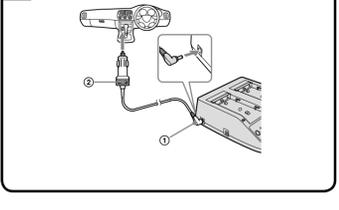
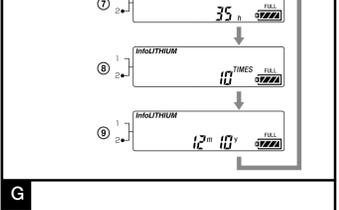
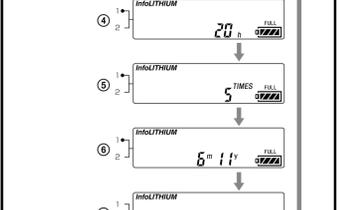
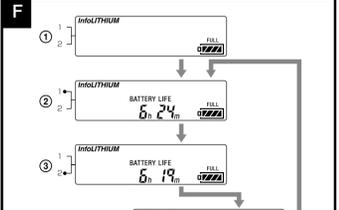
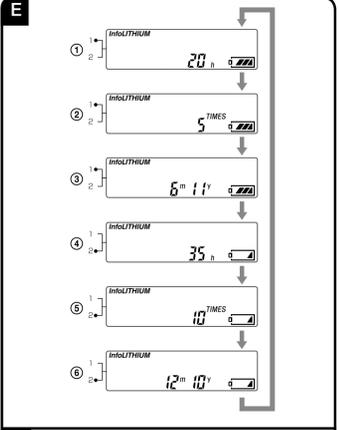
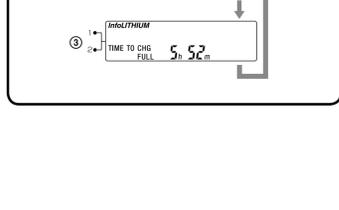
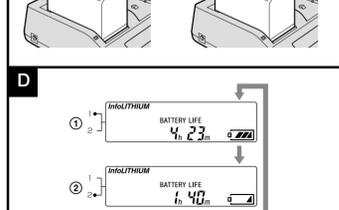
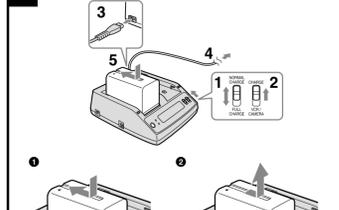
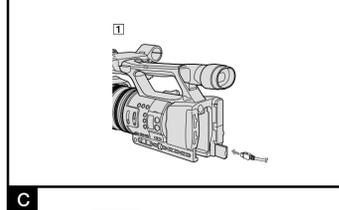
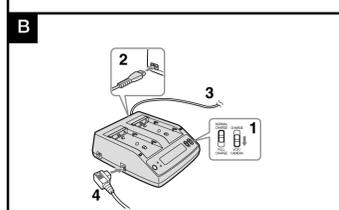
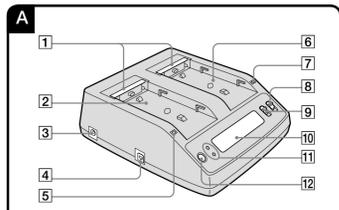


Accessory Kit Kit d'accessoires

Operating Instructions
Mode d'emploi

ACC-L1BP

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Printed in Japan



Where not to put this unit

Do not put this unit in any of the following places, whether it is in use or in storage. Doing so may lead to a malfunction.

- Where it gets extremely hot
 - Near a heater or in direct sunlight such as on a dashboard. The interior of cars gets particularly hot if the windows are shut during summer or on a sweltering day. This unit may become deformed or malfunction.
- Where there is excessive vibration
- Where there is strong magnetism or radiation
- Where there is excessive sand or dust
 - Protect this unit from sand and dust in places such as the seashore and other sandy areas or where dust clouds occur, as there is risk of malfunction.

