Before attempting to connect, operate or adjust this product, please read these instructions thoroughly.

Spanish Quick Use Guide is included.
Guía para rápida consulta en español está incluida.

For assistance, please call: 1-800-211-PANA (7262) or send e-mail to: consumerproducts@panasonic.com

LSQT0563A
# Things You Should Know

**Thank you for choosing Panasonic!**

You have purchased one of the most sophisticated and reliable products on the market today. Used properly, we’re sure it will bring you and your family years of enjoyment. Please take time to fill in the information below. The serial number is on the tag located on the underside of your Palmcorder. Be sure to retain this manual as your convenient Palmcorder information source.

## Safety Precautions

**WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.**

Your Mini**DV** Palmcorder is designed to record and play back in Standard Play (SP) mode and Long (LP) mode. It is recommended that only cassette tapes that have been tested and inspected for use in VCR machines with the Mini**DV** mark be used.

---

**CAUTION**

**RISK OF ELECTRIC SHOCK**

**DO NOT OPEN**

**CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL**

The above markings are located on the appliance bottom cover.

---

<table>
<thead>
<tr>
<th>Declaration of Conformity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Number : PV-DV202/PV-DV402</td>
</tr>
<tr>
<td>Trade Name : Panasonic</td>
</tr>
<tr>
<td>Responsibility Party : Matsushita Electric Corporation of America</td>
</tr>
<tr>
<td>Address : One Panasonic Way Secaucus New Jersey 07094</td>
</tr>
<tr>
<td>Telephone Number : 1-800-211-PANA(7262)</td>
</tr>
</tbody>
</table>

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**Note:** This equipment has been tested and found to comply with Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when operated in a residential environment. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, use the equipment in another location and/or utilize an electrical outlet different from that used by the receiver. If necessary, consult the dealer or an experienced radio/TV technician for help. You may find the booklet, ‘Something About Interference’ available from FCC local regional offices helpful.

**FCC Warning:** To assure continued FCC compliance, use only the provided shielded interface cable when connecting digital video camcorder to computer in accordance with instruction herein. Also, any unauthorized changes or modifications to this equipment would void the user’s authority to operate.

---

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com
1. Read Instructions — All the safety and operating instructions should be read before the unit is operated.
2. Retain Instructions — The safety and operating instructions should be retained for future reference.
3. Heed Warnings — All warnings on the unit and in the operating instructions should be adhered to.
4. Follow Instructions — All operating and maintenance instructions should be followed.
5. Cleaning — Unplug this video unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a dry cloth for cleaning.
6. Attachments — Do not use attachments not recommended by the video product manufacturer as they may be hazardous.
7. Water and Moisture — Do not use this video unit near water — for example near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.
8. Accessories — Do not place this video unit on an unstable cart, stand, tripod, bracket, or table. The video unit may fall, causing serious injury to a child or adult, and serious damage to the unit. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the video unit. Any mounting of the unit should follow the manufacturer’s instructions and should use a mounting accessory recommended by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
9. Ventilation — Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the video unit and to protect it from overheating. These openings must not be blocked or covered. Never place the video unit on a bed, sofa, rug, or other similar surface, or near or over a radiator or heat register. This video unit should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer’s instructions have been adhered to.
10. Power Sources — This video unit should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For video units intended to be operated from battery power, or other sources, refer to the operating instructions.
11. Grounding or Polarization — This video unit may be equipped with either a polarized 2-wire AC (Alternating Current) line plug (a plug having one blade wider than the other) or 3-wire grounding type plug. A 2-wire polarized plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug. The 3-wire grounding type plug will fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.
12. Power-Cord Protection — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords of plugs, convenience receptacles, and the point where they exit from the unit.
13. Outdoor Antenna Grounding — If an outside antenna or cable system is connected to the video unit, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Part 1 of the Canadian Electrical Code, in USA Section 810 of the National Electrical Code, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.
14. Lightning — For added protection of this video unit receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video unit due to lightning and power-line surges.
15. Power Lines — An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

16. Overloading — Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

17. Objects and Liquids — Never push objects of any kind into this video unit through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind onto the video unit.

18. Servicing — Do not attempt to service this video unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

19. Damage Requiring Service — Unplug this video unit from the wall outlet and refer servicing to qualified service personnel under the following conditions:
   a. When the power-supply cord or plug is damaged.
   b. If any liquid has been spilled into, or objects have fallen onto, the video unit.
   c. If the video unit has been exposed to rain or water.
   d. If the video unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video unit to its normal operation.
   e. If the video unit has been dropped or the cabinet has been damaged.
   f. When the video unit exhibits a distinct change in performance — this indicates a need for service.

20. Replacement Parts — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

21. Safety Check — Upon completion of any service or repairs to this video unit, ask the service technician to perform safety checks to determine that the video unit is in safe operating order.

**Important Safeguards**

**USE & LOCATION**

**TO AVOID SHOCK HAZARD ...** Your Palmcorder and power supply should not be exposed to rain or moisture. Do not connect the power supply or operate your Palmcorder if it gets wet. Your Palmcorder has been designed for outdoor use, however it is not designed to sustain direct exposure to water, rain, sleet, snow, sand, dust, or direct splashing from a pool or even a cup of coffee. This action could permanently damage the internal parts of your Palmcorder. Do not attempt to disassemble this unit. There are no user serviceable parts inside. Unplug your Palmcorder from the power supply before cleaning.

**DO NOT AIM YOUR PALMCORDER AT THE SUN OR OTHER BRIGHT OBJECTS**

**DO NOT LEAVE THE PALMCORDER WITH THE EVF AIMED DIRECTLY AT THE SUN AS THIS MAY CAUSE DAMAGE TO THE INTERNAL PARTS OF THE EVF**

**DO NOT EXPOSE YOUR PALMCORDER TO EXTENDED HIGH TEMPERATURE ...** Such as, direct sunlight, inside a closed car, next to a heater, etc... This action could permanently damage the internal parts of your Palmcorder.

**AVOID SUDDEN CHANGES IN TEMPERATURE ...** If the unit is suddenly moved from a cold place to a warm place, moisture may form on the tape and inside the unit.

**DO NOT LEAVE YOUR PALMCORDER OR THE POWER SUPPLY TURNED ON WHEN NOT IN USE.**

**STORAGE OF YOUR PALMCORDER ...** Store and handle your Palmcorder in a manner that will not subject it to unnecessary movement (avoid shaking and striking). Your Palmcorder contains a sensitive pick-up device which could be damaged by improper handling or storage.

**CARE**

**TO CLEAN YOUR PALMCORDER ...** Do not use strong or abrasive detergents when cleaning your Palmcorder body.

**TO PROTECT THE LENS ...** Do not touch the surface of the lens with your hand. Use a commercial Palmcorder lens solution and lens paper when cleaning the lens. Improper cleaning can scratch the lens coating.

**TO PROTECT THE FINISH OF YOUR PALMCORDER ...** Before handling your Palmcorder, make sure your hands and face are free from any chemical products, such as suntan lotion, as it may damage the finish.

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For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com
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*PV-DV52 / PV-DV52-S / PV-DV102 / PV-DV202 / PV-DV402*
This Operating Instructions book is designed for use with models PV-DV202 and PV-DV402. The PV-DV402 is the model used for illustrative purposes. Features may vary, so please read carefully.

### Differences between models

<table>
<thead>
<tr>
<th>Model Number</th>
<th>LCD Monitor</th>
<th>MagicVu™ IR Filter (0Lux)</th>
<th>MIC IN EXTERNAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>PV-DV202</td>
<td>63.5 mm (2.5 inch) Liquid Crystal Display</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>PV-DV402</td>
<td>88.9 mm (3.5 inch) Liquid Crystal Display</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>

### Unpack your Palmcorder

1. 1 pc. AC Adaptor (PV-DAC11) with AC Cable and DC Cable
2. 1 pc. 8 MB Memory Card (RP-SD008BMKO)
3. 1 pc. Battery Pack (CGR-D08/CRG-D08R)
4. 1 pc. A/V Cable (LSJA0280)
5. 1 pc. Shoulder Strap (LSFC0016)
6. 1 pc. Lens Cap (LSYF0518) with Lens Cap Strap (LSQ0066)
7. 1 pc. USB Cable (K1HA05CD0001)
9. 1 pc. IR Remote Control (LSJS0294) with Battery (CR2025)

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Intel® Pentium® is a registered trademark.

i.LINK is a trademark.

PHOTOVU/MPEG4 Movie Messenger™ System is a registered trademark.

IBM is a registered trademark of IBM Company.

MultiMediaCard is a registered trademark.

SD is a trademark.

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For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com
Before Using

Record Speed/Playback Time
Use only those tapes having the Mini DV logo indicating the 6.35 mm digital standard.

<table>
<thead>
<tr>
<th>Cassette type</th>
<th>Record Speed/Playback time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SP</td>
</tr>
<tr>
<td>AY-DVM30EA</td>
<td>30 minutes</td>
</tr>
<tr>
<td>AY-DVM60EA</td>
<td>60 minutes</td>
</tr>
<tr>
<td>AY-DVM80EA</td>
<td>80 minutes</td>
</tr>
</tbody>
</table>

Erase Protection
Cassettes have a sliding record tab to ensure recordings are not accidentally erased.

1 To prevent accidental erasure:
Slide the tab to the left (open).

2 To record again:
Slide the tab to the right (close).

Easy Cassette Eject/Insertion
If the Palmcorder is connected to a power source, the cassette can be inserted and ejected without turning the Palmcorder on.

Before you begin
• Connect the Palmcorder to a power source. (pp. 14, 15)

1 Press LCD-OPEN to unlock the LCD monitor, and swing it fully open.
2 Slide TAPE EJECT to open the Cassette Compartment Cover.
3 Insert a cassette record tab up, window side facing out.
4 Press PUSH TO CLOSE to close the Cassette Compartment Cover.

• To remove the cassette...
Slide TAPE EJECT to open the Cassette Compartment Cover and pull the cassette tape straight out.

Note
• When inserting the cassette, make sure it is facing the right direction and then push it in completely.
Before Using

**Attaching the Shoulder Strap**

1. Undo the two strap ends from their buckles.

2. Thread the strap ends through the Strap Attachment Rings.

3. Reinsert the strap ends through their buckles.
   • Make sure the straps are not twisted.

**Adjust the Length**

1. Loosen the strap from the Buckle and create a loop.

2. Pull the strap firmly through the Buckle to shorten or lengthen the strap.

---

**Hand Strap**

Adjust the length of the Hand Strap to the size of your hand as illustrated.

**Lens Cap**

**Attaching the Lens Cap Strap:**

Thread the Lens Cap Strap through the Strap Attachment Ring as shown.

**Attaching the Lens Cap Cord to the Hand Strap:**

Remove the Hand Strap from the front clasp and thread the Strap through the loop in the Lens Cap Cord. Reattach the Hand Strap.
Before Use

Before Using

Using the Built-in Light

To brighten the natural colors in a scene.

Before you begin

• Connect the Palmcorder to a power source. (pp. 14, 15)
• Set POWER to CAMERA or M-CARD.

1 Hold down LIGHT for more than 0.7 seconds to turn ON or OFF.
• “ Đ ” will appear on the screen.

Note

• Using Light reduces battery time.
• Provide adequate ventilation if using Light in a hot environment for a long time.
• Set LIGHT to OFF when not in use.
• When replacing the bulb, see page 94.

Caution

This light becomes hot during operation. Make sure nothing covers the light during operation.

Remote Control

You can operate the major functions of your Palmcorder from up to approximately 5 m (16 feet) away (indoors). Aim the IR Remote Control toward the front of the Palmcorder and press the desired buttons (Remote Sensor is located under the lens).

To operate Camera functions:

Set POWER to CAMERA.

To operate VCR functions:

Set POWER to VCR.

Controlled Functions

• Rec/Pause (p. 18)
• Tele (Zoom) (p. 21)
• Wide (Zoom) (p. 21)
• Date/Time (p. 112)
• Reset (p. 45)
• PhotoShot (p. 20)
• Display On TV (p. 39)
• Counter/Time Code (p. 113)
• Audio Dubbing (p. 44)
• Record (p. 47)
• Menu (p. 17)
• Play (p. 32)
• FF/Search (p. 34)
• REW/Search (p. 34)
• Pause/Select (pp. 16, 17, 36)
• Stop/Set (pp. 16, 17, 32, 47)
• Slow/Frame Advance (Forward) (pp. 35, 36)
• Slow/Frame Advance (Backward) (pp. 35, 36)
• Index Search (Forward) (pp. 36, 37)
• Index Search (Backward) (pp. 36, 37)
• Speaker Volume (p. 33)
Before Using

Replace the Battery

1 While pressing the tab in the direction of the arrow (A) with your fingernail, pull out the Battery Tray (B).

2 Insert the battery into the Battery Tray with the + mark facing up. Do not reverse the polarity.

3 Insert the Battery Tray.

Remote Controlling Two Palmcorders

You can control any two Panasonic Palmcorders with one Remote control. In order for the remote to distinguish between the two units, it is necessary to set one of the Palmcorders to VCR 2. On the remote, press VCR 1 or VCR 2 to control the desired Palmcorder.

