



Changing the default settings with the menu

Icon/item	Mode	Meaning	POWER switch
 CAMERA SET			
D ZOOM	● OFF	To deactivate the digital zoom. Up to 10× zoom is performed.	CAMERA
	20×	To activate the digital zoom. More than 10× to 20× zoom is performed digitally (p. 31)	
	120×	To activate the digital zoom. More than 10× to 120× zoom is performed digitally	
PHOTO REC	● MEMORY	To record still images on "Memory Stick"s when you press PHOTO in the tape recording or tape recording standby (p. 47)	CAMERA
	TAPE	To record still images on tape when you press PHOTO in the tape recording or tape recording standby (p. 52)	
16:9WIDE	● OFF	---	CAMERA
	ON	To record a 16:9 wide picture (p. 55)	
STEADYSHOT	● ON	To compensate for camera-shake	CAMERA
	OFF	To cancel the SteadyShot. Natural pictures are produced when shooting a stationary object with a tripod.	
FRAME REC	● OFF	To deactivate Frame recording	CAMERA
	ON	To activate Frame recording (p. 74)	
INT. REC	ON	To activate interval recording (p. 72)	CAMERA
	● OFF	To deactivate interval recording	
	SET	To set the INTERVAL and REC TIME for interval recording	
HOLOGRAM F	● AUTO	The HOLOGRAM AF emits when focusing on subjects is difficult in dark places (p. 132)	MEMORY/ NETWORK
	OFF	The HOLOGRAM AF does not emit.	

Notes on the SteadyShot



- The SteadyShot will not correct excessive camera-shake.
- Attachment of a conversion lens (optional) may influence the SteadyShot.

If you cancel the SteadyShot

The SteadyShot off indicator  appears. Your camcorder prevents excessive compensation for camera-shake.

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Changing the default settings with the menu

Icon/item	Mode	Meaning	POWER switch
VCR SET			
HiFi SOUND	● STEREO	To play back a stereo tape or dual sound track tape with main and sub sound (p. 221)	VCR
	1	To play back a stereo tape with the left sound or a dual sound tape with main sound	
	2	To play back a stereo tape with the right sound or a dual sound track tape with sub sound	
AUDIO MIX	---	To adjust the balance between the stereo 1 and stereo 2 (p. 109)	VCR
			
A/V→DV OUT	● OFF	To output digital images and sound in analog format using your camcorder	VCR
	ON	To output analog images and sound in digital format using your camcorder (p. 196)	
LCD/VF SET			
LCD B.L.	● BRT NORMAL	To set the brightness on the LCD screen to normal	VCR CAMERA MEMORY/ NETWORK
	BRIGHT	To brighten the LCD screen	
LCD COLOR	---	To adjust the color on the LCD screen, turn the SEL/PUSH EXE dial.	VCR CAMERA MEMORY/ NETWORK
			
VF B.L.	● BRT NORMAL	To set the brightness on the viewfinder screen to normal	VCR CAMERA MEMORY/ NETWORK
	BRIGHT	To brighten the viewfinder screen	

Notes on LCD B.L. and VF B.L.

- When you select BRIGHT, battery life is reduced by about 10 percent during recording.
- When you use power supplies other than the battery pack, BRIGHT is automatically selected.

Even if you adjust LCD B.L., LCD COLOR and/or VF B.L.


The recorded picture will not be affected.

Changing the default settings with the menu


Icon/item	Mode	Meaning	POWER switch
<input checked="" type="checkbox"/> MEMORY SET			
STILL SET			
BURST	● OFF	To not record continuously.	MEMORY/ NETWORK
	NORMAL	To record from three to nine images continuously (p. 128)	
	HIGH SPEED	To record up to 16 images continuously fast	
	EXP BRKTG	To record three images continuously with different exposure	
	MULTI SCRNN	To record nine images continuously, display the images on a single page divided into nine boxes	
QUALITY	● SUPER FINE	To record still images in the finest image quality mode (p. 122)	VCR MEMORY/ NETWORK
	FINE	To record still images in the fine image quality mode	
	STANDARD	To record still images in the standard image quality mode	
IMAGESIZE	● 1360 × 1020	To record still images at 1360 × 1020 size (p. 124)	MEMORY/ NETWORK
	640 × 480	To record still images at 640 × 480 size	
MOVIE SET			
IMAGESIZE	● 320 × 240	To record moving pictures at 320 × 240 size (p. 124).	VCR MEMORY/ NETWORK
	160 × 112	To record moving pictures at 160 × 112 size.	
<input type="checkbox"/> REMAIN	● AUTO	To display the remaining capacity of the “Memory Stick” in the following cases: <ul style="list-style-type: none"> • For five seconds after setting the POWER switch to MEMORY/NETWORK (DCR-TRV50 only) or VCR • For five seconds after setting the POWER switch to MEMORY/NETWORK (DCR-TRV50 only) or VCR and inserting a “Memory Stick” • When the remaining capacity of the “Memory Stick” is less than two minutes after setting the POWER switch to MEMORY/NETWORK (DCR-TRV50 only) • For five seconds from the start of moving picture recording • For five seconds after completing a moving picture recording 	VCR MEMORY/ NETWORK
	ON	To always display the remaining capacity of the “Memory Stick”	

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Changing the default settings with the menu

Icon/item	Mode	Meaning	POWER switch
 MEMORY SET			
PHOTO SAVE	---	To copy still images on tape onto "Memory Stick" (p. 154).	VCR
FILE NO.	● SERIES	To assign numbers to file in sequence even if the "Memory Stick" is changed	VCR MEMORY/ NETWORK
	RESET	To reset the file numbering each time the "Memory Stick" is changed	
DELETE ALL	---	To delete all unprotected images (p. 170)	MEMORY/ NETWORK
FORMAT	● RETURN	To cancel formatting	MEMORY/ NETWORK
	OK	To format an inserted "Memory Stick" Formatting erases all information on the "Memory Stick" Check the contents of the "Memory Stick" before formatting. 1. Select FORMAT. 2. Select OK with the SEL/PUSH EXEC dial, then press the dial. 3. After EXECUTE appears, press SEL/PUSH EXEC dial. FORMATTING flashes during formatting. COMPLETE appears when formatting is finished.	

Notes on formatting

- Do not do any of the following while FORMATTING is displayed:
 - Switch the POWER switch
 - Operate buttons
 - Eject the "Memory Stick"
- The supplied or optional "Memory Stick" has been formatted at factory. Formatting "Memory Stick"s on your camcorder is not required.
- You cannot format the "Memory Stick" if the write-protect tab on the "Memory Stick" is set to LOCK.
- Format the "Memory Stick" when  FORMAT ERROR is displayed.
- Formatting erases protected image data on the "Memory Stick."

Changing the default settings with the menu




Icon/item	Mode	Meaning	POWER switch
 PRINT SET			
DATE/TIME	● OFF	To make prints without the recording date and time	MEMORY/ NETWORK
	DATE	To make prints with the recording date (p. 172)	
	DAY&TIME	To make prints with the recording date and time	
 CM SET			
TITLE	---	To superimpose a title or make your own title (p. 110, 113)	VCR CAMERA
TITLEERASE	---	To erase the title you have superimposed (p. 112)	VCR CAMERA
TITLE DSPL	● ON	To display the title you have superimposed	VCR
	OFF	To not display the title	
CM SEARCH	● ON	To search using cassette memory (p. 80, 81, 83)	VCR
	OFF	To search without using cassette memory	
TAPE TITLE	---	To label a cassette (p. 115)	VCR CAMERA
ERASE ALL	---	To erase all the data in cassette memory (p. 116)	VCR CAMERA

Note on PRINT SET

DATE/TIME is displayed only when an external printer (optional) is connected to the intelligent accessory shoe.

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Changing the default settings with the menu

Icon/item	Mode	Meaning	POWER switch
 TAPE SET			
REC MODE	● SP	To record in the SP (Standard Play) mode	VCR
	LP	To increase the recording time to 1.5 times the SP mode	CAMERA
AUDIO MODE	● 12BIT	To record in the 12-bit mode (two stereo sounds)	VCR
	16BIT	To record in the 16-bit mode (one stereo sound with high quality)	CAMERA
 REMAIN	● AUTO	To display the remaining tape bar: <ul style="list-style-type: none"> • For about eight seconds after a cassette is inserted and your camcorder calculates the remaining amount of tape • For about eight seconds after  or DISPLAY/TOUCH PANEL is pressed 	VCR
	ON	To always display the remaining tape indicator	CAMERA


Notes on the LP mode

- When you record a tape in the LP mode on your camcorder, we recommend playing the tape on your camcorder. When you play back the tape on other camcorders or VCRs, noise may occur in pictures or sound.
- When you record in the LP mode, we recommend using a Sony Excellence/Master cassette so that you can get the most out of your camcorder.
- You cannot dub audio on a tape recorded in the LP mode. Use the SP mode for the tape to be audio dubbed.
- When you record in the SP and LP modes on one tape or you record some scenes in the LP mode, the playback picture may be distorted or the time code may not be written properly between scenes.

Notes on AUDIO MODE

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

Changing the default settings with the menu

Icon/item	Mode	Meaning	POWER switch
 SETUP MENU			
CLOCK SET	---	To set the date or time (p. 20).	CAMERA MEMORY/ NETWORK
USB STREAM	● OFF	To deactivate the USB streaming	VCR
	ON	To activate the USB streaming	CAMERA
USBCONNECT	● NORMAL	To connect and recognize the “Memory Stick” drive.	MEMORY/ NETWORK
	PTP	To connect and only copy a “Memory Stick” image from your camcorder to a computer (only with Windows XP or Mac OS X) 1 Turn the SEL/PUSH EXEC dial to select USBCONNECT followed by PTP, then press the dial to set. 2 Insert the “Memory Stick” in the camcorder, and connect the camcorder to the computer using a USB cable. Copy Wizard will automatically start up.	
LTR SIZE	● NORMAL	To display selected menu items in normal size	VCR
	2×	To display selected menu items at twice the normal size	CAMERA MEMORY/ NETWORK
LANGUAGE	● ENGLISH	To display the following information indicators in English: min, REC, STBY and START.	VCR
	FRANÇAIS	To display the information indicators in French.	CAMERA
	ESPAÑOL	To display the information indicators in Spanish.	MEMORY/ NETWORK
	PORTUGUÊS	To display the information indicators in Portuguese.	
	中文	To display the information indicators in Chinese.	
	한국어	To display the information indicators in Korean.	
DEMO MODE	● ON	To make the demonstration appear	
	OFF	To cancel the demonstration	CAMERA

Notes on DEMO MODE

- You cannot select DEMO MODE when a cassette or a “Memory Stick” is inserted in your camcorder.
- When NIGHTSHOT is set to ON, the “NIGHTSHOT” indicator appears on the screen and you cannot select DEMO MODE in the menu settings.
- The DEMO MODE default setting is STBY (Standby) and the demonstration starts about 10 minutes after you have set the POWER switch to CAMERA without a cassette and a “Memory Stick” inserted.

