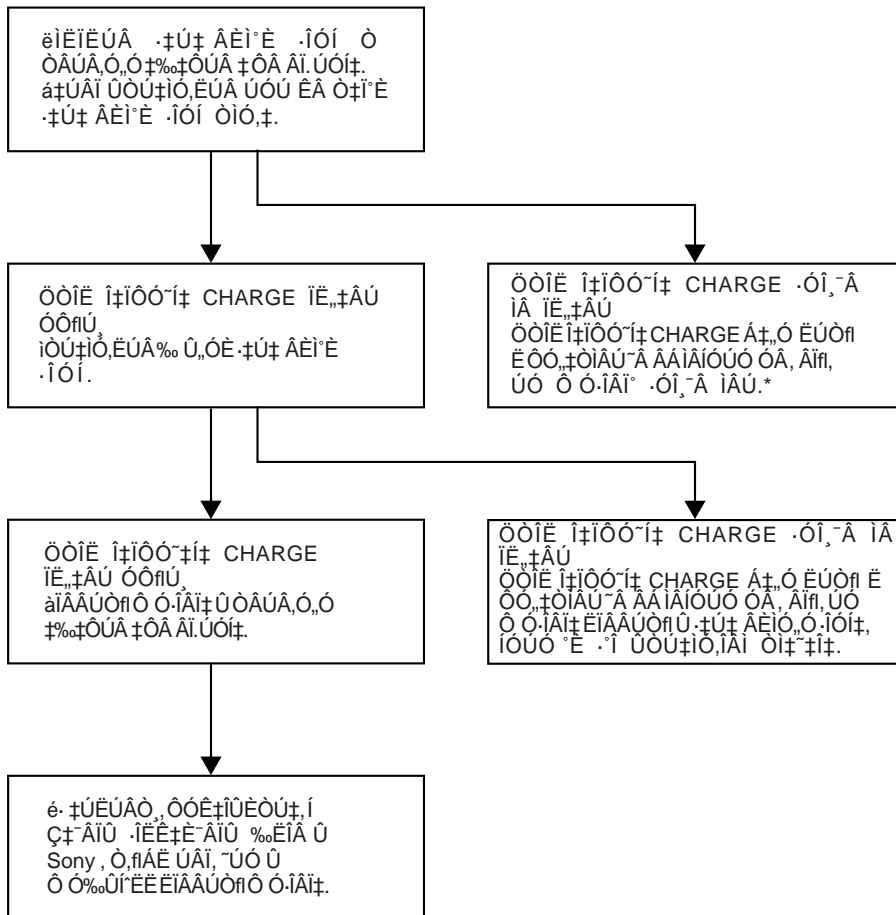
è Ó,Á ì†ìÀÈÒÒ †,ìÒÒÚÀÈ

èÁÚÀ,ÓÈ†%†ÒÚÀ ÒÀ ÌÌÀìÒ,ÓÚÓì†

è ÈÀì†ì	è È~Èì† /ÈÌÈ %ÀÈÒÚ,Èñ ÒÓ ÒÓÚ †ìÀÌÈ
à†ìÒÒ~ì† POWER ìÀ,,Ó ÈÚ.	→ÒÓÚ†ìÒ,ÈÚÀÒÀìÀìÚÓ ,ÒÓìÒÈÀÌÈÀ VTRÈÓÚÓÒÀ%ÈÌÈÚÀ ÒÓ,Ó% ÌÀìÚ ÒÒÈÚ†Èñ.òÀ ÁÁÓ%ìÚÌÈìÚÚÓÒÓÒ Ó.ÚÈÚÀ ÒìÒ,†. (ÒÚp. 9)
àÈ,,†ÁÚ Ì†ìÒÒ~ì† CHARGE.	• èìÒÚ ÈÚÀ ÒìÀ%Ò.~Ò. Ò†.ÌÈ~Ò.

àÓ,,%† ÌÈ,,†ÁÚ Ì†ìÒÒ~ì† CHARGE

è Ó,Á ,ÚÀ ÒÓ ÒìÀ%Ò.~ÀÈ Ò†.ÌÈ~À.



* ÒÒìÈ Ç° ÈÒÒÒì,ÁÚÀÚÀ .†Ú† ÀÈì°È .ìÒì, ÌÓÚÓ °È Ç° ÒÓì,ìÒ ~ÚÓ ÌÚÒÈÌÈ, ÈÌÈ ÌÓÚÓ °È .ì ÒÓÚ†,ìÀì Ì† %ìÈÚÀì ÌÒÀ , Áñ ÒÓ Ì†ìÒÒ~ì† CHARGE ÌÒÈÁÚ ÌÈ,,†Ú, Ò È ÒÀ ,ÒÈ Á† ñ%ìÀ. ÇÓ ~ÚÓìÀ ñ,ñÁÚÒñ Ò Ó.ìÀìÓÈ. èÓ,ÚÓ ÈÚÀ ÒìÒ,† Ò Ó~À%Ò Ò Ò† ñ%ÒìÈ ÒÓÚÀìÈÀ Ò†ì°ì .†Ú† ÀÈì°ì .ìÒìÒì.

English

Specifications

Video Camera Recorder System

Video recording system

Two rotary heads, Helical scanning, FM system

Audio recording system

Rotary heads, FM system

Video signal

PAL colour, CCIR standards

Usable cassette

8 mm video format cassette (standard 8 mm)

Recording/Playback time

SP mode: 1 hour and 30

minutes (P5-90)

LP mode: 3 hours (P5-90)

Fastforward/rewind time

Approx. 5 min. (P5-90)

Image device

CCD (Charge Coupled Device)

Viewfinder

Electronic viewfinder (Black and white)

Lens

CCD-TR401E: 13x, combined

power zoom lens, F1.8 – 2.8

CCD-TR402E: 13x (optical), 26x

(digital), combined power

zoom lens, F1.8 – 2.8

Focal distance

$f = 5.3 - 68.9 \text{ mm } (7/32 - 2 \frac{3}{4}$

inches), 38 – 494 mm

(1 $\frac{1}{2}$ – 19 $\frac{1}{2}$ inches) when

converted to a 35 mm still

camera

Colour temperature

Auto

Minimum illumination

0.5 lux at F 1.8

Illumination range

0.5 to 100,000 lux

Recommended illumination

More than 100 lux

Input and Output connectors

Video output

Phono jack, 1 Vp-p, 75 ohm, unbalanced

Audio output

Phono jack, 327 mV, (at load impedance 47 kilohm), impedance less than 2.2 kilohm

RFU DC OUT

Special minijack, DC 5 V

LANC jack

Stereo-mini-mini-jack (\varnothing 2.5 mm)

MIC jack

Minijack, 0.388 mV, low impedance with 2.5 to 3 V DC, output impedance 6.8 kilohm (\varnothing 3.5 mm)

General

Power requirements

On battery mounting surface

6.0 V (battery pack), 7.5 V (AC

power adaptor)

Average power consumption

CCD-TR401E: 3.6 W

CCD-TR402E: 3.7 W

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. 115 x 103 x 207 mm

(4 $\frac{5}{8}$ x 4 $\frac{1}{8}$ x 8 $\frac{1}{4}$ inches) (w/h/d)

Mass

Excluding the battery pack, lithium battery, cassette and

shoulder strap

CCD-TR401E:

Approx. 720 g (1 lb 9 oz)

CCD-TR402E:

Approx. 730 g (1 lb 9 oz)

Including the battery pack NP-

33, lithium battery CR2025,

cassette P5-90 and shoulder

strap

CCD-TR401E:

Approx. 940 g (2 lb 1 oz)

CCD-TR402E:

Approx. 950 g (2 lb 1 oz)

Microphone

Electret condenser microphone

Monaural type

Supplied accessories

See page 6.

