

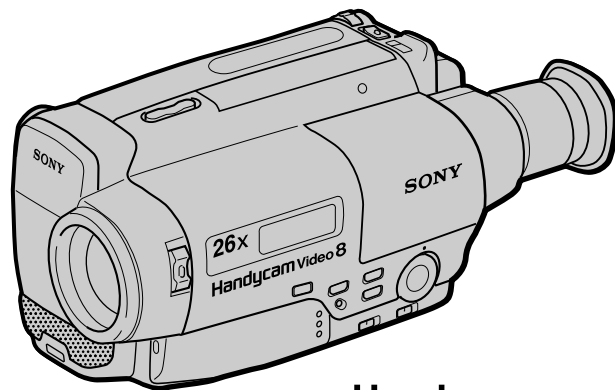
Video Camera Recorder

Operating Instructions

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

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èÀ Å%οì±±íóí "íòôîû±ú±^ëë%±ìò,ό±òò± ±ú± ό όòëí
,ìë±úáì,ìό ό σ^άου,ì±óúóñ^άά úíó,ό%οὐ,όëóóú±,éú,
À,ό%òíí·ú%ú^ëíòò ±,óí.



Handycam
CCD-TR402E

Video 8

CCD-TR401E/TR402E **8**

©1996 by Sony Corporation

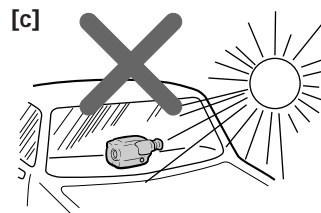
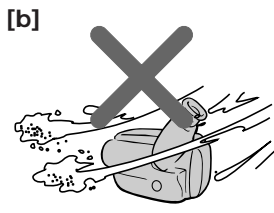
Precautions on Camcorder Care

- 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 από βροχή ή 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



Getting Started

Charging and Installing the Battery Pack

Getting Started

á± fl%óí± È ÚÓÚ±ÍÓ,í± ±Ú± ÆÈÍÓ,,Ó ·ÍÓí±

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

èÀ,Á%ò,ÓÓÍ ÁÓ,±ÈÁÍ Ç± ÆÈ,È%ò,ÁÓí±ÍÁ ÓÈ Ç±ÍÓÍÁ%ò,ÚÁÚÓí± ±í± Á± fl%ò,ÈÚ, È ÚÓÚ±ÍÓ,ÈÚ, ±Ú± ÆÈÍÓ È ·ÍÓí, Nífl Á± fl%ò,ÍÈ, ±Ú± ÆÈÍÓ,,Ó ·ÍÓí±, ÓÓÓÓÍ,ÁÚÈÚÁÓ, Ó Èí±,±ÁÍ Í ÓÁÚÁ,í±±%±ÚÓÁ ÓÍÓÁ Áí.ÚÓí±.

Charging the Battery Pack

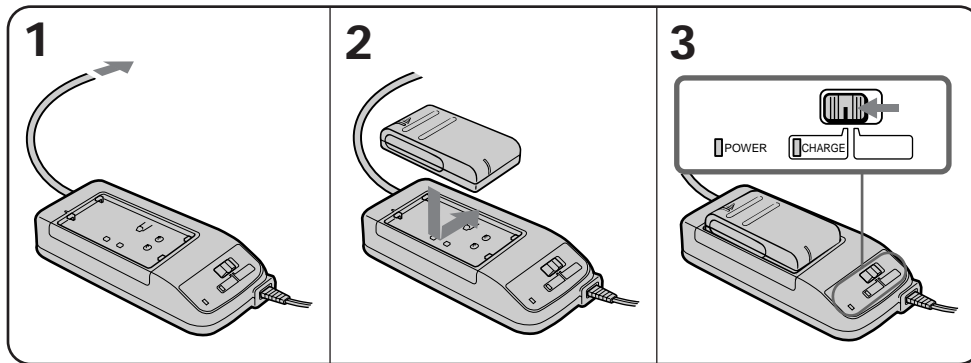
Charge the battery pack on a flat place without vibration.

- (1) Connect the AC power adaptor to the mains.
- (2) Align the right side of the battery pack with the line on the AC power adaptor, then slide the battery pack in the direction of the arrow.
- (3) Set the selector to CHARGE. The CHARGE lamp (orange) lights up. Charging begins. When charging is completed, the CHARGE lamp goes out. Unplug the unit from the mains, and then remove the battery pack and install it on the camcorder.

á± fl%óí± ±Ú± ÆÈÍÓ,,Ó ·ÍÓí±

- á± fl%ò,ÍÚ, ±Ú± ÆÈÍÓ,Ó ·ÍÓí± Ó ÈÁ,Ó%ò,ÈÚÁí± Ó,ÍÓÈ,ÓÓ,Á ÍÍÓÓÚÈ,ÍÁ ÓÓ%ò,Á ÈÁÍÍÓÈ È, ±ÈÈ.
- (1) èÓ%ò,ÓÓÁ%ò,ÈÈÈÚÁÓÁÚÁ ÓÈ ÍÚ ±%±ÚÓÁ ± ÓÁ Áí.ÚÓí± ÍÁÍÚ È ÆÓÍÓÈ ÓÁÚÈ.
 - (2) ÍÓÚ±ÍÓ,ÈÚÁ Ó ±Ú, ÓÓÓ ÓÍÚ, ±Ú± ÆÈÍÓ,,Ó ·ÍÓí± Í±, Ó%ò,ÍÓÈ ÈÈÈÈÈ Ó ÓÁÚÁ, Í ±%±ÚÓÁ ÓÍÓÁ Áí.ÚÓí±, Á±ÚÁÍ ÓÁ Á%ò,Èí ÚÁ, ±Ú± ÆÈÍÓ È ·ÍÓí, Í±Ó ±,ÍÁÍÈÈ ÓÚ ÁÍÈÈ.
 - (3) ÍÓÚ±ÍÓ,ÈÚÁ ÓÁÍÁÍÚÓ, ÓÓÍÓÈÁÍÈÁ CHARGE. á±, Ó ÈÚÓfl Í±ÍÓÓ Í± CHARGE (Ó ±ÍÈÁ,fl). ç± ÍÁÚÓfl Á± fl%ò,Í±.
- äÓ,%ò,± Á± fl%ò,± Á±,Á ÈÚÓfl,Í±ÍÓÓ Í± CHARGE ÓÓ,±ÍÓÁÚ. èÚÍÍ ÈÚÁ±ÓÓ± ±ÚÓÚ ÍÁÍÚ È ÆÓÍÓÈ ÓÁÚÈ, ±Á±ÚÁÍ ÓÍÈÈÈÚÁ ±Ú± ÆÈÍÓ È ·ÍÓí È ÚÓÚ±ÍÓ,ÈÚÁ Á,,Ó Í± È%ò,ÁÓí±ÍÁ Ú.

Getting Started èÓ%ò,ÓÓÓÍ± Í±±ÍÚ ±ÓÚ



Charging Time

Battery pack	Charging time*
NP-33 (supplied)	60
NP-65/67	105
NP-66H/68	125
NP-77H/78	170
NP-90/90D/98	215

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

Ç Áífl Á± fl%óíÈ

Á±Ú± ÆÈÍÓ È ·ÍÓí	Ç Áífl Á± fl%óíÈ *
NP33(ÈÈ±ÁÚÓfl)	06
65/67	501
66/68	521
77/78	071
90/98	512

* è ÈÈÈÈÈÈÚÁÍ ÍÓ, ÈÈÍÓÚ±Í, %ò,Ífl Á± fl%óíÈ ±Á flÈÁÍÍÓ,Ó. ±Ú± ÆÈÍÓ,Ó ·ÍÓí± Ó ÈÓÓÓÍ, ÁÓ,±ÈÁÍÓ Èí±, ±ÁÍÓ, Ó ÓÁÚÁ, Ó, Ó ±%±ÚÓÁ ± ÓÁ Áí. ÚÓí±. (è ÈÈÈÈÈÈÈÈ ÚÁÍÓÁ ±ÚÚ ±, Áífl Á± fl%ò,ÈÚ%ò,ÍÈflÁÚÓfl.)

Charging and Installing the Battery Pack

á± fl%í± È ÙÒÙ±íÓ,í± ·±Ú± ÁÈíÓ,,Ó ·íÓí±

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 ÒíÛÈ° ·±Ú± ÁÁí CCD-TR401E

Á±Ú± ÁÈíÈ ·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± ÁÈíÈ ·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 ífl Ò Ó%ÓíÈÈÚÁí,íÓÓÚ, íÈíÚÙ±í Ó ÈÁ±ÒÈÓÈ,íÓ%±Ç ÓÓ,ÚÓ flÁÚÁí±ííÓ/ÓÓÙ±íÓ,Á±ÒÈÓÈ, Ú,±íÓÓÙí±È È íí ±ÁÚÁ/íí ±ÁÚÁ, ÓÈÚ±íÈÁ. èÁííÈ Ò Óí, ÓíÛÈ° ·±Ú± ÁÈíÓ,,Ó ·íÓí± íÓÈÁÚ ·Ú, íÓ ÓÁ.

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

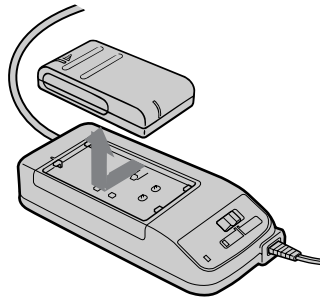
Ç±ÈíÓ!

áÓÓÓí ÁÚÈÚÁ Á± fl% ·±Ú± ÁÈíÓ,Ó ·íÓí± ÓÓííÓÓÚ,, Ó ÁÈ%Á, ·Áí Ó ÈÓÓÚÓÈÚ, í Á ÓÁ± fl%íÁí! èÁ Á%Á± fl%íÓÈ ·±Ú± ÁÈíÓ,Ó ·íÓí± Ú·Á%ÈÚÁÓ, ·ÚÓÁ,ÓÁ± fl%ÓÓííÓÓÚ,, ÈÓÓÓí ÁÓ,±í (íÓí ±Á flÈÁí). èÓ,ÚÓ ífl Á± fl%í±, ÓíÛÈ° ±ÓÙÈ·íÓ ÓÓÙ±,·ÈÈÓfl ÁííÓÓÙÈ Ó È,Ó%ÈÚ íÓíÈÈÁíÈ, ÁííÓÓÙÈ, è%íííÓ ÓÁ Óí±±í ífl ÁííÓÓÙ, ·±Ú± ÁÈ íÓÈÁÚ ·Ú, ÓÓÓÙ±íÓ,íÁí±, ÁÓíÈ Ç ÓÓííÓÓÚ, ÈÓÓÓí ÁÚÁÚÁÁ± fl% ·±Ú± ÁÈ È ÓíÓ ±ÁÁ ÓÓííÓÓÚ, Á± fl%ÈÚÁ. Nífl ±Á fl%íÈ ·±Ú± ÁÈ ÓíÈÈÚÁí±ÓÓÁÚÈÈ ÓÁ Á%Èí ÚÁ ÓÁ Áíí ±ÚÁí, POWER ÓÓíÓÈÁíÈÁCAMERAÓ ÈÓÓ%ÓÓÁ%ÈíÁííÓÈ ·±Ú± ÁÁÈÓÓÙ±, ÚÁ È%ÁÓí±íÁ Ú íí ·ÁííÓÈ %Ó ÚÁí ÓÓ, ÓÓí±, È%ÓÈÓí±ÚÁíÁ íÁ í±íÚÚ, °ÓÚ Ó 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.

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 èÄ Å%Èì,ÚÄ .±ú± ÄÈìÈ .ìóí,
 ìò± ±,ìÄìËË ÒÙ ÄìË.



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.

- è ÈìÄ±ìËñ ÒÓ Ä± ñ%íÄ .±ú± ÄÈìÓ,Ó .ìóí±
- ã±ìóóí±POWERÛ%ÄÛÄìóóÓ ÓÄ Äññ ÒÄÛËÛ Òñ,%±ÈÄ,ÄóìË.±ú± ÄÈìÈ .ìóí ÒññÛËÓÄÛÄ,ÓÈìÛ ÓúññÄìóóóìÄ Ä± ñ%ìË .±ú± ÄÈìÓ,Ó .ìóí±. ùóó ñ,ñÄÛòñ ìó ì±ì,ìí.
- òòìË±ìóóí±POWERÄÄ±,Ó ±ÄÛòñ, Ûóó±ìó,ËÛÓÄìÄìÛóóìóÈÄìËÄVTRDC OUTËÛóóÄ±ÈìÛÄÓ,Ó% ïÄìÛ ÓóËÛ±ìËñ.è ÈìÄ ìóÄ ÄÄìËìÛÛ ìó, Óó%óóÄ%ÈìÛÄ Ó Ó,Ó% ïÄìÛ ÓóËÛ±ìËñÈóòñÛ,Ûóó±ìó,ËÛÄ ÓÄìÄìÛóóìóÈÄìËÄCHARGE.
- Ç°ìÄìóÈÄÛÄÛó ±,ññÛ,È%Äóí±ìÄ ÓÈò Èóóóì,Áó,±ìÈÄì ÓÄÛÄ,Ó,Ó ±%±óÛÄ ± ÓÄ Äì.Ûóí±,Ó, Äññ Ä± ñ%ìË .±ú± ÄÈìÓ,Ó .ìóí±.

Getting Started e0%0,0ú0,ìñ ìñ±ìÛ ±óó°

Charging and Installing the Battery Pack

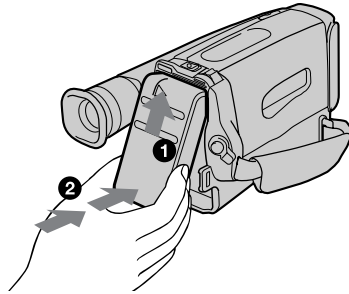
á± fl%Í± È ÙÒÚ±ìÓ,Í±
·±Ú± ÂÈìÓ,,Ó ·ìÓí±

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.

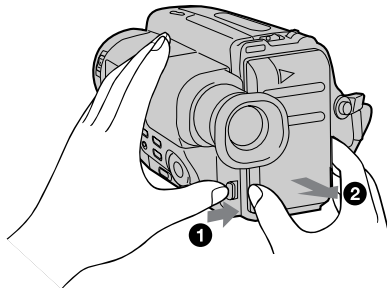
- (1) ÇÒÚ±, ÚÁ, Â ìÈÈ ÌÓìÁ· ·±Ú± ÂÈìÓ,,Ó ·ìÓí±,,Á ìì,~±ÒÚ, ·±Ú± ÂÈìÓÈ ÙÒÚ±ìÓ,Ó·ìÓÈ ÒÓ,Â ìÒÓÚÈ.
- (2) ç±ÈìÈÚÁ·±Ú± ÂÈìÈ·ìÓí,Ú±í,~ÚÓ.° òì ·ì±%ÂÈìÓÓ ÈÒÓÁ%Èìì.ì.Á%ÈÚÁÒ,, ~ÚÓÇ°%,,±È%° ÚÓì~±ìÈ~ÁìÓí.



To Remove the Battery Pack

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

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



Inserting a Cassette

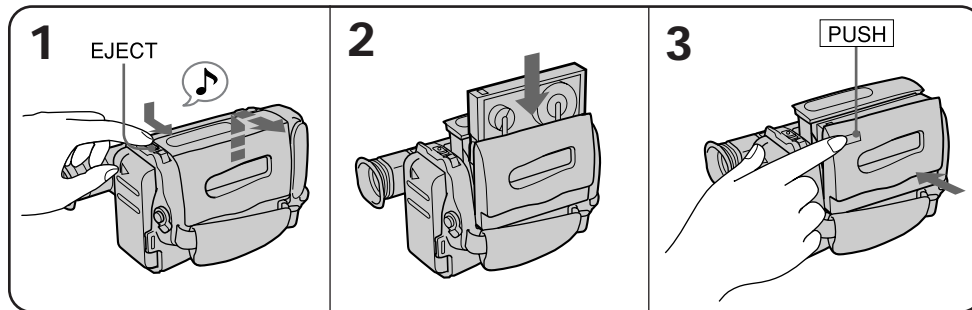
ÇÒÚ±,Í± Í±ÒÒÁÚ°

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.

Ì·À%ÈÚÁÒ, ÒÓÈÒÓÓ·ÍÈÍÒÈÚ±ÈÈÚÒÓÚ±ÍÓ,ÍÁÌ.

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



To Eject the Cassette

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

To Prevent Accidental Erasure

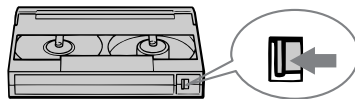
Slide the tab on the cassette to expose the red mark. If you insert the cassette with the red mark exposed and close the cassette compartment, the beeps sound for a while. If you try to record with the red mark exposed, the and indicators flash in the viewfinder, and you cannot record. To re-record on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

ÑÍÈÈ, °Ú±ÍÈÈ,±ÍÈÈ Í±ÒÒÁÚ°

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

ÑÍÈÈ Ò·Á%ÓÚ, ±·ÁÌÈÈ ÒÌÚ·±ÈÍÓ,ÓÒÚÈ ±ÍÈÈ

ÈÁ Á%ÈÌ, ÚÁÍÁÒÁÒÓÚÓÍÍ±Í±ÒÒÁÚÁ, ÒÓ·ÒÓÈÈ,ÈÍ±Ò, Í ±ÒÍ±ÈÈ ÍÁÚÍ±.ÒÓÍÈÇ·,ÒÚ±,ÈÚÁÍ±ÒÒÁÚÚÒ È, °ÒÚ±,ÍÁÌÍÒÈÍ ±ÒÍÒÈÈÁÚÍÁÈÁ±Í ÒÁÚÁÒÓÚÒÁÍÍ±ÒÒÁÚ°,ÚÓÁ±Á,Ú·ÈÚÁÚÍÁ Ì·ÈÒÈÈ,Í±Í.ÒÓÍÈÇ·ÒÓÒ·Ú±ÁÚÁÒ, Á±ÒÈÒ°,±Ú, Ò È·,ÒÚ±,ÍÁÌÍÒÈÈ Í ±ÒÍÒÈÈ ÍÁÚÍÁ, ,È%ÒÈÒÍ±ÚÁÍÁ·Ú%ÚÚÍÈÈ,±Ú, ÈÈ%ÈÍ±ÚÓ ° È±,ÈÇ·ÍÁÒÍÒÈÈÁÚÁÒ ÒÈÁ,ÁÒÚÈÈ Á±ÒÈÒ°,ÑÍÈÈ ÒÁ ÁÁ±ÒÈÒÈÈ Í±%±ÍÍÚ, ÍÁÍÚÚÒÁ Á%ÈÌ, ÚÁÍÁÒÁÒÓÚÓÍÍ±Á±%, ÒÓ·. Á±Í °Ú, Í ±ÒÍÚ, ÍÁÚÍÚ.



To Stop Recording Momentarily [a]

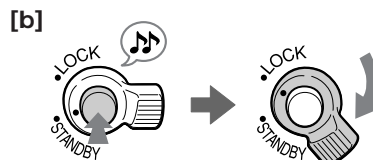
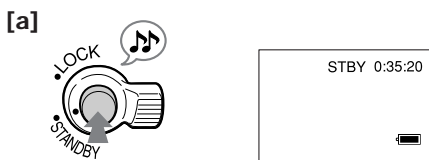
Press START/STOP again. The "REC" indicator in the viewfinder changes to the "STBY" indicator (Standby mode).