To cancel the demonstration, insert a cassette or a “Memory Stick,” set the POWER switch to other than CAMERA, or set DEMO MODE to OFF. To set to STBY (Standby) again, leave the DEMO MODE at ON in the menu settings, turn the POWER switch to OFF (CHG), and return the POWER switch to CAMERA.

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Changing the default settings with the menu

Icon/item	Mode	Meaning	POWER switch
ETC OTHERS			
DATA CODE* ¹	● DATE/CAM	To display date, time and various settings during playback when pressing DATA CODE on the Remote Commander (p. 42)	VCR MEMORY/ NETWORK
	DATE	To display date and time during playback when pressing DATA CODE on the Remote Commander	
AREA SET	---	Temporarily change the area where you are using your camcorder	CAMERA MEMORY/ NETWORK
DST SET* ²	● OFF	Not during daylight saving time	CAMERA MEMORY/ NETWORK
	ON	During daylight saving time	
BEEP	● MELODY	To output the melody when you start/stop recording or when an unusual condition occurs on your camcorder	VCR CAMERA MEMORY/ NETWORK
	NORMAL	To output the beep instead of the melody	
	OFF	To cancel all sound including shutter sound	
COMMANDER	● ON	To activate the Remote Commander supplied with your camcorder	VCR CAMERA MEMORY/ NETWORK
	OFF	To deactivate the Remote Commander to avoid erroneous remote control operation caused by other VCR's remote control	

*¹ When using the Remote Commander.

*² Instead of DST, SUMMERTIME is displayed on the screen for some models.

Changing the default settings with the menu

Icon/item	Mode	Meaning	POWER switch
ETC OTHERS			
DISPLAY	● LCD	To show the display on the LCD screen and in the viewfinder	VCR CAMERA MEMORY/ NETWORK
	V-OUT/LCD	To show the display on the TV screen, LCD screen and in the viewfinder	
REC LAMP	● ON	To light up the camera recording lamp at the front of your camcorder	CAMERA MEMORY/ NETWORK
	OFF	To turn the camera recording lamp off so that the person is not aware of the recording	
VIDEO EDIT	● RETURN	To cancel video editing.	VCR
	TAPE	To make a program and perform video editing (p. 89)	
	MEMORY	To make program and perform MPEG editing (p. 151)	

Note

If you press DISPLAY/TOUCH PANEL with DISPLAY set to V-OUT/LCD in the menu settings, the picture from a TV or VCR will not appear on the LCD screen even when your camcorder is connected to outputs on the TV or VCR.

When recording a close subject

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

In more than five minutes after removing the power supply

The WHT BAL, FLASH LVL, HiFi SOUND, AUDIO MIX and COMMANDER settings are returned to their default settings.

Other menu settings are held in memory even when the battery is removed.

Types of trouble and how to correct trouble

If you run into any problem using your camcorder, use the following table to troubleshoot the problem. If the problem persists, disconnect the power supply and contact your Sony dealer or local authorized Sony service facility. If “C:□□:□□” appears on the screen, the self-diagnosis display function has worked. See page 217.

In the recording

Symptom	Cause and/or Corrective Actions
START/STOP does not operate.	<ul style="list-style-type: none"> • The POWER switch is not set to CAMERA. → Set it to CAMERA (p. 26). • The tape has run out. → Rewind the cassette or insert a new one (p. 23, 44). • The write-protect tab is set to expose the red mark. → Use a new cassette or slide the tab (p. 23). • The tape is stuck to the drum (moisture condensation). → Remove the cassette and leave your camcorder for at least one hour to acclimatize (p. 228).
The power goes off.	<ul style="list-style-type: none"> • While being operated when the POWER switch is set to CAMERA, your camcorder has been in the standby for more than five minutes. → Set the POWER switch to OFF (CHG) and then to CAMERA. • The battery pack is dead or nearly dead. → Install a charged battery pack.
You cannot record still images on a “Memory Stick” in the tape recording or tape recording standby.	<ul style="list-style-type: none"> • PHOTO REC is set to TAPE in the menu settings. → Set it to MEMORY (p. 201).
You cannot record still images on a tape.	<ul style="list-style-type: none"> • PHOTO REC is set to MEMORY in the menu settings. → Set it to TAPE (p. 201).
The image on the viewfinder screen is not clear.	<ul style="list-style-type: none"> • The viewfinder lens is not adjusted. → Adjust the viewfinder lens (p. 30).
The SteadyShot does not work.	<ul style="list-style-type: none"> • STEADYSHOT is set to OFF in the menu settings. → Set it to ON (p. 201).
The autofocusing does not work.	<ul style="list-style-type: none"> • The setting is the manual focus. → Set FOCUS to the autofocus (p. 69). • Shooting conditions are not suitable for autofocus. → Adjust for manual focusing (p. 69).

Types of trouble and how to correct trouble

Symptom	Cause and/or Corrective Actions
The picture does not appear in the viewfinder.	<ul style="list-style-type: none"> • The LCD panel is open. → Close the LCD panel (p. 28).
A vertical band appears when you shoot a subject such as lights or a candle flame against a dark background.	<ul style="list-style-type: none"> • The contrast between the subject and background is too high. This is not a malfunction.
A vertical band appears when you shoot a very bright subject.	<ul style="list-style-type: none"> • This is not a malfunction.
Some tiny white spots appear on the screen.	<ul style="list-style-type: none"> • Slow shutter, Super NightShot or Color Slow Shutter is activated. This is not a malfunction.
An unknown picture is displayed on the screen.	<ul style="list-style-type: none"> • If 10 minutes elapse after you set the POWER switch to CAMERA or DEMO MODE is set to ON in the menu settings without a cassette and a "Memory Stick" inserted, your camcorder automatically starts the demonstration. → Insert a cassette or a "Memory Stick" and the demonstration stops. You can also cancel DEMO MODE (p. 207).
The picture is recorded in incorrect or unnatural colors.	<ul style="list-style-type: none"> • NIGHTSHOT is set to ON. → Set it to OFF (p. 34).
The picture appears too bright, and the subject does not appear on the screen.	<ul style="list-style-type: none"> • NIGHTSHOT is set to ON in a bright place. → Set it to OFF (p. 34). • The backlight is active. → Set it off (p. 34).
The click of the shutter does not sound.	<ul style="list-style-type: none"> • BEEP is set to OFF in the menu settings. → Set it to MELODY or NORMAL (p. 208).
Black bands appear when you record TV or computer screen.	<ul style="list-style-type: none"> • Set the STEADYSHOT in the menu settings to OFF (p. 201).
An external flash (optional) does not work.	<ul style="list-style-type: none"> • The power of the external flash is off or the power supply is not installed. → Turn on the external flash or install the power supply. • Two or more external flashes (optional) are attached. → Only one external flash (optional) can be attached.

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

Types of trouble and how to correct trouble

In the playback

Symptom	Cause and/or Corrective Actions
The tape does not move when a video control button is pressed.	<ul style="list-style-type: none">• The POWER switch is not set to VCR. → Set it to VCR (p. 40).
The playback button does not work.	<ul style="list-style-type: none">• The cassette has run out of tape. → Rewind the tape (p. 40).
There are horizontal lines on the picture, or the playback picture is not clear or does not appear.	<ul style="list-style-type: none">• The video heads may be dirty. → Clean the heads using the cleaning cassette (optional) (p. 229).
No sound or only a low sound is heard when playing back a tape.	<ul style="list-style-type: none">• The stereo tape is played back with HiFi SOUND set to 2 in the menu settings. → Set it to STEREO (p. 202).• The volume is turned to minimum. → Turn up the volume (p. 40).• AUDIO MIX is set to ST2 in the menu settings. → Adjust AUDIO MIX (p. 202).
During displaying the recorded date, date search does not work.	<ul style="list-style-type: none">• The cassette has no cassette memory. → Use a cassette with cassette memory (p. 81).• CM SEARCH is set to OFF in the menu settings. → Set it to ON (p. 205).• The tape has a blank portion between recorded portions (p. 82).
The title search does not work.	<ul style="list-style-type: none">• The cassette has no cassette memory. → Use a cassette with cassette memory (p. 80).• CM SEARCH is set to OFF in the menu settings. → Set it to ON (p. 205).• There is no title in the tape. → Superimpose the titles (p. 110).• The tape has a blank portion between recorded portions (p. 80).
The new sound added to the recorded tape is not heard.	<ul style="list-style-type: none">• AUDIO MIX is set to the ST1 side in the menu settings. → Adjust AUDIO MIX (p. 109).
The title is not displayed.	<ul style="list-style-type: none">• TITLE DSPL is set to OFF in the menu settings. → Set it to ON (p. 205).