Precautions on Use

- Do not use the unit placed in a narrow space, such as between a wall and furniture
- A negligible amount of electric current will flow into this unit as long as it is plugged into a wall outlet.
- The nameplate indicating operating voltage, power consumption, etc. is located on the bottom.
- Attach the battery pack firmly to this unit when charging the battery pack.
- Do not use this unit where there are strong radio waves or radiation. Video cameras etc. may not be able to record or play back correctly.
- Do not drop or otherwise cause shock to this unit.
- Keep this unit away from TV, AM receivers and other tuners. They may be affected by interference if placed nearby.
- Use the nearby wall outlet (wall socket) when using this unit. Even if the CHARGE lamp of this unit is off, the power is still connected. If some trouble occurs while using this unit, immediately shut off the power by disconnecting the plug from the wall outlet (wall socket).
- Be sure that nothing metallic comes into contact with the metal parts of this unit or connecting cord. If it does, a short may occur and this unit may be damaged.
- Do not connect this unit to a voltage adaptor for overseas travel. This may result in overheating or some other malfunction.
- Plug this unit from the wall outlet after use. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- Do not place objects filled with liquids, such as vases, on this unit.
- This unit or the battery pack may get warm during or immediately after charging. This is not a malfunction.
- Remove the battery pack from this unit when charging is complete. Keeping the battery pack attached may decrease the battery life.

Countries/Regions	Voltage	Frequency (Hz)	Plug type
Australia	240	50	A
New Zealand	230/240	50	D
North America			
Countries/Regions	Voltage	Frequency (Hz)	Plug type
Canada	120	60	A
USA	120	60	A
Central America			
Countries/Regions	Voltage	Frequency (Hz)	Plug type
Bahamas	120/240	60	A
Costa Rica	110	60	A
Cuba	110/220	60	A/C
Dominican (rep)	110	60	A
El Salvador	110	60	A
Guatemala	120	60	A
Honduras	110	60	A
Jamaica	110	50	A
Mexico	120/127	60	A
Nicaragua	220	60	A/C
Panama	110/220	60	A
South America			
Countries/Regions	Voltage	Frequency (Hz)	Plug type
Argentina	220	50	C/F6/0
Brazil	127/220	60	A/C
Chile	220	50	C
Colombia	120	60	A
Peru	220	60	A/C
Venezuela	120	60	A
Middle East			
Countries/Regions	Voltage	Frequency (Hz)	Plug type
Iran	220	50	C/BF
Israel	220	50	C
Saudi Arabia	127/220	50	A/C/BF
Turkey	220	50	C
UAE	240	50	C/BF
Africa			
Countries/Regions	Voltage	Frequency (Hz)	Plug type
Algeria	127/220	50	C
Benin	220	50	C
Egypt	220	50	C
Kenya	240	50	C/BF
Nigeria	230	50	C/BF
South Africa	220/230	50	C/BF
Tanzania	230	50	C/BF
Tunisia	220	50	C

IMPORTANT SAFETY INSTRUCTIONS

- 1 Terminal shutter
- 2 Slot
- 3 DC IN connector (only for DCC-VQ1)
- 4 DC OUT connector
- 5 CHARGE lamp
- 6 Slot
- 7 CHARGE lamp
- 8 Output change switch
- 9 Charging mode change switch
- 10 Display window
- 11 Slot indicator lamp
- 12 DISPLAY change button
- 13 "InfoLITHIUM" indicator
- 14 WAITING indicator
- 15 WARNING indicator
- 16 TIME TO CHG (charge) indicator
- 17 Time/LOG indicator
- 18 BATTERY LIFE indicator
- 19 VCR/CAMERA indicator
- 20 Normal charge indicator
- 21 Full charge indicator
- 22 Battery life indicator

NOTICE FOR THE CUSTOMERS IN THE U.S.A.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Notice:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTICE FOR THE CUSTOMERS IN THE U.S.A. AND CANADA

IMPORTANT SAFETY INSTRUCTIONS
SAVE THESE INSTRUCTIONS.

DANGER - TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, CAREFULLY FOLLOW THESE INSTRUCTIONS.

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has three blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being run over or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories from the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/appliance combination to avoid injury from tip-over.

Recycling Information:
Lithium-ion batteries are recyclable. You can help preserve our environment by returning your used rechargeable batteries to the collection and recycling location nearest you.
For more information regarding recycling of rechargeable batteries, call toll free 1-800-822-8837, or visit <http://www.eco.org/>.
Caution: Do not handle damaged or leaking Lithium-ion Batteries.