For VCR 2:
Press these buttons at the same time.

For VCR 1:
Press these buttons at the same time.

Note
- When the Palmcorder and remote are not set to the same mode (VCR1 or VCR2), “CHECK REMOTE MODE (REMOTE)” will appear.

1 Set POWER to VCR or CAMERA.
  - The POWER Lamp lights red.
  - Be sure POWER is fully turned to VCR or CAMERA position.

2 Press MENU to display the VCR or CAMERA mode menu screen.

3 Rotate JOG KEY to select [SET-UP] in the CAMERA mode menu screen or [PLAY MODE] in the VCR mode menu screen, then press JOG KEY to display the CAMERA SET-UP or VCR PLAY MODE menu screen.

4 Rotate JOG KEY to select [REMOTE], and then press JOG KEY to select VCR 2 (Menu OSD: pp. 109, 110). Leave the other Palmcorder set to VCR1.

5 Set the Remote Control to VCR 1 or VCR 2 to correspond with the Palmcorder you wish to control. (See above left.)
  - After replacing the Remote Control Battery, the remote will default to VCR 1.
Before Use

Quick Guide

Insert the Battery Pack

1 Insert the Battery Pack and slide it up until it locks with a click.

Protection Film

Note

• Remove the Protection Film before use.

Before you begin

• Charge the Battery. (p. 14)

Insert Cassette

These Palmcorders are equipped with the Easy Cassette Eject System so it is easy to insert or remove tapes, even when on a tripod. (p. 7)

1 Press LCD-OPEN to unlock the LCD monitor, and swing it fully open.

2 Set POWER to VCR or CAMERA.

3 Slide TAPE EJECT to open the Cassette Compartment Cover.

5 Press PUSH TO CLOSE mark to close the Cassette Compartment Cover.

4 Insert a cassette record tab up, window side facing out.

• Make sure the record tab is closed. (p. 7)
Quick Guide

Camera Recording
When the LCD monitor is fully open, the Viewfinder automatically turns OFF.

1 Set POWER to CAMERA.
2 Adjust the Vision Adjustment Control to your eyesight.
3 Press LCD-OPEN to unlock the LCD monitor. Swing it fully open and adjust the angle.
4 Press REC/PAUSE to start recording. Press REC/PAUSE again to pause recording.

To Watch Playback in the LCD (Liquid Crystal Display)
When the LCD monitor is fully open, the Viewfinder automatically turns OFF.

1 Set POWER to VCR.
2 Press LCD-OPEN to unlock the LCD monitor. Swing it fully open and adjust the angle.
3 Press (REW) to rewind the tape.
4 Press (PLAY) to start playback.
5 Press (STOP) to stop playback.

Before you begin
• Charge the Battery. (p. 14)

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com
Supplying Power

Charge the Battery Pack on the AC Adaptor

1. Connect and plug in the Power Cord as shown.
   - POWER Lamp will light.
   - Remove the DC Cable, if attached, from the adaptor.

2. Attach the Battery as shown to charge.
   - CHARGE Lamp lights up. It goes out when charging is complete (approx. 1 hour). Expect approx. 1 hour 30 minutes of operation (EVF usage) when fully charged.

3. Remove the Battery. Slide the Battery out and then lift up.

Note

About the Flashing of the CHARGE Lamp
- Charge the Battery within an ambient temperature range of 10 °C (50 °F) and 30 °C (86 °F).
- If charging is done in extreme low or high temperatures, Battery charge time increases.

CHARGE Lamp flashes when...
- The Battery is being charged, but charging is taking longer than normal.
- Charging is not possible. Remove the Battery once, wait a short time, then re-attach it for charging.

Insert the Battery Pack

1. Insert the Battery Pack and slide it up until it locks with a click.

Remove the Battery Pack

1. Tilt Viewfinder upward.
2. Remove the Battery Pack and slide the Battery downward while sliding the BATT RELEASE.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com
Battery Care

Caution:
- Charge only with specified charger.
- Charge the Battery within an ambient temperature range of 10 °C (50 °F) and 30 °C (86 °F).
- The Battery may be warm after charging or just after use. This is normal.
- Do not use an insufficiently charged or worn out Battery.
- If charging is done in extreme low or high temperatures, Battery charge time increases.

Safety precautions:
- Do not place the Battery near, or dispose of in fire.
- Do not directly connect (short circuit) the positive (+) and negative (–) terminals.
- Never attempt to disassemble or reassemble the Battery.

To avoid damage to the Battery:
- Do not drop or jar the Battery.
- Use the Battery with specified models only.
- If the Battery is used in extremely high temperatures, a safety device will automatically prevent operation.

To insure longer battery life:
- While not in use, remove Battery from the Palmcorder and AC Adaptor and store in a cool, dark, dry place. If you leave the Battery in the Palmcorder or on the AC Adaptor, the Battery will no longer be rechargeable.
- Keep the Battery terminals clean.

U.S.A. CONSUMERS: ATTENTION:

A lithium ion/polymer battery that is recyclable powers the product you have purchased. Please call 1-800-8-BATTERY for information on how to recycle this battery.

Use AC Adaptor

1. Slide the Battery downward while sliding BATT RELEASE to remove the Battery Pack. (p. 14)
2. Insert the DC Cable into the DC IN Terminal.
3. Connect the other end of the DC Cable to the AC Adaptor as shown.
4. Plug in the AC Adaptor.
   - The POWER Lamp on the AC Adaptor lights up.

Note
- When not in use, unplug the AC Adaptor from the AC outlet. (AC Adaptor consumes 1 W of electric power when plugged into an AC outlet even when not in use.)
Setting the Clock

Set the Date and Time
The date and time is calculated, including leap year, up to DEC 31 2089.

Before you begin
- Connect the Palmcorder to a power source. (pp. 14, 15)
- Set POWER to CAMERA or VCR.

1. Press MENU to display the Camera or VCR mode menu screen. (p. 17)

2. Rotate JOG KEY to select DISPLAY SETTING, and then press JOG KEY to display the DISPLAY SETTING menu screen.

3. Rotate JOG KEY to select CLOCK-SET, and then press JOG KEY to set to ON. (Menu OSD: pp. 109, 111)

4. The DATE/TIME SETTING menu is displayed.

EXAMPLE:

When DATE/TIME setting is completed, press MENU three times to start the clock and exit.

Note
- To make corrections, Press JOG KEY repeatedly to move back to an item and correct.
- A built-in Battery maintains clock operation. If the Palmcorder is not connected to a power source for a few months, the built-in battery may discharge and “CLOCK BATTERY” indication appears. (p. 99)
Using the Palmcorder Menu

The Palmcorder features three menu displays: one for CAMERA mode (recording), one for M-CARD (Memory Card Photo Mode) and one for VCR mode (Playback). (pp. 108–111)

- While the Menu screen is displayed, you cannot record on or play a tape.
- While recording, the Menu screen cannot be displayed.
- During playback, the Menu screen can be displayed.

**Before you begin**
- Connect the Palmcorder to a power source. (pp. 14, 15)
- Set POWER to CAMERA or VCR.

1. **D**. FUNCTION
   - CAMERA FUNCTION menu is displayed. To select D.FUNCTION, D.ZOOM, or PROGRESSIVE.
2. **ADJUST**
   - CAMERA ADJUST menu is displayed. To select PROG. AE or CINEMA.
3. **REC MODE**
   - CAMERA REC-MODE menu is displayed. To select REC-SPEED, AUDIO-REC, INDEX, SHUTTER, SELF-REC, WIND-CUT, or ZOOM-MIC.
4. **SET-UP**
   - CAMERA SET-UP menu is displayed. To select REMOTE, BEEP, or MAGICVU (PV-DV402 only).
5. **DISPLAY SETTING**
   - DISPLAY SETTING menu is displayed. To select DISPLAY, C.RESET, DATE/TIME, or CLOCK-SET.
6. **LCD/EVF SETTING**
   - LCD/EVF SETTING menu is displayed. To select LCD BRIGHTNESS, LCD COLOR or EVF BRIGHTNESS.
7. **PHOTO TITLE**
   - PHOTO TITLE menu is displayed. To select TITLE or MODE.

**VCR Main menu**

1. **PLAY FUNCTION**
   - VCR PLAY FUNCTION menu is displayed. To select D. FUNCTION, D.EFFECT, or D.ZOOM.
2. **REC MODE**
   - VCR REC MODE menu is displayed. To select REC-SPEED or AUDIO-DUB.
3. **PLAY MODE**
   - VCR PLAY MODE menu is displayed. To select INDEX, AUDIO, REMOTE, or B.SEARCH.
4. **MULTI SETTING**
   - MULTI SETTING menu is displayed. To select SPEED.
5. **DISPLAY SETTING**
   - DISPLAY SETTING menu is displayed. To select DISPLAY, C.RESET, DATE/TIME, or CLOCK-SET.
6. **LCD/EVF SETTING**
   - LCD/EVF SETTING menu is displayed. To select LCD BRIGHTNESS, LCD COLOR or EVF BRIGHTNESS.

**Displaying the MENU**

**Before Use**

1. Press MENU to display the CAMERA or VCR menu (according to the POWER setting).
2. Rotate JOG KEY to select a menu item.

**Setting the MENU Items**

**A**
- Press JOG KEY to set your selection.

**B**
- Rotate JOG KEY to select a menu item.

**C**
- Press JOG KEY to set your selection.

- The "*" mark indicates selection.

**D**
- Press MENU twice to exit the menu.
Camera Recording

Simple Recording
Remove the lens cap and clip it to the hand strap.

Before you begin
• Connect the Palmcorder to a power source. (pp. 14, 15)
• Insert a cassette with the record tab closed. (p. 7)

1 Set POWER to CAMERA.
• The POWER Lamp lights red.
• Be sure POWER is fully turned to the CAMERA position.

2 With the Viewfinder Eye Cup held up against your eye, adjust the Vision Adjustment Control to your eyesight.
• Adjust the EVF Brightness of the Viewfinder if necessary. Please refer to "To adjust the LCD/EVF BRIGHTNESS or COLOR" on page 19.

3 Set to REC-SPEED “SP” or “LP” in the CAMERA Mode Menu. (Menu OSD: p. 108)

4 Press REC/PAUSE to start recording.
• “REC” is displayed on the screen.
Press REC/PAUSE again to pause recording.

5 Set POWER to OFF when finished.
• To remove the cassette, slide TAPE EJECT.

WARNING:
• Do not leave the Palmcorder with the EVF aimed directly at the sun as this may cause damage to the internal parts of the EVF.
• Do not lift, or carry, the Palmcorder by the EVF or the LCD Monitor.
• To conserve power
After 5 minutes, the Record/Pause mode will automatically change to Standby mode.
To resume recording, set POWER to OFF and then ON again.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com
Using the LCD Monitor

The LCD (Liquid Crystal Display) monitor can be used while recording.

1 Press LCD-OPEN to unlock the LCD monitor.
2 Swing the LCD monitor fully open and adjust the viewing angle.
   • The LCD monitor will automatically turn on.
   • When the LCD monitor is completely closed, it will shut off automatically to save power.
   • Adjust the LCD Brightness and/or color of the LCD monitor if necessary. Please refer to “To adjust the LCD/EVF BRIGHTNESS or COLOR” below.
3 Start recording.

Note
• Using the LCD monitor will reduce battery operating time.
• Close the LCD monitor completely when not in use.

To adjust the LCD/EVF BRIGHTNESS or COLOR

1 Press MENU to display the main menu screen.
2 Rotate JOG KEY to select LCD/EVF SETTING from the main menu screen. (Menu OSD: pp. 109, 111)
3 Press JOG KEY to display the LCD/EVF SETTING screen.
4 Press JOG KEY to select LCD BRIGHTNESS, LCD COLOR, or EVF BRIGHTNESS, then rotate JOG KEY to adjust.
5 Press MENU twice to exit this mode.
Camera Recording

Digital PhotoShot™ Mode

Use this feature to record a seven second (approx.) still image from the current camera picture. Audio is also recorded for on-the-spot narration. Or, you can add narration later with the Audio Dubbing feature to make an interesting slide show, etc. (p. 44)

1 Set POWER to CAMERA.
2 Press PHOTOSHOT in Record/Pause mode. “PHOTO” will appear in the EVF or the LCD monitor.

Note
• If SHUTTER on the menu screen is set to ON, a sound effect similar to the shutter of a film camera will be heard when PHOTOSHOT is pressed.
• When PHOTOSHOT is pressed, the playback image takes approx. 7 seconds to process. After that, the Camera mode screen will be displayed.

Progressive PhotoShot™ Mode

With the progressive PhotoShot Function, you can record still pictures with higher resolution than with the normal PhotoShot Function.

1 Set POWER to CAMERA.
2 Press MENU to display the CAMERA mode menu screen.
3 Rotate JOG KEY to select D.FUNCTION and press JOG KEY to display the CAMERA FUNCTION menu screen.
4 Rotate JOG KEY to select PROGRESSIVE and press JOG KEY to select ON or OFF.
   • Press MENU twice to exit.
   • “P” will appear in the EVF or the LCD monitor.
5 Press PHOTOSHOT in Record/Pause mode.