Types of trouble and how to correct trouble

In the recording and playback

Symptom	Cause and/or Corrective Actions
The power does not turn on.	<ul style="list-style-type: none"> The battery pack is not installed, or is dead or nearly dead. <ul style="list-style-type: none"> → Install a charged battery pack (p. 15, 16). The AC power adaptor is not connected to a wall outlet. <ul style="list-style-type: none"> → Connect the AC power adaptor to a wall outlet (p. 19).
The end search does not work.	<ul style="list-style-type: none"> The cassette was ejected after recording when using a cassette without cassette memory (p. 38). You have not recorded on the new cassette yet (p. 39).
The end search does not work correctly.	<ul style="list-style-type: none"> The tape has a blank portion at the beginning or midway (p. 38).
The battery pack is quickly discharged.	<ul style="list-style-type: none"> The operating temperature is too low. The battery pack is not fully charged. <ul style="list-style-type: none"> → Charge the battery pack fully again (p. 16). The battery pack is completely dead, and cannot be recharged. <ul style="list-style-type: none"> → Replace with a new battery pack (p. 15).
The battery remaining time indicator does not indicate the correct time.	<ul style="list-style-type: none"> You have used the battery pack in an extremely hot or cold environment for a long time. The battery pack is completely dead, and cannot be recharged. <ul style="list-style-type: none"> → Replace with a new battery pack (p. 15). The battery is not fully charged. <ul style="list-style-type: none"> → Install a charged battery pack (p. 15, 16). A deviation has occurred in the remaining battery time. <ul style="list-style-type: none"> → Charge the battery pack fully again so that the indication on the battery remaining indicator is correct (p. 16).
The power goes off although the battery remaining time indicator indicates that the battery pack has enough power to operate.	<ul style="list-style-type: none"> A deviation has occurred in the remaining battery time. <ul style="list-style-type: none"> → Charge the battery pack fully again so that the indication on the battery remaining battery time indicator is correct (p. 16).
The cassette cannot be removed from the holder.	<ul style="list-style-type: none"> The power supply is disconnected. <ul style="list-style-type: none"> → Connect it firmly (p. 15, 19). The battery is dead. <ul style="list-style-type: none"> → Use a charged battery pack (p. 15, 16).
The  and  indicators flash and no functions except for cassette ejection work.	<ul style="list-style-type: none"> Moisture condensation has occurred. <ul style="list-style-type: none"> → Remove the cassette and leave your camcorder for at least one hour to acclimatize (p. 228).
C// indicator does not appear when using a cassette with cassette memory.	<ul style="list-style-type: none"> The gold-plated connector of the cassette is dirty or dusty. <ul style="list-style-type: none"> → Clean the gold-plated connector (p. 222).
Remaining tape indicator is not displayed.	<ul style="list-style-type: none"> The  REMAIN is set to AUTO in the menu settings. <ul style="list-style-type: none"> → Set it to ON to always display the remaining tape indicator (p. 206).

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Types of trouble and how to correct trouble

When operating using the “Memory Stick”

Symptom	Cause and/or Corrective Actions
The “Memory Stick” does not function.	<ul style="list-style-type: none"> • The POWER switch is not set to MEMORY/NETWORK (DCR-TRV50 only). → Set it to MEMORY/NETWORK (DCR-TRV50 only) (p. 126). • The “Memory Stick” is not inserted. → Insert a “Memory Stick” (p. 119).
Recording does not function.	<ul style="list-style-type: none"> • The “Memory Stick” has already been full. → Delete unnecessary images and record again (p. 168). • The “Memory Stick” formatted incorrectly is inserted. → Format the “Memory Stick” or use another “Memory Stick” (p. 119, 204). • The write-protect tab on the “Memory Stick” is set to LOCK. → Release the lock (p. 117).
The image cannot be deleted.	<ul style="list-style-type: none"> • The image is protected. → Cancel image protection (p. 167). • The write-protect tab on the “Memory Stick” is set to LOCK. → Release the lock (p. 117).
You cannot format the “Memory Stick”.	<ul style="list-style-type: none"> • The write-protect tab on the “Memory Stick” is set to LOCK. → Release the lock (p. 117).
Deleting all the images cannot be carried out.	<ul style="list-style-type: none"> • The write-protect tab on the “Memory Stick” is set to LOCK. → Release the lock (p. 117).
You cannot protect the image.	<ul style="list-style-type: none"> • The write-protect tab on the “Memory Stick” is set to LOCK. → Release the lock (p. 117). • INDEX screen is not displayed. → Press INDEX to display the INDEX screen and protect the image (p. 167).
You cannot write a print mark on the still image.	<ul style="list-style-type: none"> • The write-protect tab on the “Memory Stick” is set to LOCK. → Release the lock (p. 117). • INDEX screen is not displayed. → The print marks cannot be written to the single screen (p. 171). • The “Memory Stick” is full. → Delete unnecessary print marks and write a print mark again (p. 168). • You are trying to write a print mark on a moving picture. → Print marks cannot be written on a moving picture.
The photo save does not work.	<ul style="list-style-type: none"> • The write-protect tab on the “Memory Stick” is set to LOCK. → Release the lock (p. 117).
You cannot play back images in actual size.	<ul style="list-style-type: none"> • You may not be able to play back images in actual size when you try to play back images recorded by other equipment. This is not a malfunction.
You cannot play back image data.	<ul style="list-style-type: none"> • Your camcorder cannot play back some images processed with a computer (The file name will blink). • If you record images with any other equipment, the images may not play back normally on your camcorder.

Types of trouble and how to correct trouble

Others

Symptom	Cause and/or Corrective Actions
The title is not recorded.	<ul style="list-style-type: none"> • The cassette has no cassette memory. → Use a cassette with cassette memory (p. 110). • The cassette memory is full. → Erase unwanted titles (p. 112). • The cassette is set to prevent accidental erasure. → Slide the write-protect tab so that red portion is not visible (p. 23). • The tape has a blank portion between recorded portions. → Superimpose the title to recorded positions (p. 110).
The cassette label is not recorded.	<ul style="list-style-type: none"> • The cassette has no cassette memory. → Use a cassette with cassette memory (p. 115). • The cassette memory is full. → Erase unwanted data (p. 112). • The cassette is set to prevent accidental erasure. → Slide the write-protect tab so that red mark is not visible (p. 23).
Digital program editing to a tape does not function.	<ul style="list-style-type: none"> • The input selector on the VCR is not set correctly. → Check the connection and set the input selector on the VCR again (p. 89) • The camcorder is connected to DV equipment of other than Sony using the i.LINK cable (DV connecting cable). → Set it to IR (p. 94). • You have attempted to set a program on a blank portion of the tape. → Set the program again on a recorded portion (p. 97). • The camcorder and the VCR are not synchronized. → Adjust the synchronization (p. 95). • The IR SETUP code is incorrect. → Set the correct code (p. 91).
Digital program editing to a "Memory Stick" does not function.	<ul style="list-style-type: none"> • Setting program on a blank portion of the tape is attempted. → Set the program again on a recorded portion (p. 151).
The Remote Commander supplied with your camcorder does not work.	<ul style="list-style-type: none"> • COMMANDER is set to OFF in the menu settings. → Set it to ON (p. 208). • Something is blocking the infrared rays. → Remove the obstacle. • The batteries are inserted with + and - incorrectly matching + and - inside the battery compartment. → Insert the batteries correctly (p. 243). • The batteries are dead. → Insert new ones (p. 243).
The picture from a TV or VCR does not appear even when your camcorder is connected to output on the TV or VCR.	<ul style="list-style-type: none"> • DISPLAY is set to V-OUT/LCD in the menu settings. → Set it to LCD (p. 209).

(continued on the following page)

Types of trouble and how to correct trouble

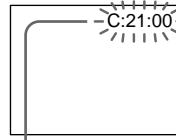
Symptom	Cause and/or Corrective Actions
The melody or beep sounds for five seconds.	<ul style="list-style-type: none"> Moisture condensation has occurred. <ul style="list-style-type: none"> → Remove the cassette and leave your camcorder for at least one hour to acclimatize (p. 228). Some troubles have occurred in your camcorder. <ul style="list-style-type: none"> → Remove the cassette and insert it again, then operate your camcorder.
You cannot charge the battery pack.	<ul style="list-style-type: none"> The POWER switch is not set to OFF (CHG). <ul style="list-style-type: none"> → Set it to OFF (CHG) (p. 16).
While charging the battery pack, no indicator appears, the indicator flashes in the display window.	<ul style="list-style-type: none"> The battery pack is not properly installed. <ul style="list-style-type: none"> → Install it properly (p. 15). Something is wrong with the battery pack. <ul style="list-style-type: none"> → Please contact your Sony dealer or local authorized Sony service facility.
No function works though the power is on.	<ul style="list-style-type: none"> Disconnect the power cord of the AC power adaptor or remove the battery, then reconnect it in about one minute. Turn the power on. If the functions still do not work, press the RESET button using a sharp-pointed object (If you press the RESET button, all the settings including the date and time return to their defaults.) (p. 15, 19, 240).
When you set the POWER switch to VCR or OFF (CHG), if you move your camcorder, you may hear a clattering sound from inside your camcorder.	<ul style="list-style-type: none"> This is because some functions use a linear mechanism. Your camcorder is not malfunctioning.
The buttons do not appear on the touch panel.	<ul style="list-style-type: none"> The DISPLAY/TOUCH PANEL button is pressed. <ul style="list-style-type: none"> → Press the LCD screen lightly. → Press the DISPLAY/TOUCH PANEL button on your camcorder or the DISPLAY button on the Remote Commander (p. 42).
The buttons on the LCD screen do not work.	<ul style="list-style-type: none"> Adjust the screen (CALIBRATION) (p. 230).
The indicators appear mirror-reversed in the viewfinder or on the TV screen.	<ul style="list-style-type: none"> The mirror mode is activated. This is not a malfunction.
Image data cannot be transferred by the USB connection.	<ul style="list-style-type: none"> The USB cable was connected before installation of the USB driver was completed. <ul style="list-style-type: none"> → Uninstall the incorrect USB driver and re-install the USB driver (p. 179, 182). USBCONNECT is set to PTP in the menu settings when the POWER switch is set to MEMORY/NETWORK (DCR-TRV50 only). <ul style="list-style-type: none"> → Set it to NORMAL (p. 207).
The cassette cannot be removed even if the cassette lid is open.	<ul style="list-style-type: none"> Moisture has started to condense in your camcorder (p. 228).

Self-diagnosis display

Your camcorder has a self-diagnosis display function.

This function displays the current state of your camcorder as a 5-digit code (a combination of a letter and figures) on the screen. If a 5-digit code is displayed, check the following list of codes. The last two digits (indicated by □□) differ depending on the state of your camcorder.

LCD screen, viewfinder or display window



Self-diagnosis display

- C:□□:□□
You can service your camcorder yourself.
- E:□□:□□
Contact your Sony dealer or local authorized Sony service facility.