Νίπν , ΆίΆίίίόέ όόύπύό,ίέ Ά±όέόέ [a]
 ϙ±έίέύά όόπύ, ίίόόίύ START/STOP. ϙ
 ,έ%οέέόί±ύΆίΆέί%οέί±ύό "REC"έΆίΆίέύόπνί±
 έί%οέί±ύό "STBY"(Άέέί,όύό,ίόόέ).

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 όόίόί~πύέπν Ά±όέόέ [b]
 ϙ±έίέύά ίίόόίύ START/STOP. εό,Ά ίέύά
 όΆ Άίί ~±ύΆί, STANDBY ,ίέΆ έ ύόύπύό,έύά
 , ίί, ~±ύΆί, POWER , όόίόέΆίέΆ OFF.
 ά±ύΆί, ~ύόίίέύάί±όόΆύύέ ύ%οπύέύά
 ~±ύ± Άέί°έ ~ίόί.



Note on Standby mode

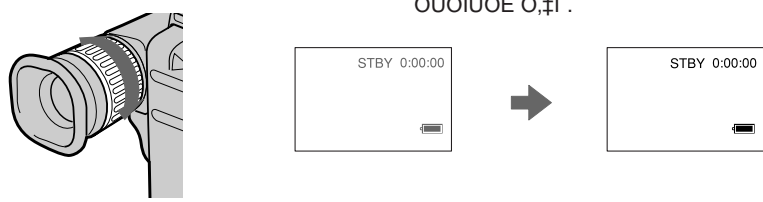
If you leave the camcorder for 5 minutes or more with a cassette inserted in Standby mode, the camcorder goes off automatically. This prevents wearing down the battery and wearing out the tape. To resume Standby mode, turn STANDBY down once and turn it up again. To start recording, press START/STOP.

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 ±,ύόπύέΆόίέ.ύύόό Ά%οόύ, ±±Άύ ±Ά π%οίύ
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 ί±έίέύά ίίόόίύ 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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 ύόόίύόέ ό,±°.



Camera Recording

Αντι-Γη (Anti-Ground) Σημείωση

Note on the indicators in the viewfinder
The indicators appear in CAMERA mode only. They do not appear in PLAYER mode.

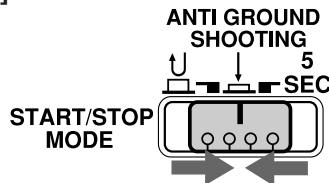
Recording with the START/STOP button depressed

You can also make recording while pressing down the START/STOP button. To make the START/STOP button work this way, set START/STOP MODE to $\frac{1}{2}$. [c]

Shooting scenery in several short takes

You can automatically make recording for about 5 seconds with the 5 SEC (p. 31). To make the START/STOP button work this way, set START/STOP MODE to 5 SEC. [d]

[c]



Note on recording

When you record from the beginning of the tape, run the tape for about 15 seconds before actual recording. This prevents the camcorder from missing any start-up scenes when you play back the tape.

Notes on recording mode

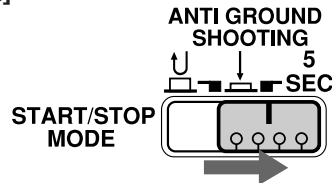
- This camcorder records and plays back in SP (standard play) mode and in LP (long play) mode. The playback quality in LP mode, however, will not be as good as that in SP mode.
- When a tape recorded on this camcorder in LP mode is played back on other types of 8mm camcorders or VCRs, the playback quality may not be as good as that on this camcorder.

Επισημειώσεις σχετικά με τα δείκτες στο οπίσθιο φακό
Οι δείκτες εμφανίζονται μόνο στην κατάσταση CAMERA. Δεν εμφανίζονται στην κατάσταση PLAYER.

Αντι-Γη (Anti-Ground) Σημείωση
Μπορείτε να κάνετε ηχογράφηση πατώντας το κουμπί START/STOP. Για να λειτουργήσει το κουμπί START/STOP με αυτόν τον τρόπο, ορίστε τον τρόπο λειτουργίας START/STOP MODE στο $\frac{1}{2}$. [c]

Σημείωση σχετικά με την ηχογράφηση σε σύντομα βήματα
Μπορείτε να κάνετε αυτόματα ηχογράφηση για περίπου 5 δευτερόλεπτα με το 5 SEC (σ. 31). Για να λειτουργήσει το κουμπί START/STOP με αυτόν τον τρόπο, ορίστε τον τρόπο λειτουργίας START/STOP MODE στο 5 SEC. [d]

[d]



Επισημειώσεις σχετικά με την ηχογράφηση
Όταν ηχογραφείτε από την αρχή της ταινίας, τρέξτε την ταινία για περίπου 15 δευτερόλεπτα πριν από την πραγματική ηχογράφηση. Αυτό αποτρέπει την απώλεια οποιωνδήποτε σκηνών εκκίνησης όταν παίζετε πίσω την ταινία.

Σημειώσεις σχετικά με τον τρόπο ηχογράφησης

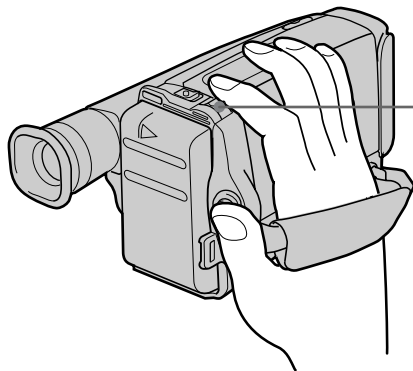
- Αυτό το camcorder ηχογραφεί και παίζει πίσω στην κατάσταση SP (standard play) και στην κατάσταση LP (long play). Η ποιότητα αναπαραγωγής στην κατάσταση LP μπορεί να μην είναι τόσο καλή όσο στην κατάσταση SP.
- Όταν ηχογραφηθεί σε αυτό το camcorder στην κατάσταση LP, η ποιότητα αναπαραγωγής σε άλλα είδη camcorder 8mm ή VCR μπορεί να μην είναι τόσο καλή όσο στην κατάσταση LP.

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.

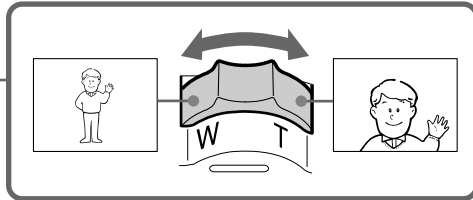
T side: for telephoto (subject appears closer)

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



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ò È·iÈÈ±Áùòñ)
ëúó óí±W: %oíñ È·óíó,ó ù,ì± ò·ÁíÈÈ
(ó·Áíú ù%o±íñÁùòñ)



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.

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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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 – ÓÓi,ÍÓ %òfñ ÌÓ%òÄiÈ CCD-TR402E
 Ç° ÍÓÉÁÚÁ ,° tìÚ, Ú tìÓÙÓtìÈ 13i
 (ÓÓÙÈ~ÁÓiÛ) ÈiÈ 26i (^ÈÙ Ó,Ú).
 • í tìÓÙÓtìÈñ ·ÓiÁÁ, ^Ái 13i,
 Ò ÓÉÁ,Ó%ÈÙÓñ ÈÙ Ó,ÌÓÓÓÓÓ·Ói,È
 tì~ÁÓÙ,ÓÉÁÓ· tìÈÁiÈñÚiÚ%~tìÁÚÓñÓÓiÁ Á
 ÓÁ ÁiÁ~ÁiÈñ , ÓÓÓ ÓiÛ í. ÓÓiÈ Ç° iÁ
 íÓÙÈÚÁÈÓÓÓi,ÁÓ,tìÚ, ÈÙ Ó,ÓÈ
 Ú tìÓÙÓtìÚÓ ,ÚÓÙtìÓ,ÈÚÁ ÚÙiíÈ ZOOM
 ,ÓÓiÓÈÁiÈÁ i13 (ÓÙ . 34)
 • è tìtñÓÙÓ Ótì [a]Èi%ÈtìÚÓ tìÈÈ,Ó%òiÓ,Ó
 Ú tìÓÙÓtìÚÓ tìÓÓtìÁ°,tìÁÚÁÓiÛ ÈÙ Ó,ÓÈ
 Ú tìÓÙÓtìÈÈ, tìiÁ,tñ ÓÙÓ Ótì [b]
 ÓÓtìÁ°,tìÁÚÁÓiÛ ÓÓÙÈ~ÁÓiÓÈ
 Ú tìÓÙÓtìÈÈ. ÓÓiÈ Ç° ÚÓÙtìÓ,ÈÚÁ
 ÚÙiíÈ ZOOM tì i13, ÚÓ ÁÓtì [a]
 ÈÓ~ÁÁiÁÚ.

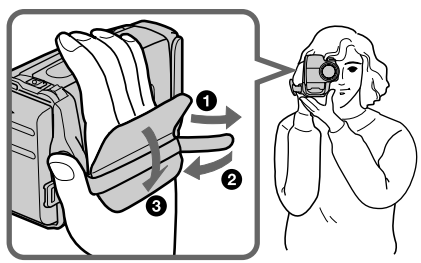


Hints for Better Shooting

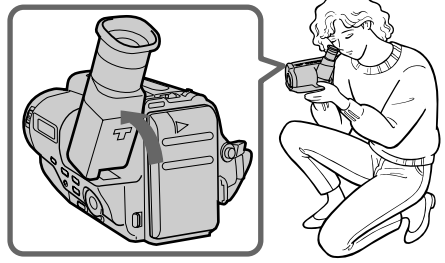
For hand-held shots, you'll get better results holding the camcorder according to the following suggestions:

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 È%òÁÓtìiÁ Ú,ÓÓÓÓ,ÁÚÓÓ,ÈÈÓÓÓiÁ%òÚÈÈÈ
 ÚtìtìÈÈñÈÈ.

[a]



[b]



Hints for Better Shooting

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- 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

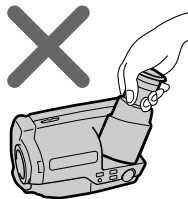
- Do not pick up the camcorder by the viewfinder. [c]
- Do not place the camcorder so as to point the viewfinder toward the sun. The inside of the viewfinder may be damaged. Be careful when placing the camcorder under sunlight or by a window. [d]

- ç±%ãÈìó%ã ÈÈÚÁ,È%ãÁóí±ã ÛÈ Ò`Á%óÓì ±ñÈÚÁ ÁÁ Ò`ÓÓìÓ`.. ÁìÀììÓ,,Ò Á±,±Ú± Û±í, ~ÚÓ Ç` ÒìÓÈÁÚÁ ÌÁ,ìÓ Ì±ìÈÓÙìÈ Ò,±Ú, Á,ÙíñÚÓ ±ìÈ Ò` ÒÓìÓ`.. Ç±-Á,,Ò`-Òì`-Ò` Ò`±í`±. [a] (ÓÚ . 17)
- è±ÒÓìÓÈÈÚÁ Ç±-Ò`±, ÈìÓìÓÙ, Ì±Ó ÒÙÈ, Ç±-Á,,Ò`-Òì±.
- è±ÒÓìÓÈÈÚÁ Ç±-ÙìÁ,Ù, ÛìÙ ÒÓ% ÌÈ%ãÁóí±ã ÒÈ%ñÁÁ ÒÓ%ãÁ ÈìÈ . ÇÁ Á± ÒÈÚÁ ÌÈì ÓÙÓì Ç±-ÈìÈ Ò±í, ±ìÈ .
- è±ÒÓìÓÈÈÚÁ Ç±-Ì±Á ÚÓ-ìÓ Ì±Ó ÒÙÈ, ÓìÙíñ ±,È%ãÓÈÓì±ÚÁíñ.
- àÒÓì,ÁÚÈÚÁ,ÈÁÈ ÌÙ, ±íìÙ,È%ãÓÈÓì±ÚÁíñ, Ì±-ÁÓÚ,Á ÛìÓ,Ó%ÓÙ,±%ñ ÒÓ`Á%ãìÁìÈñ ,,Ò`ÈÁÓìÙ±í,ìÓ,,Ò` Òì±±.
- Ç` Û±ìÈÁ ÌÓÈÁÚÁ ÓÓÙ-ÁÓÙ,íñÙ, Á±ÓÈÒ, ÈÁ ÌÈÈìÁ,,Ò` ÓÓìÓÈÁìÈñ %ñ ÒÓìÙ-ÁìÈñ ÈìÚÁ ÁÓìÓ,ÒÙ,Ì±±ÓÈÓÈ,èÒ`Á ÌÈÚÁ,È%ãÓÈÓì±ÚÁì, ,,Á` Ì%ñ Á±ÓÈÓÈÈ ÈÁ ÌÈÈìÁ,,Ò` ÓÓìÓÈÁìÈñ. [b] (ÓÚ . 17)

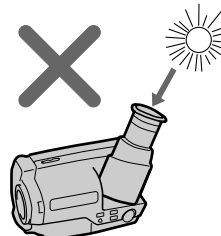
è±ÒÓì±,±ÈÚÁ,È%ãÁóí±ã Û Ì± ÒìÓìÓÈÈ ÒÓ,Á ÌìÓÙÈ ÈìÈ ÈÓÓì,ÁÚÈÚÁ Û ÁìÓÈÈì ÈÚ± ±ÈÚÁÓ, ±ÒÓì±,±Ú, È%ãÁóí±ã Û Ì± ÓÙÓìÁìÈÈ% Û,ÒÈÓìÓìÓÈÈÓÓ,Á ÌìÓÙÈ ÒÓ%ñ Ò%ñ ÌÈ,`ÒÓÙ`. ÒÓìÈ Û Ç±ÓÈìÁÁÚÓñ Û ÁìÓÈÈì%ñ Û ÓÙÓ±ÓÓ± ±Ú±, Ç` ÌÓÈÁÚÁ ÈÒÓì,ÁÓ,±Ú, Á,Ò È%ñ ÌÈ,È%ãÁóí±ã . è È Ò Èì ÁÓìÁìÈÈ Û ÁìÓÈÈìÙ, ÓÙìÈ-ìÓìÙ ÓÙ ÛÈ Ì` Sony Û-Á%ãÈÚÁÓ, ~ÚÓ Ì`ÁÓÁÈì`È,ÈìÙ Û ÁìÓÈÈì± ÌÓ`Ò`Á 6,5 Ì. Ç` Ò` ÓÙÈ,ìÓì ÒìÙ-±Á,ÈìÙ ÌÓÈÁÚÁ ÒÓ, Á%ãÈÚ, ÌÙÚ ÁììÈÁ %ãÁ Û±ìÈ,È%ãÁóí±ã .

- àÂ` Ò` Á%ãÓÓÙÓ ÒÈìÓÓÙÈ Ò`È Ò` ±`ÀìÈÈ Ò,È%ãÓÈÓì±ÚÁìÁì
- ÇÁ`ÓÓ%ìÈìÈÚÁ,È%ãÁóí±ã Û, %ã È±ÁÁÁ±,È%ãÓÈÓì±ÚÁì, [c]
- ÇÁ` ±ÒÓì±,±ÈÚÁ,È%ãÁóí±ã Û Û±ìÈ Ò` ±ÁÓì, ~ÚÓ`.. È%ãÓÈÓì±ÚÁì, .-ì Ì±Ó ±ìÁì, ÓÙÓ ÓìÙ ÓÓìì±, ùÚÓ ÌÓÈÁÚÁ Ò`È,ÁÓÙÈ Ì%ãÁÚÓ Ì±`ÈÈ, ÌÙÚ ÁììÈì, ±ÓÙÁÈ,È%ãÓÈÓì±ÚÁìñ. ÁÚ%ã, ÚÁ ÓÓÙÓ ÒÈì, ÓÓÙ±,íññ,È%ãÁóí±ã Û Ì± ÓÓì-Á ÈìÈ, ÓÁìÁ Óì±. [d]

[c]



[d]



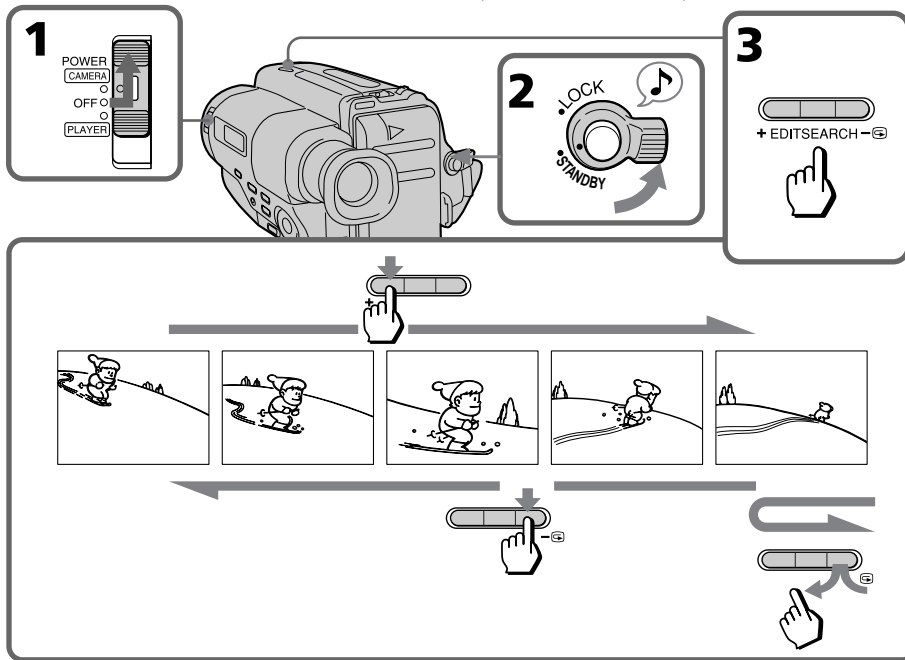
Checking the Recorded Picture

Ελέγχοντας την Εγγραφμένη Φωτογραφία

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

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

- (1) Πατώντας το μικρό πράσινο κουμπί που βρίσκεται στο διακόπτη ΠΡΩΤΟΒΑΡΙΑΣ, μετακινήστε το διακόπτη στην θέση ΚΑΜΕΡΑ.
- (2) Μετακινήστε το διακόπτη στην θέση ΣΤΑΝDBY.
- (3) Πατήστε το κουμπί EDITSEARCH. Πατώντας το - (⊖) για λίγο, οι τελευταίες δευτερόλεπτα της εγγραφμένης σκηνής παίζονται πίσω (Rec Review). Κρατώντας το - (⊖) του κουμπιού EDITSEARCH μέχρι να επιστρέψετε στην σκηνή που θέλετε, οι τελευταίες δευτερόλεπτα της εγγραφμένης σκηνής παίζονται πίσω. Για να προχωρήσετε, κρατήστε το + (Edit Search).



To Stop Playback
Release EDITSEARCH.

Για να σταματήσετε την αναπαραγωγή, απελευθερώστε το κουμπί EDITSEARCH.

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

Για να ξεκινήσετε την επανεγγραφή, πατήστε το κουμπί START/STOP. Η επανεγγραφή ξεκινά από το σημείο που απελευθερώσατε το κουμπί EDITSEARCH. Εάν δεν αφαιρέσετε το κασετό, η μετάβαση μεταξύ της τελευταίας σκηνής που εγγραφήσατε και της επόμενης θα είναι ομαλή.