Note
• This Function may not work with some function settings.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com
Camera Recording

**Zoom**
You can gradually zoom in for close ups or zoom out for wide angle shots.

1. Set POWER to CAMERA.
2. Zoom slowly:
   - by lightly pressing the “T” (Telephoto) or the “W” (Wide Angle) side of the POWER ZOOM.

   **Zoom quickly:**
   - by applying more pressure.
3. Start recording.

**Note**
- The zooming speed ranges from a slow 17 seconds to a fast 1.5 seconds according to the amount of pressure applied to the POWER ZOOM.

**Zoom Microphone Function**
Along with the zooming operation, the microphone’s directional angle and sensitivity are varied for recording sounds.

1. Set POWER to CAMERA.
2. Press MENU to display the CAMERA mode menu screen.
3. Rotate JOG KEY to select **REC MODE**, then press JOG KEY to display the CAMERA REC-MODE menu screen.
4. Rotate JOG KEY to select **ZOOM-MIC** in the CAMERA REC-MODE menu. (Menu OSD: p. 108)
5. Press JOG KEY to select ON.
   - Press MENU twice to exit.
   - “Z.MIC” will appear on the screen.

**Note**
- The Zoom Microphone Function may not work effectively if the surrounding noise is too loud.
Camera Recording

Recording Check
To playback the final few seconds of the last recorded scene in the REC/PAUSE mode.

1 Press RECORDING CHECK briefly in the REC/PAUSE mode. The [CHK] indication appears. After checking, the Palmcorder returns to the REC/PAUSE mode.

- For Recording Check, the Palmcorder must be in the same mode (SP or LP) as was used for recording, otherwise the playback picture is distorted.

Recording Still Pictures
You can record still pictures of any desired duration together with sound.

1, 2 Press STILL and hold for 2 seconds to capture a still picture. The captured still picture will be recorded together with sound.

2 Press STILL once again to release the still picture. The camera will resume recording real-time pictures.

Self Recording
Rotate the LCD monitor 180 degrees so it faces the same direction as the lens to record yourself.

3, 4 Set POWER to CAMERA.

2 Press MENU to display the CAMERA mode menu screen.

3 Rotate JOG KEY to select REC MODE, then press JOG KEY to display the CAMERA REC-MODE menu screen.

4 Rotate JOG KEY to select SELF REC, and then press JOG KEY to select MIRROR.

- The picture in the LCD monitor will appear reversed.

5 Start recording.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com
**CINEMA Mode**

You can record a picture compatible with a wide-screen TV equipped with an S2 picture terminal.

1. Set POWER to CAMERA.
2. Press MENU to display the CAMERA mode menu screen.
3. Rotate JOG KEY to select ADJUST, then press JOG KEY to display the CAMERA ADJUST menu screen.
4. Rotate JOG KEY to select CINEMA, and then press JOG KEY to select ON.
   - A black strip will appear at the top and bottom of the picture.
   - Press MENU twice to exit.
   - “CINEMA” will appear on the screen.
5. Start recording.

**Backlight**

Use when recording a subject that is darker than the surrounding scene, is in a shadowed area, or when the light source is in back of your subject.

1. Set POWER to CAMERA.
2. Press BACK LIGHT to activate the Backlight feature.
   - The Indicator “○” will appear in the EVF or LCD monitor.
3. Press BACK LIGHT again to cancel the Backlight feature.

**Note**

- The Indicator “○” will not appear in the EVF or LCD monitor when OFF is selected in the DISPLAY menu.
Special Effect Features

**Program AE**

The Auto Exposure feature can be used to make quality recordings in a variety of scene situations.

**Note**
- When MagicVu (PV-DV402 only) is ON, Program AE and H.S.S. cannot be set in the menu.

1. Set POWER to CAMERA.
2. Hold down AUTO/MANUAL for more than 0.7 seconds so that the “MNL” indication appears in the EVF or the LCD monitor.
3. Press MENU to display the menu screen.
4. Rotate JOG KEY to select **ADJUST**, and then press JOG KEY to display the CAMERA ADJUST menu screen.
5. Rotate JOG KEY to select **PROG.AE** then press JOG KEY repeatedly to select one of the five modes shown below.
6. Repeat steps 2–5 to select OFF to cancel this feature.

### Mode | Indication
--- | ---
1 | For recording fast action scenes.
2 | For recording only subjects in the foreground, while ignoring subjects in the background.
3 | For recording in extreme low light conditions.
4 | Recording in situations where subjects are under a spotlight(s).
5 | For recording in locations with a high degree of “Dazzle,” such as snow slopes and the seashore.

**Note**

SPORTS mode
- The recorded images will not be so blurred when they are viewed later using slow or still picture playback.
- When playing back a sports mode recording, the movement may appear slightly jerky.
- Do not use this mode when recording under fluorescent, mercury, or sodium lighting. These types of lights will affect the color and brightness of the images.
- A vertical band of light might appear when recording objects that are brightly illuminated or highly reflective.
- If the amount of light is insufficient, the SPORTS “Sports” indicator will flash in the EVF or the LCD monitor.
- The image may flicker if this mode is used indoors.

PORTRAIT mode
- The image may flicker if this mode is used indoors.

LOW-LIGHT mode
- Scenes recorded in extremely low light levels may not come out properly.

SPOT-LIGHT mode
- If the recorded subject is extremely bright, the picture may appear whitish.

SURF&SNOW mode
- If the recorded subject is extremely bright, the picture may appear whitish.
- It is not possible to select the SPORTS mode or PORTRAIT mode together with the MagicPix mode in the Digital function camera menu.
Special Effect Features

**MagicVu™ IR Filter (0 Lux)** (PV-DV402 only)

MagicVu allows you to record video in total darkness. You can select the color of image: B/W, green, or blue. (Menu OSD: p. 109)

1. Set POWER to CAMERA.
2. Slide MAGICVU/0LUX to ON.
   - A black and white image appears.
   - "MAGICVU" will appear on the screen.
3. Press MENU to display the menu screen.
4. Rotate JOG KEY to select SET-UP, and then press JOG KEY to display the CAMERA SET-UP menu screen.
5. Rotate JOG KEY to select MAGICVU, and then press JOG KEY repeatedly to select B/W, BLUE, or GREEN.
   - Press MENU twice to exit.
   - To cancel this feature, slide MAGICVU/0LUX to OFF.

**Note**
- The subject can be up to 3 m (9 feet) away.

---

**Audio/Video Fade In/Out**

You can make smoother scene transitions for a more professional look.

1. FADE
2. REC/PAUSE
3. MENU
4. JOG KEY
5. POWER

**Fade In**

Starting the first scene with “fade in” is very effective.

1. In REC/PAUSE mode, hold down FADE until the picture fades out.
2. Press REC/PAUSE to start recording.
3. Release FADE and the picture will gradually fade in.

**Fade Out**

Use to create a soft ending or (together with fade in) for a soft transition from one scene to the next.

A. During recording, hold down FADE until the picture fades out.
B. Press REC/PAUSE to pause the recording.
Special Effect Features

Picture in Picture (PinP)

You can display a PinP (still image) screen on the Main Picture.

Note
- PinP position is fixed at the bottom right of the screen.

1. Set POWER to CAMERA.
2. Press MENU to display the menu screen.
3. Rotate JOG KEY repeatedly to select D.FUNCTION, then press JOG KEY to display the CAMERA FUNCTION menu screen.
4. Press JOG KEY to select PinP.
   - Press MENU twice to exit this menu.
   - “PinP” will appear in the EVF or the LCD monitor.

5. Aim at the scene you wish to place as PinP, then press II (CAMERA STILL) to freeze the image.
6. Press II (CAMERA STILL) again to place the frozen image as PinP.
7. Press REC/PAUSE to record a scene with PinP image.
   - Press PHOTOSHOT to record a scene with PinP image in PhotoShot mode.
   - Press II (CAMERA STILL) again to remove PinP image.

For assistance, please call: 1-800-211-PANA(7262) or send email to: consumerproducts@panasonic.com
Special Effect Features

Photo Title
You can use PhotoShot images stored on a Memory Card to record a WIPE or MIX effect on a cassette.

Note
When Photo Title is set to ON, the selected image and Title will appear before each recording is made.

WIPE: The Photo title is replaced with the current scene in a wiping motion.

MIX: The photo title is replaced with the current scene in a gradual mixing effect.

Before you begin
- Connect the Palmcorder to a power source. (pp. 14, 15)
- Set POWER to OFF before inserting a recorded Memory Card. (pp. 48, 49)

1 Set POWER to CAMERA.

2 Press MENU to display the CAMERA menu screen. Then rotate and press JOG KEY to select PHOTO TITLE.

3 Rotate and press JOG KEY to select and set MODE and then TITLE.  
   1st: Select and set MODE (WIPE or MIX).  
   2nd: Select and set TITLE to “SET”.

   • “PLEASE WAIT” appears on-screen.
   • The Multi image screen is displayed.

4 Rotate and press JOG KEY to select and set an image.  
   • “PLEASE WAIT” is displayed while image is processed. Then, “PHOTO TITLE SET” is displayed for approx. 3 seconds, and the screen goes back to the Camera mode screen.
   • After Photo Title is performed, Digital Function turns off.

5 Press REC/PAUSE to start recording with Photo Title.
   • WIPE or MIX screen is displayed at the beginning of the recording. Then the Photo Title setting will be cleared automatically.

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   • After Photo Title is performed, Digital Function turns off.

5 Press REC/PAUSE to start recording with Photo Title.
   • WIPE or MIX screen is displayed at the beginning of the recording. Then the Photo Title setting will be cleared automatically.
Advanced Settings

White Balance
Auto White Balance ("AWB") automatically maintains optimum color balance in most lighting conditions. However, when using Digital Functions, etc., you may get better results by using the manual adjustment.

1 Set POWER to CAMERA.
2 Hold down AUTO/MANUAL for more than 0.7 seconds so that the "MNL" indication appears in the EVF or the LCD monitor.
3 Press JOG KEY repeatedly until "AWB" appears in the EVF or LCD monitor.
4 Rotate JOG KEY to select other modes. (See mode chart at left.)
   • Hold down AUTO/MANUAL for more than 0.7 seconds to cancel the setting.

* For manual White Balance adjustment:
   A. Rotate JOG KEY to select "AWB".
   B. Point the Palmcorder at a white object (full-screen) and hold JOG KEY down until "AWB" indication stops flashing.
      • If "AWB" indication flashes when the Palmcorder is turned on, the previous manual White Balance setting is in effect.

In the following cases, the "AWB" indication flashes:
   • The flashing indicates that the previously adjusted White Balance setting is still kept. This setting will be kept until White Balance is adjusted again.
   • Correct White Balance may not be attainable manually in poor lighting.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWB</td>
<td>Automatically maintains optimum color balance in most lighting conditions.</td>
</tr>
<tr>
<td>-0-</td>
<td>When the source illumination is a halogen lamp.</td>
</tr>
<tr>
<td>–∞</td>
<td>When shooting outdoors on a sunny day.</td>
</tr>
<tr>
<td>*</td>
<td>The White Balance setting that was previously set manually.</td>
</tr>
</tbody>
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Mode | Description
--- | ---
AWB | Automatically maintains optimum color balance in most lighting conditions.
-0- | When the source illumination is a halogen lamp.
–∞ | When shooting outdoors on a sunny day.
* | The White Balance setting that was previously set manually.

Note
• When ZOOM is set to 10X or higher, White Balance cannot be adjusted.
Advanced Settings

Auto Focus
The Palmcorder automatically adjusts the focus over the entire zoom range.

Manual Focus
Use Manual Focus (MF) when recording ...
- a subject through glass.
- a scene where the subject is far from the Palmcorder and there are objects in the foreground.
- a subject with distinct horizontal stripes.
- a subject not centered in the Viewfinder.
- subjects with shiny surfaces.
- an obliquely angled subject.
- a bright, flat subject such as a white wall.
- in low light situations.
- a scene with fast motions, like a golf swing.
Re-focusing may be required
- when your Palmcorder is aimed at a new scene.

1 Set POWER to CAMERA.
2 Hold down AUTO/MANUAL for more than 0.7 seconds so that the “MNL” indication appears in the EVF or the LCD monitor.
3 Press FOCUS so that the “MF” (Manual Focus) indication appears in the EVF or the LCD monitor.
4 Press and hold POWER ZOOM, “T” side (Telephoto), until the lens is at maximum zoom in.
5 Turn M.FOCUS DIAL until the picture is in focus.
   - It may be necessary to back away from the subject to focus the image properly.
6 Press POWER ZOOM to “W” or “T” as desired.
   - The subject will remain in focus over the entire zooming range.
   - It may be necessary to back away from the subject to focus the image properly.
Note
- DISPLAY must be set to on for MF, AE, W.BALANCE, or BACK LIGHT to be displayed on the LCD or EVF.

Macro Focus (for close-ups)
Press the “W” side of POWER ZOOM to the maximum wide angle position.
Auto Focus will function with the subject as close as 25 mm (1 inch) in front of the lens.
Advanced Settings

High Speed Shutter
To record high speed motion (e.g. tennis stroke) with improved STILL or SLOW MOTION playback when watching the tape on this Palmcorder.