Five-digit display	Cause and/or Corrective Actions
C:04:□□	<ul style="list-style-type: none"> • You are using a battery pack that is not an "InfoLITHIUM" battery pack. → Use an "InfoLITHIUM" battery pack (p. 18, 223).
C:21:□□	<ul style="list-style-type: none"> • Moisture condensation has occurred. → Remove the cassette and leave your camcorder for at least one hour to acclimatize (p. 228).
C:22:□□	<ul style="list-style-type: none"> • The video heads are dirty. → Clean the heads using the cleaning cassette (optional) (p. 229).
C:31:□□ C:32:□□	<ul style="list-style-type: none"> • A malfunction other than the above that you can service has occurred. → Remove the cassette and insert it again, then operate your camcorder. → Disconnect the power cord of the AC power adaptor or remove the battery pack. After reconnecting the power supply, operate your camcorder.
E:20:□□ E:61:□□ E:62:□□ E:91:□□	<ul style="list-style-type: none"> • A malfunction that you cannot service has occurred. → Contact your Sony dealer or local authorized Sony service facility and inform them of the 5-digit code (example: E:61:10).

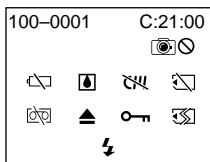
If you are unable to rectify the problem even if you try corrective actions a few times, contact your Sony dealer or local authorized Sony service facility.

Warning indicators and messages

If indicators and messages appear on the screen or in the display window, check the following:

See the page in parentheses “ () ” for more information.

Warning indicators



100-0001 Warning indicator as to file


Slow flashing:

- The file is corrupted.
- The file is unreadable.
- You are trying to use the MEMORY MIX on a moving picture (p. 139).

C:21:00 Self-diagnosis display (p. 217).

The battery is dead or nearly dead

Slow flashing:

- The battery is nearly dead.
Depending on the operating conditions, environment and battery condition, the  indicator may flash even if there are approximately five to 10 minutes remaining.

Fast flashing:

- The battery is dead (p. 16).

Moisture condensation has occurred*

Fast flashing:

- Eject the cassette, turn off your camcorder, and leave it for about one hour with the cassette compartment open (p. 228).

Warning indicator as to cassette memory*

Slow flashing:

- No cassette with cassette memory is inserted (p. 220).

Warning indicator as to “Memory Stick”*

Slow flashing:

- No “Memory Stick” is inserted.

Fast flashing:

- The “Memory Stick” is not readable on your camcorder (p. 117).
- The image cannot be recorded on “Memory Stick”.

Warning indicator as to “Memory Stick” formatting*

Fast flashing:

- “Memory Stick” is not formatted correctly (p. 204).
- The “Memory Stick” data is corrupted (p. 117).

Warning indicator as to tape

Slow flashing:

- The tape is near the end.
- No cassette is inserted.*
- The write-protect tab on the cassette is exposed (red) (p. 23).*

Fast flashing:

- The cassette has run out of tape.*

You need to eject the cassette*

Slow flashing:

- The write-protect tab on the cassette is exposed (red) (p. 23).

Fast flashing:

- Moisture condensation has occurred (p. 228).
- The cassette has run out of tape.
- The self-diagnosis display function is activated (p. 217).

The image is protected*

Slow flashing:

- The image is protected (p. 167).

Warning indicator as to the flash

Slow flashing:

- During charging

Fast flashing:

- The self-diagnosis display function is activated (p. 217).*
- There is something wrong with the built-in flash or the external flash (optional).

























Warning indicator as to recording of still image

Slow image:



- The still image cannot be recorded on a tape or a “Memory Stick” (p. 47, 52).

* You hear the melody or beep.

Warning messages

- CLOCK SET Set the date and time (p. 20).
- FOR “InfoLITHIUM” BATTERY ONLY Use an “InfoLITHIUM” battery pack (p. 18).
-  CLEANING CASSETTE** The video heads are dirty (p. 229).
-  FULL The cassette memory is full.*
-  16BIT AUDIO MODE is set to 16BIT (p. 206).* You cannot dub new audio.
-  REC MODE REC MODE is set to LP (p. 206).* You cannot dub new audio.
-  TAPE There is no recorded portion on the tape.* You cannot dub new audio.
-  “i.LINK” CABLE The i.LINK cable is connected (p. 109).* You cannot dub new audio.
-  FULL The “Memory Stick” is full (p. 129).*
-   The write-protect tab on the “Memory Stick” is set to LOCK (p. 117).*
-  NO FILE No still image is recorded on the “Memory Stick” (p. 157).*
-  NO MEMORY STICK No “Memory Stick” is inserted.*
-  AUDIO ERROR You are trying to record an image with sound that cannot be recorded by your camcorder on “Memory Stick” (p. 148).*
-  MEMORY STICK ERROR The “Memory Stick” data is corrupted (p. 119).*
-  FORMAT ERROR The “Memory Stick” is not recognized. Check the format (p. 204).*
-   DIRECTORY ERROR There are more than two of the same directories (p. 157).*
-  PLAY ERROR The image cannot be played back. Reinsert the “Memory Stick,” then play back the image again.
-  REC ERROR Check the input signal before retrying recording (p. 138, 150).*
- COPY INHIBIT The tape contains copyright control signals for copyright protection of software (p. 221).*
-   TAPE END The tape has reached its end.*
-  NO TAPE Insert a cassette.*
-  NO PRINT MARK You selected MARKED in 9PIC PRINT on the touch panel using a “Memory Stick” containing no image with a print mark. (p. 173)*
-  NO STILL IMAGE FILE You selected MULTI in 9PIC PRINT on the touch panel using a “Memory Stick” containing no still image. (p. 173)*
- DELETING You have pressed PHOTO during deleting all images on “Memory Stick.”*
- FORMATTING You have pressed PHOTO during formatting a “Memory Stick.”*
-  NOW CHARGING Charging an external flash (optional) does not work correctly.*

* You hear the melody or beep.

**The  indicator and “ CLEANING CASSETTE” message appear one after another on the screen.

Usable cassettes

Selecting cassette types

You can use ^{Mini}**DV** mini DV cassettes only*. You cannot use any other **8** 8 mm, **Hi8** Hi8, **D** Digital8, **VHS** VHS, **VHS-C** VHSC, **S-VHS** S-VHS, **S-VHS-C** S-VHSC, **B** Betamax, **ED** Beta ED Betamax, **DV** DV or ^{MICROMV}**MICRO** MV cassette.

* There are two types of mini DV cassettes: with cassette memory and without cassette memory. Cassettes with cassette memory have the **CM** (Cassette Memory) mark. We recommend that you use cassette with cassette memory.

IC memory is mounted on this type of cassette. Your camcorder can read and write data such as dates of recording or titles, etc. to this memory.

The functions using the cassette memory require successive signals recorded on the tape. If the tape has a blank portion at the beginning or between recorded portions, titles may not be displayed properly or the search functions may not work properly. Perform the following to prevent a blank portion from being made on the tape.

Press END SEARCH to go to the end of the recorded portion before you begin the next recording if you operate the following:

- You have ejected the cassette while recording.
- You have played back the tape.
- You have used the edit search.

If there is a blank portion or discontinuous signal on your tape, re-record from the beginning to the end of the tape as described above.

The same result may occur when you record using a digital video camera recorder without a cassette memory on a tape recorded by one with the cassette memory.

CM4K mark on the cassette

The memory capacity of cassettes marked with **CM**4K is 4Kbit. Your camcorder can accommodate tapes having a memory capacity of up to 16Kbit. 16Kbit cassettes are marked with **CM**16K.

Mini **DV** Digital Video Cassette This is the mini DV mark.

CM Cassette Memory This is the Cassette Memory mark.

These are trademarks.

Usable cassettes

Copyright signal

When you play back

Using any other video camera recorder, you cannot record on tape that has recorded copyright control signals for copyright protection of software which is played back on your camcorder.

When you record

You cannot record software on your camcorder that contains copyright control signals for copyright protection of software.

“COPY INHIBIT” appears on the screen or on the TV screen if you try to record such software.

Your camcorder does not record copyright control signals on the tape when it records.

Audio mode

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

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

When you play back a dual sound track tape

When you play back a dual sound track tape recorded in a stereo system, set HiFi SOUND to the desired mode in the menu settings (p. 202).

Sound from speaker

HiFi SOUND mode	Playing back a stereo tape	Playing back a dual sound track tape
STEREO	Stereo	Main sound and sub sound
1	Left sound	Main sound
2	Right sound	Sub sound

You cannot record dual sound programs on your camcorder.

Usable cassettes

Notes on the cassette

When affixing a label on the cassette

Be sure to affix a label only at the locations illustrated below [a] to prevent malfunction of your camcorder.

After using the cassette

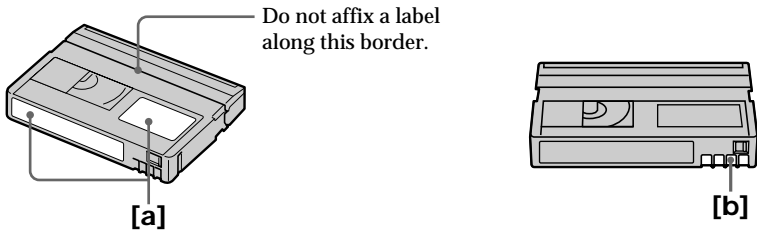
Rewind the tape to the beginning, put the cassette in its case, and store it upright.

When the cassette memory does not work

Reinsert a cassette. The gold-plated connector of the cassette may be dirty or dusty.

Cleaning the gold-plated connector

If the gold-plated connector on the cassette is dirty or dusty, the remaining tape indicator is sometimes not displayed correctly, and you may not be able to operate functions using cassette memory. Clean the gold-plated connector with a cotton-wool swab, about every 10 times that the cassette is ejected. [b]



About the “InfoLITHIUM” battery pack

What is the “InfoLITHIUM” battery pack?

The “InfoLITHIUM” battery pack is a lithium-ion battery pack that has functions for communicating information related to operating conditions between the battery pack and an optional AC adaptor/charger.

