**Light Button**

Push the LIGHT button to illuminate the main and audio panels for approximately 10 seconds. If you press and hold the button for at least 3 seconds, the panels remain illuminated until you press the button once more to turn the backlight off.
Socket for attaching the SP-100 Shoulder Pad or MA-100 or MA-200 Microphone Adapter/Shoulder Pad. Do not attach a tripod to this socket.
PHOTO button (p. 64)
START/STOP button (p. 64)
SELF TIMER button (p. 64)
ON SCREEN button (p. 114)
MENU button (p. 25)
Audio MONITOR button (p. 114)
SEARCH SELECT button (p. 81)
REW button (p. 76)
PLAY button (p. 76)
STOP button (p. 76)
REC PAUSE button (p. 87)
PAUSE button (p. 77)

Transmitter
ZOOM buttons (p. 38)
DATA CODE button (p. 79, 114)
Cursor key (p. 25)
EXECUTE button
ZERO SET MEMORY button (p. 82)
Audio DUB. button (p. 94)
MIX BALANCE buttons (p. 96)
SEARCH buttons (p. 81)
FF button (p. 76)
(frame advance) button (p. 78)
×2 button (p. 78)
SLOW button (p. 78)
Jog/Shuttle dial (p. 78)
1. Loosen the microphone attachment screw on the viewfinder unit and insert the microphone into the microphone clamp.

2. Align the mark on the microphone with the mark on the clamp and tighten the screw to hold the microphone firmly in place.

3. Plug the microphone cable to the camera’s MIC terminals.

Note:
- Make sure that the camera is turned off before attaching or removing the microphone cable.
Powering the XL1S

Before operating your camera, you will need to use the power adapter to:

provide power from an AC outlet
or
charge a battery pack

Notes:
• The power adapter converts current from a household power socket (100–240 V AC, 50/60 Hz) to the DC current used by your camera.
• If the adapter is used next to a TV, it may cause the TV to emit noise — move the adapter away from the TV or the antenna cable.

Connecting the camera to an AC outlet

1. Attach the DC coupler to the camera.
   • Align the triangle on the DC coupler with the line on the camera.
   • Slide the coupler up in the direction of the arrow, until it clicks into place.

2. Connect the DC coupler to the adapter.

3. Plug the adapter into an AC outlet.

4. Detach the DC coupler after use.
   • Press and hold the BATT. RELEASE button, while you slide the coupler down.
   • Always turn the camera off before removing the power source.
Charging and attaching the battery pack

Your battery pack was partially charged before it left the factory. It should have enough power for you to check that your camera is working properly. However, you must charge the battery pack fully if you want it to power the camera for more than a few minutes.

1. **Attach the battery pack to the power adapter.**
   - Align the triangle on the battery pack with the line on the power adapter.
   - Slide the battery across until it clicks into place.
   - Make sure the DC coupler is not connected.

2. **Plug the adapter into an AC outlet.**
   - The charge indicator flashes red to show that charging is in progress. Single flashes mean that the battery pack is less than 50% charged. Double flashes mean that it is between 50% and 75% charged. Triple flashes mean that it is more than 75% charged.
   - The indicator glows steadily when the battery pack is fully charged.

3. **Take the battery pack off the adapter and attach it to the camera.**
   - Align the triangle on the battery pack with the line on the camcorder, then slide the battery up in the direction of the arrow until it clicks into place.

4. **Remove the battery pack after use.**
   - Press and hold the BATT. RELEASE button, while you slide the battery down.
   - Always turn the camera off before removing the power source.
Loading a Cassette

1. Make sure that you have inserted a power source.
2. Slide the EJECT button across to release the cover.
   • Wait a couple of seconds for the cassette compartment to open automatically.
3. Load or unload the cassette.
   • Insert the cassette gently with the window facing out.
   • Remove the cassette by pulling it straight out.
4. Press the PUSH mark on the compartment until it clicks.
5. Click the cover back into place.

* DX is a trade mark.