Auto Shutter
In the AUTO mode (no indication in the EVF and LCD monitor), the Palmcorder will automatically adjust the shutter speed (up to 1/350).
- AUTO mode is automatically selected whenever the POWER Switch is set to CAMERA.

Manual Selection

1. Set POWER to CAMERA.
2. Hold down AUTO/MANUAL for more than 0.7 seconds so that the “MNL” indication appears in the EVF or the LCD monitor.
3. Press JOG KEY repeatedly to display the shutter speed.
4. Rotate JOG KEY to choose one of the following shutter speeds.
- Hold down AUTO/MANUAL for more than 0.7 seconds to cancel the setting.

Note
- For proper color reproduction, it is recommended that you use this feature outdoors. For indoor High Speed Shutter recording, additional halogen or tungsten light should be provided. Fluorescent light will degrade the picture quality.
- This feature requires ample light. More light is required for the fastest shutter speeds.
- The Auto Focus system may not operate properly in insufficient light when using the High Speed Shutter.
- When PROG.AE is ON, you cannot manually select the shutter speed.
- When MagicVu (PV-DV402 only) is ON, Program AE and H.S.S. cannot manually select the shutter speed.
- When MagicPix is ON, H.S.S. cannot manually select the shutter speed.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com
Adjusting the Iris Manually

Normally, the Palmcorder adjusts the exposure automatically. However, when the background is extremely bright, or when the subject is backlit, you can compensate by adjusting the Iris manually.

1. Set POWER to CAMERA.
2. Hold down AUTO/MANUAL for more than 0.7 seconds so that the “MNL” indication appears in the EVF or the LCD monitor.
3. Press JOG KEY repeatedly so that Iris setting indication appears in the EVF or the LCD monitor.
4. Rotate JOG KEY to adjust the iris;
   - When a value closer to “CLOSE” is selected, the image becomes darker.
   - When a value closer to “OP+18dB” is selected, the image becomes brighter.
5. Hold down AUTO/MANUAL for more than 0.7 seconds to cancel the setting.

Note
- The value to which +dB is attached indicates a gain value. If this value is too large, the quality of the image deteriorates.
- Depending on ZOOM magnification, the iris value may not be displayed correctly.
- If you are using Program AE mode, you cannot adjust the iris. If the iris is adjusted manually, the above modes will be canceled.

WIND-CUT

You can reduce sound distortion caused by wind hitting the microphone.

1. Set POWER to CAMERA.
2. Press MENU to display the CAMERA mode menu screen.
3. Rotate JOG KEY to select REC MODE, then press JOG KEY to display the CAMERA REC-MODE menu screen.
4. Rotate JOG KEY to select WIND-CUT and then press JOG KEY to select ON.
   - Press MENU twice to exit.
   - “WIND-CUT” will appear in the EVF or LCD monitor.
5. Start recording.
### Playback Your Recordings

**Playback using the LCD Monitor**

You can also use the LCD monitor to playback your recording.

1. **Set the POWER to VCR.**
   - The POWER lamp lights red.
   - Be sure POWER is fully turned to the VCR position.

2. **Press LCD-OPEN** to unlock the LCD monitor and swing open.

3. **Press (REWIND/SEARCH)** to rewind the tape.

4. **Press (PLAY)** to start playback.

5. **Press (STOP)** to stop playback.
   - When the tape reaches its beginning during rewind or rewind search, it will stop automatically.

**Connecting Earphone (not supplied)**

You can connect earphones (not supplied) to the PHONE Jack.

**Before you begin**

- Connect the Palmcorder to a power source. (pp. 14, 15)
- Insert a recorded cassette.

**Note**

- When a tape recorded in LP mode on another digital video camera is played back on this unit, the picture may appear mosaic.
- Using the LCD monitor reduces battery operating time.
- You can place the Palmcorder on a table, etc. for viewing. Rotate the LCD Monitor 180° and swing it up against the Palmcorder body as shown.
Playing Back Your Recordings

**Repeat Playback**

1. Press PLAY for more than 5 seconds in STOP mode.
   - The Palmcorder will go into Repeat Playback mode when the tape reaches its end.
   - The letter “R >” will appear in the EVF and LCD monitor.

2. Turn the Palmcorder OFF to exit the Repeat Playback mode.

**Adjusting the Volume**

1. Rotate VOLUME to adjust the volume of the built-in speaker in PLAY mode.
   - The volume setting screen appears.

2. Press “T” to increase the volume or press “W” to decrease the volume.

**Blank Search**

You can go directly to a blank portion of tape and start recording exactly where you left off.

1. Set POWER to VCR.

2. Press MENU to display the VCR mode menu screen.

3. Rotate JOG KEY to select PLAY MODE, then press JOG KEY to display the VCR PLAY MODE menu screen.

4. Rotate JOG KEY to select B.SEARCH in the VCR PLAY MODE menu.
   (Menu OSD: p. 110)

5. Press JOG KEY to select ON.
   - “BLANK” will appear on the screen.
Special Effect Features

**Note**
- Sound is muted during all special effects.

### Rapid Visual Search

**A** During playback, hold down ➤ (FAST FORWARD/SEARCH) or ◀ (REWIND/SEARCH).
The search will continue for as long as the button is held down.

**OR**

**B** Press ➤ (FAST FORWARD/SEARCH) or ◀ (REWIND/SEARCH) once for a continuous rapid visual search.
Press ➤ (PLAY) to release.

**Note**
- When executing a rapid visual search, the picture may become bluish for an instant or mosaic. This is normal during this mode.

### STILL Picture

1. Press II (PAUSE) during playback.
2. Press ➤ (PLAY) or II (PAUSE) to release.

**Note**
- To protect the tape and video heads, your Palmcorder’s operating modes will revert as follows: STILL ➡ STOP (after 3 minutes.)

### Fast Forward/Rewind Check

Monitor normal picture playback during fast forward or rewind.

**A** Hold down ➤ (FAST FORWARD/SEARCH) during fast forward.

**B** Hold down ◀ (REWIND/SEARCH) during rewind.
- The picture will appear for as long as the button is held down.

For assistance, please call: 1-800-211-PANA (7262) or send e-mail to: consumerproducts@panasonic.com
Special Effect Feature

**Note**
- Sound is muted during all special effects.

### Slow Motion Playback
*Remote Control Only*

1. **Forward Slow:** Press \(\text{SLOW/F.ADV}\) during play.
2. **Reverse Slow:** Press \(\text{-SLOW/F.ADV}\) during play.

2 Press \(\text{PLAY}\) to release. (During reverse slow motion playback, time code indication may not change regularly.)

**Note**
- Palmcorder will automatically STOP when in slow motion for more than 10 minutes.
- During slow motion playback, picture may move up and down. This is normal.
- When you start or stop slow motion playback, the picture may become bluish for an instant.

### Variable Speed Search

1. Press \(\text{(PLAY)}\) to start playback.
2. Press \(\text{JOG KEY}\) for about 1 second.
3. Rotate \(\text{JOG KEY}\) to adjust the playback speed.
   - Rotate \(\text{JOG KEY}\) clockwise for forward playback.
   - Rotate \(\text{JOG KEY}\) counterclockwise for reverse playback.

**To return to normal playback:** Press \(\text{(PLAY)}\). Playback will continue at normal speed.

**Note**
- The Variable Speed Search function offers a choice of six playback speeds (1/5X (LP mode: 1/3X), 1X, 2X, 5X, 10X, 20X) both in forward and reverse directions.
- The review playback at the 1X speed is playback in reverse direction.
- During the Variable Speed Search (at a speed other than 1X), mosaic-like patterns will appear in the picture.
- During the Variable Speed Search, sound is muted.
Special Effect Features

**Frame by Frame Advance**
(Remote Control Only)

1. Press PAUSE during playback.
2. Press \( \text{SLOW/F.ADV} \) to do a frame by frame advance.
3. Press \( \text{SLOW/F.ADV} \) to do a frame by frame reverse.
4. Press PLAY to release.

**Note**
- If you hold down SLOW/F.ADV, you can see a continuous series of still images at a slower speed than normal slow mode.
- During frame by frame advance, a few frames may move automatically, and the picture may become bluish for an instant.

**Index Search (Photo/Scene)**
(Remote Control Only)

1. Press MENU to display the VCR mode menu screen.
2. Rotate JOG KEY to select PLAY MODE, and press JOG KEY to display the VCR PLAY MODE menu screen.
3. Rotate JOG KEY to select INDEX, and press JOG KEY to select PHOTO or SCENE.
4. Press MENU twice to exit.
5. Press INDEX SEARCH fast forward or rewind on the remote control to advance or rewind the tape to playback a PhotoShot scene. To view the next PhotoShot, INDEX SEARCH must be pressed again.

**Note**
- The picture quality will deteriorate slightly.
- The tape remaining indicator will not appear while the PHOTOSHOT feature is used.
- In the Photo/Scene Index Search mode, the shutter sound effect may not be able to be heard even when SHUTTER is set to ON.
- Photo Index Search may fail to detect a recorded PhotoShot image if the image is 3 seconds or less.

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For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com
Special Effect Features

Jog Frame by Frame Search
(Palmcorder Only)

During Still mode, rotate JOG KEY to advance or reverse the picture one frame at a time.

Index Forward/Reverse Search
(Remote Control Only)

1 Press MENU to display the VCR mode menu screen.
2 Rotate JOG KEY to select PLAY MODE, then press JOG KEY to display the VCR PLAY MODE menu screen.
3 Rotate JOG KEY to select INDEX, and then press JOG KEY to select PHOTO or SCENE. (Menu OSD; p. 110)
   • Press MENU twice to exit.
A Place the Palmcorder in the VCR STOP mode.
B Press INDEX SEARCH fast forward or rewind for the number of recordings (indexes) forward or back you want to view. The Palmcorder will advance or rewind to the desired recording and automatically start playback.
   • The number of times you pressed the button is displayed in the EVF and the LCD monitor if you set INDEX on the VCR menu to SCENE. (Menu OSD; p. 110)
     (Ex., if you press the button three times, “S3” will appear.)
     • If the interval between scenes is less than 1 minute, index search may not operate properly.
     • Response time from pressing the button and the change in the scene number is quite slow. Do not press INDEX SEARCH rapidly and continuously.
     • During Reverse Index Search mode, playback will not begin when a tape rewinds all the way to the beginning.

Note
• Sound is muted during all special effects.

Search for a particular scene by using the electronic index marks placed at the beginning of each recording.

Top Scan
If you hold down INDEX SEARCH more than 2 seconds, the Palmcorder will scan for scenes (or PhotoShots) and playback the first few seconds of each.
To cancel this function, press PLAY or STOP.
Note
• Search will not work if there is succession of PhotoShots.

1 MENU
2, 3 JOG KEY
INDEX SEARCH (fast forward)
INDEX SEARCH (rewind)
**Special Effect Features**

**Strobe Multi Mode**

In Strobe Multi Mode, you can select the rate at which a succession of still screens are captured from the playback picture.

1. Set POWER to VCR.
2. Press MENU to display the menu screen.
3. Rotate and press JOG KEY to select MULTI SETTING.
4. Press JOG KEY repeatedly to set desired speed.
5. Press (PLAY) to start playback. Press (MULTI) at the point you want to start capturing. A succession of 9 screens will be captured, and playback will stop.

**Strobe Speeds**

<table>
<thead>
<tr>
<th>Strobe Speeds</th>
<th>9 screen capture time</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAST</td>
<td>Every 0.3 seconds</td>
</tr>
<tr>
<td>NORM</td>
<td>Every 0.6 seconds</td>
</tr>
<tr>
<td>SLOW</td>
<td>Every 1.0 seconds</td>
</tr>
</tbody>
</table>

- Press MENU twice to exit.

5. Press (PLAY) to start playback. Press (MULTI) at the point you want to start capturing. A succession of 9 screens will be captured, and playback will stop.

- Press (PLAY) to start playback. Press (STOP) to stop playback.

**Note**
- A Multi Image Playback screen cannot be output from the DV terminal or Digital Still Image terminal.
- A Multi screen will have slightly lower image quality.

For assistance, please call: 1-800-211-PANA (7262) or send e-mail to: consumerproducts@panasonic.com
Special Effect Features

View Recording/Playback on your TV

[ TV with AUDIO/VIDEO IN Jacks ]

Before you begin
- When using S-VIDEO Connector, insert the DC Cable into the DC IN Terminal. (p. 15)

1 Set POWER to CAMERA or VCR. To view what the Palmcorder is recording or to playback a tape on your TV.

2 Turn your TV ON and set it to LINE INPUT or S-VIDEO. Check your TV operating instructions for further information.

3 Start playback or begin a recording.
- Make sure the Palmcorder and TV are turned off while connecting.
- Please connect the A/V Cable securely.

Note
(Remote Control Only)
You can display the various EVF and LCD indications on your TV by pressing DISPLAY ON TV on remote control. Press again to remove the indications.

[ TV with S-VIDEO IN Jacks ]
For best Chrominance and Luminance, use the S-Video connection if available on your TV.
Digital Features

Digital Zoom
This feature is useful when you want to record close-up shots of subjects located beyond a normal zoom range of 1X to 10X magnification. With the digital zooming feature, you can select a magnification of 25X or even to 700X.