Basic Operations εγχειρίδιο χρήστη

Connections for Playback

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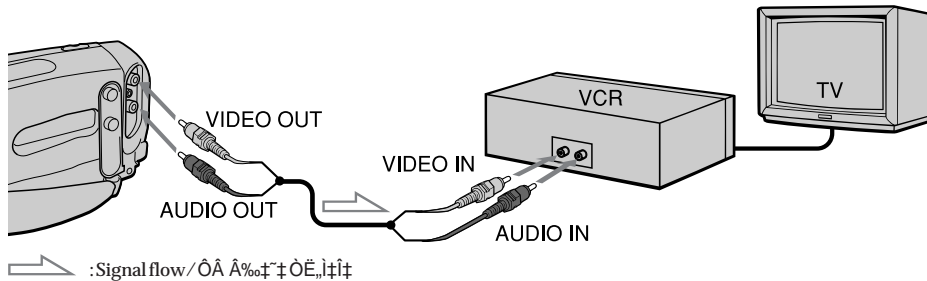
Connect the camcorder to your VCR or TV to watch the playback picture on the TV screen. It is recommended to use the mains as the power source (p. 25).

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.

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ËËÛÄËÄ,ÉÁÓ Û%oíîÓ ÓÓÍÓÜ ±
,ÓÒÔ ÓËÁ,Ó%oËÍÓ,ÓËÁÓ. ±ËÄËfl±
ÛÄËÄ,ÉÄËÓííÓÍ í ±Ä. èÄÍÓÍÄí%oÛÄÛÒfl
ËÒÓÓÍ,ÁÓ,±Ü, íÄÍÜ È-ÄÓÍÜ, ÓÄÜ, ,
í±-ÄÓÜ,ÄËÓÜÓ-íËí±ÖËÛ±Ëfl (ÓÜ .25).

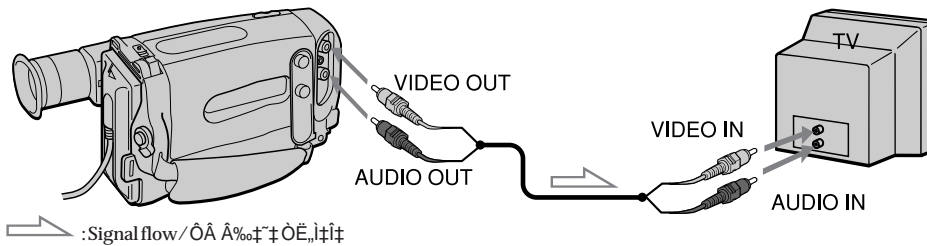
ÒÓÍË äÇá ÒÓ%oÓÓÁ%oËËËí ÜÛÄËÄ,ÉÁÓ Ü
éÚÍ ÓËÛÄí í-ÍÜ, ÌÄÁ%o± È ÓÓ%oÍÎ ÒËÛÄ
,È%oÁÓíîË Ü LINE IN í± KBM, ÈÒÓÓÍ,ÁÜfl
Ó Èí±,±Äí È ÓÓÁ%oËËÛÄí ìÈ í±.Äí. ±Ü%oËÓ/
,È%oÁÓ. ìÓÜ±ÍÓ,ËÛÄ, íÓ%oÍÓÈ ÓÄÍÄÍÜÓ í± í,
,ÓÓÍÓÈÄËÄ LINE. ìÓÜ±ÍÓ,ËÛÄ ÓÄÍÄÍÜÓ TV/
VCR, ÓÓÍÓÈÄËÄ VCR í± ÜÄËÄ,ÉÁÓ Ä.



Connecting Directly to a TV

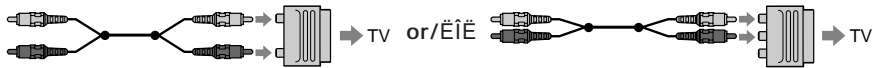
Open the jack cover and connect the camcorder to your TV by using the supplied A/V connecting cable. Set the TV/VCR selector to VCR on the TV.

èÓ%oÍÎ ~ÀÌËÄ ÌÄÓÒÔ Á%oÓÜ,ÄííÓ í
ÛÄËÄ,ÉÁÓ Ü
éÚÍ ÓËÛÄí í-ÍÜ, ÌÄÁ%o± È ÓÓ%oÓÓÁ%oËËÛÄ
,È%oÁÓíîË Ü í, ±-ÄÍÜ ÜÄËÄ,ÉÁÓ Ü,
ÈÒÓÓÍ,ÁÜfl Ó Èí±,±Äí È ÓÓÁ%oËËÛÄí ìÈ
í±.Äí. ±Ü%oËÓ/,È%oÁÓ. ìÓÜ±ÍÓ,ËÛÄ ÓÄÍÄÍÜÓ
TV/VCR, ÓÓÍÓÈÄËÄ VCR í± ÜÄËÄ,ÉÁÓ Ä.



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).

ÑÏñ ÖÓ%ÏÏ~ÄÏËñ í ÚÂÏÄ,ËÁÓ Û ËÏË äÇå
·ÄÄ ,ÍÓ%Í°Í/°ÍÓ%Í°Í „ÏÄÄ%È%ÄÓ/
±Ú%ËÖ
Ç°ÖÓÏËÚÄ ÖÓ%ÏÏ~ÄÏËÄ Ò ÈÖÖÓÏ,ÁÓ,±ÏËÄÏ
±%±ÖÚÄ ±RFU (ÏÄÖ ËÏ±,±ÄÚÖñ).

Playing Back a Tape

ÇÓÒÓ ÓĒÁ,Â%ÀĪĒÁ ĪÂĪÚ°

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).

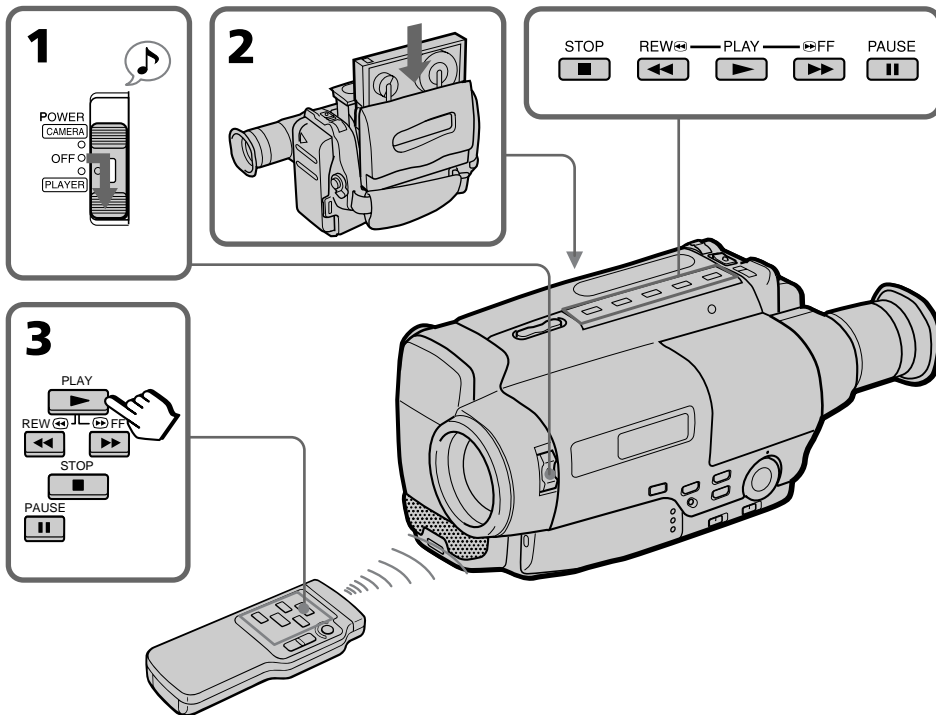
You can control playback using the supplied Remote Commander.

- (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.

Ç° ĪÓĒÁÚÁ ,°ÓÓĪĒĪÚ. ĪÓĪÚ ÓĪĪ°Ē ÓÓÓĪÚÚ ,ÓÓÓ ÓĒÁ,Â%ĒĪÓ,ÓĒÁÓ. †ĒĒĪĒĒĒ, ,Ē%ÓĒĒÓĪÚÁĪÁ. Ç° Ú†ĪĒĒ ĪÓĒÁÚÁ ,°ÓÓĪĒĪÚ, ÓÓÓĪÚÚ Ī†ĪĪÁÚÁĪÁ,ĒÁÓ †ÓÓÓĪÁ ÓÓ%ĪĪ,ĒĪĒĒĒ ,Ē%ÁÓĪ†ĪÁ° Ī ÚÁĪÁ,ĒÁÓ Ú/ăÇá(ÓÚ ,20).

Ç° ĪÓĒÁÚÁ ĪÓĪÚ ÓĪĒ Ó,†Ú ,ÓÓÓ ÓĒÁ,Â%ĪĒĒÁÓĒÓÓĪ,ÁÓ,†ĪĒĒĒĒ ÓĒĪ†,†ĒĪÓ,ÓÓÚĪ,Ú†%ĒÓÚ†ĪĒÓĪĪÓ,ÓÚÓ †,ĪĪĒĒĒĒ.

- (1) Ç†ĒĒĒĒĒ Ī†ĪĪĪ,ĪÚ, ÁĪĪĪĪÚ, ĪĪÓÓĪÚ Ī†ĪĪ,†ÚÁĪÁ POWER, ÓÁ Á%,ĒĪ,ÚÁ Á,,Ó ,ÓÓĪÓĒĒĒĒĒPLAYER. á†,,Ó †,ÚÓĒĒ ĪĪÓÓĪĒ ÓÁ ĪĪÁ°ĪĪĒĒĒ ĪĪĪÚ°.
- (2) ÇÓÚ†,ÚÁ Á†ÓĒÓ†ĪĪÚ, ĪĪĪÚÚ ÓĪÓ-ĪÓĪ, Ó. †°ĪĪ°Ī Ī† ÚĒÚ.
- (3) Ç†ĒĒĒĒĒ ►. Ç†ĪĪÁÚÓĒĒ,ÓÓÓ ÓĒÁ,Â%ĪĒĒÁ.



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

ĪĪĒĒ ÓÓÚ†ĪÓ,ĪĒ ,ÓÓÓ ÓĒÁ,Â%ĪĒĒĒ Ī†ĒĒĒÚÁ ■.
ĪĪĒĒ ÚÓĪÓ ĪĪĪÓĒ ÓÁ ĪĪÓÚĪĒĒ ĪĪĪÚ° Ī†Á†% Ī†ĒĒĒÚÁ ◀◀.
ĪĪĒĒ ÚÓĪÓ ĪĪĪÓĒ ÓÁ ĪĪÓÚĪĒĒ ĪĪĪÚ° ,ÓÁ Á% Ī†ĒĒĒÚÁ ▶▶.

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 ÔÚÍ Ú†
 %ÈÓÚ†ÈÓÒÍÓ,Ó ÚÓ †,ÌÀÈ†
 Ç°ÍÓÈÁÚÁ ÚÓ †,†Ú, ÓÓÒ ÓÈÁ,Á%ÀÈÄ†
 ÈÓÓÓÍ,ÁÓ,†ÈÄ†È†,†Á†Ó,Ó ÓÚÍ,Ú†
 %ÈÓÚ†ÈÓÒÍÓ,Ó ÚÓ †,ÌÀÈ†. èÁ Á%††ÍÓÍ
 ÈÓÓÓÍ,ÁÓ,†È†ÓÚÍ Ú†%ÈÓÚ†ÈÓÒÍÓ,Ó
 ÚÓ †,ÌÀÈ†,ÓÚ†,ÚÁ .†Ú† ÁÈÈ R6
 (†Á†Á Ó†Á).

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

è†ÁÈÈ~†Á ÁÈÈ†°,ÓÒÒ ÓÈÁ,Á-
 %ÀÈÈ†%†††Ó ÓÓÍÓÚ †ÌÁÓÓ%,ÈÈÍÓ,Ó

àÁÓ. †ÈÄÈ†(†ÚÁ†,ÓÓÒ ÓÈÁ,Á%ÀÈ†)
 ç†ÈÈÚÁ ††ÓÓÍÚ ††,Ó, Á††
 ,ÓÓÒ ÓÈÁ,Á%ÀÈÈ†. †††,ÓÁÓ-ÌÓ,ÌÀÈ†
 ,ÓÓÒ ÓÈÁ,Á%ÀÈÈ††ÈÈÚÁ ††ÓÓÍÚ ††ÈÈ▶.

††† ÓÚ°Ó††È† È†††Á†Ó,Ó Ú †,ÌÀÈÚ†
 (ÓÓÈÓÍ ÈÁÓ. †ÈÄÈ†)
 †Á È†Ú, †È†ÚÓÈ ††ÓÓÍÚ ††ÈÈ▶▶ Ó
 , Á††,ÓÓÒ ÓÈÁ,Á%ÀÈÈ†. †††,ÓÁÓ-ÌÓ,ÌÀÈ†
 †Ó††ÍÓ,Ó,ÓÓÒ ÓÈÁ,Á%ÀÈÈ†ÓÚÓÚÓÚÈ,
 ††ÓÓÍÚ.

††† ÍÓÍÚ Ó†† ÈÁÓ. †ÈÄÈ† ††,°ÓÓÍÓÈ
 ÓÍÓ ÓÓÚÈ,Ó, Á†† ÚÓÍÓ Á††ÈÈ ÓÁ Á††ÈÈ
 ÇÓÁ Á%ÈÈÈ†††% (ÓÓÈÓÍ†ÁÚÓ%ÓÍ
 Ó Ó,Ó††)
 †Á È†Ú, †È†ÚÓÈ ††ÓÓÍÚ ††,Ó, Á††
 ÓÁ Á††ÈÈ††Á†† †††ÈÈ ††ÓÓÍÚ ††▶▶,Ó
 , Á†† ÓÁ Á††ÈÈ††Á††,ÓÁ Á%. †††
 ,ÓÁÓ-ÌÓ,ÌÀÈ† †Ó††ÍÓ,Ó
 ,ÓÓÒ ÓÈÁ,Á%ÀÈÈ††È†Ú, ††ÓÓÍÚ ▶.

è È†Ä~†È† Í ,ÓÓÒ ÓÈÁ,Á%ÀÈÈ,
 • Ç †ÁÈÈ~††, ÁÈÈ††,ÓÓÒ ÓÈÁ,Á%ÀÈÈ† ††
 ††Á††,ÓÚ ÓÓ†,ÈÚ,Ó†† ÓÓÍÓÓ È Á,ÚÍ
 .Ú%ÁÚÓ È,†Ú~Á†.
 • ÓÓÍÈ ÁÈÈ††ÁÓ%ÈÈÍÓ,ÓÈÁÓ. †ÈÄÈ†
 Ó Ó%ÓÍÈ†ÁÚÒ† ÓÍÓÍÓ 5 †ÈÈÚÚ ÈÈÈ.ÓÍ-Á,
 È%ÁÓ†††††ÚÓ††ÈÈ~ÁÓÍÈ ÓÁ Á††ÈÈ,
 ÁÈÈ† 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 car battery	Sony DC pack DCP-77

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.

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	LR6 (size AA) Sony alkaline battery	Battery case
In the car	12 V or 24 V car battery	Sony DC pack DCP-77

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.

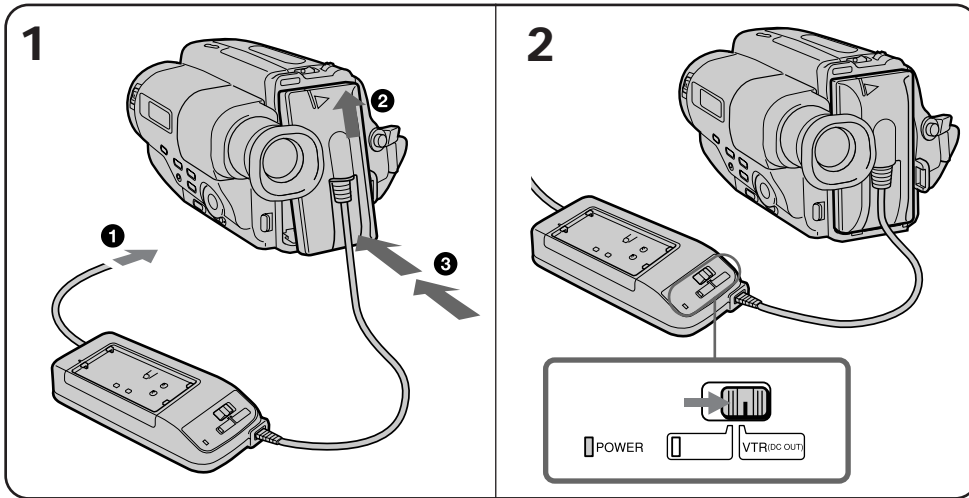


This mark indicates that this product is a genuine accessory for Sony video products. When purchasing Sony video products, Sony recommends that you purchase accessories with this "GENUINE VIDEO ACCESSORIES" mark.

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).

à000Í,ÁÓ,±ìÈÀ ÍÁÍÚ È~ÁÓÍÓÈ ÒÀÚÈ

Νίη Ε000Í, ÁÓ, ±ìÈñ Ò Èì, ±ÁÍÓ,, Ò ÒÁÚÁ, Ò, Ò ±%±00Á ±0Á Áì. Ú0Í±:

- (1) è0%00Á%ÈìÈÚÁ Ò, Ò%00 ÍÁÍÚ Ò0ÈÚ±ìÈñÍ ÍÁÍÚ È~ÁÓÍÓÈ ÒÁÚÈ. Ç00±, ÚÁ, Á ìÈÈ Ì0ÍÁ~ Ò0Á%ÈìÈÚÁ Ì0È Òì±00Èì~ ÒÁÚÁ, Ò, Ò ±%±00Á ± 0Á Áì. Ú0Í±, Á ìì, ±00±, ±00± ÁÈì0ÈÚ00±Í0, ÒÍ0È00, Á Ì000È, ç±ÈìÈÚÁ Ì± Ò0Á%ÈìÈÚÁ ÌÚ, Òì±00ÈìÚ, Ú±ì, Ú0~ Òì± Ò È00Á%ÈìÈì±0 Ì±%0ÁÈì0. ì.Á%ÈÚÁ Ò, ~Ú0 Ç° %0, ±È%° Ú0Í± ±ìÈ Áì~ Òì.
- (2) ì00±Í0, ÈÚ, ÒÁìÁìÚÓ, Ò0Í0ÈÁìÈÀ VTR (DC OUT).

èè ÒÑìèèì ÒÜÑ Òçà Ò èÁÚÁ, ÒÈ Ò Ò, Ò%0 ÒìÁ%0 ÒÁÚÁ Á±ìÁìñÚ, Ú0Í± Ì0, Ì±00Á Òì0È Ì, ±ìÈÈÈ~È Ò, ±ìì0,, Ò Ò~0ìÚÈÈ~ ±ìÈñ.

èè ÒÑèèì Òè ÒÜ Òçà Ò Ν±ìì È ±00± ±Ú ÌÁ Ò0Íì ±ÁÚ0ñ ÒÚ È000 ÌÈì±0ÈÚ±ìÈñ ÒÁ Áì. Ú0Í±, Ò0Í± Òì Ò0Á%ÈìÁì Ò ÍÁÍÚ È~ÁÓÍÓÈ ÒÁÚÈ, %0±ÈÁ, Á0ÈÈ Ò±ì ±00± ±Ú Ò0Íì~Áì.