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

Should the fuse in the plug supplied need to be replaced, a fuse of the same rating as the supplied one and approved by ASTA or BSI to BS1362 (i.e., marked with or) must be used.

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

Recycling Information (applicable in the European Union and other European countries with separate collection systems)
This symbol on the battery or on the packaging indicates that the battery provided with this product shall not be treated as household waste.

On certain batteries this symbol might be used in combination with a chemical symbol. The chemical symbols for mercury (Hg) or lead (Pb) are added if the battery contains more than 0.0005% mercury or 0.004% lead.

By ensuring these batteries are disposed of correctly, you will help prevent potentially negative consequences for the environment and human health which could otherwise be caused by inappropriate waste handling of the battery. The recycling of the materials will help to conserve natural resources.

In case of products that for safety, performance or data integrity reasons require a permanent connection with an incorporated battery, this battery should be replaced by qualified service staff only. To ensure that the battery will be treated properly, hand over the product at end-of-life to the applicable collection point for the recycling of electrical and electronic equipment.

For all other batteries, please view the section on how to remove the battery from the product safely.

Hand the battery over to the applicable collection point for the recycling of waste batteries.

For more detailed information about recycling of this product or battery, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)
This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

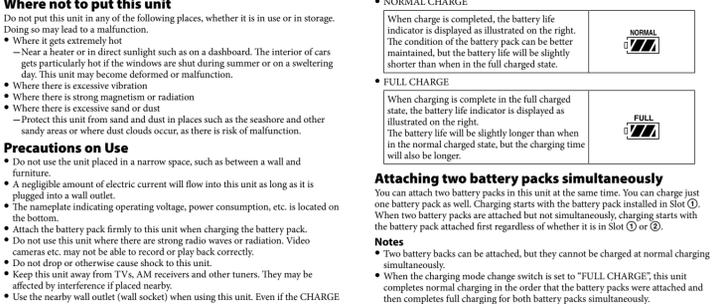
Notes on Use
This unit does not have dust-proof, splash-proof or waterproof specifications.

Warranty for Recorded Content
Contents of the recording cannot be compensated if recording or playback is not made due to a malfunction of the battery pack, AC Power Adaptor, AC Power Adaptor/Charger, etc.

Charging
• Designed for use with genuine Sony battery packs.
• Only charge recommended battery packs with this unit.
• Attach the battery pack firmly.

Charging temperature
• To provide maximum battery efficiency, the recommended temperature range when charging is 10 °C to 30 °C (50 °F to 86 °F). Charging becomes more difficult at lower temperatures.
• This unit provides quick charging, but charging outside the recommended temperature range leads to longer charging times in order to protect the battery pack. Once the charging time has been extended, it will not return to quick charging even if the temperature is brought within the recommended temperature range. Reattach the battery pack and then charge it again.

Countries/Regions	Voltage	Frequency (Hz)	Plug type
Europe			
Austria	230	50	C
Belgium	230	50	C
Czech	220	50	C
Denmark	230	50	C
Finland	230	50	C
France	230	50	C
Germany	230	50	C
Greece	220	50	C
Hungary	220	50	C
Iceland	230	50	C
Ireland	220	50	C/BF
Italy	220	50	C
Luxemburg	230	50	C
Netherlands	230	50	C
Norway	230	50	C
Poland	220	50	C
Portugal	230	50	C
Spain	220	50	C
Romania	220	50	C
Russia	220	50	A/C
Slovak	220	50	C
Spain	127/230	50	C
Sweden	230	50	C
Switzerland	230	50	C
UK	240	50	BF
Asia			
Countries/Regions	Voltage	Frequency (Hz)	Plug type
China	220	50	A
Hong Kong	200/220	50	BF
India	230/240	50	C
Indonesia	127/220	50	C
Japan	100	50/60	A
Korea (rep)	220	60	C
Malaysia	240	50	C
Philippines	220/240	50	A/C
Singapore	220	50	BF
Taiwan	110	60	A
Thailand	220	50	C/BF
Vietnam	220	50	A/C



Attaching two battery packs simultaneously
You can attach two battery packs in this unit at the same time. You can charge just one battery pack as well. Charging starts with the battery pack installed in Slot ①. When two battery packs are attached but not simultaneously, charging starts with the battery pack attached first regardless of whether it is in Slot ① or ②.