The “InfoLITHIUM” battery pack calculates the power consumption according to the operating conditions of your camcorder, and displays the remaining battery time in minutes. With an AC adaptor/charger (optional), the remaining battery time and charging time are displayed.


Charging the battery pack

- Be sure to charge the battery pack before you start using your camcorder.
- We recommend charging the battery pack in an ambient temperature of between 10°C to 30°C (50°F to 86°F) until FULL appears in the display window, indicating that the battery pack is fully charged. If you charge the battery outside of this temperature range, you may not be able to efficiently charge the battery pack.
- After charging is completed, either disconnect the cable from the DC IN jack on your camcorder or remove the battery pack.

Effective use of the battery pack

- Battery pack performance decreases in low-temperature surroundings. So, the time that the battery pack can be used becomes shorter. We recommend the following to ensure longer battery pack use:
 - Put the battery pack in a pocket to warm it up, and insert it in your camcorder immediately before you start taking shots.
 - Use the large-capacity battery pack (NP-FM70/QM71/FM90/FM91/QM91, optional).
- Frequently using the LCD panel or frequently operating playback, fast forward or rewind wears out the battery pack faster. We recommend using the large-capacity battery pack (NP-FM70/QM71/FM90/FM91/QM91, optional).
- Be sure to turn off the power switch when not taking shots or playing back on your camcorder. The battery pack is also consumed when your camcorder is in the standby or playback pause.
- Have spare battery packs handy for two or three times the expected recording time, and make trial recordings before taking the actual recording.
- Do not expose the battery pack to water. The battery pack is not water-resistant.

Remaining battery time indicator

- If the power goes off although the remaining battery time indicator indicates that the battery pack has enough power to operate, fully charge the battery pack again so that the indication on the remaining battery time indicator is correct. Note, however, that the correct battery indication sometimes will not be restored if it is used in high temperatures for a long time or left in a fully charged state, or the battery pack is frequently used. Regard the remaining battery time indication as the approximate recording time.
- The  mark indicating that there is little remaining battery time sometimes flashes depending on the operating conditions or ambient temperature and environment even if the remaining battery time is about five to 10 minutes.

(Continued on the following page)

About the “InfolITHIUM” battery pack

How to store the battery pack

- If the battery pack is not used for a long time, do the following procedure once per year to maintain proper function.
 1. Fully charge the battery.
 2. Discharge on your electronic equipment.
 3. Remove the battery from the equipment and store it in a dry, cool place.
- To use the battery pack up on your camcorder, leave your camcorder in the recording standby until the power goes off without a cassette inserted.

Battery life

- The battery life is limited. Battery capacity drops little by little as you use it more and more, and as time passes. When the available battery time is shortened considerably, a probable cause is that the battery pack has reached the end of its life. Buy a new battery pack.
- The battery life varies according to how it is stored and operating conditions and environment for each battery pack.

About i.LINK

The DV jack on this unit is an i.LINK-compliant DV input/output jack. This section describes the i.LINK standard and its features.

What is i.LINK?

i.LINK is a digital serial interface for handling digital video, digital audio and other data in two directions between equipment having the i.LINK jack, and for controlling other equipment.

i.LINK-compatible equipment can be connected by a single i.LINK cable. Possible applications are operations and data transactions with various digital AV equipment. When two or more i.LINK-compatible equipment are connected to this unit in a daisy chain, operations and data transactions are possible with not only the equipment that this unit is connected to but also with other devices via the directly connected equipment.

Note, however, that the method of operation sometimes varies according to the characteristics and specifications of the equipment to be connected, and that operations and data transactions are sometimes not possible on some connected equipment.

Note

Normally, only one piece of equipment can be connected to this unit by the i.LINK cable (DV cable). When connecting this unit to i.LINK-compatible equipment having two or more i.LINK jacks (DV jacks), refer to the operating instructions of the equipment to be connected.

About the name “i.LINK”

i.LINK is a more familiar term for IEEE 1394 data transport bus proposed by SONY, and is a trademark approved by many corporations. IEEE 1394 is an international standard standardized by the Institute of Electrical and Electronic Engineers.

i.LINK baud rate

i.LINK's maximum baud rate varies according to the equipment. Three maximum baud rates are defined:

- S100 (approx. 100Mbps*)
- S200 (approx. 200Mbps)
- S400 (approx. 400Mbps)

The baud rate is listed under “Specifications” in the operating instructions of each equipment. It is also indicated near the i.LINK jack on some equipment. The maximum baud rate of equipment on which it is not indicated such as this unit is “S100”.

When units are connected to equipment having a different maximum baud rate, the baud rate sometimes differs from the indicated baud rate.

*What is Mbps?

Mbps stands for megabits per second, or the amount of data that can be sent or received in one second. For example, a baud rate of 100Mbps means that 100 megabits of data can be sent in one second.

About i.LINK

i.LINK functions on this unit

For details on how to dub when this unit is connected to other video equipment having DV jacks, see page 88 and 102.


This unit can also be connected to other i.LINK (DV) compatible equipment made by SONY (e.g. VAIO series personal computer) other than video equipment.

Before connecting this unit to a personal computer, make sure that application software supported by this unit is already installed on the personal computer.

For details on precautions when connecting this unit, also refer to the operating instructions of the equipment to be connected.

Required i.LINK cable

Use the Sony i.LINK 4-pin-to-4-pin cable (during DV dubbing).

i.LINK and  are trademarks.

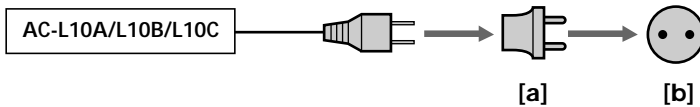
Using your camcorder abroad

Using your camcorder abroad

Countries and areas where you can use network functions are restricted. For details, refer to the separate Network Operating Instructions. (DCR-TRV50 only)

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

Use a commercially available AC plug adaptor [a], if necessary, depending on the design of the wall outlet [b].



Your camcorder is an NTSC system based camcorder. If you want to view the playback picture on a TV, it must be an NTSC system based TV with the AUDIO/VIDEO input jack.

The following shows TV color systems used overseas.

NTSC system

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

PAL system

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

PAL-M system

Brazil

PAL-N system



Argentina, Paraguay, Uruguay

SECAM system


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

Maintenance information and precautions

Moisture condensation

If your camcorder is brought directly from a cold place to a warm place, moisture may condense inside your camcorder, on the surface of the tape, or on the lens. In this state, the tape may stick to the head drum and be damaged or your camcorder may not operate correctly. If there is moisture inside your camcorder, the beep and the  indicator flashes. When the  indicator flashes at the same time, the cassette is inserted in your camcorder. If moisture condenses on the lens, the indicator will not appear.

If moisture condensation has occurred

None of the functions except cassette ejection will work. Eject the cassette, turn off your camcorder, and leave it for about one hour with the cassette lid open. Your camcorder can be used again if the  indicator does not appear when the power is turned on again.

If moisture starts to condense, your camcorder sometimes cannot detect condensation. If this happens, the cassette is sometimes not ejected for 10 seconds after the cassette lid is opened. This is not a malfunction. Do not close the cassette lid until the cassette is ejected.

Note on moisture condensation

Moisture may condense when you bring your camcorder from a cold place into a warm place (or vice versa) or when you use your camcorder in a hot place as follows:

- You bring your camcorder from a ski slope into a place warmed up by heating device.
- You bring your camcorder from an air-conditioned car or room into a hot place outside.
- You use your camcorder after a squall or a shower.
- You use your camcorder in a high temperature and humid place.


How to prevent moisture condensation

When you bring your camcorder from a cold place into a warm place, put your camcorder in a plastic bag and tightly seal it. Remove the bag when the air temperature inside the plastic bag has reached the surrounding temperature (after about one hour).

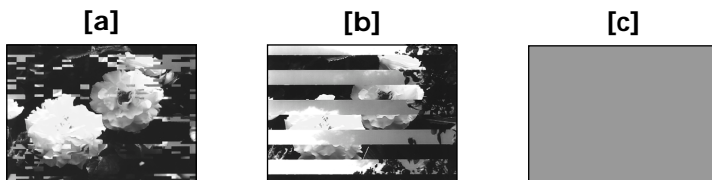
Maintenance information

Cleaning the video heads

To ensure normal recording and clear pictures, clean the video heads. The video heads may be dirty when:

- Mosaic-pattern noise appears on the playback picture.
- Playback pictures do not move.
- Playback pictures do not appear.
- The ⊗ indicator and “ CLEANING CASSETTE” message appear one after another, or the ⊗ indicator flashes on the screen during recording.

If the above problem [a], [b] or [c] occurs, clean the video heads for 10 seconds with the Sony DVM-12CLD cleaning cassette (optional). Check the picture and if the above problem persists, repeat cleaning.



If the video heads get dirtier, the entire screen becomes blue [c].

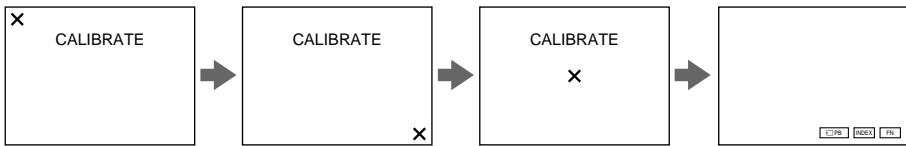
Cleaning the LCD screen

If fingerprints or dust make the LCD screen dirty, we recommend using the Cleaning cloth (supplied) to clean the LCD screen. When you use the LCD Cleaning Kit (optional), do not apply the cleaning liquid directly to the LCD screen. Clean the LCD screen with cleaning paper moistened with the liquid.

Adjusting the LCD screen (CALIBRATION)

The buttons on the touch panel may not work correctly. If this happens, follow the procedure below.

- (1) Set the POWER switch to OFF (CHG).
- (2) Eject the cassette from your camcorder, then disconnect any connecting cable from your camcorder.
- (3) Set the POWER switch to VCR while pressing DISPLAY/TOUCH PANEL on your camcorder, then keep pressing DISPLAY/TOUCH PANEL for about five seconds.
- (4) Follow the procedure below using an object such as the corner of a “Memory Stick” supplied with your camcorder.
You can use the supplied stylus for this operation (DCR-TRV50 only).
 - ① Touch ✕ at the upper left corner.
 - ② Touch ✕ at the lower right corner.
 - ③ Touch ✕ in the middle of the screen.