è ÈìÁ~±ìÈñ Ì Ì±Í00~ÍÁ POWER

- à±ì00~Í± POWER~Ú%0ÁÚ Ò00±, ±Ú Òñ, Ò ñ~ÁÈ Ì±Í0Á~Ú0, Áìñ, %00±ÈÁ, Á0ÈÈ ±00± ±Ú~Ú%0ÁÚ000Á%ÈìÁì000ÍÁ È000Í, ÁÓ, ±ìÈñ. ùÚ0 ñ, ññÁÚ0ñ Ì0 Ì±ì, Ìì.
- 00ÈÈ Ì±Í00~Í± POWER ÌÁ Á±, Ò ±ÁÚ0ñ, Ò000Á%ÈìÈÚÁ ÒÁÚÁ ÒÈ Ò Ò%00Á ÁÁ0%0 Ò ÌÈìÚ00 Òì0, ±00%00Á%ÈìÈÚÁ ÒÁÚÁ ÒÈ Ò00%0

Νίη ÒìñÚÈñ Ì±%0±00Á ± Á%0±00Á ÒìÈì±ÁÚ0ñ Ò±ìÈìÈÁ Ò. ±ÁÓì, Ì±ìÈ ±00± ÁÈìÈ Ìì0Í (00 Ì0).

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 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.

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

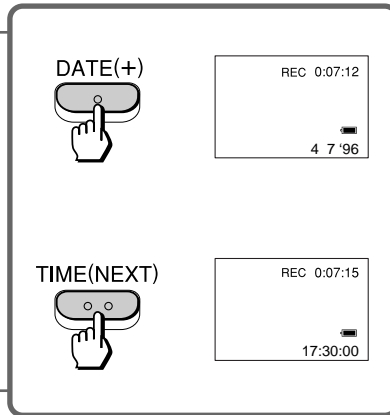
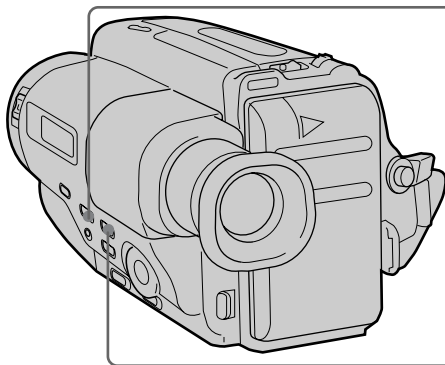
Recording with the Date or Time

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.



To Stop Recording with the Date or Time

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

Note

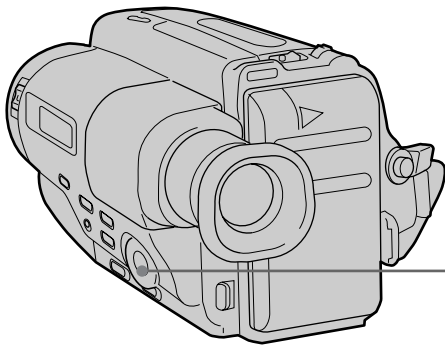
You cannot superimpose a title during recording the date or time.

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

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

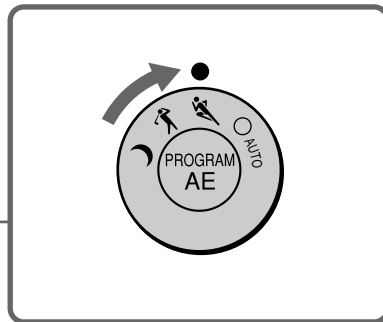
Using the PROGRAM AE Function

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



PROGRAM AE

●, PROGRAM AE.



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


PROGRAM AE
 1/50 to 1/500
 1/4000
 1/50
 1/50

Shooting with Backlighting

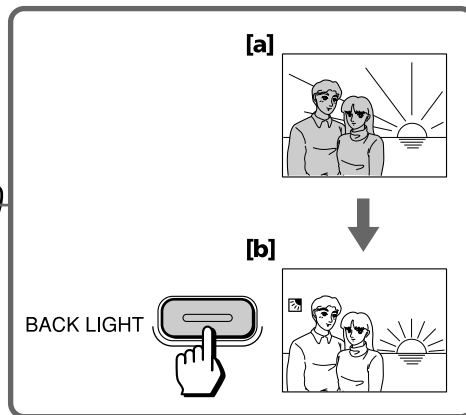
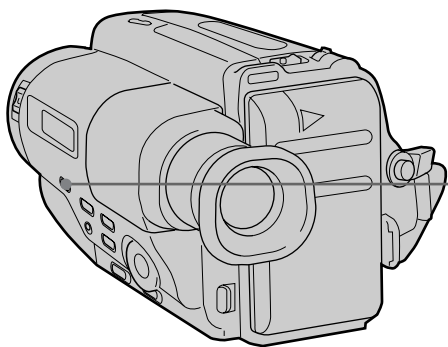
επιβάλλει το Αυτόματη Έκθεση

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 ένα θέμα με φωτεινό φόντο, χρησιμοποιήστε το BACK LIGHT.

Press BACK LIGHT. The  indicator appears inside the viewfinder.


Πατήστε το 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 του φωτισμού από πίσω.
- [b] Το θέμα γίνεται φωτεινό με την αποζημίωση φωτισμού από πίσω.

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.

επιβάλλει το Αυτόματη Έκθεση. Πατήστε το BACK LIGHT, το  θα εξαφανιστεί υπό κανονικές συνθήκες φωτισμού. Διαφορετικά, η εικόνα θα είναι πολύ φωτεινή υπό 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 μεταξοστόχο ή συνθετικό υλικό, 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).

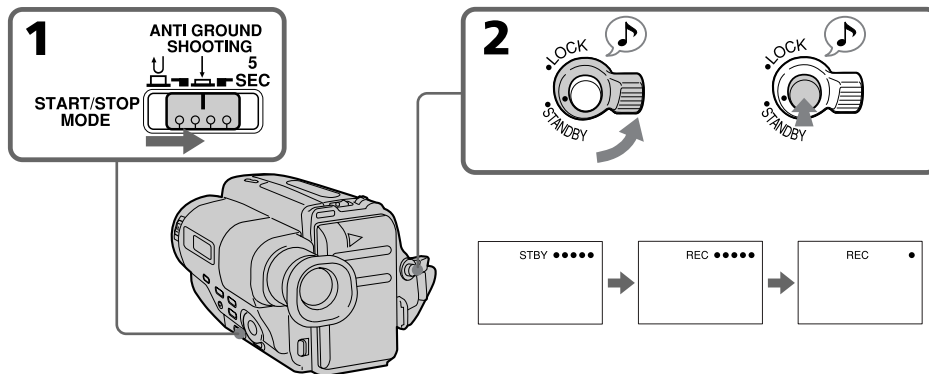
ANTI GROUND SHOOTING : The camcorder records only while you press down START/STOP so that you can avoid recording unnecessary scenes.

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.

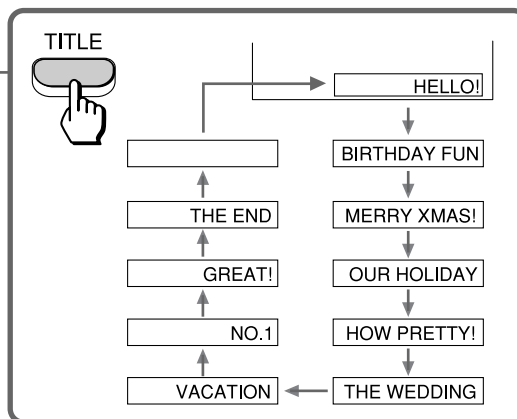
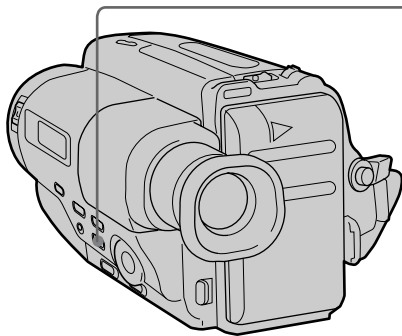
To Superimpose On the Way of Recording

- (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° İÖÊÁÚÀ, ìÉ ±Ú, ÈÁ %ÀÒÍÚË
 Ó Á%,± ÈÚÁÌ İÓ ÚÓÚ±İÓ,İÀİİ° İ±%ÒËÒÀË
 %òİİ İ±İÖÊÀİËİİ Èİ İ± ÈÁÓ. ±ÈÀİËÄ, Ó, Áİİ
 Á±ÖËË. ä±È%È ±Á, İÓ,,%± Ç° İ±ÈËİ±ÁÚÀ
 İİÓÍÚ TITLE, Ó Á%,± ÈÚÁÌ, İÓ
 ÚÓÚ±İÓ,İÀİİ° Á İ±%ÒËËË ÒÓİİ,İİ, ÚÒİİ Ó%ò± Á±
 %òÚ,Ë

- Ñİİİ İ±İÖÊÀİËİİ ÓÚ İ±~±İ±
- (1) ÈÁ Á%,Èİ ÚÀ ÓÀ Áİİ,±ÚÁİ, POWER ,
 ÓÓİÖÊÀİËÄ CAMERA.
 - (2) èÓ,Ä İËÚÁ STANDBY „Ä İ.
 - (3) ÇÁÓ%òÍÓİ ±ÚİÓ İ±ÈËİ±ÈÚÁ TITLE, ÓÓİ± İÄ
 ÓÓİİ,ÈÚÓİİ ÈÁİ±Áİ±İİ İ±%ÒËË. Ç±%ÒËË,
 ·Ú%ÀÚİË,,±Ú,.
 - (4) Ç±ÈİËÚÁ START/STOP %òİİ İ±~±İ± Á±ÖËËË.
 - (5) Ç±ÈİËÚÁ TITLE, İÓ,,%± Ç° Á±İÓÚÈÚÁ
 ,°İ,~ÈÚ, İ±%ÒËË,.

- Ñİİİ İ±İÖÊÀİËİİ, Ó Ó°ÀÒÒÀ Á±ÖËËË
- (1) ÇÁÓ%òÍÓİ ±ÚİÓ İ±ÈËİ±ÈÚÁ TITLE, ÓÓİ± İÄ
 ÓÓİİ,ÈÚÓİİ ÈÁİ±Áİ±İİ İ±%ÒËË. Ç±%ÒËË,
 ·Ú%ÀÚİË,,±Ú,.
 - (2) äÓ,,%± İ±%ÒËË, ÓÀ ÁÓÚ±İÁÚİË,,±Ú,
 İ±ÈİËÚÁ TITLE. Ç±%ÒËË, ÈÒ°ÁÁİÁÚ.
 - (3) Ç±ÈİËÚÁ START/STOP %òİİ İ±~±İ± Á±ÖËËË.
 - (4) Ç±ÈİËÚÁ TITLE, İÓ,,%± Ç° ÓÓÈÁİ±ÁÚÀ
 İ±İÖËËÚ, İ±%ÒËË,.
 - (5) Ç±ÈİËÚÁ TITLE, İÓ,,%± Ç° Á±İÓÚÈÚÁ
 ,°İ,~ÈÚ, İ±%ÒËË,.



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

è ÈİÄ~±İËÄ İ, °Ó Ú İ±%ÒËËË
 Ç° İÄ İÖÊÁÚÀ, ìÉ ±Ú, İ±%ÒËËË, Ó, Áİİ
 Á±ÖËËË

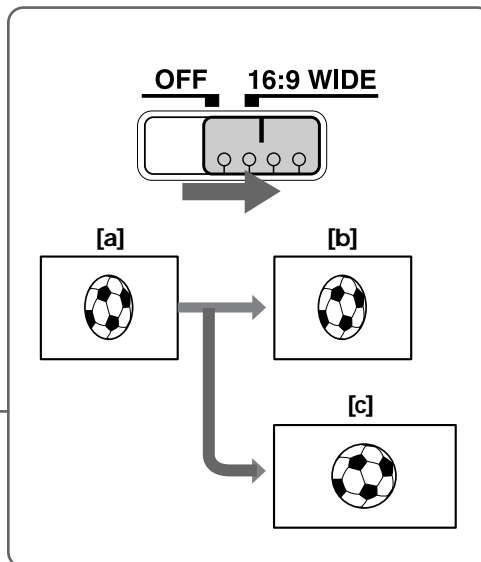
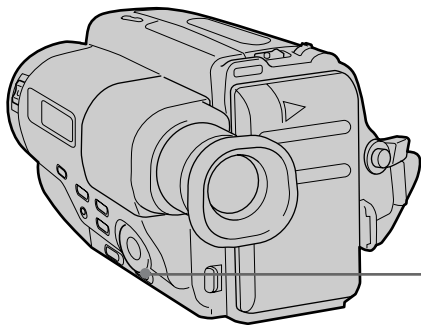
Using the Wide Mode Function

- 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].

Changing the Mode Settings

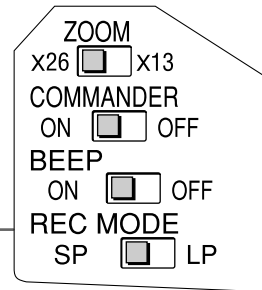
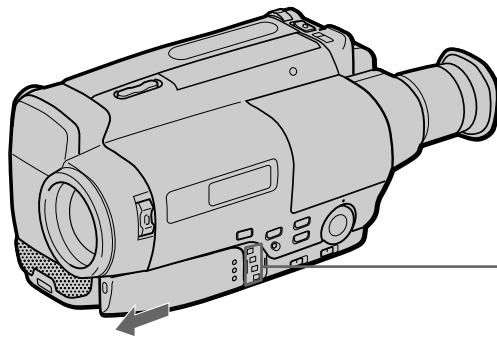
ÀÁÏÀÏÀÏËÄ ÅÊËÏ° Ì ÛÒÙ±ÌÓ,ÓÍ

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° ÌÖËÄÛÄ ÈÁÏÀÏÙ, ÛÒÙ±ÌÓ,ÏË ÅÊËÏ°, %òíñ Ì±ÒÍ±Ë%òíñ %òòòòíËÛÄÏ,Ï°ÏË Ò,ÒËÒÙ,±ÏË È ÛÒÏí°ËíË.

- (1) èÄ Å%ò,ËÏ ÛÄ Ì°ÏÙ, ÏÄ,Ó. Ç° Û,Ë%ËÛÄ ÒÄ ÁÏ,±ÙÄÏË ÅÊËÏ°.
- (2) ìÒÙ±ÌÓ,ËÛÄ ÒÄ ÁÏ,±ÙÄÏË ÅÊËÏ°, Ì± ÈÁÏ±ÄÏ° È ÅÊËÏ.
- (3) áÍ ÒËÛÄ Ì°ÏÙ.



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 ÛÒÙ±ÌÓ,ÏË ÅÊËÏ± ÒÓ Ì±Ë%òíÛ ÒÛÏÏÛÛ

ZOOM <x26/x13> (ÛÒÍ,ÏÓ %òíñ ÌÖËÄÛÄ ÈÁÏË CCD-TR402E)

- ìÒÙ±ÌÓ,ËÛÄ, ÒÓÍÖËÄÏËÄ Ì26, ±ÙÓ° Ä±%ÄËÒÙ,Ó,±Ù, ±ËÛ Ò,Û Û ÌÒÙÒÍ±Ë.
- Ç° Û,Ë%ËÛÄ ÒÄ ÁÏ,±ÙÄÏË ÅÊËÏ°, ÒÓÍÖËÄÏËÄ Ì13. ÇÒÄÏÖËÏÒÙ, Û ÌÒÙÒÍ±ËÈÈ ÒÙ±ÌÓ,ËÛÒíñ13.

COMMANDER<ON/OFF>

- ìÒÙ±ÌÓ,ËÛÄ, ÒÓÍÖËÄÏËÄ ON Ò È ÈÒÒÓÍ,ÄÓ,±ËÈÈ Ò ÈÏ,±ÄÏ,ÓÒÛÍ,Û± %òËÒÙ±ËÈÒÏ,ÓÛÓ ±,ÏÄÏËñ %òíñ È%òÄÏ±Ä°.
- ìÒÙ±ÌÓ,ËÛÄ, ÒÓÍÖËÄÏËÄ OFF, ÄÒÏÈ ÒÛÍ,Û %òËÒÙ±ËÈÒÏ,ÓÛÓ ±,ÏÄÏËñ ÏÄ ÈÒÒÓÍ,ÄÛÄÛÒíñ %òíñ,È%òÄÏ±Ä°.

BEEP<ON/OFF>

- ìÒÙ±ÌÓ,ËÛÄ, ÒÓÍÖËÄÏËÄ ON %òíñ ÏÏ°ÄÏËñ ÄÛÏÄ ÌÓ,Ó Ä,ÛÍÓ,Ó,Ó ÒÈ,,Ì±Ï±.
- ìÒÙ±ÌÓ,ËÛÄ, ÒÓÍÖËÄÏËÄ OFF %òíñ ÏÏ°ÄÏËñ ÄÛÏÄ ÌÓ,Ó Ä,ÛÍÓ,Ó,Ó ÒÈ,,Ì±Ï±.


REC MODE <SP/LP>

- Ç° Ä ÈÛÄ SP %òíñ Ä±ÒËÒË ÏÄÏÛ°, ÅÊËÏÄ SP(ÒÙ±%± ÛÍÓ,Ó,ÒÒÒ ÒËÄ,Ä%òÄÏËñ).
- Ç° Ä ÈÛÄ LP %òíñ Ä±ÒËÒË ÏÄÏÛ°, ÅÊËÏÄ LP(Û%òËÏÄÏÏ,Ó,ÒÒÒ ÒËÄ,Ä%òÄÏËñ).

Additional Information

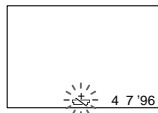
Changing the Lithium Battery in the Camcorder

**NOÓÓÏËÜÄÏ, Ì±fl ÈÏÚÓ Ì±Ê±fl
á±IAI± ÌEUEA, OE
±Ú± ÁÈÏË , È%ÄÓÏ±ÏÄ 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.)

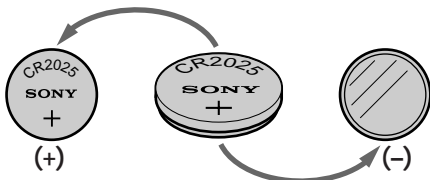
Ç±± ,È%ÄÓÏ±ÏÄ ± Òì±.ÈÀì± ÙÓÙ±ÍÓ,ÏÄÏÏË ÌEUEA,OE ±Ú± ÁÈÏË. ÒÏÏË ±Ú± ÁÈÏ±ÓÙ±ÏÄÙ Òì±. ÒË ÈÏË ÒÏÏÏÓÙ, ±Ä flÈÀÏÏË, ÈÏ%ÈÏ±ÚÓ Ì±. Ù%ÄÛÏË, ±Ú± ,È%ÄÓËÏ±ÏÄÏÄ, ÙÄ ÄÏËÄ5 ÒÄÏÏÏ%,, ÌÓ,,%±Ç± ÙÓÙ±ÍÓ, ÈÜÄ , Ì± ±ÚÄÏ, POWER , ÒÏÏËÄÏËÄ CAMERA. Ç Ù±ÏÏÏ ÒÏÏ±Ä Ä±ÏÄÏËÄ ±Ú± ÁÈÏË Ì± ÌEUEA,Ü. ±Ú± ÁÈÏË Sony CR2025. äÓÓÏÏ, ÄÓ, ±ÏËÄ % Ù, ÒË ±Ú± ÁÈÏË ÏËÈÄÙ Ò È, ÄÓÙË Ì ÈÏÏÏ, ÒÓÏÏÏÄÏÏÏ ÈÏË , Ä , ±. äÈÜËÄ, ±fl ±Ú± ÁÈÏ± %fl, È%ÄÓÏ±ÏÄ ±. ÒÙ±ÄÙ Ò È. ÈÄËÜÄÏÏ, ÙÄ ÄÏËÄ 1,, Ò%± Ò È ÌÓ Ì± Ì± ÙÓÏË. Èfl, ÏÏÏÏÙ±Ú± ÈÈ. (äÈÜËÄ, ÒË ±Ú± ÁÈÏË, ÌÓÙÓ ±fl. Ì± ÙÓÙ±ÍÓ, ÏÄÏÏ Ì± Ä±, Ò%Ä, ÏËÈÄÙ ÏÄ Ì, ±ÜËÜ, Ì± 1,, Ò%.)