AC power adaptor

Power requirements

110 – 240 V AC, 50/60Hz

Power consumption

AC-V16: 20 W

AC-V16A: 22 W

Output voltage

DC OUT in operation mode

7.5 V, 1.8 A

Battery charge terminal

10 V, 1.1 A in charge mode

Application

Sony battery pack

Ni-Cd type (6V):

NP-33 (800 mAh) (supplied),

NP-65/67 (1500 mAh),

NP-66H/68 (1800 mAh),

NP-77H/78 (2400 mAh),

NP-90/90D/98 (3000 mAh)

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. 166 x 43 x 75 mm

(6 $\frac{5}{8}$ x 1 $\frac{11}{16}$ x 3 inches)

(w/h/d)

including projecting parts and

controls

Mass

AC-V16: Approx. 420 g (15 oz)

AC-V16A: Approx. 450 g (16

oz)

Design and specifications are

subject to change without

notice.

Additional Information NOOOIEUAI IHI EUO I I I I I

ÌÂÏÈ~ÂÒÍÈÂ Ì‡‡ÌÚÂ ÈÒÚÈÍÈ

ÇÈ%ÂÓÍ‡ÌÂ ‡
 èÈÓÚÂÌ‡
 èÈÓÚÂÌ‡È%ÂÓÁ‡ÔÈÒÈ
 N.Â. ‡‡.ÈÁÓfl „ÓÍÒ,ÍÈ,
 Ì‡ÍÍÒÍÌ‡fl. ÍÂÌ‡ÍÈ~ÂÓÍ‡fl
 ‡.Â.Â ÚÌ‡.ÒÈÓÚÂÌ‡‡óà
 èÈÓÚÂÌ‡‡Ú%ÈÓÁ‡ÔÈÒÈ
 Ç‡‡.ÈÁÓfl „ÓÍÒ,ÍÈ,
 ÒÈÓÚÂÌ‡‡óà
 ÇÈ%ÂÓÓÈÈ.Ì‡Í
 ñ.Â.ÚÓ,ÒÈ.ÒÈ.‡‡ PAL,
 ÓÚ‡‡%‡ ÚÓÓààèè
 àÒÓÓÍ.ÂÚÂÍ^À Ì‡ÒÓÂÚ^
 ‡‡ÒÓÂÚ^ 8-Ì.È%ÂÓÚÓ Ì‡Ú‡
 (ÓÚ‡‡%‡ Ú 8Ì)
 Ç.ÂÍfl.Â‡ÔÈÒÈ/
 „ÓÓÓÈÁ.Â%ÂÍÈfl
 èÂÈÈÍ SP: 1 ‡Ò È 30 ÌÈÍÚÚ
 (è5-90)
 èÂÈÈÍ LP: 3 ‡Ò‡ (è5-90)
 Ç.ÂÍfl.ÒÂ.ÂÍÓÚÈÈ.ÒÂ.Â%
 Ì‡Â‡%
 è È.ÌÈÁ. 5 ÌÈÍ. (è5-90)
 ÍÓÍ ÈÈ.Ó.‡ÚÂÍ,
 ÈÁÓ.‡ÈÁÍÈfl
 èèD(ÒÈ.Ó.ÒÁ‡fl%Ó,ÒÈ
 Ó,fl.Â.)
 ÇÈ%ÂÓÈÈÓ‡ÚÂÍ
 ùÍÂÍÚ.ÒÍÈÈ.È%ÂÓÈÈÓ‡ÚÂÍ,
 óÂ.ÍÓ.~.ÂÍÈÈ
 è.~.ÂÍÚÈÈ,
 èèD-TR401E: 13Ì,
 ÍÓÍ.ÈÈÈ.Ó.‡ÍÈÈÈ.Ó.~.ÂÍÚÈÈ,
 Ò.ÒÈ.Ó%
 Ú.‡ÍÓÚÓ‡ÚÓ.ÓÍ, F1,8-2,8
 èèD-TR402E: 13Ì,
 (ÓÓÚÈ~.ÂÓÍÈÈÈ),26Ì („ÈÚ.Ó.ÓÈÈ)
 ÍÓÍ.ÈÈÈ.Ó.‡ÍÈÈÈ.Ó.~.ÂÍÚÈÈ,
 Ò.ÒÈ.Ó%
 Ú.‡ÍÓÚÓ‡ÚÓ.ÓÍ, F1,8-2,8
 ÍÓÍÓÚÓÍÓÁ.‡ÓÓÚÓflÈÁ
 f=5,3 - 68,9 ÌÌ, 38 - 494 ÌÌ
 ÓÈÈ.Ó.ÂÓ.‡ÁÓ.‡ÍÈÈÈ, 35 ÌÌ
 ÓÓÓ‡%
 ñ.Â.ÚÓ,‡fl.ÚÂÍÒÂ.‡ÚÚ‡
 Â.ÚÓ
 àÈÍÈÈÍ‡Í.Ì‡fl
 ÓÓ.Â.ÂÍÍÓÓÚ.
 0,5 ÌÍÓ.ÒÈÈ. F1,8
 NÈÈ‡ÓÍ.ÓÓ.Â.ÂÍÈÈfl
 ÓÚ.0,5%Ó.100000 Ì.ÍÓ
 è.ÂÍÓÍ.ÂÍ%Ú.ÂÍ‡fl
 ÓÓ.Â.ÂÍÍÓÓÚ.
 ÂÓÍ.Â.Â. 100 Ì.ÍÓ