Notes
• Two battery packs can be attached, but they cannot be charged at normal charging rate.
• Battery pack performance decreases in low-temperature surroundings, reducing the time the battery pack can be used. To conserve battery power, we recommend that you keep the battery pack warm, for example in your pocket, and only insert it in your electronic device when the temperature is above 5 °C (41 °F).
• Always switch off your camcorder when not recording or playing back. Battery power is consumed even when the camcorder is on recording standby or when playback is paused.
• Have spare battery packs handy for two or three times the expected recording time, and do a trial recording before actual recording.
• If the power goes off even though the remaining battery time shows the battery pack has enough power to operate, charge the battery pack fully again so that the correct remaining battery time is shown. Note that the remaining battery time is sometimes not restored if used in high temperatures for a long time or left in a full-charge state, or if the battery pack is frequently used. Regard the remaining battery time shown as the approximate shooting time.

Charging time
Quick Charge

	NP-F970	NP-F770	NP-F570
Normal charge	285 min	185 min	110 min
Full charge	345 min	245 min	170 min

• The times shown are for charging an empty battery pack, using this unit at an ambient temperature of 25 °C (77 °F).
• The charging time may differ depending on the condition of the battery pack and the ambient temperature.

To attach the battery pack (E-1)
Place the battery pack on this unit with the + mark facing the terminal shutter.

To remove the battery pack (E-2)
Slide the battery pack in the direction of the arrow and lift it straight out.

Notes
• Do not pull this unit up by holding the battery pack.
• Be sure not to hit the terminal shutter. When attaching the battery pack, be particularly careful not to hit the battery pack against it.
• Be careful not to pinch your fingers while attaching or removing the battery pack.

To Check Charging
When charging starts, the battery life lights up in the display window. The battery life displayed is the approximate time remaining for recording images using the viewfinder. The battery life is shorter if the LCD display is used. The battery life may not be displayed with certain video cameras. For details, refer to "Notes on the BATTERY LIFE indicator" in the operating instructions.

There are two methods of switching the contents of the display window during charging.
There are two methods of switching the contents of the display window: display changing automatically and display changing each time you press the DISPLAY change button. The slot indicator lamp corresponds to the slot number. Following is an example of installing a battery pack in Slot ① followed by another in Slot ②.

Changing the contents of the display window automatically during charging (See illustration D)

- 1 **Battery life**
The battery life of the first attached battery pack.
This is the battery life when attached to the "InfoLITHIUM" compatible video camera, etc. last used.
- 2 **Battery life**
The battery life of the subsequently attached battery pack.
- 3 **Charging time**
The total remaining time until full charging of the battery packs installed in Slot ① and ② is complete.
When the charging mode change switch is set to "NORMAL CHARGE", the remaining time until normal charging is complete is displayed.

Press the DISPLAY change button during charging. (See illustration E)
During charging, "BATTERY LOG" can be displayed by pressing the DISPLAY change button.
The contents of the display window change each time you press the DISPLAY change button as follows.
About five seconds after pressing the DISPLAY change button, battery life is displayed and then this automatically switches between the battery life and the remaining time until charging is complete.

- 1 **Total charging time**
The total charging time of the first attached battery pack.
Displays the approximate total charging time from first charging. The minimum displayed is 5 hours.
- 2 **Total charge count**
The number of times the first attached battery pack has been charged.
Displays the approximate number of times the battery pack has been charged since its first charging. The minimum displayed is 5 times, and the count is displayed in multiples of five. Top-up charges and suspended charges may not be counted.
- 3 **Year and month of last use**
The year and month when the first attached battery pack was last used.
Displays "Month" followed by "Year" (last two digits of the year). If used with a video camera that has no calendar set, "-" is displayed.
- 4 **Total charging time**
The total charging time of the subsequently attached battery pack.
- 5 **Total charge count**
The number of times the subsequently attached battery pack has been charged.
- 6 **Year and month of last use**
The year and month when the subsequently attached battery pack was last used.

Press the DISPLAY change button after charging is complete. (See illustration F)
After charging is complete, the display does not change automatically. The contents of the display window change each time you press the DISPLAY change button as follows.
About five seconds after pressing the DISPLAY change button, returns to the display shown in E.

