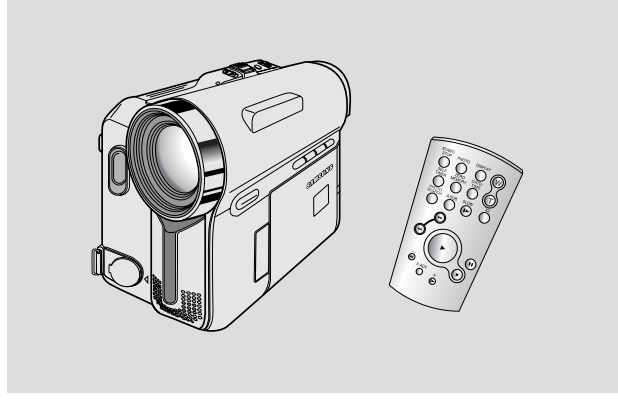
ENGLISH

Digital Video Camcorder

Mini DV Digital Video Cassette **SCD351/D352/D353/D354/D355**



AF Auto Focus
CCD Charge Coupled Device
LCD Liquid Crystal Display

Owner's Instruction Book

Before operating the unit, please read this Instruction Book thoroughly, and retain it for future reference.

SAMSUNG ELECTRONICS

US PATENT 4415844

ENGLISH

Notices and Safety Instructions

Safety Instructions

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.

To prevent electric shock, match wide blade of plug to wide slot and fully insert.

This symbol is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of fire or electric shock.

This symbol is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying this product.

1. READ INSTRUCTIONS:
All the safety and operating instructions should be read before the CAMCORDER is operated.

2. RETAIN INSTRUCTIONS:
The safety and operating instructions should be retained for future reference.

3. HEED WARNINGS:
All warnings on the CAMCORDER and in the operating instructions should be adhered to.

4. FOLLOW INSTRUCTIONS:
All operating and maintenance instructions should be followed.

5. CLEANING:
Unplug this CAMCORDER from the wall outlet before cleaning.
Do not use liquid or aerosol cleaners.
Use a dry cloth used for dusting cabinets.

6. ATTACHMENTS:
Do not use attachments not recommended by the CAMCORDER product manufacturer as they may be hazardous.

7. WATER AND MOISTURE:
Do not use this CAMCORDER near water;
for example, near a bathtub, wash bowl, kitchen sink, laundry tub, in a wet basement, near a swimming pool or lake.

8. ACCESSORIES:
Do not place this CAMCORDER on an unstable cart, stand, tripod, bracket or table. The CAMCORDER 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 CAMCORDER. Any mounting of the unit should follow the manufacturer's instructions and should use a mounting accessory recommended by the manufacturer.

A. 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.
PORTABLE CART WARNING
(Symbol provided by RETAC)

Notices and Safety Instructions

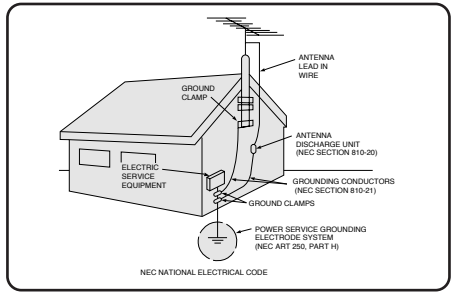
9. VENTILATION:
Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the CAMCORDER and to protect it from overheating. These openings must not be blocked or covered. Never place your CAMCORDER on a bed, sofa, rug, or other similar surface: on or near a radiator or heat register. This CAMCORDER 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:
The CAMCORDER should be operated only from the type of power source indicated on the label.
If you are not sure of the type of power supply at your home, consult your appliance dealer or local power company.
A CAMCORDER is intended to be operated from battery power, or other sources, refer to the operating instructions.

11. GROUNDING OR POLARIZATION:
This CAMCORDER may be equipped with either a polarized 2-wire AC line plug (a plug having one blade wider than the other) or a 3-wire grounding type plug, a plug having a third (grounding) pin.
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 outlet. Do not defeat the safety purpose of the polarized 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 or plugs, convenient 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 CAMCORDER, be sure the antenna or cable system is grounded to provide some protection against voltage surges and built-up static charges, Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire and supporting structure, grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding to conductors, location of antenna-discharge unit, connection to grounding electrodes and requirements for the grounding electrode.
See figure below.