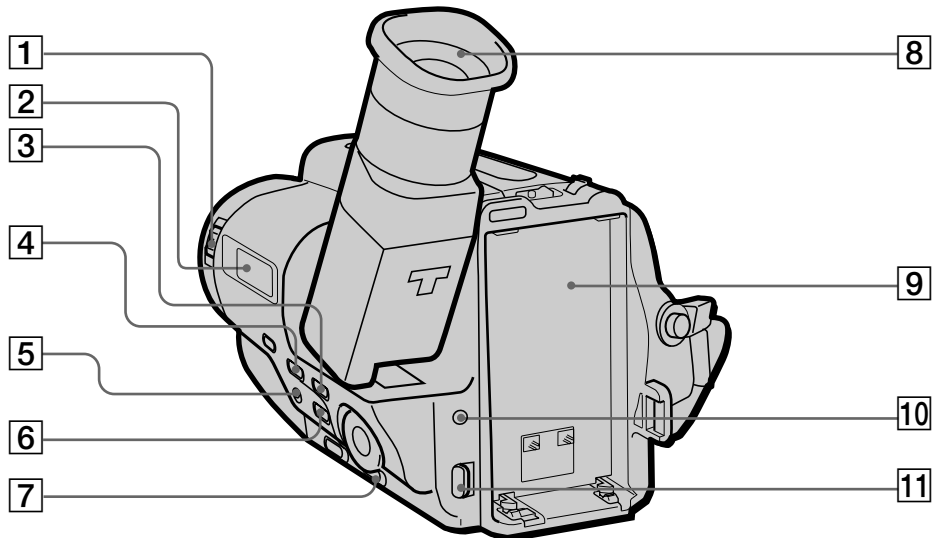
Ç.ÍÓ%Ì^Â È.~.ÍÓ%Ì^Â
 ‡.Â.ÂÍÈÈ
 ÇÈ%Â.~.ÍÓ%
 ÍÓÍ.Í.Â.Â%Ó.1Ç.ÓÓ%ÓÈÍÓÈÈ
 ‡ÍÓÍÈÚÚ%Â.75 èÍ,
 Í.ÂÓÈÍ.Â.È.ÍÓÁ
 Â.Ú%ÈÓ.~.ÍÓ%
 ÍÓÍ.Í.Â.Â%Ó.327ÍÇ(ÒÈÈ
 ÓÓÍÍÓÍÓÓÓ.Ó.ÚÈ.Í.ÂÍÈÈÈ
 Ì.Ú.Ú.Ú.ÍÈÈ.47 ÌÈÍÓÓÍ),ÓÓÍÍÓÁ
 ÓÓÓ.Ó.ÚÈ.Í.ÂÍÈÈ.Í.Â.Í.Â.~.ÂÍ
 2,2 ÌÈÍÓÓÍ
 RF DC OUT
 è.Ò.Â.È.‡.Í.ÓÁ.ÌÈÈÈ.~.Í.Â.Â%Ó,
 5Ç.ÓÓÓÚ.ÚÓÍ‡
 È.Í.Â.%Ó.Ó.LANC
 è.Ú.Â.Â.ÚÓ.Í.È.~.Â.Ó.Í.Â.ÍÈÈÈ.
 „Í.Â.Â%Ó(è.2,5 ÌÌ)
 È.Í.Â.%Ó.OMIC
 àÈÍÈÈ.~.Í.Â.Â%Ó.0,388 ÍÇ,
 ÍÈ.Â.Í.Ó.Á.Ó.Ó.Í.Ó.Á.
 ÓÓÓ.Ó.ÚÈ.Í.Â.ÍÈÈ.È.Ó.~.Í.Ó.Í.Ó.Ú.
 2,5%Ó.3Ç.Ó.Ó.Ó.Ú.Ó.Í.Ó.Í.Ó.Á.
 ÓÓÓ.Ó.ÚÈ.Í.Â.ÍÈÈ.È.6,8 ÌÈÍÓÓÍ(è.
 3,5 ÌÌ)
 è.~.Â.Â.
 Í.Â.Ó.‡.ÍÈÈ.Í.ÓÈ.Ú.‡.ÍÈÈ.
 ç‡.‡.Ú‡.ÂÈÍÓÈ.ÚÓ.Ú.Í.Ó.Ó.Í.ÓÈÈ
 Ó.Ó.Â.Í.Ó.Ú.È.6,0Ç
 (‡.Ú‡.ÂÈÍÈÈ.Í.ÓÍ), 7,5 Ç
 (Ó.Â.Ú.Â.È.‡.Ú.Ó.Á.Ó.Á.Â.
 ÚÓÍ‡)
 è.Â%Íflfl.ÓÓÚ.Â.Ífl.ÂÍfl
 ÍÓ~ÍÓÓÚ
 èèD-TR401E: 3,6 ÇÚ
 èèD-TR402E: 3,7 ÇÚ
 è‡.Ó.‡fl.Ú.Â.Í.Ó.Á.‡ÚÚ‡
 èÚ.0°è%Ó.40°è(ÓÚ.32°F%Ó.104°F)
 Í.Â.Í.Ó.Á.‡ÚÚ‡.‡.‡.Â.ÍÈÈfl
 èÚ.-20°è%Ó.60°è
 (ÓÚ.-4°F%Ó.140°F)
 è‡.Â.Í.Â.
 èÈ.ÌÈÁ. 115 × 103 × 207 ÌÌ
 (~/,„)
 à‡ÓÓ‡
 ç.Â.~.Í.‡fl.‡.Ú‡.ÂÈÍÓ.Ó.
 .Í.ÓÍ‡.ÍÈ.ÚÈ.Â.ÓÈ.‡.Ú‡.ÂÈÍÈÈ.
 Í‡ÓÓ.Â.È.Ó.Í.Â.Ó.Ó.Â.Íflfl
 èèD-TR401E: èÈ.ÌÈÁ. 720 „
 èèD-TR402E: èÈ.ÌÈÁ. 730 „
 Ç.Í.~.‡fl.‡.Ú‡.ÂÈÍÈÈ.Í.ÓÍ
 NP-33, ÍÈ.ÚÈ.Â.Ú.‡.Ú‡.ÂÈÍÚ
 èR2025, Í‡.Ó.Ó.Â.Ú.È5-90 ÈÈ
 Ó.Í.Â.ÓÈ.Â.Í.Â.
 èèD-TR401E: èÈ.ÌÈÁ. 940 „
 èèD-TR402E: èÈ.ÌÈÁ. 950 „





àÈÍ.Ó.Ú.Ó.Í.
 ùÍ.Â.Í.Ú.È.Â.Ó.ÍÈÈÈ
 Í.ÓÍ%Â.Í.Ó.‡.Ú.Ó.Í.ÈÈ.ÍÈÍ.Ó.Ú.Ó.Í.
 à.Ó.Í.Ó.Ú.Ó.ÍÈÈ.Â.Ó.ÍÈÈÈ.ÚÈÓ
 èÈ.Í.‡.‡.Â.Í.Â.
 ÒÈ.Í.‡%Í.ÂÈÍ.Ó.Ó.ÚÈÈ
 èÍ.Ó.Ú.6.
 è.Â.Ú.Â.ÓÈÈ.‡.‡.Ó.Ú.Â.
 Ó.Â.Â.Í.Â.Í.Ó.Ó.Ú.Ó.Í‡
 Í.Â.Ó.‡.ÍÈÈ.Í.ÓÈ.Ú.‡.ÍÈÈ.
 110-240Ç.Ó.Â.Â.Í.Ú.Ó.Í‡.50/60
 È.
 è.Ó.Ú.Â.Ífl.ÂÍfl.Í.Ó.~.Í.Ó.Ó.Ú.
 Aè-V16: 20 ÇÚ
 Aè-V16A: 22 ÇÚ
 Ç.Í.Ó%Í.Ó.Á.Í‡.Ó.Í.È.Â.ÍÈ.Â.
 DC OUT.‡.Ó.Â.Í.ÂÈÈ.Í.Â.
 7,5 Ç, 1,8 Â.
 Ç.Í.Ó%Í.Ó.Á.Í.‡.Í.Ó.Á.ÈÈ.‡.Ú‡.ÂÈÈ.
 10 Ç, 1,1 Â.ÂÈÈ.Í.Â.‡.Í.Ó.Á.ÈÈÈ.
 èÈ.Â.Í.Â.ÍÈ.Â.
 Â.‡.Ú‡.ÂÈÈÈÈ.Í.ÓÍ. Sony
 çÈ.Í.Â.Í.~.Í.‡%ÍÈ.Â.È.ÚÈÓ(6Ç):
 NP-33(800 Í.Â.~)
 (ÓÈ.Í.‡.Â.Ú.Ó.Ífl), NP-65/67
 (1500 Í.Â.~), NP-66H/68(1800
 Í.Â.~), NP-77H/78(2400 Í.Â.~),
 NP-90/90D/98(3000 Í.Â.~)
 è‡.Ó.‡fl.Ú.Â.Í.Ó.Á.‡ÚÚ‡
 èÚ.0°è%Ó.40°è(ÓÚ.32°F%Ó.104°F)
 Í.Â.Í.Ó.Á.‡ÚÚ‡.‡.‡.Â.ÍÈÈfl
 èÚ.-20°è%Ó.+60°è
 (èÚ.-4°F%Ó.+140°F)
 è‡.Â.Í.Â.
 èÈ.ÌÈÁ.È.Ú.166 × 43 × 75 ÌÌ
 (~/,„).~.Í.‡fl
 „Ó.Ú.Ú.Ó.‡.È.Â.~.‡.Ó.ÚÈÈÈÈ
 „.Â.Úfl.ÚÓ.
 à‡ÓÓ‡
 Aè-V16: èÈ.ÌÈÁ. 420 „
 Aè-V16A: èÈ.ÌÈÁ. 450 „





à.Ó.Í.Ó.Ú.Ú.Í.ÈÈ.È.Ú.Â.ÍÈÈ.Â.Ó.ÍÈ.Â.
 Ì‡.‡.Í.Ú.Â.È.Ó.ÚÈÈÈ.Í.Ó.Ú.Ú.~.Ú.
 È.Â.Í.Â.Í.Â.~.Â.Â.Ú.Â%Ó.Ó.Í.Â.ÍÈÈfl.