Notes:
• After loading a cassette, use record search to find the point where you want to start recording.
• Do not interfere with the cassette compartment while it is opening or closing automatically, or attempt to close the cover.
• Do not leave the cassette in the camera after use — return it to its case and store it in a cool, clean, dry place.
• Close the inner door before closing the outer door.
Using the Menus

Selecting from the Menus

1. Turn the POWER dial to a recording program or to VCR.
2. Press the MENU button to open the menu.
   • One of the main menu appears, according to the POWER dial setting.
3. Turn the IRIS/SELECT dial and move the arrow to the desired submenu.
4. Press the IRIS/SELECT dial in to select.
   • The submenu appears.
5. Turn the IRIS/SELECT dial and move the arrow to the desired function.
6. Press the IRIS/SELECT dial in to select.
   • The function and its settings only appear.
7. Turn the IRIS/SELECT dial and move the arrow to the desired setting.
8. Press the IRIS/SELECT dial in to select.
   • The function is set to and you return to the submenu.
9. Turn the IRIS/SELECT dial and select the arrow to RETURN.
10. Press the IRIS/SELECT dial in to select.
    • You return to the main menu.
11. Press the MENU button.
    • The main menu disappears.

Notes:
• Pressing the MENU button at any time closes the menu.
• Selecting ⇪ RETURN takes you back one menu, or closes the main menu.
• Items that are unavailable due to the setting of other menu items or program AE modes, appear in purple.
• You may find it convenient to use the wireless controller to move around the menus. Press the MENU button to open/close the menu and use the arrow keys to in place of turning the IRIS/SELECT dial. Push the EXECUTE button to select.
• Pressing the start/stop button or the PHOTO button will close the menu and start recording.
Basic Recording

Before you start recording

• Attach a power source.
• Load a cassette.
• Remove the lens cap.
• Adjust the viewfinder.
• Choose your grip — side or top.

To record

1. Turn the POWER dial to □ .
   • This selects the camera’s Easy Recording program. It allows you to simply point and shoot without making any manual adjustments.
   • The camera power indicator lights up red and PAUSE appears in the viewfinder — the camera is now in “record pause mode”.

2. Press the start/stop button to begin recording.
   • There are two start/stop buttons, to give you control from both gripping positions.
   • The tally lamps flash rapidly and REC appears in the viewfinder.

3. Press the start/stop button again to pause recording.
   • The camera returns to record pause mode and PAUSE reappears in the viewfinder.
   • You can stop and restart recording as often as you like by pressing the start/stop button.

Using the STANDBY button

As long as the POWER dial is set to a recording program, you can use the STANDBY button to turn the camera on and off. This makes it easy to save battery power, and prevents accidental operation of the start/stop button.

Press and hold the STANDBY button for a few moments to enter/leave standby mode. When the camera enters standby mode, ENTERING POWER STANDBY is shown in the viewfinder.
Zooming (for Zoom Lenses)

- Refer to the appropriate lens instruction manual. Note that the lens functions vary by the lens type.

Optical zoom

Operate the zoom controls from either the side grip or the camera handle.

Turn the zoom control towards W to zoom out to wide-angle.

Turn it towards T to zoom in to telephoto.

You can also zoom in and out using the lens’s zoom ring.

To control the speed of zooming (using the zoom control on the side grip and the lens’s zoom ring):

- Move the control/ring slightly to zoom slowly.
- Turn it further to zoom more quickly. (The further you turn the zoom control/ring, the faster the zoom speed.)

The T and W buttons on the wireless controller and the camera handle adjust the picture angle, but not the zoom speed.

Notes:

- When the lens is at the extreme wide-angle position, you can focus on a subject as close as 3/4 in (2 cm).
- Since the zoom changes the picture angle, when using the high speed zoom there are cases when the autofocus can not keep pace with the zoom speed.
**2x digital zoom**

Activate the digital zoom to double the camera’s zoom range.

The zoom control continues to work as usual — the camera automatically switches between optical zooming and digital zooming.

- Image resolution is slightly lower when the magnification exceeds the optical zoom range.

**Activating the digital zoom**

1. Turn the POWER dial to any recording program.
2. Press the D.E./BARS SELECT button to move through the list of effects in the viewfinder, until you reach D.ZOOM.
   - The flashing display changes to show which effect you can select.
   - The camera only displays selectable effects.