Note

If you do not press the right spot, ✕ always returns to the position at the upper left corner. In this case, start from step 4 again.

Charging the built-in rechargeable battery

Your camcorder has a built-in rechargeable battery so that the date, time and other settings are retained even when the POWER switch is turned off. The built-in rechargeable battery is always charged as long as you are using your camcorder. The battery, however, will become discharged gradually if you do not use your camcorder. It will be completely discharged in **about four months** if you do not use your camcorder at all. Even if the built-in rechargeable battery is not charged, it will not affect camcorder operation. To retain the date, time, and other information, charge the battery if the battery is discharged.

Charging the built-in rechargeable battery:

- Connect your camcorder to house current using the AC power adaptor supplied with your camcorder, and leave your camcorder with the power switch turned off for more than 24 hours.
- Or, install a charged battery pack in your camcorder, and leave your camcorder with the POWER switch set to OFF (CHG) for more than 24 hours.

Precautions

Camcorder operation

- Operate your camcorder on 7.2 V (battery pack) or 8.4 V (AC power adaptor).
- For DC or AC operation, use the accessories recommended in these operating instructions.
- If any solid object or liquid gets inside the casing, unplug your camcorder and have it checked by a 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 (CHG) when you are not using your camcorder.
- Do not wrap your camcorder with a towel, for example, and operate it. Doing so might cause heat to build up inside.
- Keep your camcorder away from strong magnetic fields or mechanical vibration.
- Do not press the LCD screen with sharp objects other than the stylus supplied. (DCR-TRV50 only)
- If your camcorder is used in a cold place, a residual image may appear on the LCD screen. This is not a malfunction.
- While using your camcorder, the back of the LCD screen may heat up. This is not a malfunction.

On handling tapes

- Do not insert anything into the small holes on the rear of the cassette. These holes are used to sense the type and thickness of the tape and if the recording tab is in or out.
- Do not open the cassette protect cover or touch the tape.
- Avoid touching or damaging the terminals. To remove dust, clean the terminals with a soft cloth.

Camcorder care

- Remove the cassette, and periodically turn on the power, operate the CAMERA and VCR sections and play back a tape for about three minutes when your camcorder is not to be used for a long time.
- Clean the lens with a soft brush to remove dust. If there are fingerprints on the lens, remove them with a soft cloth.
- Clean the camcorder body with a dry soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent which may damage the finish.
- Do not let sand get into your camcorder. When you use your camcorder on a sandy beach or in a dusty place, protect it from the sand or dust. Sand or dust may cause your camcorder to malfunction, and sometimes this malfunction cannot be repaired.

AC power adaptor

- Unplug the unit from the wall outlet when you are not using it for a long time. To disconnect the power cord, pull it out by the plug. Never pull the power cord itself.
- Do not operate the unit with a damaged cord or if the unit has been dropped or damaged.
- Do not bend the power cord forcibly, or place a heavy object on it. This will damage the cord and may cause fire or electric shock.
- Prevent metallic objects from coming into contact with the metal parts of the connecting section. If this happens, a short may occur and the unit may be damaged.
- Always keep 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. AM receivers and video equipment disturb AM reception and video operation.
- The unit becomes warm during use. This is not a malfunction.
- Do not place the unit in locations that are:
 - Extremely hot or cold
 - Dusty or dirty
 - Very humid
 - Vibrating

About care and storage of the lens

- Wipe the surface of the lens clean with a soft cloth in the following instances:
 - When there are fingerprints on the lens surface
 - In hot or humid locations
 - When the lens is used in environments such as the seaside
- Store the lens in a well-ventilated location subject to little dirt or dust.

To prevent mold from growing, periodically perform the above.

We recommend turning on and operating the video camera recorder about once per month to keep the video camera recorder in an optimum state for a long time.

Maintenance information and precautions

Battery pack

- Use only the specified charger or video equipment with the charging function.
- To prevent accident from a short circuit, do not allow metal objects to come into contact with the battery terminals.
- Keep the battery pack away from fire.
- Never expose the battery pack to temperatures above 60°C (140°F), such as in a car parked in the sun or under direct sunlight.
- Keep the battery pack dry.
- Do not expose the battery pack to any mechanical shock.
- Do not disassemble nor modify the battery pack.
- Attach the battery pack to the video equipment securely.
- Charging while some capacity remains does not affect the original battery capacity.

Notes on dry batteries

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

- Be sure to insert the batteries with the + and - correctly matching the + and - inside the battery compartment.
- Dry batteries are not rechargeable.
- Do not use a combination of new and old batteries.
- Do not use different types of batteries.
- Current flows from batteries when you are not using them for a long time.
- Do not use leaking batteries.

If batteries are leaking

- Wipe off the liquid in the battery compartment 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.

If any problem occurs, unplug your camcorder and contact your nearest Sony dealer.

Specifications

Video camera recorder

System

Video recording system

2 rotary heads

Helical scanning system

Audio recording system

Rotary heads, PCM system

Quantization: 12 bits (Fs 32 kHz,


stereo 1, stereo 2), 16 bits

(Fs 48 kHz, stereo)

Video signal

NTSC color, EIA standards

Usable cassette

Mini DV cassette with the  mark printed

Tape speed

SP: Approx. 18.81 mm/s

LP: Approx. 12.56 mm/s

Recording/playback time

(using cassette DVM60)

SP: 1 hour

LP: 1.5 hours

Fastforward/rewind time

(using cassette DVM60)

When using the battery pack:

Approx. 2 min. and 30 seconds

When using the AC power

adaptor:

Approx. 1 min. and 45 seconds

Viewfinder

Electric viewfinder (color)

Image device

4.5 mm (1/4 type) CCD (Charge

Coupled Device)

Gross: Approx. 1 550 000 pixels

Effective (still):

Approx. 1 390 000 pixels

Effective (moving):

Approx. 970 000 pixels

Lens

Carl Zeiss Vario-Sonnar

Combined power zoom lens

Filter diameter: 37 mm

(1 1/2 in.)

10× (Optical), 120× (Digital)

F = 1.8 - 2.2

Focal length

4.2 - 42 mm (3/16 - 1 11/16 in.)

When converted to a 35 mm still camera



In CAMERA:

48 - 480 mm (1 15/16 - 19 in.)

In MEMORY:

40 - 400 mm (1 5/8 - 15 3/4 in.)

Color temperature

Auto, HOLD (Hold),  Indoor (3 200 K),  Outdoor (5 800 K)

Minimum illumination

7 lx (lux) (F 1.8)

0 lx (lux) (in the NightShot mode)*

* Objects unable to be seen due to the dark can be shot with infrared lighting.

Input/Output connectors

S video input/output

4-pin mini DIN

Luminance signal: 1 Vp-p,

75 Ω (ohms), unbalanced

Chrominance signal: 0.286 Vp-p,

75 Ω (ohms), unbalanced

Audio/Video input/output

AV MINI JACK, 1 Vp-p,

75 Ω (ohms), unbalanced, sync negative

327 mV, (at output impedance

more than 47 kΩ (kilohms))

Output impedance with less than

2.2 kΩ (kilohms)/Stereo minijack

(ø 3.5 mm)

Input impedance more than

47 kΩ (kilohms)

DV input/output

4-pin connector

Headphone jack

Stereo minijack (ø 3.5 mm)

LANC jack

Stereo mini-minijack (ø 2.5 mm)

USB jack

mini-B

MIC jack

Minijack, 0.388 mV low impedance

with 2.5 to 3.0 V DC, output

impedance 6.8 kΩ (kilohms) (ø 3.5

mm)

Stereo type

LCD screen

Picture

8.8 cm (3.5 type)

72.2 × 50.4 mm (2 4/5 × 2 in.)

Total dot number

246 400 (1 120 × 220)

Wireless communications

(DCR-TRV50 only)

Communications system

Bluetooth standard Ver.1.1

Max. baud rate^{1) 2)}

Approx. 723 kbps

Output

Bluetooth standard Power Class 2

Communications distance²⁾

Max. wireless distance Approx. 10

m (393 3/4 in.) (When connecting to

BTA-NW1)

Compatible Bluetooth profile³⁾

Generic Access Profile

Dial-up Networking Profile

Operating frequency band

2.4 GHz band (2.400 GHz -

2.483 5 GHz)

¹⁾ Max. baud rate of Bluetooth standard Ver.1.1

²⁾ Varies according to the distance between communicating devices, presence of obstacles, radiowave conditions, and other factors.

³⁾ This is a specification matched to specific usage requirements between Bluetooth compatible devices. It is laid down in the Bluetooth standards.

Specifications

General

Power requirements

7.2 V (battery pack)

8.4 V (AC power adaptor)

Average power consumption (when using the battery pack)

During camera recording using
LCD

4.5 W

Viewfinder

3.4 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.)

72 × 91 × 168 mm

(2 7/8 × 3 5/8 × 6 5/8 in.) (w/h/d)

Mass (Approx.)

700 g (1 lb 8 oz)

main unit only

800 g (1 lb 12 oz)

including the battery pack

NP-FM50, cassette DVM60 and

lens cap

Supplied accessories

See page 14.

AC power adaptor

Power requirements

100 – 240 V AC, 50/60 Hz

Power consumption

23 W

Output voltage

DC OUT: 8.4 V, 1.5 A in the
operating mode

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.)

125 × 39 × 62 mm

(5 × 1 9/16 × 2 1/2 in.) (w/h/d)

excluding projecting parts

Mass (approx.)

280 g (9.8 oz)

excluding power cord

Battery pack

Maximum output voltage

DC 8.4 V

Output voltage

DC 7.2 V

Capacity

8.5 Wh (1 180 mAh)

Dimensions (approx.)

38.2 × 20.5 × 55.6 mm

(1 9/16 × 13/16 × 2 1/4 in.)

(w/h/d)

Mass (approx.)

76 g (2.7 oz)

Type

Lithium ion

“Memory Stick”

Memory

Flash memory

8MB: MSA-8A

Operating voltage

2.7 – 3.6 V

Power consumption

Approx. 45 mA in the operating
mode

Approx. 130 µA in the standby
mode

Dimensions (approx.)