Identifying the Parts

ç±ÈÏÀÌÓ,±ìÈÀ
%òÀÛ±ÌÈÈ



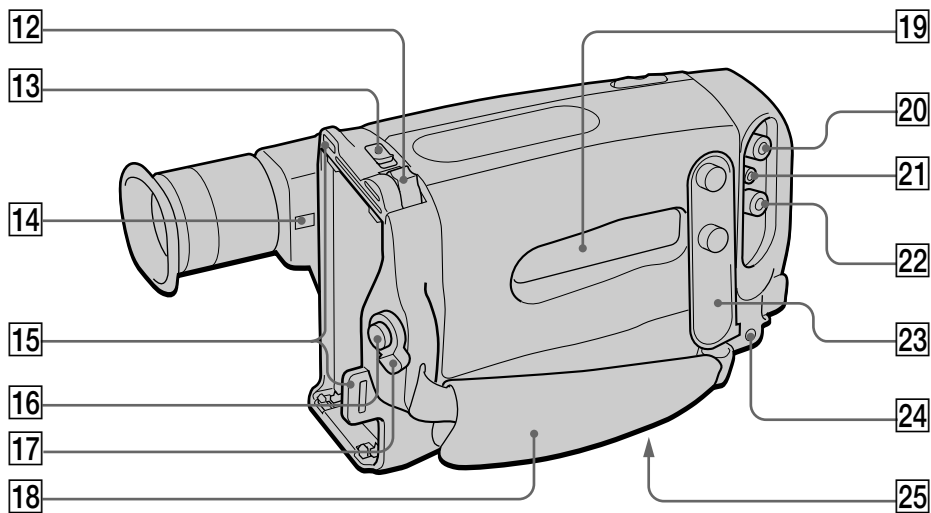
- 1 POWER switch (p. 12, 22)
- 2 Display window (p. 66)
- 3 TIME(NEXT) button (p. 27, 38)
- 4 DATE(+) button (p. 27, 38)
- 5 COUNTER RESET button (p. 15)
- 6 TITLE button (p. 32)
- 7 16:9 WIDE mode switch (CCD-TR402E only) (p. 33)
- 8 Eyecup (p. 17, 47)
- 9 Battery mounting surface (p. 10)
- 10 LANC  control jack
Connect the LANC  connecting cable to a wired remote control unit such as an editing controller. In this case, set the COMMANDER mode to OFF (p. 34).  stands for Local Application Control Bus system. The  control jack is used for controlling the tape transport of video equipment and peripherals connected to it. This jack has the same function as the connectors indicated as CONTROL L or REMOTE.
- 11 BATT (battery) release knob (p. 10)

- 1 Ç°ÍÏ,±ÚÀÏ, POWER (ÒÚ . 12, 22)
- 2 éÍÓ-ÍÓ %òÈÒÓÏÈÈ (ÒÚ . 66)
- 3 àìÓÓÏ± TIME (NEXT) (ÒÚ . 27, 38)
- 4 àìÓÓÏ± DATE (+) (ÒÚ . 27, 38)
- 5 àìÓÓÏ± COUNTER RESET (ÒÚ . 15)
- 6 àìÓÓÏ± TITLE (ÒÚ . 32)
- 7 Ç°ÍÏ,±ÚÀÏ, ±È ÓÍÓÓ Ï±ÚÌÓ,,Ó ÀÈÈÏ± 16:9 WIDE (ÍÓÍ,ÍÓ %òÏÈ ÌÓ%òÀÏÈ CCD-TR402E)(ÒÚ . 33)
- 8 éÍÛÈÈ (ÒÚ . 17, 47)
- 9 À±Ú± ÀÈÏ±È ÛÓÚ±ÌÓ,Ó-Ï±ÈÈ ÓÓ,À ÌÍÓÓÚ, (ÒÚ . 10)
- 10 ÈÌÁÁ%ò ÛÓ ±,ÌÀÏÈÈ LANC  èÓ%ÏÏ ±ÈÛÀ Ï±,ÀÏ, LANC  Í ÓÛÏ ÛÚ Ó Ó,Ó%òÍÓ,,Ó%òÈÓÛ±ÈÈÓÏÏ,,Ó ÛÓ ±,ÌÀÏÈÈ, ÈÒÓÓÏ ÀÛÀÏÍÓ,,Ó Ï±,ÀÓÛ,À %òÓÓÏÈÈÛÀÏ,ÍÓ,,Ó Ï±,ÚÓ ±,ÌÀÏÈÈÈ. Ç ±ÚÓÍÓÏ±À ÛÓÚ±ÌÓÈÛÀ ÀÈÈÏ COMMANDER, ÓÓÍÓÈÀÏÈÀ OFF (ÒÚ . 34).  ÓÀÏ±±ÀÛ ÓÈÓÛÀÏÛ Ï±,±,± ÌÀÓÛÏ,,Ó ÛÓ ±,ÌÀÏÈÈÈ. ÈÌÁÁ%ò ÛÓ ±,ÌÀÏÈÈÈ  ÈÒÓÓÏ ÀÛÀÛÓÈÈ%òÏÈÍÓÏÛ ÓÈÈÀ± ÓÀ ÀÌÁ-ÀÏÈÀÏ ÌÀÏÛ, È%òÀÓÓ-Ó Û%ò,±ÈÈÈ ÈÓÀ ÈÛÀ ÈÈÏ±ÛÓÛ ÓÈÓÛ,, ÓÓ%òÏÏ-ÀÏÏ, Í ÌÀÏÛ. Ñ±ÌÍÓÀ,,ÌÁÁ%ò ÈÌÁÁÛ Û±ÌÛ, ÈÀ ÛÛÏÏ-È,, Ï±,È ±Á-ÀÏ, Ó-ÓÀÏ±-ÀÏÏ-À Ï±,± CONTROL L ÈÏÈ REMOTE.
- 11 àìÓÓÏ± ÓÓ,Ó-ÓÈÈ%òÀÏÈÈ (-±Ú± ÀÈ) BATT (ÒÚ . 10)