3. Press the D.E./BARS ON/OFF button to activate the digital zoom.
   - D.ZOOM is shown constantly in the viewfinder.
4. The digital zoom will remain activated until you press the D.E./BARS ON/OFF button to deactivate it. When deactivated, D.ZOOM flashes in the viewfinder and you can then press the D.E./BARS SELECT button to select a different digital effect, or to turn the digital effects off completely by choosing the blank display.

**Notes:**
- You cannot select a different digital effect while the digital zoom is still activated.
- The digital zoom remains programmed until you turn it off.
The Optical Image Stabilizer can compensate for a wide range of camera movement — you can record stable images even if you are shooting from a moving car.

Before you start recording, slide the STABILIZER switch on the video lens to turn the image stabilizer on or off.

Notes:
• The image stabilizer is designed to deal with a normal degree of camera shake.
• Keep the image stabilizer turned off when the camera is mounted on a tripod.
• Sliding the switch to OFF has no effect when the camera is set to the [Easy Recording program.
• The image stabilizer is not as effective as usual when the Extender XL 1.6× (optional) is attached.
Taking Still Pictures (Photo Mode)

You can record still pictures like a photograph. The camera records the picture and sound to tape for approximately 6 seconds. The exposure is automatically adjusted. Also, starting your shooting with a still photo makes it easy to find the beginning again later with the Photo Search function.

There are 2 Photo buttons on the camera body, to let you take still images from both gripping positions.

You can take a still picture at any time during regular video recording, or you can put the camcorder into record pause mode first, then take a still picture.

### During record mode
Press the PHOTO fully down and the still picture will be taken immediately.
- The camera takes the images immediately, and then records the “photo” to the tape for approximately 6 seconds. During this time the camera also records the sound, and the display shows the still picture.
- A counter display appears, and counts up to 6 seconds as the camcorder records the picture.
- The camera returns to record pause mode.

### During record pause mode
1. **Press the Photo button halfway down and hold it:**
   - “PHOTO” flashes in the viewfinder.
   - Exposure is locked.
   - During autofocus ☺ flashes white in the viewfinder as the camcorder adjusts the focus and it is displayed continuously as a green mark when the camera is ready to take the still picture. (The focus, exposure and zoom are now locked. Also you cannot turn the image stabilizer on/off)
   - To change the still picture before recoding: release the button, select a new picture and then press down the PHOTO button lightly once more.
   - If the subject is unsuitable for auto-focus, the camera may not be able to focus, and ☺ may continue to flash white in the viewfinder. In this case: override the focus temporarily using the lens’ manual focusing ring. The green mark lights up.
   - If you are recording using manual focus, the ☺ mark will light up green when you first press the PHOTO button. Focus the camera using the manual focusing ring.
2. **Press the PHOTO button fully down to take the still picture.**
   - The camera takes the image immediately, and then records the “photo” to the tape for approximately 6 seconds. During this time the camera also records the sound, and the display shows the still picture.
   - A counter display appears, and counts up to 6 seconds as the camera records the picture. ● disappears from the display.
   - The camera returns to record pause mode.

**Notes:**
- While the camera records the still, you cannot use the camera functions (POWER dial/STANDBY button do not respond until recording is complete). This applies even when you haven’t loaded a cassette.
- The wireless controller’s PHOTO button has no half-way setting, press the button and the camera soon takes the “photo”.
- Only take “photos” where it is bright enough to see the image in the viewfinder.
Searching and Reviewing While Recording

**Record search**

When the camera is in record pause mode, you can use record search to play the tape forwards or backwards to find the point where you want to start or restart recording.

1. Make sure the camera is in record pause mode.
2. Press and hold the REC SEARCH + or – button while you check the picture in the viewfinder.
   - The + button plays the recording forwards and the – button plays it backwards.
3. Release the button when you find the point where you want to start recording.
   - The camera returns to record pause mode.

**Record review**

When the camera is in record pause mode, you can use record review to play back the last few seconds of your recording and then return automatically to record pause mode.