50 × 2.8 × 21.5 mm

(2 × 1/8 × 7/8 in.) (w/h/d)

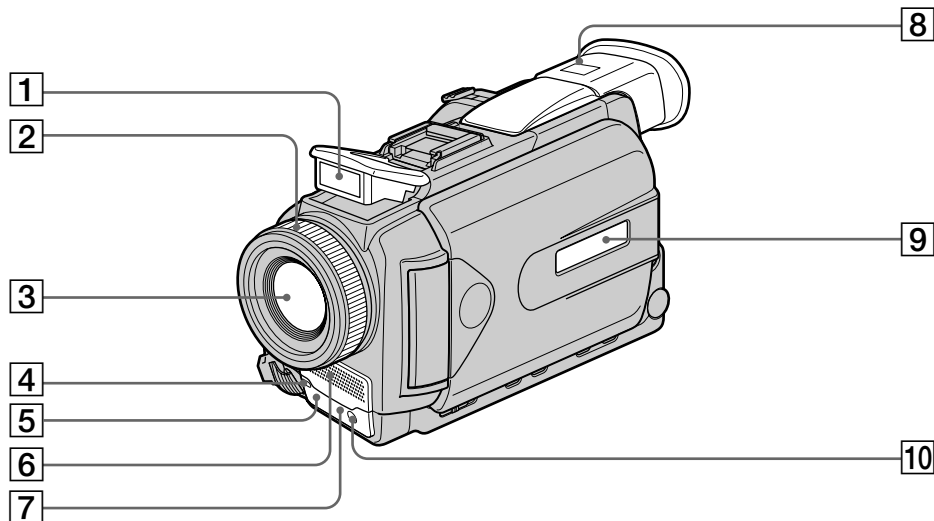
Mass (approx.)

4 g (0.14 oz)

Design and specifications are
subject to change without notice.

Identifying parts and controls

Camcorder



- | | |
|--|--|
| 1 Flash (p. 49, 130) | 6 Microphone |
| 2 Focus ring (p. 69) | 7 Remote sensor |
| 3 Lens | 8 Viewfinder (p. 30) |
| 4 Camera recording lamp (p. 26) | 9 Display window (p. 16) |
| 5 Infrared rays emitter (p. 34, 92) | 10 HOLOGRAM AF emitter (p. 132) |

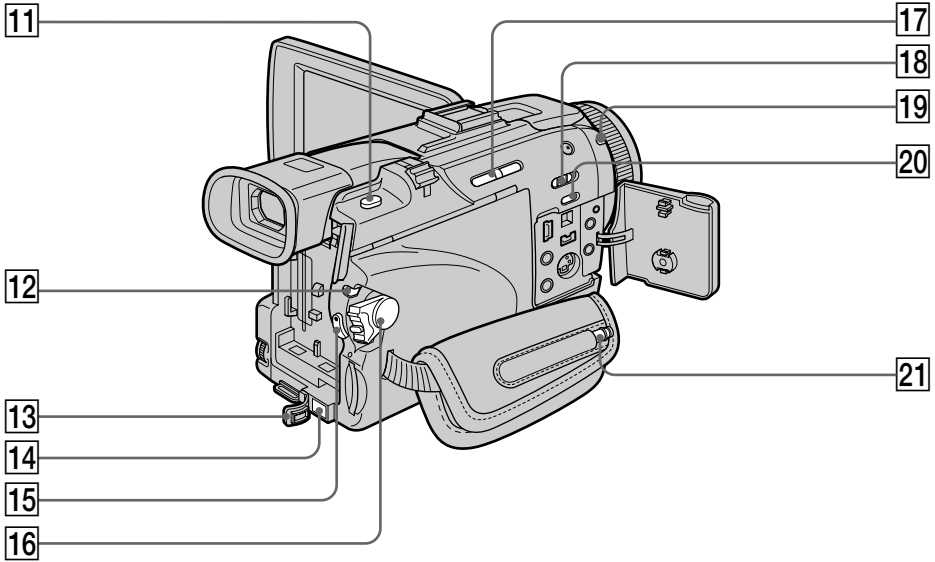
Note on the Carl Zeiss lens

Your camcorder is equipped with a Carl Zeiss lens which can reproduce fine images. The lens for your camcorder was developed jointly by Carl Zeiss, in Germany, and Sony Corporation. It adopts the MTF[#] measurement system for video camera and offers a quality as the Carl Zeiss lens.

[#] MTF Stands for Modulation Transfer Function.

The value number indicates the amount of light of a subject coming into the lens.

Identifying parts and controls



11 PHOTO button (p. 47, 52, 126)

12 LOCK switch (p. 26)

13 DC IN jack cover

14 DC IN jack (p. 19)

15 START/STOP button (p. 26)

16 POWER switch (p. 26)

17 EDITSEARCH button (p. 38)

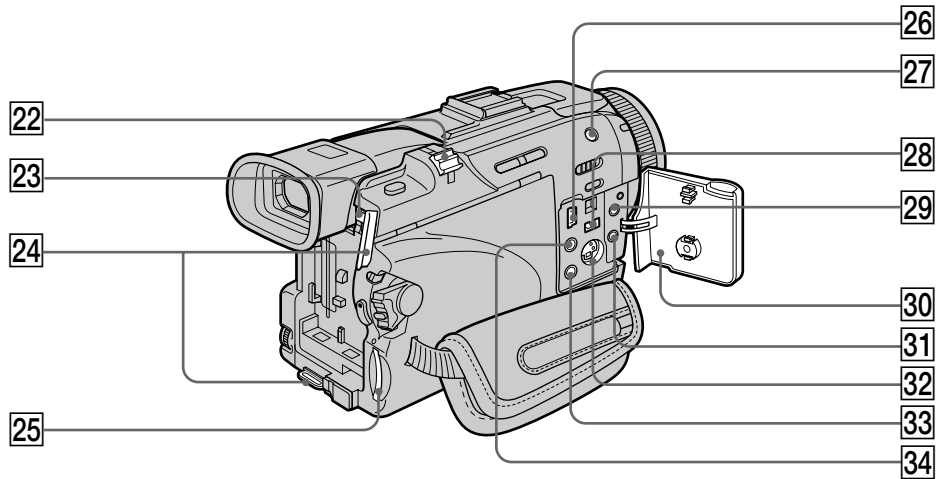
18 NIGHTSHOT switch (p. 34)

19  (Bluetooth) lamp (DCR-TRV50 only)
(p. 197)

20 SUPER NS/COLOR SLOW S button
(p. 34)

21 Stylus (DCR-TRV50 only) (p. 198)

Identifying parts and controls





22 Power zoom lever (p. 31, 77, 164)

23 BATT release button (p. 15)


24 Hooks for shoulder strap

25 "Memory Stick" slot (p. 119)

26  (USB) jack (p. 174)

27  (flash) button (p. 49, 130)


28  DV IN/OUT jack (p. 88, 102, 138, 150)

29  (LANC) jack (blue)

30 Jack cover (p. 46)

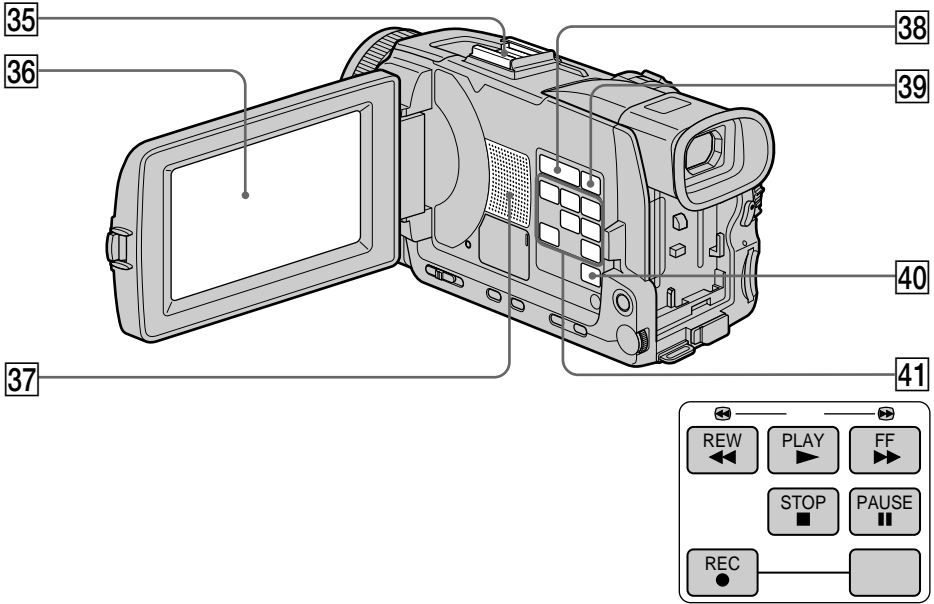
31 MIC jack (PLUG IN POWER) (red)
Connect an external microphone (optional). This jack also accepts a "plug-in-power" microphone.

32 S VIDEO ID-2 jack (p. 46, 86, 137, 149)

33  (headphones) jack (green)
When you use headphones, the speaker on your camcorder is silent.