Additional Information
ΝόσόςÏÈÛÀÏ,ÏÈÈ ÈÏÛÓ Ï±,ÈÈ

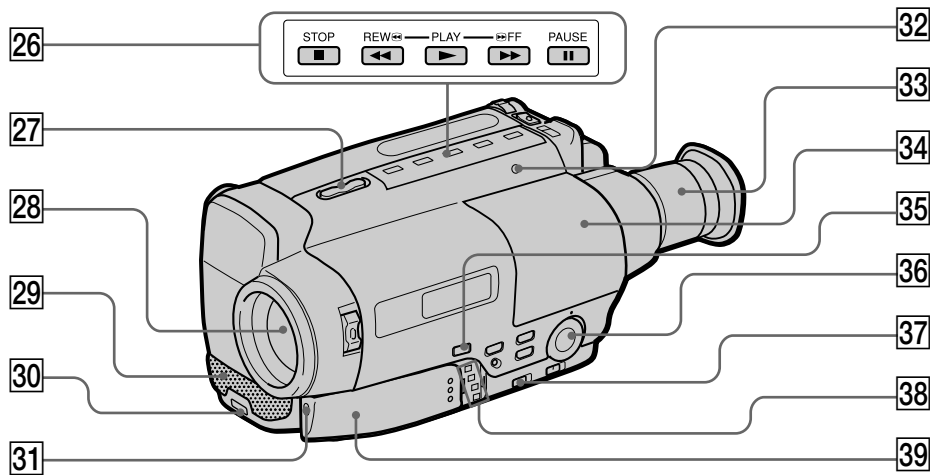
Identifying the Parts

Αναγνωρίζοντας τα μέρη



- 12 Power zoom lever (p. 16)
- 13 EJECT knob (p. 11)
- 14 Eyecup release knob (p. 47)
- 15 Hooks for shoulder strap (p. 62)
- 16 START/STOP button (p. 12)
- 17 STANDBY switch (p. 12)
- 18 Grip strap (p. 17)
- 19 Cassette compartment (p. 11)
- 20 VIDEO OUT jack (p. 20)
- 21 RFU DC OUT (RFU adaptor DC out) jack
- 22 AUDIO OUT jack (p. 20)
- 23 Jack cover
- 24 MIC (microphone) jack
Connect an optional external microphone.
This jack also accepts a "plug-in-power"
microphone.
- 25 Tripod receptacle (p. 18)
Attach a tripod (not supplied) here.

- 12 ε~+, Ò È, ò%ò, òó ÷ òòóí±úó ± (òú . 16)
- 13 àìòí± EJECT (òú . 11)
- 14 àìòóí± òó, ò-òÈ%ÀìÈñ òíúíñ ± (òú . 47)
- 15 ä ~íÈ %òíñ òíÀ~À, ò, ò Áííñ (òú . 62)
- 16 àìòóí± START/STOP (òú . 12)
- 17 èÀ Áíí ~±úÁí, STANDBY (òú . 12)
- 18 èÁíÁì, Á±, ±ú± (òú . 17)
- 19 éúòÁí±òòÁú° (òú . 11)
- 20 ÈíÁÁ%ò VIDEOOUT (òú . 20)
- 21 ÈíÁÁ%ò RFU DC OUT (, ò%±%±òúÁ ± òòú.úóí±RFU)
- 22 ÈíÁÁ%ò AUDIOOUT (òú . 20)
- 23 ä ~í± „íÁÁ%±
- 24 ÈíÁÁ%ò MIC (íÈí òúòí±)
èò%òòÁ%èìÈúÁ %òòòíÈúÁí, ÷ È, ìÀ-ìÈÈ
íÈí òúòí. ùúó, ìÁÁ%òò±ÈÁòò%ò%òÈU
%òíñ òó%òí ~ÁìÈñ ìÈí òúòí± ò
„íí ~ÁìÈÁì òÈú±ìÈñ”.
- 25 ÑÁ È±úÁí, ú ÁìòÈìÈí± (òú . 18)
è ÈòòÁ%èìÈúÁ, ÁìòÈìÈí (ìÁ
ò Èí±, ±Áúòí) Á%Áò.



26 Tape transport buttons (p. 22, 23)

- STOP
- ◀◀ REW (rewind)
- ▶▶ PLAY (playback)
- ▶▶▶ FF (fast forward)
- || PAUSE

These buttons will function in PLAYER mode.

27 EDITSEARCH button (p. 19)

28 Lens cover

29 Built-in microphone

30 Remote sensor (p. 64)

31 Camera recording/battery lamp

32 DEW lamp (p. 45)

33 Viewfinder adjustment ring (p. 13)

34 Viewfinder (p. 13)

35 BACK LIGHT button (p. 30)

36 PROGRAM AE dial (p. 28)

37 START/STOP MODE switch (p. 12, 14, 31)

38 Mode switches (p. 34)

39 Lithium battery compartment (p. 37)

26 αιόόίέ ôâ âîâ~âîèñ îâîú° (òú . 22, 23)

- STOP (òóú†ìó, í†)
- ◀◀ REW (ôâ âîóú†í†â†%)
- ▶▶ PLAY (,òóò óéâ,â%âîéâ)
- ▶▶▶ FF (ôâ âîóú†,ôâ â%)
- || PAUSE (ò†úâ†)

ùúé ìíóóíé .ú%úú úúìí°éóíé ó,†ú, ,
âééîâ PLAYER.

27 αιόóí† EDITSEARCH (òú . 19)

28 ä °-í† ó·âíúé,†

29 çòú óâìì°è ìéí óúóì

30 ñéòú†ì°éòìì°è %ú†ú°éí (òú . 64)

31 ä†ìóó~í† â†òéòé ,é%âóí†îâ /
†ú† âéíó,ó ·íóí†

32 ä†ìóó~í† DEW (òú . 45)

33 äóì, °ó ä,,úíé ó,íé ,é%óéòí†úâîñ
(òú .13)

34 çé%óéòí†úâî, (òú .13)

35 αιόóí† BACK LIGHT (òú . 30)

36 ñéóì PROGRAMAE (òú .28)

37 èâ âíì,~†úâî, START/STOP MODE
(òú .12,14,31)

38 èâ âíì,~†úâîé âééíó, (òú . 34)

39 éúôâíîéúéâ,óé .†ú† âéíé (òú .37)

Identifying the Parts

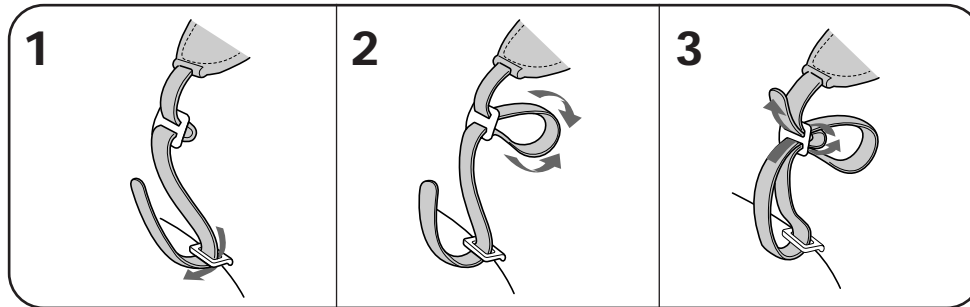
Αναγνωρίζοντας τα μέρη

Attaching the shoulder strap

Attach the supplied shoulder strap to the hooks for the shoulder strap (15 on page 60).

Επιβάλλεται να συνδέσετε το ελαστικό λουρί που συνοδεύει την κάμερα στα αγκυράκια για το λουρί (15 στην σελίδα 60).

Επιβάλλεται να συνδέσετε το ελαστικό λουρί που συνοδεύει την κάμερα στα αγκυράκια για το λουρί (15 στην σελίδα 60).