Notices and Safety Instructions

14. LIGHTNING:
For added protection of this CAMCORDER 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 CAMCORDER 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 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 CAMCORDER through openings as they may touch dangerous voltage points or short out a part that could result in a fire or electric shock.
Never spill liquids of any kind onto the CAMCORDER. Should spillage occur, unplug unit and have it checked by a technician before use.

18. SERVICING:
Do not attempt to service this CAMCORDER yourself. 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 CAMCORDER 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 onto, or objects have fallen into the CAMCORDER.
c. If the CAMCORDER has been exposed to rain or water.
d. If the CAMCORDER does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the CAMCORDER to its normal operation.
e. If the CAMCORDER has been dropped or the cabinet has been damaged.
f. When the CAMCORDER 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 and having 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 CAMCORDER, ask the service technician to perform safety checks to determine that the CAMCORDER is in safe operating order.

Notices and Safety Instructions

22. To prevent damage which may result in fire or shock hazard, do not expose this appliance to rain or moisture.

23. If this power supply is used at 240V ac, a suitable plug adapter should be used.

NOTE TO CATV SYSTEM INSTALLER:
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

USER INSTALLER CAUTION:
Your authority to operate this FCC certified equipment could be voided if you make changes or modifications not expressly approved by this party responsible for compliance to part 15 FCC rules.

NOTE:

Hg LAMP(S) INSIDE THIS PRODUCT CONTAIN MERCURY AND MUST BE RECYCLED OR DISPOSED OF ACCORDING
TO LOCAL, STATE OR FEDERAL LAWS For details see lamprecycle.org, eiae.org, or call 1-800-Samsung

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help and for additional suggestions.
  The user may find the following booklet prepared by the Federal Communications Commission helpful : "How to Identify and Resolve Radio-TV Interference Problems."
  This Booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

FCC Warning
The user is cautioned that changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

FCC ID : A3L05DRAGON
This device complies with Part 15 of 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.

ENGLISH

Contents

Notes and Safety Instructions 6

Getting to Know Your Camcorder 11

Features 11
Accessories Supplied with Camcorder 12
Front & Left View 13
Left Side View 14
Right & Top View 15
Rear & Bottom View 16
Remote Control (SCD354/D355 only) 17

Preparation 18

Adjusting the Hand Strap 18
- Hand Strap 18
- When You carry Your Camcorder 18
- Attaching the Lens Cover 18

Lithium Battery Installation 19
- Battery Installation for the Internal Clock 19
- Battery Installation for the Remote Control (SCD354/D355 only) 19

Connecting a Power Source 20
- To use the AC Power Adapter and DC Cable 20
- To select the Camcorder Mode 20

Using the Lithium Ion Battery Pack 21
- Charging the Lithium Ion Battery Pack 21
- Table of continuous Recording Time based on Model and Battery Type 22
- Battery Level Display 23

OSD (On Screen Display in Camera/Play Modes) 24
OSD (On Screen Display in M.Cam/M.Player Modes) (SCD353/D354/D355 only) 25
Turning the OSD (On Screen Display) On/Off 25

System Menu Setting 26

Selecting the OSD Language 26
Setting the Clock 27
Setting the Wireless Remote Control Acceptance (Remote) (SCD354/D355 only) 28
Setting the Beep Sound 29
Setting the Shutter Sound (SCD353/D354/D355 only) 30
Viewing the Demonstration 31

Display Menu Setting 32

Adjusting the LCD Screen 32
Setting the Date/Time 33
Setting the TV Display 34

Contents

Basic Recording 35

Using the Viewfinder 35
Adjusting the Focus 35
Inserting and Ejecting a Cassette 36
Hints for Stable Image Recording 37
Recording with the LCD screen 37
Recording with the Viewfinder 37
Various Recording Techniques 38
Making your First Recording 39
Using EASY Q Mode (for Beginners) 40
Record Search (REC SEARCH) 41
Setting the Zero Memory (SCD354/D355 only) 42
Self Record using the Remote Control (SCD354/D355 only) 43
Zooming In and Out 44
Using the Tele Macro 44
Using the Fade In and Out 45
To Start Recording 45
To Stop Recording (use Fade In/Fade Out) 45
Using Back Light Compensation Mode (BLC) 46
Using the Color Nite Shutter 47
Using the Color Nite Shutter with LED Light (SCD352/D354/D355 only) 48
Nite Pix (0 lux recording) (SCD352/D354/D355 only) 49
Power Nite Pix (SCD352/D354/D355 only) 50