- 1 **Charging is complete**
The charging mode change switch is set to "NORMAL CHARGE", the battery life indicator shows "NORMAL".
- 2 **Battery life**
The battery life of the first attached battery pack.
- 3 **Battery life**
The battery life of the subsequently attached battery pack.
- 4 **Total charging time**
The total charging time of the first attached battery pack.
- 5 **Total charge count**
The number of times the first attached battery pack has been charged.
- 6 **Year and month of last use**
The year and month when the first attached battery pack was last used.
- 7 **Total charging time**
The total charging time of the subsequently attached battery pack.
- 8 **Total charge count**
The number of times the subsequently attached battery pack has been charged.
- 9 **Year and month of last use**
The year and month when the subsequently attached battery pack was last used.

Notes
• Setting the output change switch to CHARGE while operating the video camera, etc. cuts the power supply to the video camera.
• You cannot charge a battery pack attached to this unit when this unit is in VCR/CAMERA mode.
• Move this unit away from your video camera, etc. if the image is distorted.
• The illustration shows connection to an HDR-AX2000 digital HD video camera recorder.

To Operate Video Equipment
For details of connection, refer to the operating instructions of the video camera etc.

- 1 **Set the output change switch to "NORMAL CHARGE".**
- 2 **Connect the AC power cord to this unit.**
- 3 **Connect the AC power cord to a wall outlet.**
There is a beep and the display window comes on.
- 4 **Connect the connecting cord to the DC OUT connector of this unit.**
- 5 **Connect the connecting cord to the video camera.**
For the direction in which to fit the connecting cord, refer to the operating instructions of video camera, etc.

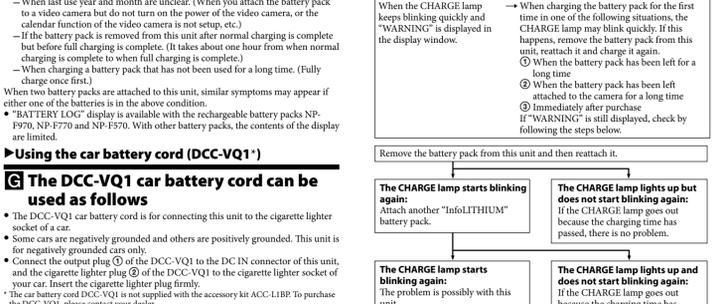
Notes
• When using the connecting cord DK-215 (Illustration B-1).

Notes
• Setting the output change switch to CHARGE while operating the video camera, etc. cuts the power supply to the video camera.
• You cannot charge a battery pack attached to this unit when this unit is in VCR/CAMERA mode.
• Move this unit away from your video camera, etc. if the image is distorted.
• The illustration shows connection to an HDR-AX2000 digital HD video camera recorder.

To Charge the Battery Pack
To set the charging mode change switch to "NORMAL CHARGE" or "FULL CHARGE".
If you want to charge the battery pack until full charging is complete, set the charging mode change switch to "FULL CHARGE".
If you want to finish charging when normal charging is complete, set it to "NORMAL CHARGE".
For details, refer to "Switching the charging mode".

 - 1 **Set the output change switch to CHARGE.**
 - 2 **Set the output change switch to CHARGE.**
 - 3 **Connect the AC power cord to this unit.**
 - 4 **Connect the AC power cord to a wall outlet.**
There is a beep and the display window comes on.
 - 5 **Attach the battery pack.**
Refer to "To attach the battery pack". When charging starts, the battery life indicator in the display window blinks in sequence and the CHARGE lamp lights up.
 - 6 **When charging is complete, remove the battery pack.**
This unit finishes charging on the charging level that you set with the charging mode change switch. When the CHARGE lamp turns off, charging is complete. For details about charge completion, refer to "Switching the charging mode". Refer to "To remove the battery pack" when removing the battery pack.

Switching the charging mode
There are two levels of charge completion: "Normal charge" and "Full charge". You can change the charging mode with the charging mode change switch on this unit.