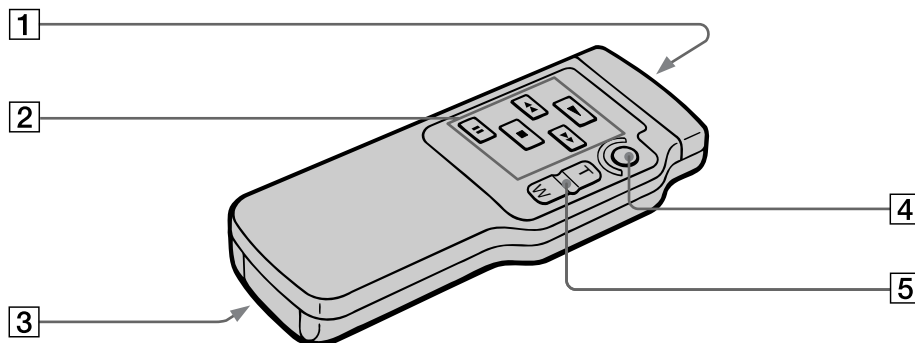


Remote Commander

Απομακρυσμένος Έλεγχος

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

Οι κουμπιά που έχουν το ίδιο όνομα στο τηλεχειριστήριο και στην κάμερα λειτουργούν με τον ίδιο τρόπο.



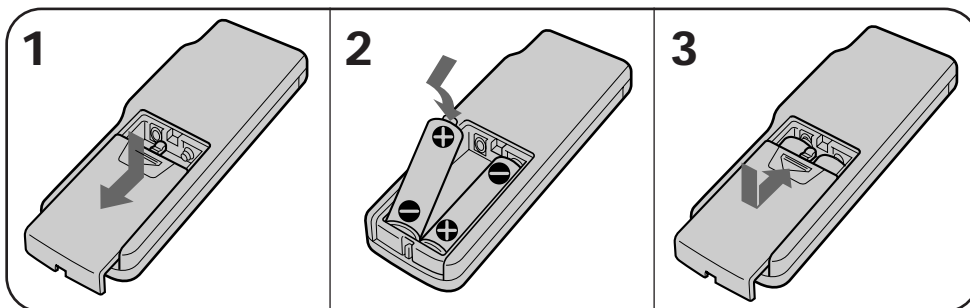
- 1 Transmitter
Point toward the remote sensor to control the camcorder after turning on the POWER switch on the camcorder.
- 2 Tape transport buttons (p. 22, 23)
- 3 R6 (size AA) battery holder (p. 63)
- 4 START/STOP button
- 5 Power zoom button
The zooming speed is unchangeable on the Remote Commander.

- 1 Ηλεκτρονική Αποστολή
Πομπή που χρησιμοποιείται για τον έλεγχο της κάμερας μετά την ενεργοποίηση του διακόπτη POWER στην κάμερα.
- 2 Κουμπιά μεταφοράς ταινίας (σ. 22, 23)
- 3 Κρατηστής μπαταρίας R6 (τύπου AA) (σ. 63)
- 4 Κουμπί START/STOP
- 5 Κουμπί ζουμ με ισχύ
Η ταχύτητα ζουμ είναι αμετάβλητη στο τηλεχειριστήριο.

Preparing 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.



Note on battery life

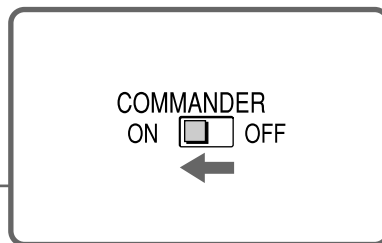
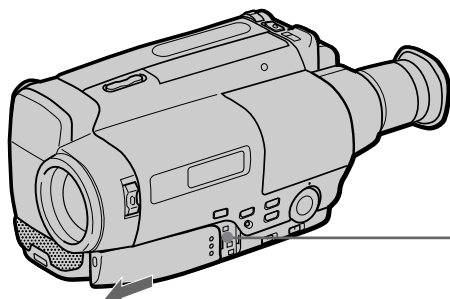
The batteries for the Remote Commander last about 6 months under normal operation. When the batteries become weak or dead, the Remote Commander does not work.

To avoid damage from possible battery leakage

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

Using the Remote Commander

Make sure that the COMMANDER mode is set to ON (p. 34).



èÓ%, ÓÚÓ, í± ÒÚÍ, Ú± %ÈÓÚ±í^ÈÓìÒ,, Ó
 ÛÓ ±, íÁíÈñ
 ÑñÈÓÓÓÍ, ÁÓ, ±íÈñ ÒÚÍ, Ú± %ÈÓÚ±í^ÈÓìÒ,, Ó
 ÛÓ ±, íÁíÈñ Ç° %ÓíÈí° , ÓÚ±, ÈÚ, %,, Á
 ±Ú± ÁÈíÈ R6 (±ÁíÁ ÓíÁÁ).
 ÇÓÓÓÓÍ, ÁÚÈÚÁÓ, Ó Èí±,, ±Áí^È° ±Ú± ÁÈí±È
 R6 (±ÁíÁ ÓíÁÁ).
 (1) èíÈíÈÚÁ í °ÍÚ, ÓÚÓÁí±, ±Ú± ÁÁí Ó
 ÓÚÍ, Ú± %ÈÓÚ±í^ÈÓìÒ,, Ó ÛÓ ±, íÁíÈñ.
 (2) ÇÓÚ±, ÚÁ Ó-Á, ±Ú± ÁÈíÈ R6 (±ÁíÁ ÓíÁÁ)
 Ó Ó ±, Èí íÓÈ ÓÓñ íÓÓ.
 (3) íÓÚ±íÓ, ÈÚÁ í °ÍÚ í± ÒÚÍ, Ú
 %ÈÓÚ±í^ÈÓìÒ,, Ó ÛÓ ±, íÁíÈñ.

è ÈíÁ~±íÈÁ ÓÚíÓÓÈÚÁí, íÓ Ó Óí± ÓíÙÈ°
 ±Ú± ÁÁí
 Á±Ú± ÁÁí%ñ ÒÚÍ, Ú± %ÈÓÚ±í^ÈÓìÒ,, Ó
 ÛÓ ±, íÁíÈñ í, ±Ú±ÁÚ Ó ÈíÁ íÓ í± 6 íÁÓñ^Á,
 Ó ÈíÓ í±í, íÓÈ °íÓÓíÚ±Ú± ÈÈ. ÓÓíÈÁ± ñ%
 ±Ú± ÁÁí ÓÚ±íÁÚ Óí±. íÈíÈÁ ±ÓíÓ%ÚÁÚÓñ
 ÓÓ, ÓÁí, ÓÚÍ, Ú± %ÈÓÚ±í^ÈÓìÒ,, Ó ÛÓ ±, íÁíÈñ
 ÓÁ ÁÓÚ±íÁÚ ÛÚí^ÈÓíÈ Ó, ±Ú.
 ÇÓ ÈÁ. ÁÈ±íÈÁ ÓÓ, ÁÈ%ÁíÈñ, ÓíÁ%ÓÚ, ÈÁ
 , ÓÁíÓÈíÓÈ ÚÚÁ^íÈ ÓÓ%Á ÈÈíÓ, Ó ±Ú± ÁÁí
 í%±íÈÚÁ ±Ú± ÁÈíÈ, ÁÓíÈ Ç° íÁ. Ú%ÁÚÁ
 ÈÓÓÓÍ, ÁÓ, ±Ú, ÓÚÍ, Ú± %ÈÓÚ±í^ÈÓìÒ,, Ó
 ÛÓ ±, íÁíÈñ %ÈíÈÚÁí, íÓÁ , Áññ.
 àÒÓÓÍ, ÁÓ, ±íÈÁ ÒÚÍ, Ú±
 %ÈÓÚ±í^ÈÓìÒ,, Ó ÛÓ ±, íÁíÈñ
 í-Á%ÈÚÁÓ, ~ÚÓ ÁÈÈí COMMANDER
 ÓÚÓ±íÓ, íÁí, ÓÓíÓÈÁíÈÁ ON (ÓÚ . 34).