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±ÏËÄ ÒÓ ÌEUEA,OE ±Ú± ÁÈÏÄ Ì±ÏËÄ ÌEUEA,Ü ±Ú± ÁÈÏË, ÏÄÓÙÄ, ÏÄ %ÄÓÓÙÙÓÏÏ%fl%ÄÛÏË. Ç ÒÏÏ±Ä Ò Ó, Ì±Ú±, ±ÏËfl ±Ú± ÁÈÏË ÏÄÏÄ%ÄÏÏÏ Ò. ±ÜËÜÄÓ, Ì, ±Ú. è ÓÙËÜÄ ±Ú± ÁÈÏË ÒÏÏË ÒÏÏË Ì, %fl ÙÓ, Ò, ÏÓ. Ò. ÄÓÓÄËÜ, ÌÓ Ò ÈÈ ÌÏÏÏ±Ï. ÇÄ%Ä ÈÈÜÄ ±Ú± ÁÈÏË Ò ÓÓÏÏ ÏÄÙ±ÏÏÈÄÓÏ, Ò ÒËÏÄÙ±, ÈÏÄ ÏËÈÄÙ Ò ÒÈÄÓÈÜËÏ ÒÏÏÏÄÄ±ÏÏÏÏÏÏÏ. é. ±ÜËÜÄ ÏËÏÏËÄ, ÏÓ ÌEUEA, ±fl ±Ú± ÁÈÏ± ÈÏÄÄÙ ÒÓÏËÈÈÜÄÏ ÌÈ (+) È ÒÙË±ÚÄÏ ÌÈ (-) ÒÓÏÏ, Ì±Ï ÒÏÏÄ±ÏÏ Ì± ÈÏÏÏÏÄ. ÇÄ Ä±. Ù%Ä ÙÄ ÙÓÙ±ÍÓ, ÈÜ, ÌEUEA,Ü ±Ú± ÁÈÏË Ù±Ï, ÏÓ. ÒÓÏÏ Ò Ì± ±Ú± ÁÈÏÄ ÒÓÓÙ, ÄÙÓÙ, Ò, ±ÏÈ ÒÓÏÏ Ì± ,È%ÄÓÏ±ÏÄ Ä.



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

è è ÒÏÏÏè è ÒÏÏÏÏÇÄ ÒÏÏÏ Ò ±Ú± ÁÈÏË ÏÄ Ò ±ÈÏ, ÌÓ Ò. ±±Ú, Òfl, Òì± ÏËÈÄÙ, ÄÓ, ±Ú, Òfl. ÇÄ ÒÄ ÄÄ± flÈ±Ú, ÏÄ ±ÄÈ ±Ú, ÈÏÄ. ÒÓ±Ú, ±Ú± ÁÈÏË, Ò, ÒÏ,.

Changing the Lithium Battery

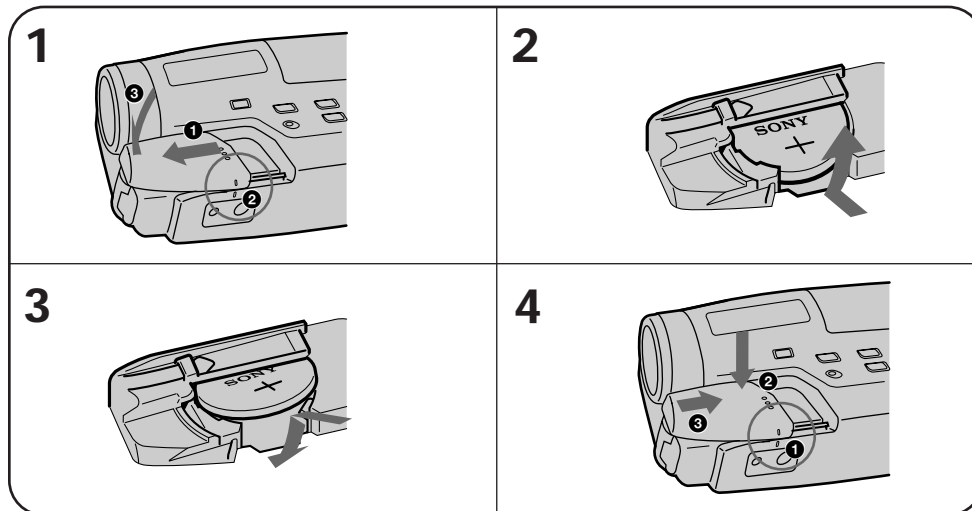
When replacing the lithium battery, keep the battery pack or other power source attached. Otherwise, you will need to reset the date and time.

- (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.

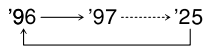
á†ÏÄÏ† ÏÉÚËÄ,ÓË ·†Ú† ÄËÏË

è È Á†ÏÄÏ† ÏÉÚËÄ,ÓË ·†Ú† ÄËÏË%Ä ÈËÚÄ ·†Ú† ÄËÏË·È·ÍÓÏËË%Ú,ÓË ÈÓÚÓÏËÏ ÓËÚ†ÏËÏ Ò ÈÓÓÄ%ÈÏÏÏ. à†Ä Ç†Ï Ó È%ÄÚÓÏÓÄ ÁÚÓÚ††,ÏË,†Ú,%†ÚÚË, ÄÏÏ.

- (1) è%È,ÈÏ,ÚÄ ÏÏÚ È ÓÓ,ÏÄÓÚËÚÄ ÏÄÚÏÚ ÏÏË Ò ÏÄÚÏÓË ÏÓ ÓÚÓ†. ç†Ë†Ú, ÏÏÚ, ÏËÄ.
- (2) ç†ËËÚÄ ·†Ú† ÄËÏÚ Ó%ÈÏ †Ä È,Ï,ÚÄ ÄÄ ÈÄ%Ä È†ÚÄÏÏ.
- (3) ÏÓÚ†ÏÓ,ËÚÄ ÏÉÚËÄ,Ú ·†Ú† ÄËÏÚ ÓÓÏÓËËÚÄÏÏË(+)ÓÚÓ ÓÏËË†ÚËË.
- (4) èÓ,ÏÄÓÚËÚÄ ÏÄÚÏÚ ÏÏË Ò ÏÄÚÏÓË ÏÓ ÓÚÓ†. ç†ËËÚÄ ÏÏÚ, ÓÓÏ† ÓÏ† ÏÄ Ä†ÄÏÏÄÚÓÏ È Ó%È,ÈÏ,ÚÄ ÏÏÚ.



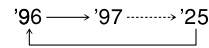
The year indicator changes as follows:



Note on the time indicator

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

àì%òÉí±`Èñ „Ó%± ÈÁÌÀñÁÚÒñ
 ÓÌÁ%òÚ ÷ ÈÌ Ó· ±ÁÓÌ:



èÁÌÀñÁÚÒñ
 ÇÓÚ ÓÁÌ`Á ±Ò° ,È%òÁÓí±Ì° ±·ÓÚ±Ú ,
 24~±ÒÓ,ÓÌ `ÈÌÁ.

Playback Modes

The playback mode is selected automatically according to the recording system (SP/LP mode) in which the tape was recorded.

Foreign 8 mm video

You cannot playback tapes recorded on a different TV colour system. Because the TV colour systems differ from country to country, you may not be able to playback foreign pre-recorded tapes. Refer to the list of "Using Your Camcorder Abroad" to check the TV colour system of foreign countries.

èÁÈÈÌ.ÓÒÔ ÓÈÁ,Á%òÁÌÈñ ,È ±ÁÚÒñ
 ±,ÚÓÌ±ÚÈ`ÁÓÌÈÓÓ,Ì±ÓÌÓÓÈÓÚÁÌÁ±ÓÈÈÈ
 (ÁÈÈÈ SP/LP) , , ÍÓÚÓ ÓÈ `Ì± Á±ÓÈÈ±±
 ÍÁÌÚ±.

àÌÓÓÚ ±Ì`Á ,È%òÁÓÌÁÌÚ° 8 ÌÌ
 Ç`ÌÁ ÓÌÓÈÁÚÁ,ÓÒÔ ÓÈÁ,Ó%òÈÚ,ÌÁÌÚ°,
 Á±ÓÈÈ±±`Á , ±ÁÌ`Ì ÓÈÈÓÚÁÌ±,`ÁÚÌÓ,Ó
 ÚÁÌÁ,È%òÁÌÈñ. èÓÓÌÓÌ,ÌÚ ÓÈÈÓÚÁÌ° `ÁÚÌÓ,Ó
 ÚÁÌÁ,È%òÁÌÈñ ÈÁÌÁñ,ÚÒñ, Á±,ÈÓÈÌÓÓÚÈ ÓÚ
 ÓÚ ±Ì°, Ç` ÍÓÈÁÚ ÍÁ ÓÌÓÈÁÚÁ
 ,ÓÒÔ ÓÈÁ,Ó%òÈÚ,ÈÌÓÓÚ ±Ì`Á
 Ó Á%ò,± ÈÚÁÌ ÍÓ Á±ÓÈÈ±±`Á ÍÁÌÚ°
 èÌÓÚ ÈÚÁÓÓÈÓÓÌ, ±Á%òÁÌÁ "èÓÓÓÌ,ÁÓ,±ÈÁ
 Ç±`ÁÈ,È%òÁÓÌ±Ì° `Á± Ú·ÁÈÓÌ" %òÌñ
 Ó Ó,Á ÍÈÓÈÈÓÚÁÌ° `ÁÚÌÓ,Ó ÚÁÌÁ,È%òÁÌÈñ
 ÈÌÓÓÚ ±Ì`Ì,ÓÓÚ%ò± ÓÚ,.

Tips for Using the Battery Pack

•••••

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

Preparing the Battery Pack

Always Carry Additional Batteries

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

Battery Life is Shorter in Cold Environment

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

To Save Battery Power

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.

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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.

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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.

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

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.

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.

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.

- 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.

Additional Information

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

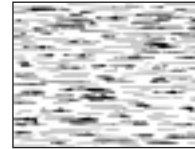
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Video Head Cleaning

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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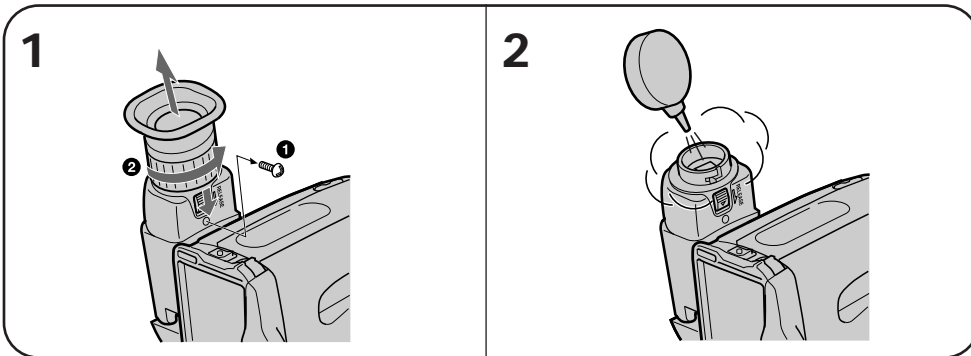
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Removing Dust from inside the Viewfinder

- (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 του φακού από το εσωτερικό του παρατηρητή

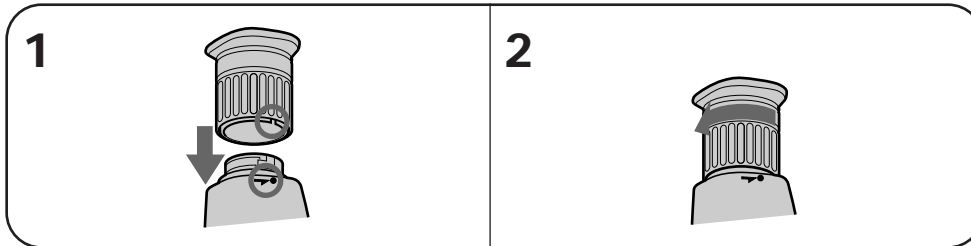
- (1) Αφαιρέστε το βίδο με βιδωτή (που δεν παρέχεται). Στη συνέχεια, κινώντας το κουμπί RELEASE, στρέψτε το φλιτζάνι προς την κατεύθυνση του βέλους και τραβήξτε το έξω.
- (2) Καθαρίστε την επιφάνεια με βLOWER που είναι εμπορεύματα.



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.

- (1) Συμμετρήστε το αυλάκι του φλιτζανιού με το σημάδι στο κανάλι.
- (2) Περάστε το φλιτζάνι στην κατεύθυνση του βέλους. Στη συνέχεια, βιδώστε το βίδο.



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

Προσοχή
Μην αφαιρείτε άλλα βίδες. Μπορείτε να αφαιρέσετε μόνο το βίδο για να αφαιρέσετε το φλιτζάνι.

Additional Information Νο0011ΕΥΑ11Η ΕΙΥ001Γ-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 playback 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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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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- ÇÓÁ, %± ÓÓ%± Á ÈË ±Ë ÚÁ ÌÁ ÚÏË "ÁÓË Á ÌÓÏ ÚÏ", "ÈÓÚÓÚÁ.
- ÇÁ ±Á È ±Ë ÚÁ±ÔÔ± ±Ú.
- ÇÁ ÓÓ%±, ±Ë ÚÁ±ÔÔ± ±Ú ÌÁ ÌË "ÁÓË ÈÏ Ú%± ÌË ÈÁ ÓÏË ÚÁ Á, Ó.
- ÓÓË ±ÔÔ± ±Ú ÌÓ%È ÚÓÏ, ÍÓÏÏÚ±Ë ÈË, ÓÓÓ. ÁÏÏ, ÁÈÈÏ Á± Ï%Ë, Ì ±Ë ÚÁ Á, Ó, %± È ÓÚ ±%È ÓÓ ÈÁÏË Ó, ÁÁ È, È%ÁÓÓ. Ó Ú%Ó, ÌË ÈÏ, ÓÓÚÓÏ "ÚÓ ÓÏ ÌÓË ÚÁ ± ÚË, Ó ÈÁÏ ÁÁ È ±ÓÚ. È%ÁÓÓ± ±Ú.
- ÁÓÓ± ±Ú ÓÚ±Ï, ÈÓÏ ÌÁ Ó, ÁÏ ÈÓÓÓ. ÁÓ, ÌË ÈÏ, ÚÚÓ Ï. Ï ÁÓÏ Ï ÌÓ Ì± Ì. Ì.
- ÇÁ ±ÁÏ ±Ë ÚÁ±ÔÔ± ±Ú, ÌÁÓÚ±, ÌÓÚÓ Á:
 - Ì ±Ë ÌÁ, Ó Ï ÈÁ ÈË ÌÓÏ%± Á
 - Ó Ì ÌÁ ÈË Ï ÁÏ Á
 - Ó ÁÏ, ÌË ÈÏ Á
 - ÓÓ%±, Á ÈÁÏ, È. ±ÈÈ

Á± Ï%ÁÏ ÓÁ ÚÓÚ ÓÈÓÚ, Ó ±Ï ÚÏÏ Ï ÚÓ Ì Ì. ±Ú± ÁÁÏ %± ÏË ÈË È%ÁÓÏ ÌÁ ± Ó Á%± ÌÁ ± ÁÏ %± Ï Á± Ï%Ë ÌË ÌÁÏ, Ì±%Ë, Ì. ±Ú± ÁÁÏ Ni-Cd ÚË Ì. Sony È %± ÓÏË Ó. Ú, ÈÓÓÓÏ, ÁÓ, ±Ï ÚÓÏ ÌÓ. "ÚË" ÁÏÏ, ÈË È, "ÁÏÏ, Á± Ï%Ë ±Ú± ÁÁÏ, ÌÓÚÓ Á Ï. Ï ÚÓÏ ÓÓ, ÌÁÓÚËÏ È Ó. "ÚÓÏ Ï ÚË È Ó. ÁÓÓÁ. È. ±Ú. ÁÁÓÓ± ÓÏ ÓÁ ÚÏÏ ÈÓË Ó. ±Ë ÈÏ ÚÓÚ ÓÈÓÚ. Ï. Ï ÌÓÁÁ± Ï%ÁÏ ÓÁ ÚÓÚ ÓÈÓÚ, Ó ±Ï ÚÏÏ Ï ÚÓ Ì Ì. ±Ú± ÁÁÏ ÌÁ, ÓÏÁ%Á ÚÁ ÈÓÓÓÏ, ÁÓ, ±Ú, %± Ï Á± Ï%Ë. ±Ú± ÁÁÏ Ni-MH, Ú± Ì± "ÚÓ ÌÓË ÚÁ Ó È. ÁÓË Ì. ÁÁÏ ÌÓÏ ÓÓ, "ÁË, ÚÁÏÁ ±ÚÚ. ±Ú± ÁÁÏ Ni-âç. ÏË Ì± Sony ÌÁ, ± ±Ï È ÚÁ ÚÓ ÓÓ, ÌÁÓÚËÏ ÓÚÚ, ÈË ÁÁÓÓ± ÓÓÚ, %± Ï, ÓÁ± Ï%ÁÏ, ÓÚÓÚ ÓÈÓÚ ± ±Ï ÚÏÏ Ï ÚÓ Ì Ì. ±Ú± ÁÁÏ Ó È ÈÓÓÓÏ, ÁÓ, ±Ë È Á, Ó Ó. ±Ú± ÁË ÌË, ÓÚËÏ ÌË ÓÚ ÌË ÌÁÏ, Ì±%Ë, Ì. ±Ú± ÁÁÏ Ni-Cd ÚË Ì. Sony. èÁ Á%ÈÓÓÓÏ, ÁÓ, ±Ë ÁÏ%± Ï, ÓÁ± Ï%ÁÏ, ÓÚÓÚ ÓÈÓÚ, ± ±Ï ÚÏÏ Ï ÚÓ Ì Ì. ±Ú± ÁÁÏ %± Ï Á± Ï%Ë %± Ú, ÈÏ, ÓÚËÏ Ì Ì. ÓÚ ÌË ÌÁÏ, Ì±%Ë, Ì. ±Ú± ÁÁÏ Ni-Cd ÚË Ì. Sony, %± ÓÏË Ó. Ú, ÓÓÏ ÚÁÓ ÓÓ%± ÚÁ È%ÁË ÁÓ ÚÁ, ÓÚÓ, È ÚÁË È. ±Ú± ÁÁÏ, ÚÓ ±Ú± ÁË ÈË Ï, Ï ÚÓÏ ÓÓÏ ÁÓ ÚË ÌË Ó %± Ï Ì Ì Á± Ï%± Ì ÚÓÚ ÓÈÓÚ, Ï ÈÏ, ÚÚ ÓÏ ÈË. ÁÁÓÓ± ÓÏ ÈÓÓÓÏ, ÁÓ, ±Ú, ÓÏ.