Note
• Other Digital Functions are turned off automatically when the EIS and Digital Zoom are selected.

CAMERA mode

1 Set POWER to CAMERA.

2 Press MENU to display the CAMERA MENU screen.

3 Rotate JOG KEY to select D.ZOOM, then press JOG KEY to display the CAMERA FUNCTION menu screen.

4 Rotate JOG KEY to select D.ZOOM1 or D.ZOOM2.
   D.ZOOM1: from 10X to 25X
   D.ZOOM2: from 10X to 700X
   OFF: Turn off D.ZOOM
• Press MENU twice to exit.

5 Press REC/PAUSE to start recording and press POWER ZOOM to zoom in or zoom out.
• The magnification level is always displayed in the EVF or the LCD monitor when DISPLAY is set to ON. (Menu OSD: pp. 109, 111)

6 Repeat steps 2-4 to select OFF to cancel this feature.

Note
• The normal optical zoom functions from 1X to 10X.
• As magnification increases, resolution significantly decreases.
• Because the image is enlarged digitally, the picture may become distorted when higher magnification levels are used.
• When the level falls below 10X, the normal zooming function will resume.
• Focus distance becomes 1.2 m (4 feet) if the lens is in full telephoto.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com
Digital Features

Digital Zoom (Continued)

1 Set POWER to VCR.
2 Press MENU to display the VCR MENU screen.
3 Rotate JOG KEY to select PLAY FUNCTION, then press JOG KEY to display the VCR PLAY FUNCTION menu screen.
4 Rotate JOG KEY to select D.ZOOM, then press JOG KEY to select ON.
5 Press ◄ (PLAY) to start playback.
6 Repeat steps 2-4 to select OFF to cancel this feature.

MagicPix™ Images

Color recording of video or still images onto the Mini DV tape in low lighting. (pp. 43, 108)

Note
• MagicPix cannot be used with still images on the Memory Card.
(See “Card PhotoShot” on page 48.)

1 Set POWER to CAMERA.
2 Press MENU to display the menu screen.
3 Rotate JOG KEY to select D.FUNCTION, and then press JOG KEY to display the CAMERA FUNCTION menu screen.
4 Rotate JOG KEY to select D.FUNCTION, and then press JOG KEY repeatedly to select MAGICPIX.
5 To cancel the Digital Function, press JOG KEY repeatedly to select OFF.
Digital Features

Dual Digital Electronic Image Stabilization System (D.E.I.S.)

This feature helps compensate for any unintentional hand or body movement. It can be used in both the Recording and Playback (VCR) modes.

**Note**
- Other Digital Functions are turned off automatically when the EIS and Digital Zoom are selected.

**CAMERA mode**

1. Set POWER to CAMERA.
2. Press EIS to stabilize the picture.
   - Picture flicker may be observed when taping under fluorescent lighting conditions.
   - The EIS indicator flashes when the light level is inadequate.
   - Turn D.E.I.S. OFF during recording when using a tripod.
3. Press REC/PAUSE to start recording.
4. Press EIS again to cancel.
   - Be sure that D.E.I.S. is turned off when not needed.

**D.E.I.S. may not function when...**
- Palmcorder movement is too extreme.
- Recording a subject with distinct horizontal or vertical stripes.
- Recording in low light situations.
- Recording a subject under a great amount of fluorescent light.
- Recording a scene with very fast motions.

**VCR mode**

A. Set POWER to VCR.
B. Press ► (PLAY) to start playback.
C. Press EIS to stabilize the picture.
D. Press EIS again to cancel.
   - Be sure that D.E.I.S. is turned off when not needed.

**Note**
- When using D.E.I.S in VCR mode, the image size is slightly larger.
Digital Features

Other Digital Functions
Use the following features to add interest and professionalism to your recordings or playback. Select from twelve special effects.

1. Set POWER to CAMERA or VCR.
2. Press MENU to display the menu screen.
3. Rotate JOG KEY to select D.FUNCTION in the CAMERA mode menu screen or PLAY FUNCTION in the VCR mode menu screen, then press JOG KEY to display the CAMERA FUNCTION or VCR PLAY FUNCTION menu screen.
4. Rotate JOG KEY to select D.FUNCTION, and then press JOG KEY repeatedly to select one of the Digital Functions listed on the left.
5. To cancel the Digital Function, press JOG KEY repeatedly to select OFF.

The EIS and Digital Zoom features are turned off automatically when one of the Digital Functions listed at left is selected.

Note
- The EIS and Digital Zoom features are turned off automatically when one of the Digital Functions listed at left is selected.

Types of Digital Functions

MIRROR
Symmetrical image from the current camera picture.

STROBE
The recording appears as a sequence of still frames.

MOASIC
The picture appears in a mosaic pattern.

SLIM
The picture is expanded vertically.

TRAIL
The subject being recorded creates a trail when in motion.

STRETCH
The picture is expanded horizontally.

MAGICPIX (Not available during playback)
Color recording of video or still images onto the Mini DV in low lighting. (p. 41)
- Only Manual Focus is available.

WIPE
Successive scenes are separated in a way which simulates the drawing of a curtain.

MIX
The current scene is mixed in with the following scene during scene changes.

PinP
PinP (Still image) is displayed on the Main Picture.

SEPIA (Only available during playback)
The picture is played back in sepia, a brownish color, giving it an antique look.

MONOTONE (Monotone) (Only available during playback)
The picture is played back in black-and-white.

Note
- When Photo Title is set, WIPE/MIX mode becomes Photo Title. When Photo Title is finished, Digital Function turns OFF.

To use the WIPE function
a. In Camera mode, set the "D.FUNCTION" item in the main menu screen to "WIPE". (Menu OSD: p. 108)
b. Press REC/PAUSE to start recording.
c. Press REC/PAUSE to pause the recording. The last scene will be memorized.
d. Press RECORD/PAUSE to start recording again. The new scene will take the place of the memorized scene.

To use the MIX function
a. In Camera mode, set the "D.FUNCTION" item in the main menu screen to "MIX". (Menu OSD: p. 108). Then, perform steps b-d above.

The memorized scene and the new scene will appear mixed as the scene changes from one to the other.

Note
- When Photo Title is set, WIPE/MIX mode becomes Photo Title. When Photo Title is finished, Digital Function turns OFF.
**Editing Features**

**Audio Dubbing using the External (PV-DV402 only) or Built-in Microphone**

The original sound can be replaced with new sound using the built-in Palmcorder microphone or an external microphone (PV-DV402 only).

External Microphone with M3 connector (not supplied)

External Microphone Jack (PV-DV402 only)

Built-in Microphone

**Before you begin**
- Connect the external Microphone (if used) (PV-DV402 only).
- Turn on the Palmcorder.
- Insert a pre-recorded tape to be dubbed.

The AUDIO-REC setting in CAMERA MENU mode should be as follows:

<table>
<thead>
<tr>
<th>12 bit</th>
<th>The original sound is recorded on ST (Stereo) 1, and the new sound will be recorded on ST (Stereo) 2.</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 bit</td>
<td>The original sound is replaced with the new sound.</td>
</tr>
</tbody>
</table>

- Select 12 bit if you do not want the original sound to be completely replaced during an audio dub.
- If you dub over a tape which has both 12 bit and 16 bit audio recordings on it, keep in mind that the original 16 bit audio portion will be completely replaced.

1. **Set POWER to VCR.**
   - With the Remote Control, you can set the Palmcorder to stop automatically at a specified point on the tape. See “Memory-Stop Editing” on page 45.

2. **Press ➤ (PLAY).** Then press ⟨ PAUSE ⟩ where you want dubbing to begin.

**When using the Palmcorder only**

3. **Press MENU to display the VCR mode menu screen.**
   - Rotate JOG KEY to select REC MODE, then press JOG KEY to display the VCR REC MODE menu screen.
   - Rotate JOG KEY to select AUDIO-DUB, and then press JOG KEY to select ON.
   - The Palmcorder will go to Stand By mode, and “A.DUB” flashes in the EVF or the LCD monitor. Go to step 4.

**When using the Remote Control only**

3. **Press A.DUB on the Remote Control.**
   - The Palmcorder will go to Stand By mode, and “A.DUB” flashes in the EVF or the LCD monitor. Go to step 4.
**Editing Features**

4 **Press II (PAUSE)** to start Audio Dubbing.
   - Connect the Palmcorder to the TV in order to monitor the sound.
   - **(p. 39)**

Only NTSC (National Television Standards Committee) recorded tapes can be audio dubbed. The following screen appears if the tape was not recorded in NTSC format.

5 **Press II (PAUSE)** to stop Audio Dubbing.
   - If the microphone used for dubbing gets too near the speaker of your TV, a howling noise (feedback) may occur.
   - If the tape position is in or was started in a blank section, you cannot use the A.DUB feature.

**Note**
   - 16 bit dubbed sound completely erases the original 16 bit recorded sound.
   - If you dubbed using 12 bit AUDIO recording and then selected AUDIO-MIX in the menu for playback, the sound will be stereo regardless of the AUDIO-OUT setting.
   - If you recorded in LP mode, you cannot use the A.DUB feature.

**Memory-Stop Editing (Remote Control Only)**
You can set an automatic Dubbing stop point.

- **ST 1** Set this position to listen to the original sound.
- **ST 2** Set this position to listen to the audio dubbed sound.
- **MIX** Set this position to listen to both the original sound and the audio dubbed sound.

**A** Press **MENU** to display the VCR menu screen.

**B** Rotate **JOG KEY** to select **DISPLAY SETTING**, and then press **JOG KEY** to display the DISPLAY SETTING menu.

**C** Rotate **JOG KEY** to select **DISPLAY**, and then press **JOG KEY** to set to **MEMORY**.

**D** Press **MENU** two times to exit MENU mode. Then, press **RESET** on the remote control to reset the Counter Memory to M 0:00:00.

Now, rewind to the editing start point, and continue with steps 2-5. The tape will now stop automatically at “M 0:00:00”.

45
**Editing Features**

### Copying your Tapes to S-VHS or VHS Cassette

**Source (Playing) Palmcorder**

- DC Cable (Supplied)
- S-VIDEO OUT
- A/V OUT
- A/V Cable (Supplied)
- S-Video Cable (not supplied)
- VHF Connecting Cable (not supplied)
- Recording: VCR (Rear)
- Audio In
- Video In
- To Audio In
- To Video In
- To S-Video In (If there is S-Video In)

**Before you begin**

- Connect both Palmcorder and VCR to their power sources.
- Connect the Palmcorder to a VCR as illustrated left.
- Turn ON both units.
- Set the recording VCR’s Input Signal Selector to LINE.
- Set the Palmcorder POWER to VCR.
- Before using S-VIDEO Connector, insert the DC Cable into the DC IN Terminal. (p. 15)

1. **Insert a pre-recorded tape** into the source (playing) Palmcorder and a blank tape, with record tab in place, into the target VCR (Recorder).
2. **Press ► (PLAY)** on the Palmcorder. When the tape reaches the point you want to start dubbing, **press PAUSE**.
3. **Place the VCR into REC/PAUSE mode.** (See VCR manual.)
4. **Simultaneously, press PAUSE** on both units to begin copying.
5. **Press STOP on both units when copying is completed.**

**Note**

- For technical reasons, dubbing a tape may reduce its quality.
- Press DISPLAY ON TV on the Palmcorder Remote Control to eliminate EVF/LCD Monitor indications.
- If the Time Code is displayed in the EVF or LCD monitor, it cannot be reset.
- Only the DATE/TIME, when displayed, will be recorded on the tape.

**Monitor with your TV**

- Turn the TV ON and select its VCR channel (either CH3 or CH4).
- Set the VCR/TV Selector on the recording VCR to VCR.

**CAUTION:**

Unauthorized exchanging and/or copying of copyrighted recordings may be copyright infringement.
Before you begin

- Connect both Palmcorders to their power sources.
- Connect the two Palmcorders using the DV interface cable (i.LINK) (4-pin to 4-pin).
- Turn both Palmcorders ON.

1. Insert a pre-recorded tape into the source (playing) Palmcorder, and set POWER to VCR.

2. Insert a blank tape with the record tab closed into the target (recording) Palmcorder and set POWER to VCR.

3. Press ▶ (PLAY) on the source Palmcorder. When the tape reaches the point you want to start dubbing, press II (PAUSE).

4. Hold down REC and press ▶ (PLAY) on the target (recording) Palmcorder or on the remote control. Press II (PAUSE) to pause the tape at the starting point of the dub.

5. Simultaneously, press II (PAUSE) on both units to begin dubbing.

6. Press ■ (STOP) on the recording unit, and then press ■ (STOP) on the playing unit to end dubbing.

Note:
- When two Palmcorders are used for dubbing, it is recommended that the Remote Control VCR1 or VCR2 setting be used to avoid improper-operation.
- When two Palmcorders are connected using the DV interface cable (i.LINK) (not supplied), a Video Editing Controller cannot be used.
- Do not connect both an S-Video Cable or A/V Cable and a DV Interface Cable (i.LINK).