34 AUDIO/VIDEO jack (yellow) (p. 46, 86, 137, 149)

Identifying parts and controls



- 35** Intelligent accessory shoe (p. 106)
- 36** LCD/Touch panel screen (p. 24, 29, 120)
- 37** Speaker
- 38** VOLUME buttons (p. 40)
- 39** DISPLAY/TOUCH PANEL button (p. 42)
- 40** MENU button (p. 199)

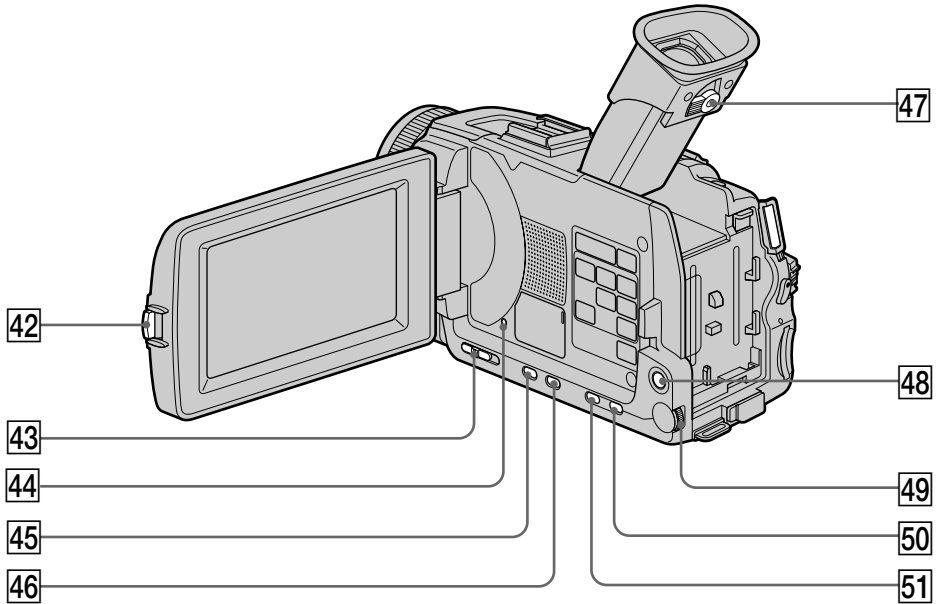
- 41** Video control buttons
 - STOP (stop)
 - ◀ REW (rewind)
 - ▶ PLAY (playback)
 - ▶▶ FF (fastforward)
 - || PAUSE (pause)
 - REC (record)



Notes on the intelligent accessory shoe

- The intelligent accessory shoe supplies power to optional accessories such as a video light or microphone.
- The intelligent accessory shoe is linked to the POWER switch, allowing you to turn the power supplied by the shoe on and off. Refer to the operating instructions of the accessory for further information.
- The intelligent accessory shoe has a safety device for fixing the installed accessory securely. To connect an accessory, press down and push it to the end, and then tighten the screw.
- To remove an accessory, loosen the screw, and then press down and pull out the accessory.

Identifying parts and controls



42 OPEN button (p. 26)

43 FOCUS switch (p. 69)

44 RESET button (p. 216)

45 FADER button (p. 58)

46 BACK LIGHT button (p. 34)

47 Viewfinder lens adjustment lever
(p. 30)

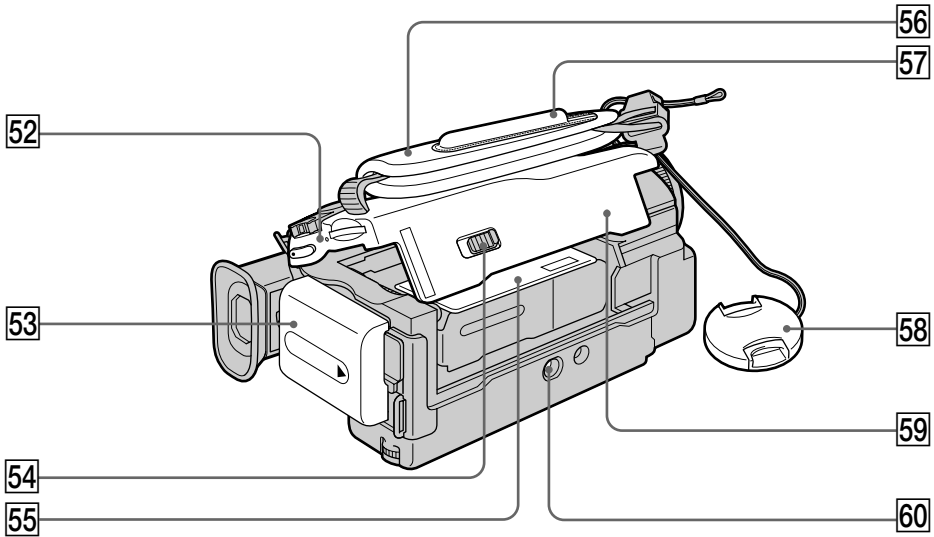
48 NETWORK button (DCR-TRV50 only)
(p. 197)

49 SEL/PUSH EXEC dial (p. 199)

50 PROGRAM AE button

51 EXPOSURE button (p. 67)

Identifying parts and controls



52 Access lamp

53 Battery pack (p. 15)

54  OPEN/EJECT lever (p. 23)

55 Cassette compartment

56 Grip strap

57 Holder (DCR-TRV50 only) (p. 198)

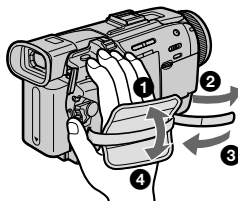
58 Lens cap (p. 26)

59 Cassette lid (p. 23)

60 Tripod receptacle

Make sure that the length of the tripod screw is less than 5.5 mm (7/32 inch). Otherwise, you cannot attach the tripod securely, and the screw may damage your camcorder.

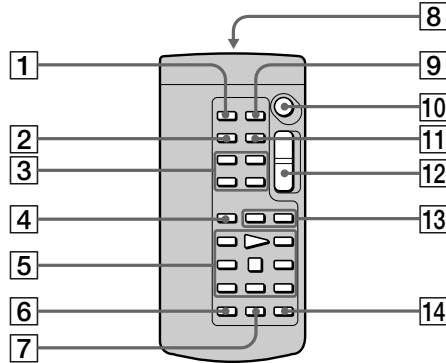
Fastening the grip strap
Fasten the grip strap firmly.



Identifying parts and controls

Remote Commander

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



1 PHOTO button (p. 47, 52, 126)

2 DISPLAY button (p. 42)

3 Memory control buttons

4 SEARCH MODE button (p. 80, 81, 83)

5 Video control buttons (p. 44)

6 REC button

7 MARK button (p. 97)

8 Transmitter

Point toward the remote sensor to control your camcorder after turning on your camcorder.

9 ZERO SET MEMORY button (p. 79)

10 START/STOP button (p. 26)

11 DATA CODE button (p. 42)

12 Power zoom button (p. 31)

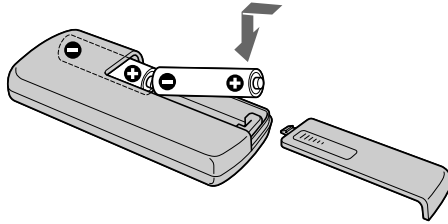
13 **◀◀/▶▶** buttons (p. 80, 81, 83)

14 AUDIO DUB button (p. 108)

Identifying parts and controls

To prepare the Remote Commander

Insert two size AA (R6) batteries by matching the + and - on the batteries to the + and - in the battery compartment.



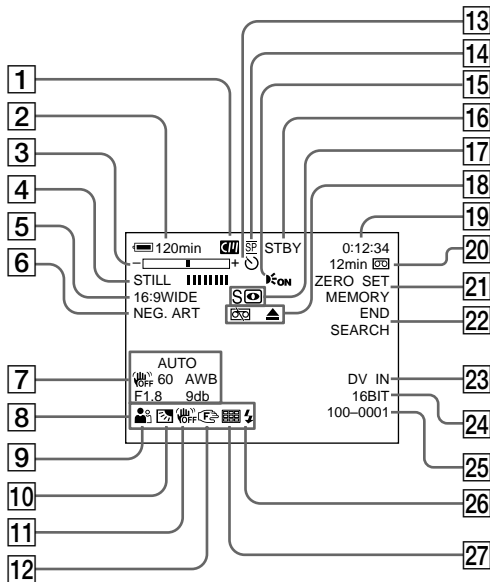
Notes on the Remote Commander

- Point the remote sensor away from strong light sources such as direct sunlight or overhead lighting. Otherwise, the Remote Commander may not function properly.
- Your camcorder works in the commander mode VTR 2. Commander modes 1, 2 and 3 are used to distinguish your camcorder from other Sony VCRs to avoid erroneous remote control operation. If you use another Sony VCR in the commander mode VTR 2, we recommend changing the commander mode or covering the sensor of the VCR with black paper.

Identifying parts and controls

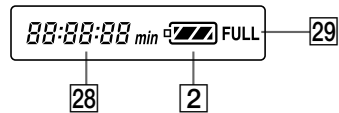
Operation indicators

LCD screen and Viewfinder



- 1 Cassette memory (p. 33, 220)
- 2 Remaining battery time (p. 33)
- 3 Zoom (p. 31)/Exposure (p. 67)/
Data file name (p. 117)
- 4 Digital effect (p. 61, 76)/MEMORY MIX
(p. 139)/FADER (p. 57)
- 5 16:9WIDE (p. 55)
- 6 Picture effect (p. 60, 75)
- 7 Data code (p. 42)
- 8 Volume (p. 40)/Date (p. 33)
- 9 PROGRAM AE (p. 64)
- 10 Backlight (p. 34)
- 11 SteadyShot off (p. 201)
- 12 Manual focus/Infinity (p. 69)
- 13 Self-timer (p. 37, 51, 134)
- 14 Recording mode (p. 33)
- 15 HOLOGRAM AF (p. 132)
- 16 STBY/REC (p. 33)/Video control mode
(p. 44)/Image size (p. 124)/Image
quality (p. 122)
- 17 NIGHTSHOT (p. 34)/SUPER NIGHTSHOT
(p. 35) COLOR SLOW SHUTTER (p. 35)

Display window



- 18 Warning (p. 218)
- 19 Tape counter (p. 33)/Time code
(p. 33)/Self-diagnosis (p. 217)/Tape
photo (p. 52)/Memory photo (p. 126)/
Image number (p. 157)
- 20 Remaining tape (p. 33)/Memory
playback (p. 157)
- 21 ZERO SET MEMORY (p. 79)
- 22 END SEARCH (p. 38)
- 23 A/V → DV (p. 196)/DV IN (p. 103)
- 24 Audio mode (p. 206)
- 25 Data file name (p. 117)/Time (p. 33)
- 26 Flash (p. 49, 130)
This indicator appears only when the
flash is in use.
- 27 Continuous photo recording (p. 128)
- 28 Remaining battery time indicator (p.
33)/Tape counter (p. 33)/Memory
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33)/Self-diagnosis indicator (p. 217)
- 29 FULL charge indicator (p. 16)

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<http://www.sony.net/>