ÇÓÏÚ±ÁÚ Ú%± ÓÓÚÁÈ ÓÚÓÁ%È ÈË ÚÁ±ÔÔ± ±Ú È Ó. ±Ë ÚÁÓ, Ç± Á. ÌË È±È. ÁÁ ±, ÁÏ ÚÓÚ, Ó Sony.

Using Your Camcorder Abroad

àÒÒÓÍ ÁÓ, †ÌÈÄ Ç†-ÄÈ
, È%ÁÓÍ†ÌÄ ° 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 †† ÈÌÈ Ó·†òÚ, ÈÌÄÄ Ò, Ó
ÒÓ·ÒÚ, ÄÌÛ, ÒÈÒÚÄÌÛ ÍÄÌÛ È·ÄÓÍÒÈ ÒÄÛÈÈ
ÒÈÒÚÄÌÛ·ÄÛÍÓ, ÓÚÄÌÄ, È%ÄÌÈfl. èÄ Ä%
ÈÒÒÓÍ ÁÓ, †ÌÈÄÌ Ç†-ÄÈ , È%ÁÓÍ†ÌÄ ° Á†
Û-ÄÈÓÍ Ò Ó, Ä , ÚÄ ÓÍÄ%Ú, ÈÄ ÒÛÌÛ:

àÒÓÓÍ-ÌÈÈÈ ÒÈÛ†ÌÈÈfl

Ç· ÍÒÈÄÚÄ ÈÒÒÓÍ ÁÓ, †Ú, Ç†-Û, È%ÁÓÍ†ÌÄ Û
, Í·ÒÈ ÒÚ †ÌÄ ÈÌÈ Ó·†òÚÈÈ Ò Ò ÈÌ†, †ÄÌ·Ì
ÒÄÛÄ, ††%†òÚÄ ÓÍÒÄ ÄÌ·ÚÓÍ†, Ó Ä%ÄÌ†Ì
ÓÚ 110 Ç%Ò 240 Ç ÓÄ ÄÌ·ÚÓÍ†, 50/60 È·.

è†ÄÌÈÈÈfl , ÒÈÒÚÄÌ†Ì , ÄÛÍÓ, Ó ÚÄÌÄ, È%ÄÌÈÈfl

Ñ†Ì†fl , È%ÁÓÍ†ÌÄ † ÒÒÍÓ, †† †† ÒÈÒÚÄÌÄ
PAL, ÒÓÍÈÇ·, ÒÚÈÛÄ, ÒÒÒ ÒÈÄ, Ó%ÈÛ
ÈÄÓ· †ÈÄÌÈÄ †† ÚÄÌÄ, ÈÄÓ Ó, ÒÍ %ÓÍÈÄÌ··Ú,
ÒÓÍÓ, †† †† ÒÈÒÚÄÌÄ PAL ÈÌÈ ÈÄ †† ÒÈÒÚÄÌÄ
SECAM ÒÚ †òÍÓ%Ä ÒÍ PAL-SECAM.
è Ó, Ä , ÚÄ ÓÍÄ%Ú, ÈÈÈÒÈÒÓÍ,
ÒÒÓÚ†, ÍÄÌ·È , †ÍÛ†, ÈÛÍÓÍ ÒÓ fl%ÍÄ.

èÈÒÚÄÌ† PAL
Ä, ÒÚ †ÌÈfl, Ä, ÒÚ Èfl, ÄÄÌ, Èfl,
ÇÄÌÈÍÓ· ÈÛ†ÌÈfl, ÈÄ ††Èfl, ÈÓÍ†Ì%Èfl,
ÈÓÍÍÓ, Ñ†ÌÈfl, àÒÓ†ÌÈfl, àÚ†ÌÈfl, àÈÛ†È,
àÛ, ÄÈÛ, à††ÈÄÈfl, çÓ, †fl áÄÌ†Ì%Èfl,
çÓ, Ä, Èfl, èÓ ÛÛ, †ÌÈfl, èÈÌ, †òÚ, ††È†Ì%,
ÌÈÌÍfl%Èfl, ò, ÄÈfl, ó, ÄÈ·† Èfl, È %.

èÈÒÚÄÌ† PAL-M
Ä †ÄÈÈÈfl

èÈÒÚÄÌ† PAL-N
Ä , ÄÌÛÈ†, è† †, †È, ì Û, †È

èÈÒÚÄÌ† NTSC
Ä†, †ÍÓÍÈÄ ÒÒÚ Ó, †, ÁÓÍÈ, Èfl, ÇÄÌÄÒÛ·††,
ä††%†, äÓÍÛ·Èfl, äÓ Äfl, áÄÍÓÈ†, èÄ Û,
èÛ ÈÌ†Ì, èòÄ, ††È, †Ì, †ÈÌÈÒÓÈÌ,
ñÄÌÛ ††, ††fl ÄÌÄ È††, óÈÈ, ù†, †%Ó,
Û†ÈÈ†, ùÒÓÍÈÈ È %.

èÈÒÚÄÌ† SECAM
ÄÓÍ, † Èfl, ÇÄÌ, Èfl, È†È††, à †Ì, à †Ì,
áÓÍ†ÍÓ, èÓÍ, †, èÓÒÒÈfl, èÍÓ, †·†fl
èÄÒÒÚ·ÌÈ††, ì†È††, ì†ÈÈfl, óÄ·ÓÍ†fl
èÄÒÒÚ·ÌÈ†ÈÈ%.

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

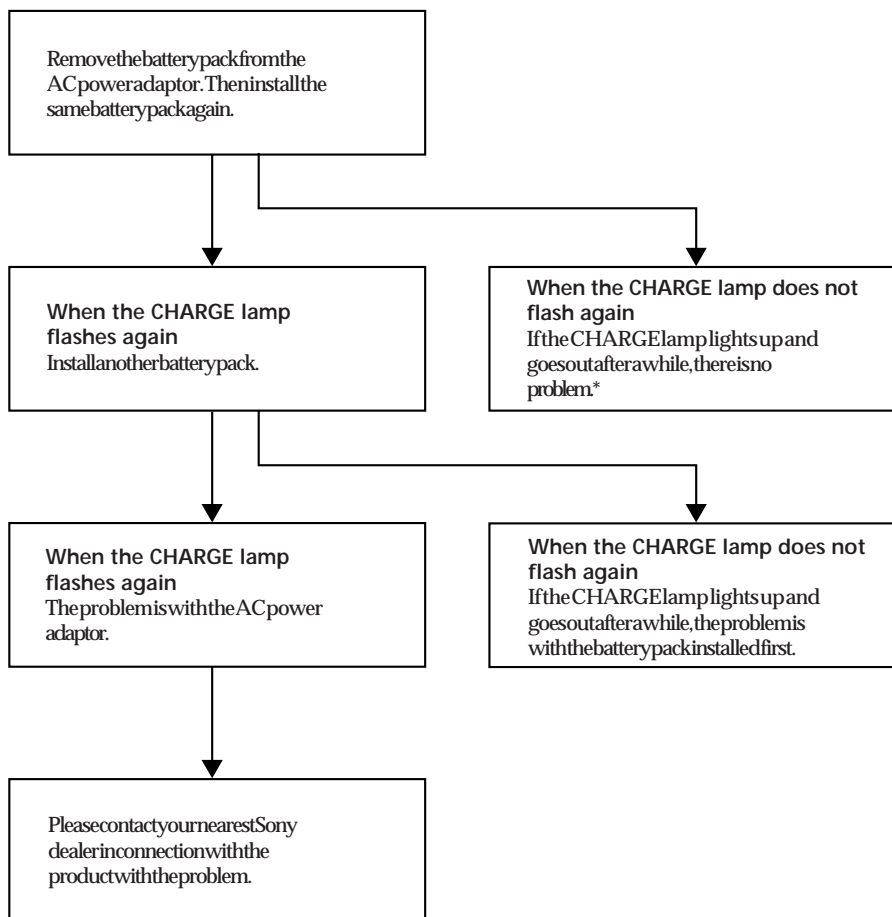
Symptom	Cause and/or Corrective Actions
The supplied Remote Commander does not work.	<ul style="list-style-type: none"> COMMANDER is set to OFF. <ul style="list-style-type: none"> → Set it to ON. (p. 34) Something is blocking the infrared rays. <ul style="list-style-type: none"> → Remove the obstacle. 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 ÌÍÓÍÈ DATE(+) È TIME(NEXT) ,ÌÁÒÙÁ -ÓÌÁÁ, ÁÌ ì± 2 ÒÁÌÙì%. → ÇÈ%ÁÓí±Á ±, ÈÒÒ ±,ÌÓÒÙÈ. Ç° ÍÓÈÁÙÁ ì±±Ù, Á±ÒÈÒ, ãÈ,±ÌÈÁ, ÒÍÓ Á Ò ÁÌ ±ÙÈÙÒñ.
àÕÁÁ±ÁÙÈì%Èí±ÙÒ %±Ù ÈÌÈ, ÁÌÀÌÈ.	→ èÌÓ,±ÙÒÙ±ÌÓ,ÈÙÁ%±ÙÙÈ, Áññ. (ÒÚρ. 38)
á±ÒÈÒ, ÒÓÙ±±,ÌÈ,±ÁÙÒñ ~Á ÁÁÌÁÒÍÓÍ,ÍÓ ÒÁÌÙì%.	<ul style="list-style-type: none"> • èÁ ÁÌí ~±ÙÁÌ, START/STOP MODE ìÙÒÙ±ÌÓ,ÌÁÌ, ÒÓÍÓÈÁÌÈÁ $\underline{\text{A}}$ ÈÌÈ 5 SEC. → ìÙÙ±ÌÓ,ÈÙÁÁ, Ò, ÒÓÍÓÈÁÌÈÁ $\underline{\text{B}}$. (ÒÚρ. 31)
àÁÓ. ±ÈÁÌÈÁ	
è ÈÀì±í	è ÈÈì± È /ÈÌÈ %ÀÈÒÙ,Èñ ÒÓ ÙÒÙ ±ÌÀÌÈ.
àÁÓ. ±ÈÁÌÈÁ ì± í ±ÌÁ È%ÒÈÒÍ±ÙÁÌñ ÌÁ ~ÁÙÍÓÁ.	<ul style="list-style-type: none"> • çÁ ÒÙ Á, ÙÌÈ Ò, ±Ì Ò. ÁÌÙÈ, È%ÒÈÒÍ±ÙÁÌñ. → èÙ Á, ÙÌÈ ÙÈÙÁ Ò. ÁÌÙÈ, È%ÒÈÒÍ±ÙÁÌñ. (ÒÚρ. 13)
è Òñ, ÌñÁÙÒñ, Á ÙÈÌ±, Ìñ ÒÓÍÓÒ±, ÁÒÌÈ Ù±ÌÈÁ Ò. ÁÌÙ°, ì± Ò, ÁÙ ÈÌÈ Òí±ñ Ò, Á È ÒÌÈ±, ÙÒñ ì± ÙÁÌÒÍ ÙÓÌÁ.	<ul style="list-style-type: none"> • èÌÈ-ÍÓÍ -ÓÍ-ÒÈ ÍÓÌÙ ±ÒÙ ÌÁÈ%Ù Ò. ÁÌÙÓÍ È ÙÓÍÓÍ. → ÇÈ%ÁÓí±Á ± ±. ÒÙ±ÁÙ ÌÓ ì±, ÌÓ. àÁÌÀÌÈÙÁ ÒÓÁÈÈ, Ò. ÁÌÈÈ.
àÁÓ. ±ÈÁÌÈÁ “Á± ÙÌÁÌÓ”.	<ul style="list-style-type: none"> • ÇÓÁÍÓÈÌÓ Á±, ñÁÌÁÌ°, È%ÁÓ, ÒÍÓ, ÍÈ. → èÈÒÙÈÙÁ, ÒÍÓ, ÍÈ, ÈÒÓÍ, ÁÙñ%ñ ÙÓ, Ò ÓÈÒÙÈÙÁÌ, ÌÙ ì±ÒÒÁÙÙ V8-25CLH. (ÒÚρ. 46)
è Ó~ÁÁ	
è ÈÀì±í	è ÈÈì± È /ÈÌÈ %ÀÈÒÙ,Èñ ÒÓ ÙÒÙ ±ÌÀÌÈ.
è ÈÌ±, ±ÁÌÈ ÒÙÌ Ù %ÈÒÙ±ÈÒÌÒ, ÒÓÙÒ ±,ÌÀÌÈñ ÌÁ ±. ÒÙ±ÁÙ.	<ul style="list-style-type: none"> • COMMANDER ÙÒÙ±ÌÓ,ÌÁÌ, ÒÓÍÓÈÁÌÈÁ OFF. → ìÙÙ±ÌÓ,ÈÙÁÁ, Ò, ÒÓÍÓÈÁÌÈÁ ON. (ÒÚρ. 34) • óÓÓ-ÓÓ Ò Á, ±È%±ÁÙ ÒÓÙ, ÈÌÙ ±í ±ÒÌÍÌÙ±í. → ÒÙ ±ÈÙÁ Ò Á, ±%Ù. • Á±Ù± ÁÈÌÈ, ÒÙ±,ÌÁÌ ò ÌÁ Ò ±, ÈÌ, ÌÓÈ ÒÓñ ÌÓÒÙ. → ÇÓÙ±, ÙÁ ±Ù± ÁÈÌÈ, ÒÓ. Í.%±ñ Ò ±, ÈÌ, ÌÙ, ÒÓñ ÌÓÒÙ. (ÒÚρ. 63) • á± ñ% ±Ù± ÁÁÌÈÁ ±ÒÍ% Ò, ±í. → ÇÓÙ±, ÙÁ ÌÓ, Á ±Ù± ÁÈÌÈ. (ÒÚρ. 63)
á±ÒÍÈÌÒñ, È%ÒÈÒÍ±ÙÁÌ,	→ èÙÒÓÁ%ÈÌÈÁ ÒÍÓÌñ È ÓÈÒÙÈÙÁÁ. ÁÌÙÈ, È%ÒÈÒÍ±ÙÁÌñ. (ÒÚρ. 47)

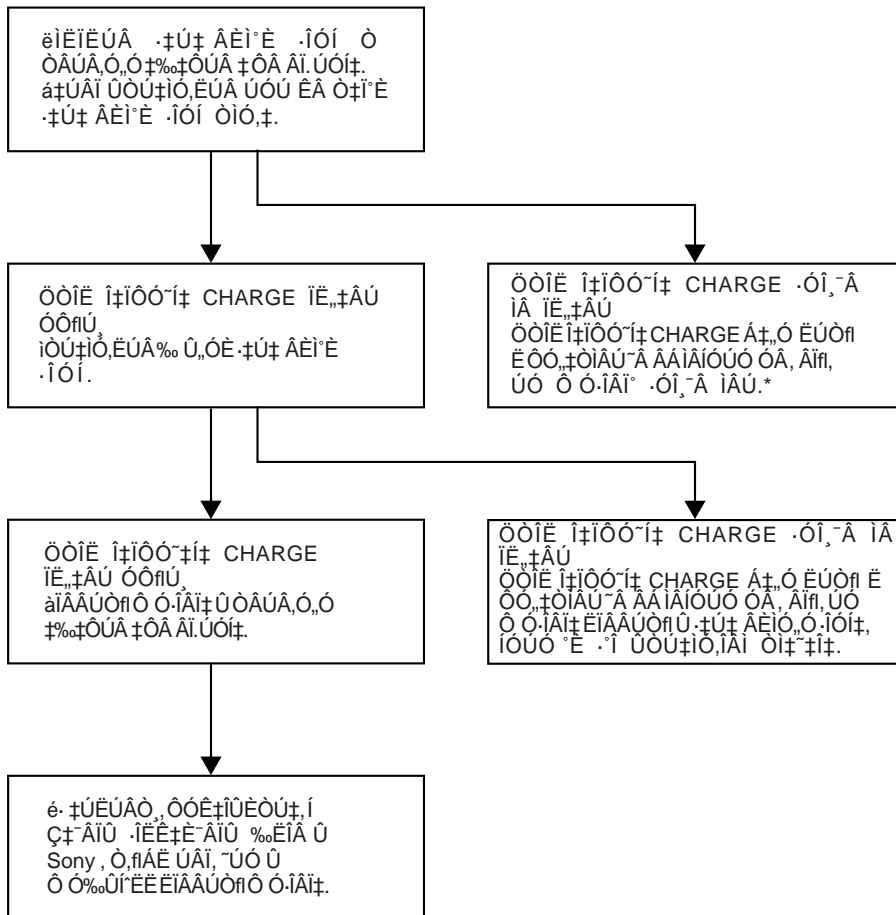
(Ò Ó%ÓÌÈÁÌÈÁ ÒÍÁ%ÚÁÙ)

è Ó,Á ì†ìÀÈÒÒ †,ìÒÒÚÀÈ

èÁÚÀ,ÓÈ†%†ÒÚÀ ÒÀ ÁìÀìÒ,ÓÚÓì†

è ÈÁì†ì	è È~Èì† /ÈÌÈ %ÀÈÒÚ,Èñ ÒÓ ÒÓÚ †ìÀìÈ
à†ìÒÒ~ì† POWER ìÀ,Ó ÈÚ.	→ÒÓÚìÒ,ÈÚÀÒÀìÀìÚÓ ,ÒÓìÒÈÀìÈÀ VTRÈÓÓÚÓÀ%ÈìÈÚÀ ÒÓ,Ó% ÌÁìÚ ÒÒÈÚ†Èñ.òÀ ÁÁÓ%ìÚìÈìÚÚÓÒÓÓ Ó.ÚÈÚÀ òìÒ,†. (ÒÚp. 9)
àÈ,,†ÁÚ ì†ìÒÒ~ì† CHARGE.	• èìÓÚ ÈÚÀ ÒìÀ%Ú~Ú Ú†.ÌÈ~Ú.

àÓ,,%† ÌÈ,,†ÁÚ ì†ìÒÒ~ì† CHARGE
 è Ó,Á ,ÚÀ ÒÓ ÒìÀ%Ú~ÀÈ Ú†.ÌÈ~À.



* ÒÒìÈ Ç° ÈÒÒìÁÚÀÚÀ .†Ú† ÁÈì°È .ìÒì, ìÓÚÓ °È Ç° ÒÓì,ìÒ ~ÚÓ ìÙÒÈìÈ, ÈìÈ ìÓÚÓ °È .ì ÒÓÚ†,ìÀì ì†%ìÈÚÁì ìÒÀ , Áñ ÒÓ ì†ìÒÒ~ì† CHARGE ìÒÈÁÚ ÌÈ,,†Ú, Ò È ÒÀ,ÓÈ Á† ñ%ìÀ. ÇÓ ~ÚÓìÁñ,ñÁÁÚÒñ Ò Ó.ìÀìÒÈ. èÓ,ÚÓ ÈÚÀ òìÒ,† Ò Ó~À%Ú Ò Á† ñ%ìÈ ÒÓÚÁìÈÀ Ò†ì~ì† .†Ú† ÁÈì°È .ìÒì.