**CAUTION:** Unauthorized exchanging and/or copying of copyrighted recordings may be copyright infringement.
# Specifications

**Power Source:**
- Palmcorder: 7.2 V DC (Battery)
- 7.8 V DC (AC Adaptor)
- AC Adaptor: 110/120/220/240 V AC, 50/60 Hz
- Battery: Lithium-Ion Type DC 7.2 V

**Power Consumption:**
- Palmcorder: 7.2 V/7.8 V DC 6.5 W (Max. 9.5 W)
- AC Adaptor: 18 W
  - 1 W (when not in use.)

**Digital Interface**
- USB/i.LINK (IEEE1394)

**Video Signal:**
- EIA Standard (525 lines, 60 fields) NTSC color signal

**Video Recording System:**
- 2 rotary heads. helical scanning system

**Audio:**
- 12 bit (32 kHz) 4 tracks
- 16 bit (48 kHz) 2 tracks

**Pick-Up System and Device:**
- One integral color filter Charge Coupled Device (CCD)

**Lens:**
- 10:1 zoom lens, F1:1.8 with auto iris control
- Focal length: 3.6 mm - 36 mm
- Power zoom function
- Lens filter diameter: 43 mm

**Viewfinder:**
- 5.3 mm (0.21 inch) Liquid Crystal Electronic
- Viewfinder

**LCD Monitor:**
- 63.5 mm (2.5 inch) Liquid Crystal Display (PV-DV202)
- 88.9 mm (3.5 inch) Liquid Crystal Display (PV-DV402)

**Minimum Illumination Required:**
- 5 lx (F1:1.8) 0.5 footcandles
- 0 lx (MAGICVU/0LUX ON) (PV-DV402 only)

**Memory (Still image):**
- MultiMediaCard/SD Memory Card
- 640 x 480 pixels (NORMAL mode)
- 1,280 x 960 pixels (FINE mode)

**Image Storage (supplied 8 MB Memory Card):**
- Approx. 70 images (NORMAL mode)
- Approx. 30 images (FINE mode)

**Image Format:**
- JPEG (Design Rule for Camera File System)

**Operating Temperature:**
- 32 °F~104 °F (0 °C~40 °C)

**Operating Humidity:**
- 10 %~75 %

**Weight:**
- Palmcorder: (PV-DV202/402)
  - 0.58 kg
  - 1.28 lbs.
- AC Adaptor: 0.16 kg
  - 0.35 lbs.

**Dimensions:**
- Palmcorder: (PV-DV202/402)
  - 88.5 (W) x 74 (H) x 185 (D) mm
  - 3-1/2 (W) x 2-7/8 (H) x 7-5/16 (D) inch
- AC Adaptor: 70 (W) x 45 (H) x 115 (D) mm
  - 2-3/4 (W) x 1-3/4 (H) x 4-1/2 (D) inch

Weight and dimensions shown are approximate.

Designs and specifications are subject to change without notice.
Before Requesting Service

Cleaning Care for Video Heads

(a) Video Head Cleaning: Normally, your Palmcorder will not require head cleaning. However, it is possible that the heads may become clogged due to dust in the air, playing damaged tapes, long term use, etc. If "NEED HEAD CLEANING" appears for 5 seconds in the EVF or LCD monitor, the heads may require cleaning.

(b) Cleaning the Heads: It is recommended that head cleaning be performed by a qualified service technician. Please contact your nearest Panasonic Servicenter. An alternate solution is to obtain a head cleaning cassette. Please use Panasonic cleaning cassette (AY-DVMCLA). Be sure to follow the cleaning instructions carefully. Excessive use of the head cleaning cassette could shorten video head life. Use this cassette only when a head clogging symptoms occur. Refer servicing to qualified service personnel.

Tape Operations Caution

• When you go from function to function (PLAY, FF, REW etc.), please note that the unit will not accept a new function operation until the previous operation is complete.
• The POWER Button and all function buttons, (PLAY, FF, REW, etc.) are only operational after the tape has been completely loaded.

Lens Hood Area Operation Caution

When the following accessories are attached and the zoom is set to maximum wide angle, the four corners of the screen may appear darker:
• Wide or Telephoto conversion lens (optional).
• A filter (optional), etc. and then the lens hood.
• Two filters (optional).

Self Diagnostic System

If any of the following numbers appear on-screen, the camcorder may need service. Do not remove the battery (if attached) and write down the displayed number on page 101. Then, take the camcorder to a servicenter for repair.

<table>
<thead>
<tr>
<th>Error No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>U11</td>
<td>Card Error</td>
</tr>
<tr>
<td>U12</td>
<td>Card Error</td>
</tr>
<tr>
<td>U13</td>
<td>Card Error</td>
</tr>
<tr>
<td>U14</td>
<td>Card/Camcorder Dialogue Error</td>
</tr>
<tr>
<td>U15</td>
<td>Card Access Error</td>
</tr>
<tr>
<td>U16</td>
<td>Card Access Error</td>
</tr>
<tr>
<td>U30</td>
<td>Error other than above</td>
</tr>
</tbody>
</table>
# Before Requesting Service

If you have a problem with your Palmcorder, it may be something you can correct yourself. Check the list below for symptoms and corrections.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>No picture in the EVF or LCD Monitor...</td>
<td>• Make sure the Power Source is connected. (pp. 14, 15)</td>
</tr>
<tr>
<td></td>
<td>• Make sure the POWER switch is set to VCR or CAMERA. (pp. 18, 32)</td>
</tr>
<tr>
<td></td>
<td>• Check the Dew Indicator. (p. 99)</td>
</tr>
<tr>
<td></td>
<td>• Make sure the Battery is fully charged. (p. 14)</td>
</tr>
<tr>
<td></td>
<td>• Make sure all necessary cables are connected correctly and firmly. (p. 15)</td>
</tr>
<tr>
<td></td>
<td>• Make sure the Lens Cap is removed. (p. 18)</td>
</tr>
<tr>
<td>Video cassette cannot be inserted...</td>
<td>• Make sure the Power Source is connected. (pp. 14, 15)</td>
</tr>
<tr>
<td></td>
<td>• Insert the cassette record tab up, window side facing out. (p. 11)</td>
</tr>
<tr>
<td>Video cassette cannot be removed...</td>
<td>• Make sure the Power source is connected. (pp. 14, 15)</td>
</tr>
<tr>
<td>No operation starts when operation buttons</td>
<td>• Check the Dew Indicator. (p. 99)</td>
</tr>
<tr>
<td>are pressed...</td>
<td>• Make sure the record tab is closed. (p. 7)</td>
</tr>
<tr>
<td>Recording cannot be done...</td>
<td>• Check the Battery Indication. (p. 112)</td>
</tr>
<tr>
<td>Auto Focus does not operate...</td>
<td>• Make sure FOCUS is set to AUTO. (p. 29)</td>
</tr>
<tr>
<td></td>
<td>• Make sure the unit is ON and set to CAMERA mode. (p. 18)</td>
</tr>
<tr>
<td>Sound from microphone cannot be monitored...</td>
<td>• Make sure the unit is set to REC or REC/PAUSE mode.</td>
</tr>
<tr>
<td>Sound cannot be heard...</td>
<td>• Make sure the Audio on the VCR MENU is set to ST1. (pp. 44, 110)</td>
</tr>
</tbody>
</table>
The following warning displays appear in the EVF and the LCD monitor.

<table>
<thead>
<tr>
<th>Indications</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPE NOT INSERTED</td>
<td>If the Palmcorder is in CAMERA mode without a cassette inserted, “ ” will flash and “TAPE NOT INSERTED” will appear for 5 seconds. Recording will not start.</td>
</tr>
<tr>
<td>CHECK REC TAB</td>
<td>If the Palmcorder is in CAMERA mode or Audio dub mode with the cassette sliding record tab opened, “ ” will flash and “CHECK REC TAB” will appear for 5 seconds. Recording will not start.</td>
</tr>
<tr>
<td>CANNOT REC</td>
<td>When Audio dub is performed and the recording in other than NTSC format, “ ” will flash and “CANNOT REC” will appear for 5 seconds.</td>
</tr>
<tr>
<td>TAPE END</td>
<td>When the tape is about to end in REC mode, “ ” will flash and “TAPE END” will appear for 5 seconds.</td>
</tr>
<tr>
<td>INCOMPATIBLE TAPE</td>
<td>When an incompatible tape is detected, “INCOMPATIBLE TAPE” will appear for 5 seconds.</td>
</tr>
<tr>
<td>NEED HEAD CLEANING</td>
<td>If the video heads require cleaning, “NEED HEAD CLEANING” will appear for 5 seconds.</td>
</tr>
<tr>
<td>REMOTE</td>
<td>When the Palmcorder and remote are not set to the same mode (VCR1 or VCR2), “CHECK REMOTE MODE (REMOTE)” appears for 5 seconds. It also appears when the Palmcorder is first turned on.</td>
</tr>
<tr>
<td>CANNOT REC LP-MODE</td>
<td>When an AUDIO DUB is attempted on a pre-recorded LP tape, “CANNOT REC LP-MODE” will appear for 5 seconds.</td>
</tr>
<tr>
<td>DEW DETECTED</td>
<td>If excessive moisture condenses in the unit, “WARNING” will flash, “DEW DETECTED” will appear, and the Palmcorder will automatically turn OFF in 15 seconds. In this case, wait until the indicator no longer flashes when your Palmcorder is turned ON again.</td>
</tr>
<tr>
<td>LOW BATTERY</td>
<td>When a battery recharge is necessary, “WARNING” will flash, “LOW BATTERY” will appear, and the Palmcorder will automatically turn OFF in 15 seconds. (p. 112)</td>
</tr>
<tr>
<td>CLOCK BATTERY</td>
<td>When the built-in lithium clock battery is discharged, “CLOCK BATTERY” will appear. To re-charge the lithium clock battery, connect the AC Adaptor to the Palmcorder. Recharging takes approx. 4 hours. Reset the clock after charging.</td>
</tr>
</tbody>
</table>
### On-Screen Displays (OSD)

<table>
<thead>
<tr>
<th>Indications</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCOMPATIBLE DATA</td>
<td>If you play a tape recorded in a format other than NTSC or you try to copy copy-protected data, “INCOMPATIBLE DATA” will appear.</td>
</tr>
<tr>
<td>NO SPACE LEFT</td>
<td>When a still image is transferred from a tape to an already full Memory Card, or when setting is DPOF, “NO SPACE LEFT” appears.</td>
</tr>
<tr>
<td>DISCONNECT DV CABLE</td>
<td>If the Palmcorder is in M-CARD mode or Photo Title (CAMERA mode) and the DV Interface Cable (i.LINK) is connected, “DISCONNECT DV CABLE” appears. In this case, remove the DV Interface Cable (i.LINK) from the Palmcorder.</td>
</tr>
<tr>
<td>WRITE PROTECTED</td>
<td>In M-CARD mode, this display appears if the SD Memory Card Lock Switch is in the Lock position.</td>
</tr>
</tbody>
</table>
Request for Service Notice

Please photocopy this form when making a request for service notice.

Request for Service Notice:

In the unlikely event this product needs service,
• Please include your proof of purchase.
  (Failure to due so will delay your repair.)
• To further speed your repair, please provide an explanation of what is wrong with the unit and any symptom it is exhibiting.

Mail this completed form and your Proof of Purchase along with your unit to:
Panasonic Services Company
1705 N. Randall Road
Elgin, IL 60123-7847
Attn: Camcorder Repair

Please write the displayed Self Diagnostic number here. (p. 97)
Limited Warranty

Panasonic Consumer Electronics Company, Division of Matsushita Electric Corporation of America, One Panasonic Way, Secaucus, New Jersey 07094

Panasonic Sales Company, Division of Matsushita Electric of Puerto Rico, Inc. AVE. 65 de Infantería, Km. 9.5 San Gabriel Industrial Park, Carolina, Puerto Rico 00985

PANASONIC/QUASAR Video Products
Limited Warranty

Panasonic Consumer Electronics Company or Panasonic Sales Company (collectively referred to as "the Warrantor") will repair or replace this product with new or refurbished parts or equivalent product, free of charge, in the USA or Puerto Rico, in the event of a defect in materials or workmanship as follows (all time periods commence from the date of the original purchase):

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>PARTS</th>
<th>LABOR</th>
<th>SERVICE</th>
<th>CONTACT NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAMCORDER</td>
<td>ONE (1) YEAR, EXCEPT CCD IMAGE SENSOR</td>
<td>NINETY (90) DAYS</td>
<td>Carry-In or Mail-In</td>
<td>1-800-211-PANA(7262)</td>
</tr>
<tr>
<td>DVD/VCR DECK</td>
<td>ONE (1) YEAR</td>
<td>NINETY (90) DAYS</td>
<td>Carry-In or Mail-In</td>
<td>1-800-211-PANA(7262)</td>
</tr>
<tr>
<td>DIGITAL STILL CAMERA</td>
<td>ONE (1) YEAR, EXCEPT CCD IMAGE SENSOR</td>
<td>NINETY (90) DAYS</td>
<td>Carry-In or Mail-In</td>
<td>1-800-272-7033</td>
</tr>
<tr>
<td>A/V MIXER</td>
<td>ONE (1) YEAR</td>
<td>NINETY (90) DAYS</td>
<td>Carry-In or Mail-In</td>
<td>1-800-211-PANA(7262)</td>
</tr>
<tr>
<td>TV/VCR, TV/DVD TV/DVD/VCR COMBINATION</td>
<td>ONE (1) YEAR, EXCEPT CRT CRT - TWO (2) YEARS</td>
<td>NINETY (90) DAYS CRT - NINETY (90) DAYS</td>
<td>Carry-In: 21&quot; CRT and Smaller</td>
<td>1-800-211-PANA(7262)</td>
</tr>
<tr>
<td>TV/HDR COMBINATION</td>
<td>ONE (1) YEAR, EXCEPT CRT CRT - TWO (2) YEARS</td>
<td>NINETY (90) DAYS CRT - NINETY (90) DAYS</td>
<td>In-Home or Carry-In: 22&quot; CRT and Larger</td>
<td>1-800-211-PANA(7262)</td>
</tr>
</tbody>
</table>

Batteries (if included) - New rechargeable batteries in exchange for defective rechargeable batteries for ten (10) days. Non-rechargeable batteries are not warranted.