Advanced Recording 51

Use of various Functions 51
Setting Menu Items 51
Availability of Functions in each Mode 53
Selecting the Record Mode 54
Selecting Audio Mode 55
Cutting Off Wind Noise (Wind Cut) 56
Setting the Shutter Speed & Exposure 57
Recommended Shutter Speeds when Recording 57
Auto Focus/Manual Focus 58
Auto Focusing 58
Manual Focusing 58
Setting the White Balance 59
Using Quick Menu: White Balance 60
Setting the Digital Image Stabilizer (DIS) 61
Using Quick Menu: Digital Image Stabilizer (DIS) 62
Programed Automatic Explore Modes (Program AE) 63
Setting the Programed Automatic Explore Modes (Program AE) 64
Using Quick Menu: Programed Automatic Explore Modes (Program AE) 64

Contents

Appling Digital Effect 65
Selecting a Digital Effect 66
Zooming In and Out with Digital Zoom 67
Setting the Digital Zoom 67
Photo Image Recording 68
Searching for a Photo Picture 68

Playback 69

Playing Back a Tape you have recorded on the LCD Screen 69
Adjusting the LCD Bright/Color during Playback 69
Controlling Sound from the Speaker 70
Tape Playback 71
Playback on the LCD Screen 71
Playback on a TV Monitor 71
Connecting to a TV which has Audio/Video Input Jacks 71
Connecting to a TV which has no Audio and Video Input Jacks 72
Playback 72
Various Functions while in Player mode 73
Playback Pause 73
Picture Search (Forward/Reverse) 73
Slow Playback (Forward/Reverse) (SCD354/D355 only) 73
Frame Advance (To play back frame by frame) (SCD354/D355 only) 74
X2 Playback (Forward/Reverse) (SCD354/D355 only) 74
Reverse Playback (SCD354/D355 only) 74
PB Zoom 75
AV In/Out (SCD355 only) 76
Audio Dubbing (SCD354/D355 only) 77
Dubbing Dound 77
Dubbed Audio Playback 78

IEEE 1394 Data Transfer 79

USB Interface (SCD352/D353/D354/D355 only) 81

Digital Still Camera Mode (SCD353/D354/D355 only) 86

Memory Stick (Optional Accessory) 86
Memory Stick Functions 86
Inserting and Ejecting the Memory Card 87
Structure of Folders and Files on the Memory Card 88
Image Format 88
Selecting the Digital Still Camera mode 88
Selecting the Built-in Memory (SCD354/D355 only) 89
Using Quick Menu: Memory Type 89

Contents

Selecting the Image Quality 90
Number of Images on the Memory Card 90
Using Quick Menu: Photo Quality 91
Memory File Number 92
Taking Photos 93
Viewing Still Images 94
To view a Single Image 94
To view a Slide Show 94
To view the Multi Display 95
Protection from accidental Erasure 96
Using Quick Menu: Protect 97
Deleting Still Images 98
Using Quick Menu: Delete 99
Formatting the Memory Card 100
MPEG Recording 101
Saving the Pictures captured by a Camera as a Moving Picture File on Memory Card 101
MPEG Playback 102
Using Quick Menu: M.Play Select 103
Recording an Image from a Cassette as a Still Image. 105
Copying Still Images from a Cassette to Memory Card 105
Copy to (Copies Files from the Memory Card to the Built-in Memory) (SCD354/D355 only) 106
USB Select 107
Marking Images for Printing 108
Using Quick Menu: Print Mark 110

PictBridge™ 110

Maintenance 112

After Finishing a Recording 112
Cleaning and Maintaining the Camcorder 113
Using Your Camcorder Abroad 114

Troubleshooting 115

Specifications 118

Index 119

Warranty(SEA users only) 120

Notes and Safety Instructions

Notes regarding the rotation of the LCD Screen

Please rotate the LCD screen carefully as illustrated.
Over rotation may cause damage to the inside of the hinge that connects the LCD screen to the Camcorder.