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

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

inches), 38 – 494 mm

($1 1/2 - 19 1/2$ 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

($4 5/8 \times 4 1/8 \times 8 1/4$ 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

($6 5/8 \times 1 11/16 \times 3$ 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.

ÌÂÏÈ~ÂÒÍÈÂ Ì± ±ÍÚÂ ÈÒÚÈÍÈ

ÇÈ%ÂÓÍ±ÌÂ ±
 èÈÓÚÂÌ±
 èÈÓÚÂÌ±È%ÂÓÁ±ÒÈÒÈ
 N.Â . ± ±. ÈÁÒfl „ ÒÍÒ,ÍÈ,
 Ì±ÍÒÍÌ±fl . ÍÂÌ±ÍÈ~ÂÓÍ±fl
 ±.Â Á Ú±.ÒÈÓÚÂÌ±òá
 èÈÓÚÂÌ±Ú%ÈÓÁ±ÒÈÒÈ
 Ç ± ±. ÈÁÒfl „ ÒÍÒ,ÍÈ,
 ÒÈÓÚÂÌ±òá
 ÇÈ%ÂÓÒÈ.Ì±
 ñ.ÁÚÒ,ÒÈ ÒÈ.Ì± PAL,
 ÓÚ±%± ÚÓÓääè
 àÒÓÓÍ.ÁÚÂÍ^Á Í±ÒÒÁÚ^
 à±ÒÒÁÚ^ 8-Ì.È%ÂÓÚÓ Í±Ú±
 (ÓÚ±%± Ú 8Ì)
 Ç ÁÍfl Á±ÒÈÒÈ/
 „ÒÓÒ ÒÈÁ.Á%ÂÍÈfl
 èÁÈÈÍ SP: 1 ~±Ò È 30 ÍÈÍÚÓ
 (è5-90)
 èÁÈÈÍ LP: 3 ~±Ò± (è5-90)
 Ç ÁÍfl ÓÂ ÁÍÓÚÍÈ.ÓÂ Á%
 Í±Á±%
 è È.ÍÈÁ. 5 ÍÈÍ. (è5-90)
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 ùÍÁÍÚ ÒÌÈ È.È%ÒÈÒÍ±ÚÂÍ,
 óÁ ÍÒ-.ÁÍÈ
 è. ÁÍÚÈ,
 èèD-TR401E: 13Ì,
 ÍÓÍ.ÈÍÈ Ò.±ÌÈ È Ò.ÁÍÚÈ,
 Ò Ò È.Ò%
 Ú ±ÍÓÚÓÍ±ÚÓ ÓÍ, F1,8-2,8
 èèD-TR402E: 13Ì,
 (ÓÓÚÈ~ÂÓÍÈÈ),26Ì („ÈÚ Ó.ÓÈ)
 ÍÓÍ.ÈÍÈ Ò.±ÌÈ È Ò.ÁÍÚÈ,
 Ò Ò È.Ò%
 Ú ±ÍÓÚÓÍ±ÚÓ ÓÍ, F1,8-2,8
 ÍÓÍÚÓÍÓÁ ±ÓÓÚflÈÁ
 f=5,3 - 68,9 Ì, 38 - 494 Ì
 Ó È Ó.ÁÓ. ±ÁÓ,±ÍÈÈ, 35 Ì
 ÓÓÓ±%
 ñ.ÁÚÒ,±fl ÚÂÍÒÂ ±ÚÚ ±
 Á,ÚÓ
 àÈÍÈÍ±Í Ì±fl
 ÓÓ.Á ÁÍÓÓÓ,
 0,5 ÍÍÒ Ò È F1,8
 NÈ±Ò±ÁÓÍ ÓÓ.Á ÁÍÈfl
 ÓÚ 0,5 %Ó 100000 Í,ÍÒ
 èÁÍÓÍÁÍ%ÚÂÍ±fl
 ÓÓ.Á ÁÍÓÓÓ,
 ÁÓÍÁÁ 100 Í,ÍÒ

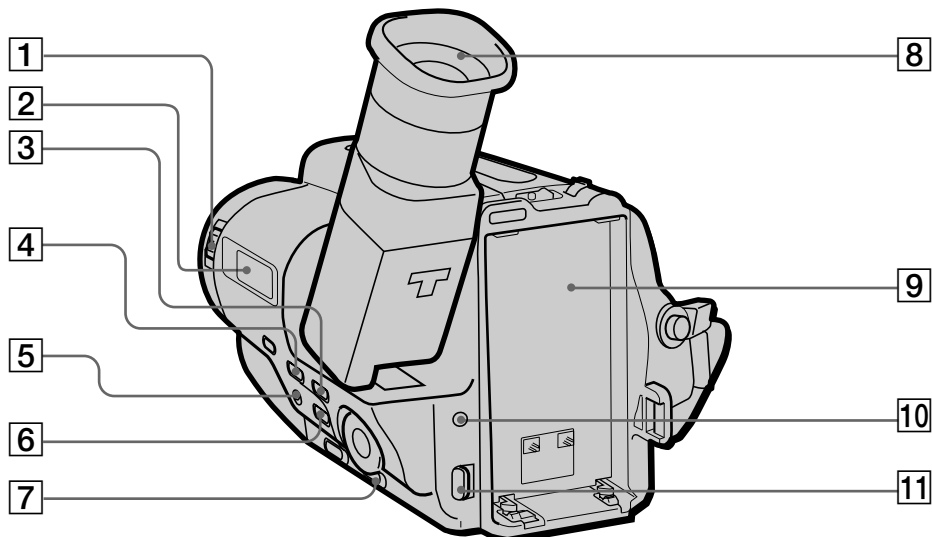
ÇÍÒ%Ì^Á È ,ÍÒ%Ì^Á
 ±.Á.ÁÍ^
 ÇÈ%Â,ÍÒ%
 ÍÓÍ.ÍÁÁ%Ó,1ÇÓÓ%ÒÈÍÓÈ
 ±ÍÓÍÈÚÚ%Â,75 éÍ,
 ÍÁÓÈÍÁÚ ÈÍÓÁ
 ÁÚ%ÈÓ,ÍÒ%
 ÍÓÍ.ÍÁÁ%Ó,327ÍÇ(Ò È
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 Í±. ÚÁÍÈ 47 ÍÈÍÓÓ),ÓÓÍÍÓÁ
 ÓÓÓ ÓÚÈ.ÍÁÍÈÁ ÍÁÍÁÁ,~ÁÍ
 2,2 ÍÈÍÓÓÍ
 RF DC OUT
 èÒÁÈ±Í.ÍÓÁ ÍÈÍÈ-.ÍÁÁ%Ó,
 5ÇÓÓÓ.ÚÓÍ±
 ÈÍÁ%ÓLANC
 èÚÁ ÁÓÚÓÍÈ~ÂÓÍÓÁÍÈÍÈ-
 „ÍÁÁ%Ó(ø 2,5 Ì)
 ÈÍÁÁ%ÓMIC
 àÈÍÈ-.ÍÁÁ%Ó,0,388 ÍÇ,
 ÍÈÁÍÓÁ.ÓÓÍÍÓÁ
 ÓÓÓ ÓÚÈ.ÍÁÍÈÁ Ò,ÍÒ%ÓÍÓÓÚ
 2,5%Ó3ÇÓÓÓÚ.ÚÓÍ±,ÓÓÍÍÓÁ
 ÓÓÓ ÓÚÈ.ÍÁÍÈÁ6,8ÍÈÍÓÓÍ(ø
 3,5 Ì)
 è.~ÁÁ
 Í.Á.Ó.±ÍÈfl Í ÒÈÚ±ÍÈ
 ç±.±Ú± ÁÈÍÓÈ ÚÓÚ±ÍÓ,ÓÍÓÈ
 ÓÓ.Á ÍÍÓÓÚÈ6,0Ç
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 (ÓÁÚÁ,ÒÈ±%±ÚÓÁ ÓÁÁÍ.
 ÚÓÍ±)
 è Á%flflfl ÓÓÓ Á.ÍflÁÍfl
 ÍÓ~ÍÓÓÓ
 èèD-TR401E: 3,6 ÇÚ
 èèD-TR402E: 3,7 ÇÚ
 è±.Ó±fl ÚÁÍÓÁ ±ÚÚ ±
 èÚ 0°è%Ó 40°è
 (ÓÚ 32°F%Ó 104°F)
 ÍÁÍÓÁ ±ÚÚ ± Í±ÁÍÈfl
 èÚ -20°è%Ó,60°è
 (ÓÚ -4°F%Ó,140°F)
 è ±ÁÍÁ
 è È.ÍÈÁ. 115 × 103 × 207 Ì
 (/,/„)
 à±ÓÓ±
 çÁ.ÍÍ.±fl.±Ú± ÁÈÍÓ.Ó
 .ÍÓÍ±.ÍÈÚÈÁ,ÒÈ.±Ú± ÁÈÍÈ,
 Í±ÓÓÁÚ^ È ÓÍÁ.Á.Ó.Ó ÁÍflfl
 èèD-TR401E: è È.ÍÈÁ. 720 „
 èèD-TR402E: è È.ÍÈÁ. 730 „
 ÇÍÍ.±fl.±Ú± ÁÈÍÈ.ÍÓÍ
 NP-33,ÍÈÚÈÁ,Ú.±Ú± ÁÈÍÚ
 èR2025,Í±ÓÓÁÚÚ è5-90 È
 ÓÍÁ.Á,ÒÈ ÁÍÁÍ
 èèD-TR401E: è È.ÍÈÁ. 940 „
 èèD-TR402E: è È.ÍÈÁ. 950 „

àÈÍ ÓÓÓÍ
 ùÍÁÍÚ È~ÂÓÍÈÈ
 ÍÓÍ%ÁÍÓ±ÚÓ ÍÈ ÍÈÍ ÓÓÓÍ
 àÓÍÓÚÓÍÈ~ÂÓÍÈÈ ÚÈÓ
 è ÈÍ±„±ÁÍ^Á
 Ò ÈÍ±%ÍÁÈÍÓÓÚÈ
 èÍ.ÓÚ 6.
 èÁÚÁ,ÒÈ±%±ÚÓÁ
 ÓÁ ÁÍÁÍÍÓ,Ó ÚÓÍ±
 Í.Á.Ó.±ÍÈfl Í ÒÈÚ±ÍÈ,
 110-240Ç ÓÁ ÁÍ.ÚÓÍ±,50/60
 È
 èÓÚ Á.ÍflÁÍ±fl ÍÓ~ÍÓÓÓ,
 Aè-V16: 20 ÇÚ
 Aè-V16A: 22 ÇÚ
 ÇÍÒ%ÍÓÁ Í±Ó flÈÁÍÈÁ
 DC OUT , ±.Ó.ÁÍ ÁÈÈÍÁ
 7,5 Ç, 1,8 Á
 ÇÍÒ%Ò%flfl Á± fl%ÍÈ.±Ú± ÁÈ
 10 Ç, 1,1 Á, ÁÈÈÍÁ Á± fl%ÍÈ
 è ÈÍÁÍÁÍÈÁ
 Á±Ú± ÁÈÍÈ.ÍÓÍ Sony
 çÈÍÁÍ-Í±%ÍÈÁ.È ÚÈÓ (6Ç):
 NP-33 (800 ÍÁ.~)
 (Ó ÈÍ±.±ÁÚÓfl),NP-65/67
 (1500 ÍÁ.~), NP-66H/68 (1800
 ÍÁ.~), NP-77H/78 (2400 ÍÁ.~),
 NP-90/90D/98 (3000 ÍÁ.~)
 è±.Ó±fl ÚÁÍÓÁ ±ÚÚ ±
 èÚ 0°è%Ó 40°è(ÓÚ 32°F%Ó
 104°F)
 ÍÁÍÓÁ ±ÚÚ ± Í±ÁÍÈfl
 èÚ -20°è%Ó +60°è
 (èÚ -4°F%Ó +140°F)
 è ±ÁÍÁ
 è È.ÍÈÁÈÚ. 166 × 43 × 75 Ì
 (/,/„), ÍÍ.±fl
 „ÓÓÚÓ±.ÈÁ ~±ÓÚÈ È
 „Á,ÚflÚÓ
 à±ÓÓ±
 Aè-V16: è È.ÍÈÁ. 420 „
 Aè-V16A: è È.ÍÈÁ. 450 „

àÓÍÓÚ ÚÍÈfl È ÚÁÍÈ~ÂÓÍÈÁ
 Í± ±ÍÚÂ ÈÓÚÈÍÈÍÓ,ÚÚ.Ú
 ÈÁÍÁÍÁÍ^ .ÁÁ Ú,Á%ÓÍÍÁÍÈfl.

Identifying the Parts

Αναγνωρίζοντας τα μέρη



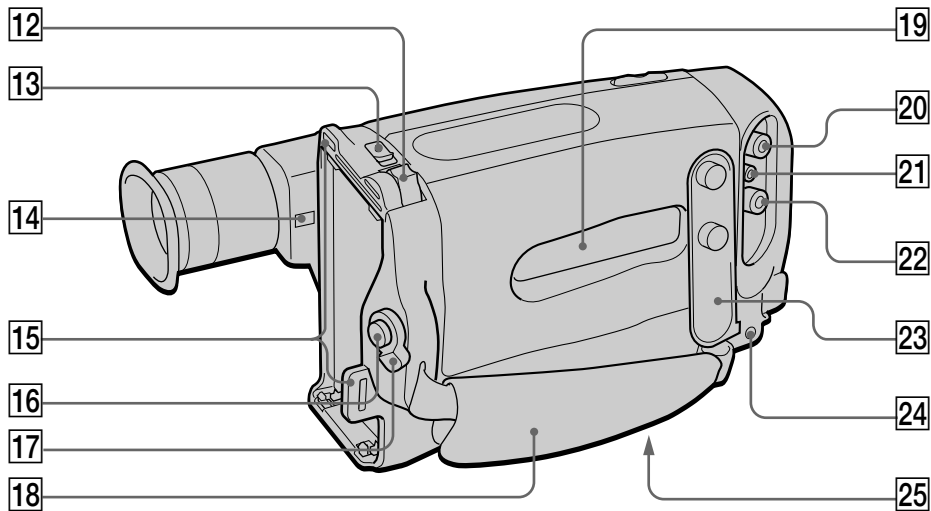
- 1 POWER switch (p. 12, 22)
- 2 Display window (p. 66)
- 3 TIME(NEXT) button (p. 27, 38)
- 4 DATE(+) button (p. 27, 38)
- 5 COUNTER RESET button (p. 15)
- 6 TITLE button (p. 32)
- 7 16:9 WIDE mode switch (CCD-TR402E only) (p. 33)
- 8 Eyecup (p. 17, 47)
- 9 Battery mounting surface (p. 10)
- 10 LANC 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 Çıkarılabilir güç düğmesi (s. 12, 22)
- 2 Görüntü penceresi (s. 66)
- 3 Zaman (NEXT) düğmesi (s. 27, 38)
- 4 Zaman (+) düğmesi (s. 27, 38)
- 5 Sayı sıfırlama düğmesi (s. 15)
- 6 Başlık düğmesi (s. 32)
- 7 Çıkarılabilir 16:9 WIDE mod seçici (CCD-TR402E için) (s. 33)
- 8 Göz kapağı (s. 17, 47)
- 9 Pil monte edilme yüzü (s. 10)
- 10 LANC kontrol jantı
LANC bağlantı kablosunu bir kablolu uzaktan kumanda birimi (örneğin montaj kontrolörü) ile birleştirin. Bu durumda, KUMANDA modunu OFF (s. 34) olarak ayarlayın. Local Application Control Bus sistemini ifade eder. kontrol jantı, video ekipmanları ve buna bağlı diğer cihazları kontrol etmek için kullanılır. Bu jantı, CONTROL L veya REMOTE olarak belirtilen bağlantıların aynı işlevi görür.
- 11 Pil çıkartma düğmesi (s. 10)

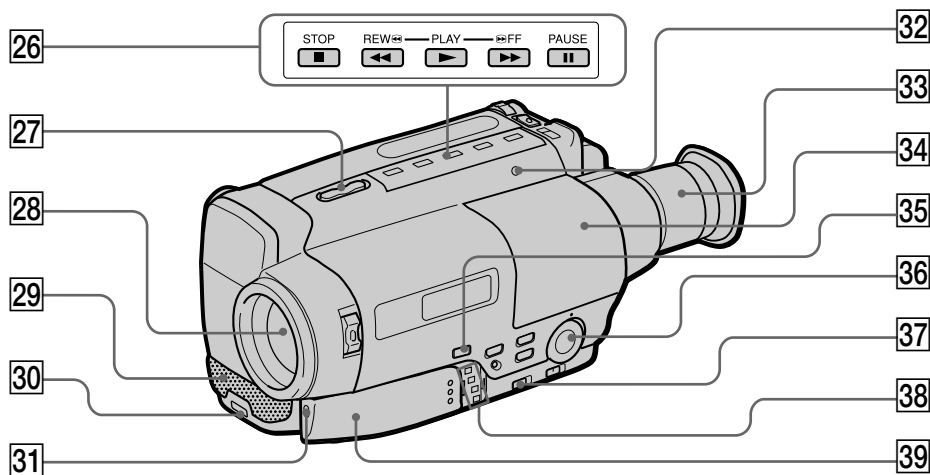
Additional Information
Nöbetçi Bilgi ve Yardım

Identifying the Parts

Αναγνωρίζοντας τα μέρη



- | | |
|--|--|
| <p>12 Power zoom lever (p. 16)</p> <p>13 EJECT knob (p. 11)</p> <p>14 Eyecup release knob (p. 47)</p> <p>15 Hooks for shoulder strap (p. 62)</p> <p>16 START/STOP button (p. 12)</p> <p>17 STANDBY switch (p. 12)</p> <p>18 Grip strap (p. 17)</p> <p>19 Cassette compartment (p. 11)</p> <p>20 VIDEO OUT jack (p. 20)</p> <p>21 RFU DC OUT (RFU adaptor DC out) jack</p> <p>22 AUDIO OUT jack (p. 20)</p> <p>23 Jack cover</p> <p>24 MIC (microphone) jack
Connect an optional external microphone. This jack also accepts a “plug-in-power” microphone.</p> <p>25 Tripod receptacle (p. 18)
Attach a tripod (not supplied) here.</p> | <p>12 Εξασθεσιμότητα ζουμ (σ. 16)</p> <p>13 αφαίρεση EJECT (σ. 11)</p> <p>14 αφαίρεση κάλυψης φακού (σ. 47)</p> <p>15 αγκύρες για τσάντα (σ. 62)</p> <p>16 αφαίρεση START/STOP (σ. 12)</p> <p>17 αφαίρεση STANDBY (σ. 12)</p> <p>18 αφαίρεση τσάντας (σ. 17)</p> <p>19 κάλυψη ταινιών (σ. 11)</p> <p>20 είσοδος VIDEO OUT (σ. 20)</p> <p>21 είσοδος RFU DC OUT (αποσαρώτρια DC εξόδου RFU)</p> <p>22 είσοδος AUDIO OUT (σ. 20)</p> <p>23 κάλυψη τριβύτης</p> <p>24 είσοδος MIC (microphone) (σ. 20)
Συνδέστε ένα επιπλέον εξωτερικό μικρόφωνο. Αυτή η τριβύτη αποδέχεται επίσης μικρόφωνο «plug-in-power».</p> <p>25 Νάρθηκα τριπόδας (σ. 18)
Συνδέστε τριπόδα (δεν είναι στο πακέτο) εδώ.</p> |
|--|--|