1. Make sure the camera is in record pause mode.
2. Press and release the (record review) button while you check the picture in the viewfinder.
   - The camera rewinds the tape, plays back the last few seconds, and returns to record pause mode.

**Note:**
- Noise may appear on the screen during record search and record review.
**Easy Recording**

The simplest way to use the camera is with the POWER dial set to the position. The camera will take care of focus, exposure and other adjustments, leaving you free to point and shoot.

**Auto**

In normal recording conditions, set the POWER dial to (Auto). This is the same as the Easy Recording program, except that you now have the option of using any of the camera’s manual functions — you can adjust focus and exposure, set the white balance, and so on.

**Manual**

Select this program for total creative freedom when operating the camcorder. You can set aperture and shutter speeds completely independently to give you exactly the exposure you require.

There are 27 shutter speed settings, between 1/8 and 1/15000 of a second and 28 aperture values, between f/1.6 and f/16 (you can also close the iris.)

**Spotlight**

The exposure is automatically adjusted for glare-free recordings of subjects lit by a concentrated light source.
Adjusting the Focus (for autofocus lenses)

The camera can focus automatically. All you have to do is point it, and whatever is in the center of the display will usually be in sharp focus. If it does not seem to be focusing well, it may be because the subject is not suitable for autofocus (page 108).

It also has functions which give you more control over focusing. Operate these from the body of the XL lens.

**Temporary focus override**

You can adjust the focus temporarily without turning autofocus off. Turn the lens’s focusing ring to set the focus. Autofocus will resume as soon as you take your hand away from the focusing ring.

**Manual focus**

1. Slide the focus switch on the body of the XL lens to M (manual).
2. When using a zoom lens, rotate the zooming ring to the telephoto end.
3. Rotate the focusing ring to adjust the focus.
4. When using a zoom lens, use the zooming ring to reframe the subject.
   - To resume autofocus, slide the focus switch to AF (auto).
   - If you focus manually then leave the camcorder with the power turned on, you may lose focus on your subject. This possible slight shift in focus is due to a rise in temperature in the camcorder interior and lens. Check the focus before resuming shooting.

**Push autofocus**

Press the PUSH AF button during manual focusing, to quickly adjust the focus automatically. The camera will continue to focus automatically as long as you hold down the button. Release the button to continue to set the focus manually.
Playing back a Cassette

You can use the viewfinder for instant, on-the-spot playback.

Notes:

• To avoid accidental recording, make sure that you slide the tab on the cassette so that it exposes the hole (the switch position is usually labelled SAVE or ERASE OFF).
• You cannot play back a tape recorded in SP or LP modes.

1. Attach a power source and turn the POWER dial to VCR.
2. Load the cassette.
3. Press the PLAY ► button to start playback.
   • To end playback, press the STOP ■ button.
   • To wind the tape forwards, stop playback and press the FF ►► button.
   • To wind the tape backwards, stop playback and press the REW ◀◀ button.
   • If the playback picture is rough (mosaic-like noise), clean the video heads using a Canon DVM-CL Digital Video Head Cleaning Cassette or a commercially available digital video head cleaning cassette.
Other playback modes

Playback Pause
To view the video as a still picture press the PAUSE  ■ button. To resume normal playback, press it again, or press the PLAY  ▶ button. The camera automatically goes into stop mode after about five minutes’ playback pause.

Edit Search
When the camera is in playback pause, you can use edit search to play the tape forwards or backwards to find the point where you want to start or restart editing.

Press and hold the edit search + and – buttons (the REC SEARCH buttons) during playback, while you check the picture in the viewfinder.
• The + button plays the recording forwards and the – button plays it backwards.

Release the button when you find the point where you want to start editing.
• The camera returns to playback pause.

Fast Forward Playback
To play back the recording at about 9.5 times normal speed, press and hold the FF  ▶▶ button during normal playback or press and hold the FF  ▶▶ button during normal fast forward.

Rewind Playback
For reverse playback at about 9.5 times normal speed, press and hold the REW  ◀◀ button during normal playback or press and hold the REW  ◀◀ button during normal rewind.