Tape (if included) - New video cassette tape in exchange for a defective video cassette tape for five (5) days. Memory cards (if included) - Exchange defective item for new one for ninety (90) days.

In-home, carry-in or mail-in service, as applicable, in the USA can be obtained during the warranty period by contacting a Panasonic Services Company (PASC) Factory Servicenter listed in the Servicenter Directory. Or call toll free contact number listed above, to locate an authorized PASC Servicenter. Carry-in or mail-in service in Puerto Rico can be obtained during the warranty period by calling the Panasonic Sales Company telephone number listed in the Servicenter Directory.

This warranty is extended only to the original purchaser. A purchase receipt or other proof of the date of the original purchase is required before warranty service is rendered. This warranty only covers failures due to defects in materials and workmanship which occur during normal use and does not cover normal maintenance, including, but not limited to, video and audio head cleaning. The warranty does not cover damage which occurs in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, modification, faulty installation, set-up adjustments, improper antenna, inadequate signal pickup, maladjustment of consumer controls, improper operation, power line surge, improper voltage supply, lightning damage, commercial use such as hotel, office, restaurant, or other business or rental use of the product, or service by anyone other than a PASC Factory Servicenter or a PASC authorized Servicenter, or damage that is attributable to acts of God.

LIMITS AND EXCLUSIONS

There are no express warranties except as listed above. THE WARRANTOR SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGE TO RECORDING MEDIA) RESULTING FROM THE USE OF THIS PRODUCT. OR ARISING OUT OF ANY BREACH OF THE WARRANTY. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

This warranty gives you specific legal rights and you may also have other rights, which vary from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the Consumer Affairs Department at the Panasonic Consumer Electronics Company address above.

SERVICE CALLS WHICH DO NOT INVOLVE DEFECTIVE MATERIALS OR WORKMANSHIP AS DETERMINED BY THE WARRANTOR, IN ITS SOLE DISCRETION, ARE NOT COVERED. COSTS OF SUCH SERVICE CALLS ARE THE RESPONSIBILITY OF THE PURCHASER.

warvid 02/12/2001

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com
Servicenter List

For Product Information, Operating Assistance, Literature Request, Dealer Locations, and all Customer Service inquiries please contact:

1-800-211-PANA (7262), Monday-Friday 9 am-9 pm; Saturday-Sunday 9 am-7 pm, EST.
or send e-mail to : consumerproducts@panasonic.com

Web Site: http://www.panasonic.com
You can purchase parts, accessories or locate your nearest servicenter by visiting our Web Site.

Accessory Purchases:
1-800-332-5368 (Customer Orders Only )
Panasonic Services Company 20421 84th Avenue South, Kent, WA 98032
(6 am to 5 pm Monday - Friday; 6 am to 10:30 am Saturday; PST)
(Visa, MasterCard, Discover Card, American Express, Check)

<table>
<thead>
<tr>
<th>Factory Servicenters Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALIFORNIA</td>
</tr>
<tr>
<td>6550 Katella Avenue</td>
</tr>
<tr>
<td>Cypress, CA 90630</td>
</tr>
<tr>
<td>800 Dubuque Avenue S, San Francisco, CA 94080</td>
</tr>
<tr>
<td>3878 Ruffin Road Suite A</td>
</tr>
<tr>
<td>San Diego, CA 92123</td>
</tr>
<tr>
<td>FLORIDA</td>
</tr>
<tr>
<td>3700 North 29th Avenue Suite 102</td>
</tr>
<tr>
<td>Hollywood, FL 33020</td>
</tr>
<tr>
<td>GEORGIA</td>
</tr>
<tr>
<td>8655 Roswell Road Suite 100</td>
</tr>
<tr>
<td>Atlanta, GA 30350</td>
</tr>
<tr>
<td>ILLINOIS</td>
</tr>
<tr>
<td>1709 North Randall Road</td>
</tr>
<tr>
<td>Elgin, IL 60123</td>
</tr>
<tr>
<td>MASSACHUSETTS</td>
</tr>
<tr>
<td>60 Glacier Drive Suite G</td>
</tr>
<tr>
<td>Westwood, MA 02090</td>
</tr>
<tr>
<td>MINNESOTA</td>
</tr>
<tr>
<td>7850-12th Avenue South</td>
</tr>
<tr>
<td>Airport Business Center</td>
</tr>
<tr>
<td>Bloomington, MN 55425</td>
</tr>
<tr>
<td>OHIO</td>
</tr>
<tr>
<td>2236 Waycross Road</td>
</tr>
<tr>
<td>Civic Center Plaza</td>
</tr>
<tr>
<td>Forest Park, OH 45240</td>
</tr>
<tr>
<td>PENNSYLVANIA</td>
</tr>
<tr>
<td>2221 Cabot Blvd. West Suite B</td>
</tr>
<tr>
<td>Langhorne, PA 19047</td>
</tr>
<tr>
<td>TEXAS</td>
</tr>
<tr>
<td>13615 Welch Road Suite 101</td>
</tr>
<tr>
<td>Farmers Branch, TX 75244</td>
</tr>
<tr>
<td>WASHINGTON</td>
</tr>
<tr>
<td>20425-84th Avenue South</td>
</tr>
<tr>
<td>South Kent, WA 98032</td>
</tr>
<tr>
<td>HAWAII</td>
</tr>
<tr>
<td>99-859 Iwaiwa Street</td>
</tr>
<tr>
<td>Aiea, Hawaii 96701</td>
</tr>
<tr>
<td>Phone (808) 488-1996</td>
</tr>
<tr>
<td>Fax (808) 486-4369</td>
</tr>
</tbody>
</table>

Service in Puerto Rico
Matsushita Electric of Puerto Rico, Inc. Panasonic Sales Company/ Factory Servicenter:
Ave. 65 de Infantería, Km. 9.5, San Gabriel Industrial Park, Carolina, Puerto Rico 00985
Phone (787) 750-4300 Fax (787) 768-2910

As of Sep. 2001
Spanish Quick Use Guide/Guía Para Uso Rápido

Precauciones para su seguridad

ADVERTENCIA: PARA EVITAR INCENDIOS Y DESCARGAS ELÉCTRICAS, NO EXPONGA ESTE EQUIPO A LA LLUVIA NI A LA HUMEDAD.

Su mini Palmcorder está diseñada para grabar y reproducir en el modo de Reproducción Estándar (SP) y modo Largo (LP). Se recomienda el uso sólo de cintas de cassette que hayan sido probadas e inspeccionadas para su uso en aparatos VCR con la marca "IX".

PRECAUCIÓN
Riesgo de Descarga Eléctrica
No abrir

Este símbolo tiene por finalidad alertar al usuario acerca de la presencia de tensión sin aislación en el interior del producto, que puede tener la intensidad suficiente como para causar descargas eléctricas. Por lo tanto, hacer contacto con cualquier pieza en el interior de la unidad es peligroso.

Este símbolo tiene por finalidad alertar al usuario de la presencia de importantes instrucciones de operación y mantenimiento en la literatura incluida con la unidad. Por lo tanto, lea detenidamente la literatura incluida para evitar problemas.

La etiqueta de régimen está pegada en la base de la cubierta del cargador.

Este dispositivo cumple con la parte 15 de las Reglas del FCC. El funcionamiento está sujeto a las dos siguientes condiciones: (1) Este dispositivo puede no causar interferencias perjudiciales, y (2) este dispositivo debe aceptar cualquier interferencia recibida, incluyendo interferencias que pueden causar un funcionamiento no deseado.

Nota:
Este equipo ha sido puesto a prueba y se encontró que cumple con la Parte 15 de las reglas del FCC. Estos límites están diseñados para proveer una protección razonable contra interferencias cuando se opera en un ambiente residencial.
Si este equipo causa interferencias en la recepción de radio o televisión, lo cual se puede comprobar al apagar y encender el equipo, utilice el equipo en otra ubicación y/o utilice un tomacorriente diferente al que está utilizando el receptor. Si es necesario, consulte con el distribuidor o un técnico experto de radio/TV para solicitar ayuda. Puede encontrar útil el folleto ‘Información sobre las interferencias’ disponible en las oficinas regionales del FCC local.

Advertencia del FCC:
Para asegurar la conformidad continua del FCC, utilice solamente el cable de interfaz blindado cuando conecte una cámara de video digital a una computadora de acuerdo con las instrucciones incluidas aquí. También, cualquier cambio sin autorización o modificaciones a este equipo anularían la autoridad del usuario para operarlo.

108 For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com
Spanish Quick Use Guide/Guía Para Uso Rápido

Inserte de la batería

Antes de comenzar
• Cargue la batería. (Página 14.)

1 Coloque la batería y deslícela hacia arriba hasta que se quede bloqueada con un clic.

Nota
• Retire la película protectora antes de utilizarlo.

Film de protección

Insert Cassette

Esta videocámara contiene un sistema de ejecución fácil del cassette. Por eso, es fácil de introducir o sacar el cassette aunque esté montado sobre un trípode. (Página 7.)

1 Presione LCD-OPEN y abra completamente el monitor LCD.
2 Ajuste el interruptor de alimentación (POWER) a la posición VCR o CAMERA.
3 Deslice el interruptor de expulsión de cinta (TAPE EJECT) para abrir la tapa del compartimiento del cassette.
4 Introduzca un cassette con la parte de la ventana hacia arriba.
• Asegúrese de que la lengüeta de grabación esté cerrada. (Página 7.)
5 Presione la marca PUSH TO CLOSE (EMPUJAR PARA CERRAR) para cerrar la tapa del compartimiento del cassette.

For Your Information

PV-DV52 / PV-DV52-S / PV-DV102 / PV-DV202 / PV-DV402
Para ver la reproducción en el LCD (pantalla de visualización de cristal líquido)

Cuando el monitor LCD se encuentra totalmente abierto, el visor se DESACTIVA automáticamente.

1 Ajuste el interruptor de alimentación (POWER) a la posición CAMERA.

2 Presione el botón de apertura del LCD (LCD-OPEN) para desbloquear el monitor LCD. Balancée abriéndolo completamente y ajuste el ángulo.

3 Presione el botón de rebobinado (REW) para rebobinar la cinta.

4 Presione el botón de reproducción (PLAY) para reproducir la cinta.

5 Presione el botón de parada (STOP) para detener la reproducción.

Antes de comenzar
- Cargue la batería. (Página 14.)
Spanish Quick Use Guide/Guía Para Uso Rápido

Introducir la Tarjeta de memoria*

*Tarjeta de Memoria: Tarjeta MultiMedia o Tarjeta de Memoria SD (Página 94.)
Asegúrese de introducir la Tarjeta de memoria antes de utilizar la tarjeta PhotoShot. (Página 48.)

A continuación se indican una lista de Tarjetas de Memoria soportadas por esta unidad.

<table>
<thead>
<tr>
<th>Memory Card</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tarjeta de memoria SD (RP-SD008BMKO)</td>
<td>8 MB</td>
</tr>
<tr>
<td>Tarjeta MultiMedia (Marca de fábrica SanDisk)</td>
<td>8 MB, 16 MB</td>
</tr>
<tr>
<td>Tarjeta de Memoria SD (opcional) (Página 92.)</td>
<td>16 MB, 32 MB, 64 MB</td>
</tr>
</tbody>
</table>

Botón para la protección de copia de la tarjeta de memoria SD

1. Ajuste el interruptor de alimentación (POWER) a la posición OFF.
2. Deslice el botón CARD EJECT para abrir la tapa del compartimiento de la tarjeta de memoria.
3. Introduzca la tarjeta de memoria hasta que se coloque en su sitio con un clic.
4. Cierre la puerta de M-CARD.

Para quitar la tarjeta de memoria...
Presione aquí para quitar la tarjeta.

Acerca del seguro M-CARD

Nota
- Deslizando el seguro M-CARD a la posición LOCK, evitará que POWER gire por error a la posición M-CARD al cambiar POWER a CAMERA.

Al insertar la tarjeta de memoria

Nota
- Al insertar la tarjeta de memoria, insertela con la esquina recortada hacia abajo tal como se indica en la figura anterior.

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**MENU OSD**

**Camera Mode Menu Screen**

1. **D.FUNCTION (pp. 41, 43)**
   To select one of the 10 digital functions. Setting to OFF cancels the previously selected digital function.