- 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 αΐΟΘΐΕ ΘΑ ΑΐΑ~ΑΐΕΗ ΙΑΐΰ° (Θΰ . 22, 23)
 - STOP (Θΰΰΰ,ΐΰ)
 - ◀◀ REW (ΘΑ ΑΐΘΰΰΰΰΰΰ)
 - ▶▶ PLAY (,ΘΘΘ ΘΕΑ,Α%ΑΐΕΑ)
 - ▶▶▶ FF (ΘΑ ΑΐΘΰΰΰ,ΘΑ Α%)
 - || PAUSE (ΘΰΰΑΰ)
 ΰΰΕ ΗΐΟΘΐΕ .ΰ%ΰΰ ΰΰΐ΄ΕΘΐΕ Θ,ΰΰ, ,
 ΑΕΕΐΑ PLAYER.
- 27 αΐΟΘΰΰ EDITSEARCH (Θΰ . 19)
- 28 α °΄ΰΰ Ο·ΑΐΰΕ,ΰ
- 29 ϘΘΰ ΘΑΐΐ°Ε ΐΕΐ ΘΰΘΐ
- 30 ΝΕΘΰΰΰΐ΄ΕΘΐΐ°Ε %ΰΰΰΰ΄Εΐ (Θΰ . 64)
- 31 αΰΐΘΰ΄ΰΰ ΑΰΘΕΘΕ ,Ε%ΑΘΐΰΐΑ /
 ΰΰΰ ΑΕΐΟ,,Ο ΐΐΐΰ
- 32 αΰΐΘΰ΄ΰΰ DEW (Θΰ . 45)
- 33 αΘΐ,΄Ο Α,,ΰΐΕ Θ,ΐΕ ,Ε%ΘΕΘΐΰΰΑΐΗ
 (Θΰ.13)
- 34 ϘΕ%ΘΕΘΐΰΰΑΐ, (Θΰ .13)
- 35 αΐΟΘΰΰ BACK LIGHT (Θΰ . 30)
- 36 ΝΕΘΐPROGRAMAE (Θΰ .28)
- 37 εΑ Αΐΐ,ΰΰΑΐ, START/STOP MODE
 (Θΰ .12,14,31)
- 38 εΑ Αΐΐ,ΰΰΑΐΕ ΑΕΕΐΟ, (Θΰ . 34)
- 39 εΰΘΑΐΐΐΕΰΕΑ,ΘΕ .ΰΰΰ ΑΕΐΕ (Θΰ .37)

Identifying the Parts

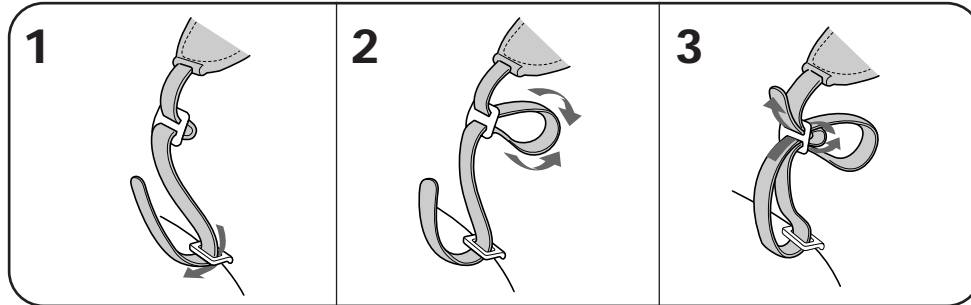
Αναγνωρίζοντας τα μέρη

Attaching the shoulder strap

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

Προσδέστε το παρεχόμενο τμήμα της αλυσίδας

στον τμήμα της αλυσίδας που είναι προορισμένο για την αλυσίδα (15 στην σελίδα 60).

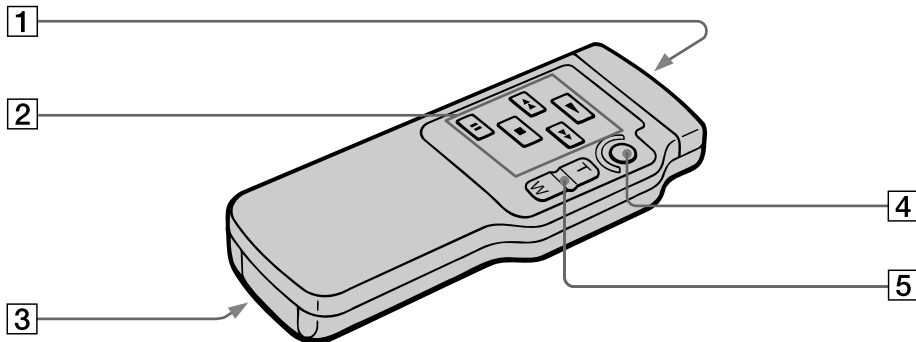


Remote Commander

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.



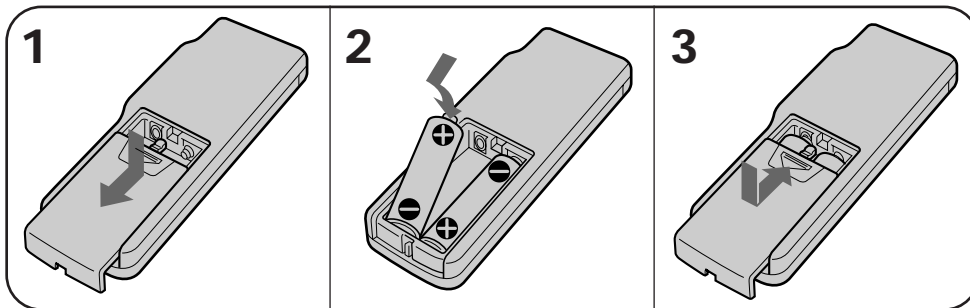
- 1 **Transmitter**
Point toward the remote sensor to control the camcorder after turning on the POWER switch on the camcorder.
- 2 **Tape transport buttons** (p. 22, 23)
- 3 **R6 (size AA) battery holder** (p. 63)
- 4 **START/STOP button**
- 5 **Power zoom button**
The zooming speed is unchangeable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

- 1 **Επεξεργαστής**
Πομπή που χρησιμοποιείται για τον έλεγχο της κάμερας μετά την ενεργοποίηση του διακόπτη POWER στην κάμερα.
- 2 **Κουμπιά μεταφοράς ταινίας** (σ. 22, 23)
- 3 **Νάβη Εξυπηρέτησης**, τμήμα που φιλοξενεί τις μπαταρίες R6 (τύπου AA) (σ. 63)
- 4 **Κουμπί START/STOP**
- 5 **Κουμπί ζουμ**
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

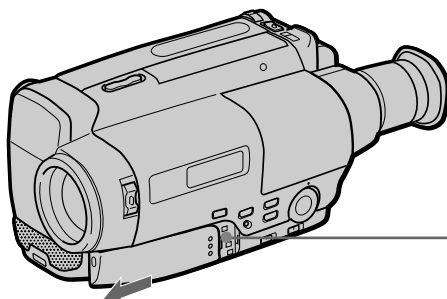
The batteries for the Remote Commander last about 6 months under normal operation. When the batteries become weak or dead, the Remote Commander does not work.

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).

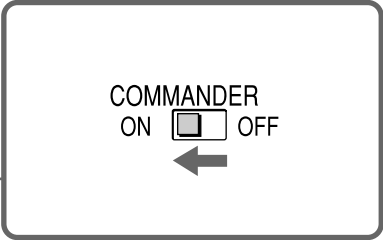


èÓ%, ÓÚÓ, í± ÒÚÍ, Ú± %ÈÓÚ±í^ÈÓìíÓ,, Ó
 ÛÓ ±, íÁíÈñ
 ÑñÈÓÓÍ, ÁÓ, ±íÈñ ÒÚÍ, Ú± %ÈÓÚ±í^ÈÓìíÓ,, Ó
 ÛÓ ±, íÁíÈñ Ç° %ÓíÈí° , ÓÚ±, ÈÚ, %,, Á
 ±Ú± ÁÈíÈ R6 (±ÁíÁ ÓíÁÁ).
 ÇÓÓÓÍ, ÁÚÈÚÁÓ, Ó Èí±,, ±Áí^È ±Ú± ÁÈí±È
 R6 (±ÁíÁ ÓíÁÁ).
 (1) èíÈíÈÚÁ í ^íÚ, ÓÚÓÁí± ±Ú± ÁÁí Ó
 ÓÚÍ, Ú± %ÈÓÚ±í^ÈÓìíÓ,, Ó ÛÓ ±, íÁíÈñ.
 (2) ÇÓÚ±, 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^ÈÓìíÓ,, Ó ÛÓ ±, íÁíÈñ.

è ÈíÁ~±íÈÁ ÓÚíÓÓÈÚÁí, íÓ Ó Óí± ÓíÙÈ°
 ±Ú± ÁÁí
 Á±Ú± ÁÁí%ñ ÒÚÍ, Ú± %ÈÓÚ±í^ÈÓìíÓ,, 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^ÈÓìíÓ,, Ó ÛÓ ±, íÁíÈñ
 ÓÁ ÁÓÚ±íÁÚ ÛÚí^ÈÓíÈ Ó, ±Ú.

ÇÓ ÈÁ. ÁÈ±íÈÁ ÓÓ, ÁÈ%ÁíÈñ, ÓíÁ%ÓÚ, ÈÁ
 , ÓÁíÓÈíÓÈ ÛÚÁ^È ÓÓ%Á ÈÈíÓ,, Ó ±Ú± ÁÁí
 í%±íÈÚÁ ±Ú± ÁÈíÈ, ÁÓíÈ Ç° íÁ. Û%ÁÚÁ
 ÈÓÓÍ, ÁÓ, ±Ú, ÓÚÍ, Ú± %ÈÓÚ±í^ÈÓìíÓ,, Ó
 ÛÓ ±, íÁíÈñ %ÈíÈÚÁí, íÓÁ , Áññ.

àÒÓÓÍ, ÁÓ, ±íÈÁ ÒÚÍ, Ú±
 %ÈÓÚ±í^ÈÓìíÓ,, Ó ÛÓ ±, íÁíÈñ
 í. Á%ÈÚÁÓ, ^ÚÓ ÁÈÈí COMMANDER
 ÓÓÚ±íÓ, íÁí, ÓÓíÓÈÁíÈÁ ON (ÓÚ . 34).



Additional Information Νόσοί/Εύαι, ίπñ ÈíÙÓ í±^Èñ

Identifying the Parts

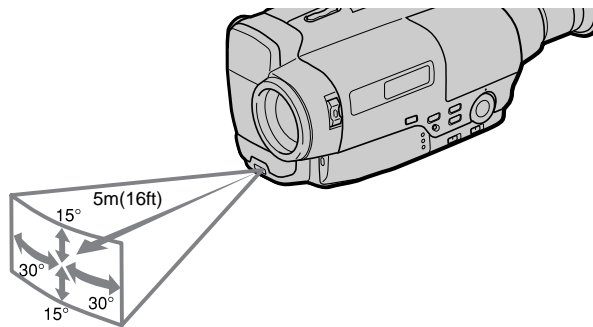
ζετινιαιιο,τιεα %ουτιε

Remote Control Direction

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

ζετινιαιεα ουτιε %εουτιεοιο,ο ου τιαιεφ

ζετινιαιεα ουτιε %εουτιεοιο,ο ου τιαιεφ
τιε %εουτιεοιε %ουτιε, ο %αιτι
%εουτιεοι,οοιτιαιο,οιεεα.



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.

εειατιεφ ουιοδευαιιο ουτιε
%εουτιεοιο,ο ου τιαιεφ


- ετιοοοι,τιεα %εουτιεοιε %ουτιε, %τιε ου οει,ι εουοιειο, ο,αυ, υτιε, ιτι ο φιοε οοιατιε ο,αυ ειε εφ,ιεφ,εφ. ζ ο ουε,ιοι οιυα %εουτιεοιοα ου τιαιεαιοεαυια ο τιυ,τιυ.
- ι.α%εαα, %ο ιαε%ο %εουτιεοιτι %ουτιεοι ε ουι,ουοι ου τιαιεφ ιαυ οαφουοεφ.
- Ντιφ,ε%αοιτια τι ουαυ, αεεια ουτιε ου τιαιεφ VTR 2 (αα 2). εεεε ουτιε ου τιαιεφ (1, 2 ε 3) εοοοι,αυ ουοι %οιφ ουιεφ %φιοε,ε%αοιτια ου %ο,ει αα υε ι Sony, %ο. εα.αετι, ιαο φει,ο ο τιυ,τιεφ ο ε %εουτιεοιοι ου τιαιεε. οοιε ζ εοοοι,αυαυα %ο,εα αα υε ι Sony, αεεια ουτιε ου τιαιεφ VTR 2 (αα 2), αιοιαι%οαυοφ εαιαε, αεειι ουι υα ου τιαιεφ ειε ατι υ, %εουτιεοιε %ουτιε αα ια οε.υτι,οε.

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 †%οΆίόίού †Έέ
 Ç° ίοέάύά ό όόίού άύ, ίό όύίύ
 %οΆίόίού †Έ έάό. †έάίέέ ό †%οέέόηέ.
 όόίέ %οΆίόίού †Έη όόη,ήηάύόη, ίό, %ο† Ç°
 έόόόί, άύάύά, έ%οάόί†ιά ύ, όά, °έ †ά, ύό
 ύ ά·ύάύόη, °έύέέά %οΆίόίού †έόίό, ό
 άέέ† %οίη έόόόί, άό, †ίέη, έ%οάόί†ιά °.


Νίηφ , ίό%ο† , %οΆίόίού †έέόί·έ άέέί
 (1) Ç° ύόήέύά †όόάύύέέόό, ά ίέύά
 , ίί, †ύάί, POWER , όόίόέάίέά OFF.

(2) έό, ά ίέύά STANDBY , ά ι.
 (3) ç†έέί†† , όά ά%ο, έί, ύά , °ίί, †ύάί,
 POWER , όόίόέάίέά CAMERA.

Νάίόίού †Έη †έ†άύόη. Νάίόίού †Έη
 ά†ί†ί·έ, †άύόη, ίό, %ο† Ç° , όύ†, έύά
 †όόάύύ.

έ· †ύέύά , †έ†ίέά, †ύό άόίέ Ç° , άίέ
 %οΆίόίού †έέόί·έ άέέί, ύό †ύό άέέί
 όόί †ηηάύόη%οόύάιόό, όόί†ύόύ†ίό, ίά†
 ίέύέά, †η †ύ† άέί†. ††ίέί ό· †άόί,
 %οΆίόίού †Έη †έ%ο·έ †ά†, ύόί†ύέ·άόίέ
 †έ†άύόη·ά άά 10 ίέίύύόόόίά ύό, ό, ††
 Ç° όό, ά ίάύά , °ίί, †ύάί, POWER ,
 όόίόέάίέά CAMERA έίέέόόίά
 , ύ†ίέ, †ίέη †όόάύ·.

Νίηφ , ίό%ο† έά %οΆίόίού †έέόίό, ό
 άέέί†
 (1) έά ά%ο, έί, ύά , °ίί, †ύάί, POWER ,
 όόίόέάίέά OFF.

(2) έό, ά ίέύά STANDBY , ά ι.
 (3) ç†έέί†† , όά ά%ο, έί, ύά , °ίί, †ύάί,
 POWER , όόίόέάίέά CAMERA.

Additional Information Νόόήέύάί, †η έίύό †Έη

Identifying the Parts

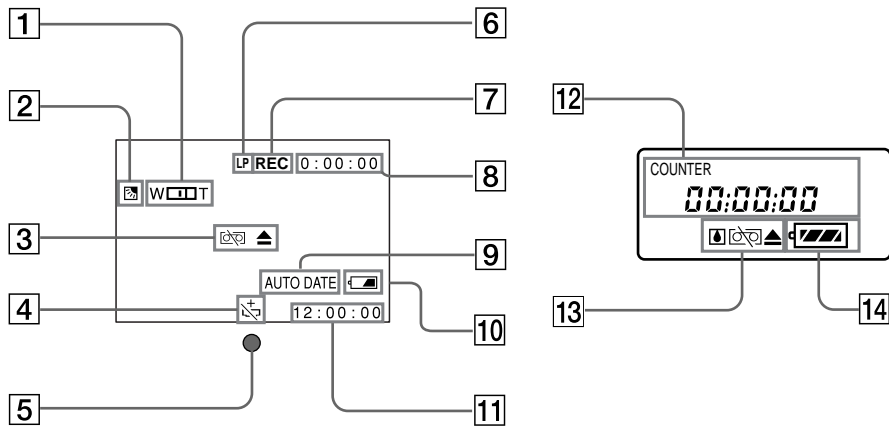
Αναγνωρίζοντας τα μέρη

Operation Indicators

Συμβολισμοί λειτουργίας

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

Οι λειτουργικοί συμβολισμοί 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 αλειτουργικός ο έ,ό,ιό,όύ ήιούήιό ή (όύ.17)

ίόί,ίό ήή ήόή CCD-TR402E

2 αλειτουργικός άήέόό,ό,άύέ (όύ.30)

3 έ ήόό ήέήέήιό (όύ.67)

4 αλειτουργικός ήέέ,όέ ήήέ (όύ.36)

5 ήήόό ή ήέέ/ήήόό ή ήήέ,ό ήή (όύ.12)

6 ήέέ, ήέή LP (όύ.12)

7 έέή ή ήήήή ήή (όύ.12)

8 ήήή ήή (όύ.15)

9 αλειτουργικός AUTODATE (όύ.12)

10 αλειτουργικός όόή,ή,όόή ήή ήή ήήέ,ό ήή (όύ.40)



11 ήή, ήή ήή ήήέ, (όύ.27,32)

12 ήήή ήή (όύ.15)

άλειτουργικός ήή ήή, ήή (όύ.27)

13 έ ήόό ήέήέήιό (όύ.67)

14 αλειτουργικός όόή,ή,όόή ήή ήή ήήέ,ό ήή (όύ.40)



Warning Indicators


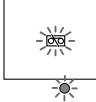
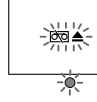
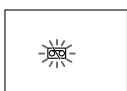





Επιεικτικές Προειδοποιήσεις

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:

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

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

♪: Όταν ο ήχος προειδοποίησης είναι ενεργός (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 μπαταρία.
αργή αναλαμπάζηση: Η μπαταρία είναι αδύναμη.
γρήγορη αναλαμπάζηση: Η μπαταρία είναι εκνευρισμένη.
Ακούτε ήχο προειδοποίησης όταν η μπαταρία είναι αδύναμη ή εκνευρισμένη.
- 2 η ταινία είναι κοντά στο τέλος.
- 3 η ταινία έχει τελειώσει.
- 4 δεν έχει εισαχθεί ταινία.
- 5 το κόκκινο φλαμάκι της ταινίας έχει βγει (σ. 11).
- 6 έχει συμβεί συμπύκνωση υδρατμών (σ. 45).
▲ ο δείκτης εμφανίζεται μόνο όταν η κασετίνα είναι εισαχθείσα (σ. 11).
- 7 οι κεφαλές βίντεο μπορεί να έχουν μολυνθεί (σ. 46).
- 8 κάποιο 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).
Αυτός ο δείκτης αναλαμπάζει μόνο μετά την ενεργοποίηση της κάμερας.

Additional Information