Using the car battery cord (DCC-VQ1)
The DCC-VQ1 car battery cord can be used as follows

- The DCC-VQ1 car battery cord is for connecting this unit to the cigarette lighter socket of a car.
- Some cars are negatively grounded and others are positively grounded. This unit is for negatively grounded cars only.
- Connect the output plug ① of the DCC-VQ1 to the DC IN connector of this unit, and the cigarette lighter plug ② of the DCC-VQ1 to the cigarette lighter socket of your car. Insert the cigarette lighter plug firmly.
- The car battery cord DCC-VQ1 is not supplied with the accessory kit ACC-L1BP. To purchase the DCC-VQ1, please contact your dealer.

Effective use of the battery pack
Always charge before use.
Battery pack performance decreases in low-temperature surroundings, reducing the time the battery pack can be used. To conserve battery power, we recommend that you keep the battery pack warm, for example in your pocket, and only insert it in your electronic device when the temperature is above 5 °C (41 °F).
Always switch off your camcorder when not recording or playing back. Battery power is consumed even when the camcorder is on recording standby or when playback is paused.
Have spare battery packs handy for two or three times the expected recording time, and do a trial recording before actual recording.
If the power goes off even though the remaining battery time shows the battery pack has enough power to operate, charge the battery pack fully again so that the correct remaining battery time is shown. Note that the remaining battery time is sometimes not restored if used in high temperatures for a long time or left in a full-charge state, or if the battery pack is frequently used. Regard the remaining battery time shown as the approximate shooting time.

Note for charging
After charging, the battery pack discharge by itself even if laid up. We recommend recharging the battery pack before use.

How to store the battery pack
If the battery pack is not used for a long time, once a year fully charge it and then fully use it up on your electronic device before storing in a dry, cool place.

Battery life
• The battery life is limited. If the remaining battery time is considerably shortened, the battery life is reaching the end of its life. Replace it with a new one.
• The battery life of each battery pack varies according to the storage method, operating conditions and environment.

Compensation for recorded content
Recorded content cannot be compensated for if recording or playback is disabled due to a malfunction of the battery pack or other devices.

You do not have to discharge the battery pack before recharging. Charging the battery pack while some charge remains does not affect the original battery capacity.

Specifications
AC Adaptor/Charger (AC-VQ1051D)
Input 100 V - 240 V AC 50 Hz/60 Hz 22 W
12 V/2 V DC (only for negative grounded cars)
Output 8.4 V DC 2.0 A (VCR/CAMERA)
8.4 V DC 1.6 A (CHARGE)
0 °C to 40 °C (32 °F to 104 °F)
-20 °C to +60 °C (-4 °F to +140 °F)
Dimensions (Approx.) 123 mm x 53 mm x 135 mm (w/h/d)
(4 1/8 in. x 2 1/8 in. x 5 3/8 in.)
(including the projecting parts)
Mass Approx. 400 g (14.1 oz.)

Rechargeable Battery Pack (NP-F970)
Battery type used Lithium ion rechargeable battery
Maximum output voltage 8.4 V DC
Mean output voltage 7.2 V DC
Maximum charge voltage 8.4 V DC
Maximum charge current 3.0 A
Capacity (typ.) 47.5 Wh (6,600 mAh)
Capacity (min.) 45 Wh (6,300 mAh)
Operating temperature 0 °C to 40 °C (32 °F to 104 °F)
Dimensions (Approx.) 38.4 mm x 60.0 mm x 70.8 mm
(w/h/d) (1 9/16 in. x 2 3/8 in. x 2 7/8 in.)
Mass Approx. 300 g (10.6 oz.)

Included items
AC Adaptor/Charger (AC-VQ1051D) (1)
Rechargeable battery pack (NP-F970) (1)
AC Power cord (1)
Connecting cord (DK-215) (1)
Set of printed documentation

Design and specifications are subject to change without notice.

Design and specifications are subject to change without notice.

Note
• This unit supports worldwide voltages 100 V to 240 V.
Do not use an electronic voltage transformer, as this may cause a malfunction.

Troubleshooting

Symptom	Cause/Solution
Video equipment does not work.	• The power plug is disconnected from the wall outlet (wall socket). → Insert into a wall outlet. • The connector cable is not properly connected. → Connect properly. • The output change switch is set to CHARGE. → Set the output change switch to VCR/CAMERA. • The output change switch is set to VCR/CAMERA. → Set the output change switch to CHARGE.
The battery pack does not charge.	• Run down the battery pack and then fully charge it again. → The battery life will be correctly displayed.