Additional Information ΝΟΟÓÍÈÚÁí, íññ ÈíÙÓ í±^Èñ

Identifying the Parts

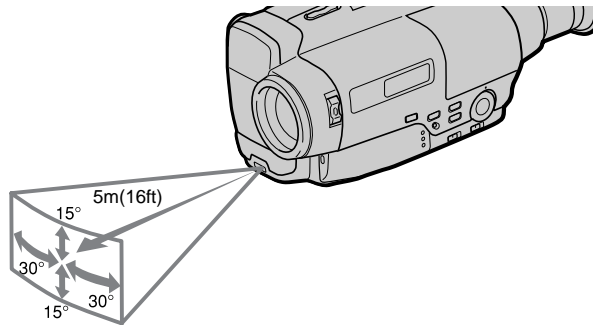
ζτÈÏÀÏÓ,†ÌÈÁ %ºÁÚ†ÎÁÈ

Remote Control Direction

Aim the Remote Commander to the remote sensor within the range as shown below.

ζτÈÏÀÏÓ ÒÚÏ,Ú† %ºÈÒÚ†ÌÈÓÏÏ,,Ó ÛÒ †,ÎÁÏÈ†

ζτÈÏÀÏÓ,ÚÁÒÚÏ,ÚºÈÒÚ†ÌÈÓÏÏ,,Ó ÛÒ †,ÎÁÏÈ† Ì† %ºÈÒÚ†ÌÈÓÏÏÈ %º†ÚÈÏ, Ò Á%ºÁÏ† %ºÈ†Ò†ÁÓÏ†,ÓÓÏ†ÁÏÏ,,ÓÏÈÈÁ.



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

è ÈÏÁ-†ÌÈ† ÒÚÏÒÈÚÁÏ,ÏÒ ÒÚÏ,Ú† %ºÈÒÚ†ÌÈÓÏÏ,,Ó ÛÒ †,ÎÁÏÈ†

- è†ÒÓÓÏ†,†ÈÚÁ%ºÈÒÚ†ÌÈÓÏÏÈ%º†ÚÈÏ, %º†ÌÈ ÓÚ ÒÈÏ,ÏÈ ÈÒÚÓÏÈÏÓ, Ò,ÁÚ†, Ú†ÌÈÏ, Ì†Ï Ò ÏÏÓÈ ÒÓÏÁÏÈÈ Ò,ÁÚ ÈÏÈ ÈÏÏ,ÏÈ†ÈÈ†. Ç Ò ÓÚÈÏ,ÏÏÏ ÒÏÚ-†Á %ºÈÒÚ†ÌÈÓÏÏÁ ÛÒ †,ÎÁÏÈÁÏÈÁÚÏÏ Ò †.†Ú,†Ú.
- Ï.Á%ºÈÚÁÒ, ~ÚÓ ÏÁÈ%ºÚ %ºÈÒÚ†ÌÈÓÏÏÈ %º†ÚÈÏÏÏÏ È ÒÚÏ,ÚÓÏ ÛÒ †,ÎÁÏÈ† ÏÁÚ ÒÁÒÏÚÓÚÈÈ.
- Ñ†ÏÏ†È,È%ºÁÓÏ†Ï† † †.ÓÚ†ÁÚ, ÁÈÈÏÁ ÒÚÏ,Ú† ÛÒ †,ÎÁÏÈ† VTR 2 (àÇá 2). èÁÈÈÏ ÒÚÏ,Ú† ÛÒ †,ÎÁÏÈ† (1, 2 È 3) ÈÓÓÓÏ,ÁÚ,ÚÒÈ %ºÏ† ÒÚÏÈÈÈÈ%º†ÏÏÈÈ,È%ºÁÓÏ†Ï† ÒÚ %ºÚ,ÈÏ àÇá ÛÈ Ï Sony, ~ÚÓÈ ÈÁ.ÁÈ†Ú, ÏÁÒ †,ÈÏ,ÏÒ Ò †.†Ú,†ÌÈ† Ò È %ºÈÒÚ†ÌÈÓÏÏÏÏ ÛÒ †,ÎÁÏÈÈ. ÒÓÏÈ Ç ÈÓÓÓÏ,ÁÚÁÚÁ%ºÚ,ÈÁ àÇá ÛÈ Ï Sony, ÁÈÈÏÁ ÒÚÏ,Ú† ÛÒ †,ÎÁÏÈ† VTR 2 (àÇá 2), ÁÏÏÏÏ%ºÚÁÚÒÈÈÁÏÏÈÚ, ÁÈÈÏÏÚÏÏÏ ÛÁ ÛÒ †,ÎÁÏÈ† ÈÏÈ Á†Ï Û, %ºÈÒÚ†ÌÈÓÏÏÈ %º†ÚÈÏ àÇá ÁÏÈÈ.Ú†,ÓÈ.

To Watch the Demonstration

You can watch a brief demonstration of pictures with titles.

If the demonstration appears when you turn on the camcorder for the first time, exit the Demo mode to use your camcorder.

To enter Demo mode

- (1) Eject the cassette and slide the POWER switch to OFF.
- (2) Turn STANDBY up.
- (3) While holding down **▶**, slide the POWER switch to CAMERA. Demonstration starts. The demonstration stops when you insert the cassette.

Note that once you enter Demo mode, this mode is retained as long as the lithium battery is in place. Therefore, demonstration starts automatically 10 minutes later every time you slide the POWER switch to CAMERA, or after you eject the cassette.

To exit Demo mode

- (1) Slide the POWER switch to OFF.
- (2) Turn STANDBY up.
- (3) While holding down **■**, slide the POWER switch to CAMERA.

Νίηφ ό όόίού †%οΑίόίού †ΈΈ
 Ç° ίοέάύά ό όόίού άύ, ίό όύίύ
 %οΑίόίού †Έ Έάό. †έΑίέέ ό †%οέέοήέ.
 όόίέ %οΑίόίού †Έή όόή,ήηάύόή, ίό, %ο† Ç°
 έόόόί, άύάύά, έ%οάόί†ιά ύ, όά, Έ †ά, ύό
 ύ ά·ύάύόή, Έύέέά %οΑίόίού †Έόίό, ό
 Άέέ† †%οίή έόόόί, άό, †ίέή, έ%οάόί†ιά °.

Νίηφ , ίό%ο† , %οΑίόίού †Έέόί·έ Άέέί
 (1) Ç° ύόήέύά †όόάύύέέόό, ά έύά
 , ίί, †ύάί, POWER , όόίόέάίέά OFF.

(2) έό, ά έέύά STANDBY , ά ι.

(3) Ç†έέί†† †▶, όά ά%ο, έί, ύά , ίί, †ύάί,
 POWER , όόίόέάίέά CAMERA.

ΝΑίόίού †Έή †Έ†άύόή. ΝΑίόίού †Έή
 Ά††ί·έ, †άύόή, ίό, %ο† Ç° , όύ†, έύά
 †όόάύύ.

έ· †ύέύά , †έ†ίέά, †ύό άόίέ Ç° , Άίέ
 %οΑίόίού †Έέόί·έ Άέέί, ύό †ύόύ Άέέί
 όόί †ήηάύόή%οόύάιόό, όό†ύόύ†ίό, ίά†
 †έύέά, †† †ύ† Άέί†. ††ίέί ό· †άόί,
 %οΑίόίού †Έή ††έ%ο Έ †ά†, ύό††ύέ·άόίέ
 ††έ†άύόή·ά άά 10 †έίύύόόόίά ύό, ό, ††
 Ç° όό, ά ίάύά , ίί, †ύάί, POWER ,
 όόίόέάίέά CAMERA έίέέόόίά
 , ύ†ίέ, †ίέή ††όόάύ·.