2. **D.ZOOM (p. 40)**
   To select D.ZOOM1 (from 10X to 25X) or D.ZOOM2 (from 10X to 700X). Setting to OFF cancels the previously selected digital zoom.

3. **PROGRESSIVE (p. 20)**
   When set to ON, still pictures taken with PhotoShot are recorded with a higher resolution than with normal PhotoShot.

4. **PROG. AE (p. 24)**
   To select one of the 5 Program AE modes. Setting to OFF cancels the previously selected Program AE mode.

5. **CINEMA (p. 23)**
   When set to ON, you can record a picture compatible with a wide-screen TV equipped with an S2 picture terminal.

6. **REC-SPEED (pp. 7, 18)**
   SP: Normal recording speed mode.
   LP: Recording time is 1.5 times as long as in the SP mode. For example, 120 minutes of recording is possible on a 80 minute tape.

7. **AUDIO-REC (p. 44)**
   12 bit: The sound is recorded in the 12 bit/32 kHz mode.
   16 bit: The sound is recorded in the 16 bit/48 kHz high-quality mode.

8. **INDEX**
   **DAY:** An index signal is recorded when recording is restarted after the date has changed since the last recording.
   **2 HOUR:** An index signal is recorded when recording is restarted after a lapse of more than 2 hours.

9. **SHUTTER (pp. 20, 48)**
   When set to ON, still pictures taken in the PhotoShot mode are recorded with a visual shutter effect and click sound.

10. **SELF-REC (p. 22)**
    **NORMAL:** During self-recording, the picture on the LCD Monitor is the same as it will be recorded.
    **MIRROR:** During self-recording, the picture on the LCD Monitor is horizontally reversed.

11. **WIND-CUT (p. 31)**
    To reduce sound distortion caused by wind hitting the microphone.

12. **ZOOM-MIC (p. 21)**
    When set to ON, the microphone’s directional angle and sensitivity vary according to the zoom operation.
For Your Information

REMOTE (p. 10)
VCR1: To receive signals from the Remote Control, set to VCR1.
VCR2: To receive signals from the Remote Control, set to VCR2.
OFF: To prevent reception of signals from the Remote Control.

BEEP
Set to ON to hear beep when starting and stopping camera recording or when unusual conditions occur. To cancel the beep, set to OFF.

MAGICVU (PV-DV402 only) (p. 25)
To select one of the 3 MagicVu modes slide MAGICVU/0LUX Switch to ON.

DISPLAY (p. 113)
To select the desired type of display and counter indication displayed on the LCD Monitor or in the viewfinder.

C.RESET (p. 113)
Setting to ON resets the counter to zero.

DATE/TIME (p. 112)
The date and time can be set and displayed on the screen.

CLOCK-SET (p. 16)
When set to ON, the date and time can be set on the screen.

LCD/EVF SETTING (p. 19)
Setting to ON displays the menu for adjusting the LCD brightness, color level, and the EVF brightness.

TITLE (p. 27)
Photo Title is recorded.

MODE (p. 27)
To select one of the 2 Photo Title modes.
REC-SPEED (p. 7)
SP: Normal recording speed mode.
LP: Recording time is 1.5 times as long as in the SP mode. For example, 120 minutes of recording is possible on an 80 minute tape.

AUDIO-DUB (p. 44)
Set to AUDIO-DUB “ON” in the Menu OSD to use the Audio Dub feature.

INDEX (pp. 36, 37)
To select the desired Index Search function.
PHOTO: To search for Photo shot pictures.
SCENE: To search for scenes marked with Index signal.

AUDIO (p. 45)
To select the desired audio playback mode after performing audio dubbing in the 12 bit mode (SP mode only).
ST1: The original sound alone is played back.
ST2: The dubbed sound alone is played back.
MIX: The original sound and the dubbed sound are played back together.

REMOTE (p. 10)
VCR1: To receive signals from the Remote Control, set to VCR1.
VCR2: To receive signals from the Remote Control, set to VCR2.
OFF: To prevent reception of signals from the Remote Control.

B.SEARCH (Blank Search) (p. 33)
Select ON to go directly to a blank portion of the tape.

SPEED (p. 38)
In Strobe Multi mode, used to select the interval at which a succession of still screens are captured from the playback picture.
FAST: Every 0.3 seconds
NORM: Every 0.6 seconds
SLOW: Every 1.0 seconds
MENU OSD

DISPLAY (p. 113)
To select the desired type of display and counter indication displayed on the LCD Monitor or in the viewfinder.

C.RESET (p. 113)
Setting to ON resets the counter to zero.

DATE/TIME (p. 112)
The date and time can be set and displayed on the screen.

CLOCK-SET (p. 16)
When set to ON, the date and time can be set on the screen.

LCD/EVF SETTING (p. 19)
Setting to ON displays the menu for adjusting the LCD brightness, color level, and the EVF brightness.

M-CARD Mode Menu Screen
[ Photo Rec Mode Menu Screen ]

REC MODE (p. 48)
To select Photo Rec Mode.

DISPLAY (p. 115)
Select to OFF to cancel all Displays on the screen.

DCF NO. (pp. 50, 115)
Select to OFF to cancel DCF (Design rule for Camera File system) No. on the screen.

DPOF (pp. 54, 115)
When set to ON, information of the image to be printed and the number of prints desired (DPOF data) is written to the Memory Card.

VARIABLE (p. 54)
When set to ON, you can select images recorded on the Memory Card and set the number of prints desired.

ALL1 (p. 54)
When set to ON, the number of prints recorded on the Memory Card is collectively set to 1.

ALL0 (p. 54)
When set to ON, the currently set number of prints is set to 0.

For Your Information

111
Here are some of the basic indications which will appear on the Palmcorder EVF and LCD Monitor. Only Date and Time indications will be recorded onto the tape.

**Electronic Viewfinder/LCD Monitor Indications**

**CAMERA/VCR Mode**

- **Battery Remaining**
  - FULL
  - EMPTY

- **Tape Remaining**
  - (AY-DVM30EA) (AY-DVM60EA)
  - It will take several seconds for the tape remaining indicator to operate after the tape starts moving.

- **CINEMA Indication**
  - (Menu OSD: p. 108)

- **Digital Zoom and other Digital Functions**
  - (Menu OSD: p. 108)
  - This display appears when the digital zoom function has been activated.

- **Playback Effect**
  - (Menu OSD: p. 110)
  - This display appears when SEPIA or MONO is selected in VCR menu.

- **Volume Display**
  - (p. 33)
  - The volume bar appears when the volume of the built-in speaker is being adjusted.

- **Date and Time Indication**
  - (Menu OSD: pp. 109, 111)
  - As shown below, the date and time indication changes each time DATE/TIME is selected from the Palmcorder’s MENU (Menu OSD: pp. 109, 111) or the DATE/TIME Button is pressed on the remote.

- **Tape Speed Indication**
  - (Menu OSD: p. 108)
  - Indicates the tape speed (SP or LP).

- **MAGICVU (PV-DV402 only)**
  - (Menu OSD: p. 109)
  - This display appears when MAGICVU is set to ON.

- **MNL Indication**
  - (pp. 28~31)
  - This display appears when AUTO/MANUAL is pressed to MANUAL.

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to: consumerproducts@panasonic.com
Electronic Viewfinder/LCD Monitor Indications

**CAMERA/VCR Mode**

**WARNING Indication** (pp. 99, 100)
The warning displays appear in the EVF and the LCD monitor.

**Display ON/OFF and Counter/Time Code**
The indication switches as shown below when the desired "DISPLAY" mode is selected from the menu.
(Menu OSD: pp. 109, 111)
- When OFF is selected, all displays are turned off.

**Memory Counter M 0:00:00**
The Palmcorder will stop whenever it reaches the point where the counter was previously set to M 0:00:00 during audio dub, fast forward, or rewind.

**Time Code 0h00m00s00f**
The Palmcorder calculates and displays exactly where you are on any tape in terms of hours, minutes, seconds, and frames (30 frames = 1 second).
- This display cannot be reset.

**Linear Time Counter**

**Memory Counter**

**Tape Mode Indications**

**REC** Recording.
**PHOTO** PhotoShot recording.
**PAUSE** Paused during recording.
**II** Still.
**I** Slow (forward).
**II** Slow (reverse).
**II>>** Frame Advance (forward).
**II<<** Frame Advance (reverse).
**R I>>** Repeat Playback.
**CHK** Recording Check.
**FF** Fast forward.
**REW** Rewind.
**F F>>** FF Search.
**I<<** REW Search.
**BLANK** Blank Search.
**SEARCH** Index Search.

**IMPORTANT NOTE:**
- Display must be set to ON for MF, AE, W.BALANCE or BACK LIGHT indications to be displayed on the EVF or LCD Panel when selected.
- C.RESET does not work when DISPLAY is set to OFF and T.CODE.

**For Your Information**
Electronic Viewfinder/LCD Monitor Indications

**CAMERA/VCR Mode**

- **Zoom Magnification Level** (p. 40)
- **Digital EIS Indications** (p. 42)
  - This display appears when EIS is pressed.
- **Backlight Indication** (p. 23)
  - This display appears when BACK LIGHT is pressed.
- **PROGRAM-AE Indication** (p. 24)
- **Manual Focus Indication** (p. 29)
- **White Balance Indication** (p. 28)
- **Shutter Mode Indication** (p. 30)
- **Iris Indication** (p. 31)

- **Z.MIC Indication** (Menu OSD: p. 108)
  - This display appears when ZOOM-MIC is set to ON.
- **Light Indication** (p. 9)
  - This display appears when LIGHT is set to ON.
- **WIND-CUT Indication**
  - (Menu OSD: p. 108)
  - This display appears when WIND-CUT is set to ON.
- **Progressive Indication**
  - (Menu OSD: p. 108)
  - This display appears when PROGRESSIVE is set to ON.
Electronic Viewfinder/LCD Monitor Indications

**PHOTO Mode**

- **Image Page Remaining Indication** (p. 48)
  - Image pages left in selected mode.
  - “000” flashes when memory is full.
  - Memory capacity provided all pictures are taken in the same mode:
    - “NORMAL” mode
      - Approx. 70 images
        - (Supplied 8 MB Memory Card)
    - “FINE” mode
      - Approx. 30 images
        - (Supplied 8 MB Memory Card)

- **Recording Mode**
  - POWER is set to PICTURE.

- **Directly/Image Number**

- **DCF NO. (Design rule for Camera File system) Indication**
  - (Menu OSD: p. 111)

- **DPOF Indication** (p. 54)

- **Multi Image Playback page number**

- **Currently selected image is underlined in green**

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**Front View**
- Built-in Twin Capsule 2-Way Microphone System
- MAGICVU/OLUX (PV-DV402 only)
- Lens
- Remote Sensor
- Built-in Light
- Shoulder Strap Attachment Ring
- BATT RELEASE

**Side View**
- JOG KEY
- M.FOCUS DIAL
- M-CARD EJECT
- POWER (VCR-OFF-CAMERA-M-CARD)
- M-CARD Door
- External Microphone Jack (PV-DV402 only)
- Built-in Speaker
- Hand Strap

**Rear View**
- Cassette Compartment Cover
- LCD (Liquid Crystal Display) Monitor
- LCD-OPEN
- TAPE EJECT
- DV Input/Output (i.LINK) Connector
- DC IN Terminal
- S-VIDEO Terminal
- USB Terminal

For assistance, please call: 1-800-211-PANA(7262) or send e-mail to consumerproducts@panasonic.com
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- MENU pp. 16, 17.
- A/V Output Connector pp. 39, 81.
- PHONE p. 32.
- PHOTOSHOT pp. 20, 48, 49.
- POWER ZOOM pp. 21, 40.
- VOLUME p. 33.
- Lens Cap p. 8.

**Top View**
- FOCUS p. 29.
- AUTO/MANUAL pp. 28~31.
- FADE p. 25.
- REC p. 47.
- LIGHT p. 9.
- EIS p. 42.
- REW pp. 12, 32.
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- PAUSE pp. 34, 45, 47.
- M-DEL pp. 51, 52, 53.
- PLAY pp. 12, 32.
- M-PLAY pp. 50, 51.
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- STOP pp. 12, 32.
- M-STOP pp. 50~53.
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**Back View**
- Vision Adjustment Control pp. 12, 18.
- POWER Lamp p. 18.
- REC/PAUSE pp. 12, 18.

**Underside View**
- Tripod Receptacle
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CAUTION:
This unit will operate on 110/120/220/240 V AC. An AC plug adaptor may be required for voltages other than 120V AC. Please contact either a local or foreign electrical parts distributor for assistance in selecting an alternate AC plug. We recommend using the accessory power plug adaptor (VJSS0070) in an area which has special AC outlets.

Remote Control

DATE/TIME pp. 9, 112.
DISPLAY ON TV pp. 9, 39.
COUNTER/TC pp. 9, 113.
VIDEO REC pp. 9, 47.
PLAY pp. 9, 32, 47.
REWIND/SEARCH pp. 9, 34.
REVERSE SLOW/F. ADV pp. 9, 35, 36.
REVERSE INDEX SEARCH pp. 9, 36, 37.
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