Our camcorders use mini 8cm DVD discs designed especially for camcorders. There are two formats of discs to choose from, DVD-R or DVD+RW. The DVD-R discs allow a one-time recording and cannot be reused. The DVD+RW discs allow reformatting (erasing all files) and recording new video on the disc. Both discs have a standard recording time of 30 minutes.

**What kind of discs can I use for DVD movies?**

<table>
<thead>
<tr>
<th>Disc type and the recording format</th>
<th>DVD-R</th>
<th>DVD-RW</th>
<th>DVD+RW</th>
</tr>
</thead>
<tbody>
<tr>
<td>8cm DVD-R</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VIDEO mode</td>
<td></td>
<td>VR mode</td>
<td></td>
</tr>
<tr>
<td>Marks used in this manual</td>
<td>DVD-R 8cm</td>
<td>DVD-RW 8cm</td>
<td>DVD+RW 8cm</td>
</tr>
<tr>
<td>Features</td>
<td>This kind of disc can be recorded only once</td>
<td>This kind of disc can be overwritten repeatedly, even when the disc is full, if you format it.</td>
<td></td>
</tr>
</tbody>
</table>
There are three image quality settings for recording video:

- **HQ**: Records in high quality mode (20 min. of record time)
- **SP**: Records in standard quality mode (30 min. of record time)
- **LP**: Records in lower quality mode (60 min. of record time)
  - This mode may have degraded scenes if there are fast or quick moving video objects.

Setting a recording image quality:

- Touch “P-MENU” on the LCD screen.
- Touch “SETUP”
- Touch “STANDARD SET”

  ![STANDARD SET]

- Touch “DISC SET”
- Touch “REC MODE”
- Choose from “HQ”, “SP”, or “LP” recording mode.
- Touch the return arrow.
- Touch “X” to end programming.

Loading a mini-DVD disc into the camcorder:

- Insert a disc into the camcorder:
  - Be sure the disc is free of dust or fingerprints before loading the disc into the camcorder.
  - Turn the power switch to “ON”

  ![POWER switch]

  - Slide the disc cover OPEN switch in the direction of the arrow.
  - “Preparing to open” appears on the LCD screen and the camcorder beeps.
  - After the beeps stop, the disc cover opens slightly automatically.
Place the disc with the recording side facing your camcorder, then press the center of the disc until it clicks.

Gently close the disc cover.

- If the disc is new and has not been formatted, a message will appear informing you that the disc needs to be formatted.

**Format the disc:**

- Formatting the disc prepares the disc for recording video.
- Use the AC power adapter to prevent running out of power during the time you are formatting the disc.
- Note: double sided discs require formatting on each side.
- Turn on the power by sliding the POWER switch down.
- Touch “P-MENU” LCD screen, then “FORMAT”.
- The format screen appears.
- Select the recording format for your DVD-RW or DVD+RW, and then touch “OK”.
- You will see a message “Can playback on various DVD devices. Cannot edit in Camcorder.
- Touch “YES” twice
- Formatting begins.
- Do not move or shock the camcorder during format.
- Then touch “OK” when the format “COMPLETE” appears.
- You are now ready to record your movie.

**Camcorder Battery:**

- You charge the battery by attaching it to the camcorder.

- Connect the AC adapter to the camcorder.
- Connect the Power cord to the AC adapter and wall outlet.

- Slide the POWER switch to “OFF”

<table>
<thead>
<tr>
<th>Battery pack</th>
<th>Continuous recording time</th>
<th>Typical recording time</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP-FP50 (supplied)</td>
<td>85</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>90</td>
<td>40</td>
</tr>
</tbody>
</table>
- The “CHARGE” light comes on.

- The “CHARGE” light turns off when the battery is fully charged.
  o Recording time on a fully charged battery:

<table>
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<th>Battery pack</th>
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</tr>
</thead>
<tbody>
<tr>
<td>NP-FP50*</td>
<td>80</td>
<td>35</td>
</tr>
<tr>
<td>(supplied)</td>
<td>85</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>90</td>
<td>40</td>
</tr>
</tbody>
</table>

**Charging time (full charge)**

Approximate time (min.) required when you fully charge a fully discharged battery pack.

<table>
<thead>
<tr>
<th>Battery pack</th>
<th>Charging time</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP-FP50*</td>
<td>130</td>
</tr>
</tbody>
</table>

**Recording**

- Slide the POWER switch down repeatedly to select between recording movies, recording still images, or playback/edit.
Start recording by pressing the REC START/STOP button.

To stop recording, press it again.

Playback
- Slide the POWER switch down repeatedly to light up the Play/Edit lamp.
- The VISUAL INDEX screen appears on the LCD screen:

Viewing your movie
- Touch the Movie tab, then the movie to be played back.
Adjusting Volume

- Touch "P-MENU" [VOLUME], then adjust it with the "-" or "+" key button.

**To adjust the volume**

- Touch [MENU] → [VOLUME], then adjust it with 
- If you cannot find [VOLUME ] in [MENU],
  touch [SETUP] (p.52).

Making the disc compatible with playback on DVD players or DVD drives (Finalizing).

- Finalizing allows you to play back the DVD movies on other DVD players/recorders, etc., as well as playback on your computer. The finalizing procedure differs depending on the disc type.
- *Please note that playback compatibility is not guaranteed with all players.*
- See the list below for recommended finalization instructions for various types of DVD media:

<table>
<thead>
<tr>
<th>DVD media</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVD-R</td>
<td>Finalizing is required. The disc cannot be overwritten once you finalize it even when there is space to record.</td>
</tr>
<tr>
<td>DVD-RW</td>
<td>Finalizing is required. After finalizing, the disc can be overwritten on your camcorder when you unfinalize it (p.50). You need to finalize it again when you play it back on other DVD players.</td>
</tr>
<tr>
<td>DVD+RW</td>
<td>Finalizing is required. Once you finalize the disc, you can play it back on DVD players that support the VR mode. After finalizing, you can also record additional material at any time. You do not need to finalize the disc again after additional recording.</td>
</tr>
</tbody>
</table>

You can play back the disc on DVD players without finalizing it. However, you need to finalize the disc in the following cases:
- when you want to create a DVD menu (p.45).
- when you want to create a Photomovie (p.46).
- when you want to play back images on a DVD drive of a computer.
- when recording time is the following:
  - HQ mode: less than 5 minutes
  - SP mode: less than 8 minutes
  - LP mode: less than 10 minutes

How to record additional scenes after finalizing:

- You can record additional media on a finalized disc only if it is a DVD-RW or DVD+RW disc.
- Use the AC adapter as the power source to prevent your camcorder from running out of power during the operation.
- Do not move or shock the camcorder during the operation.
- Any DVD menus or Photomovies created during finalization are deleted.
- When using a double-sided disc, follow the same procedure for both sides.
- When using **DVD-RW**:
  - Connect the AC adapter to the “DC IN” on the camcorder.
  - Connect the power cord to the adapter and the wall outlet.
  - Turn on the power by sliding the POWER switch down.
  - Insert the finalized disc into the camcorder.
  - Touch “P-MENU”, “SET-UP”

  ![MENU] → [SETUP].

  - Touch “DISC-SET”, “UNFINALIZE”

  **Touch DISC SET → [UNFINALIZE].**

  - Touch “Yes” twice, then “OK”.

**Supplied Items**

- **AC Adapter:**

- **Power Cord:**

- **Av Connection cable:**

- **USB Cable:**

- **Camcorder Case:**