Νίηφ , ίό%ο† έά %οΑίόίού †Έέόίό, ό
 Άέέί†

(1) έά ά%ο, έί, ύά , ίί, †ύάί, POWER ,
 όόίόέάίέά OFF.

(2) έό, ά έέύά STANDBY , ά ι.

(3) Ç†έέί†† †■, όά ά%ο, έί, ύά , ίί, †ύάί,
 POWER , όόίόέάίέά CAMERA.

Identifying the Parts

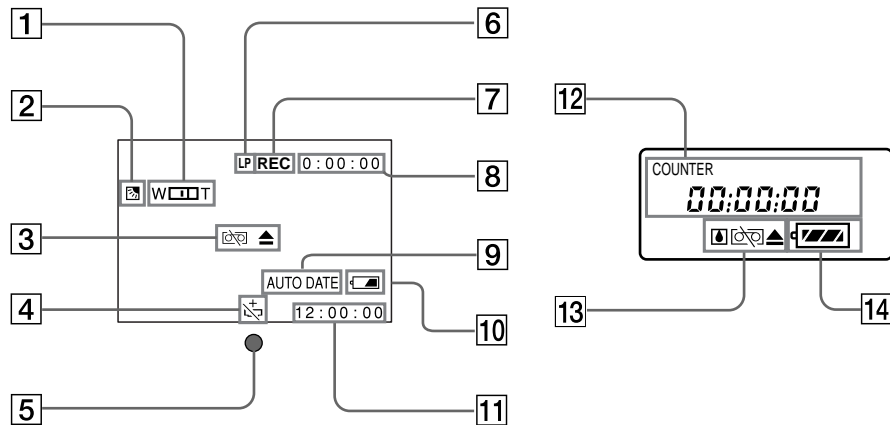
Αναγνωρίζοντας τα μέρη

Operation Indicators

Σημειώσεις λειτουργίας

The indicators in the display window appear in CAMERA mode only.

Οι σημειώσεις εμφανίζονται μόνο στην οθόνη της κάμερας.



1 Power zoom indicator (p. 17)
CCD-TR402E only

2 Backlight indicator (p. 30)

3 Warning indicator (p. 67)

4 Lithium battery indicator (p. 36)

5 Recording lamp/battery lamp (p. 12)

6 Recording in LP mode (p. 12)

7 Tape transport mode (p. 12)

8 Tape counter (p. 15)

9 AUTO DATE indicator (p. 12)

10 Remaining battery indicator (p. 40)



11 Date, Time or Title (p. 27, 32)

12 Tape counter (p. 15)

Date or time indicator (p. 27)

13 Warning indicator (p. 67)

14 Remaining battery indicator (p. 40)



1 αλμείπιό ό έ,όμ,ιό,όύ πιόόπιό π (όύ.17)

ιό,ιό μίπ ίόμ,ιέ CCD-TR402E

2 αλμείπιό άπ,ιέόό,ό,άμ,ιέ (όύ.30)

3 έ μ,ό,ό άέπ,ιέ έέέ,ιέπιό (όύ.67)

4 αλμείπιό ίέ,έ,όέ.π, άέίέ (όύ.36)

5 άπιόό-ίπ άπ,έ,έ/ίπ,όό-ίπ π, άέ,ό,ό-ίόπ (όύ.12)

6 άπ,έ,έ, άέέ,ιέ LP (όύ.12)

7 έέέ,ιέ όά, ά,ά-ά,ιέ,ιέ,ιέ (όύ.12)

8 έ-ά,έ,ιέ,ιέ (όύ.15)

9 αλμείπιό AUTODATE (όύ.12)

10 αλμείπιό όόπ,ά,όό,ιέ,ιέ π, π, π, άέ,ό,ό-ίόπ (όύ.40)



11 Νπ,π, ά,ιέ,ιέ,ιέ,ιέ,ιέ,ιέ,ιέ (όύ.27,32)

12 έ-ά,έ,ιέ,ιέ (όύ.15)

άλμείπιό π,π, έέ, ά,ά,ιέ (όύ.27)

13 έ μ,ό,ό άέπ,ιέ έέέ,ιέπιό (όύ.67)

14 αλμείπιό όόπ,ά,όό,ιέ,ιέ π, π, π, άέ,ό,ό-ίόπ (όύ.40)



Warning Indicators


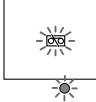
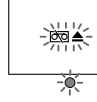
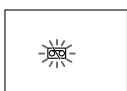





Επιεικτικές Προειδοποιήσεις

All indicators appear only when you use the camcorder in CAMERA mode. If indicators flash in the viewfinder, or a caution lamp on the camcorder flashes, check the following:

♪: You can hear the beep sound when BEEP is set to ON (p. 34).

Όλες οι προειδοποιήσεις εμφανίζονται μόνο όταν χρησιμοποιείτε την κάμερα. Εάν οι προειδοποιήσεις αναλαμπάζουν στο οπίσθιο φακό ή κάποιο φανάρι προειδοποίησης στην κάμερα, ελέγξτε τα παρακάτω:

♪: Μπορείτε να ακούσετε τον ήχο κτύπου όταν η λειτουργία BEEP είναι ενεργή (σ. 34).

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

- 1 **Battery Remaining**
Slow flashing: The battery is weak.
Fast flashing: The battery is dead.
- 2 **The tape is near the end.**
- 3 **The tape has run out.**
- 4 **No tape has been inserted.**
- 5 **The tab on the tape is out (red) (p. 11).**
- 6 **Moisture condensation has occurred (p. 45).**
▲ indicator appears only when the cassette is inserted.
- 7 **The video heads may be contaminated (p. 46).**
- 8 **Some other trouble has occurred.**
Disconnect the power source and contact your Sony dealer or local authorized facility.
- 9 **The lithium battery is weak or the lithium battery is not installed (p. 36).**
This indicator flashes just only after powering on.

- 1 ελλιπής ή εξαντλημένη μπαταρία.
αργή αναλαμπάζηση: Η μπαταρία είναι αδύναμη.
γρήγορη αναλαμπάζηση: Η μπαταρία είναι εξαντλημένη.
- 2 Η ταινία είναι κοντά στο τέλος.
- 3 Η ταινία έχει τελειώσει.
- 4 Δεν έχει εισαχθεί ταινία.
- 5 Το κόκκινο σήμα της ταινίας έχει βγει έξω (σ. 11).
- 6 Έχει συμβεί συμπύκνωση υδραερίων (σ. 45).
▲ το φανάρι εμφανίζεται μόνο όταν η κασετίνα είναι εισαχθείσα (σ. 11).
- 7 Τα κεφάλια βίντεο μπορεί να είναι μολυσμένα (σ. 46).
- 8 Άλλο πρόβλημα.
Αποσυνδέστε την πηγή τροφοδοσίας και επικοινωνήστε με τον πωλητή ή τον εξουσιοδοτημένο αντιπρόσωπο της Sony.
- 9 Η μπαταρία λιθίου είναι αδύναμη ή δεν είναι εγκατεστημένη (σ. 36).
Αυτό το φανάρι αναλαμπάζει μόνο μετά την ενεργοποίηση της κάμερας.

Additional Information

Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

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TV manuals search

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