1. LCD screen closed.

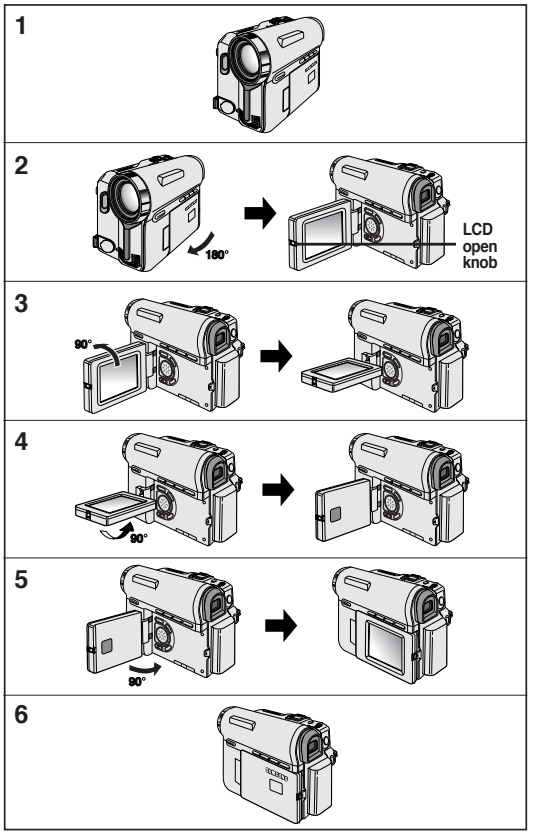
2. Standard recording using the LCD screen.
   ■ Open the LCD screen with your finger.

3. Recording when looking at the LCD screen from the top.

4. Recording when looking at the LCD screen from the front.

5. Recording when looking at the LCD screen from the left.

6. Recording with the LCD screen closed.



Notes and Safety Instructions

Notices regarding Copyright

Television programs, video tapes, DVD titles, films, and other program materials may be copyrighted.
Unauthorized copying of copyrighted material may be against the law.
All the trade names and registered trademarks mentioned in this manual or other documentation provided with your Samsung product are trademarks or registered trademarks of their respective holders.

Notes regarding Moisture Condensation

1. A sudden rise in atmospheric temperature may cause condensation to form inside the Camcorder.

   for example:
   - When you move the Camcorder from a cold location to a warm location (e.g. from outside to inside during winter.)
   - When you move the Camcorder from a cool location to a hot location (e.g. from inside to outside during the summer.)

2. If the (DEW) protection feature is activated, leave the Camcorder for at least two hours in a dry, warm room with the cassette compartment opened and the Battery pack removed.

Notes regarding Camcorder

1. Do not leave the Camcorder exposed to high temperature (above 60°C or 140°F).
   For example, in a parked car in the sun or exposed to direct sunlight.

2. Do not let the Camcorder get wet.
   Keep the Camcorder away from rain, sea water, and any other form of moisture.
   If the Camcorder gets wet, it may get damaged.
   Sometimes a malfunction due to exposure to liquids cannot be repaired.

Notes and Safety Instructions

Notes regarding the Battery Pack

- Make sure that the Battery pack is fully charged before starting to record.
- To preserve battery power, keep your Camcorder turned off when you are not operating it.
- If your Camcorder is in CAMERA mode, and it is left in STBY mode without being operated for more than 5 minutes with a tape inserted, it will automatically turn itself off to protect against unnecessary battery discharge.
- Make sure that the Battery pack is fitted firmly into place.
  Do not drop the Battery pack. Dropping the Battery pack may damage it.
- A brand new Battery pack is not charged.
  Before using the Battery pack, you need to charge it completely.
- Fully discharging a Lithium-Ion battery damages the internal cells. The Battery pack may be prone to leakage when fully discharged.

When the battery reaches the end of its life, please contact your local dealer.
The batteries have to be dealt with as chemical waste.

Notes regarding the Video Head Cleaning

- To ensure normal recording and a clear picture, clean the video heads regularly.
  If a square block-shape distorts playback, or only a blue screen is displayed, the video heads may be dirty.
  If this happens, clean the video heads with a dry type cleaning cassette.
- Do not use a wet-type cleaning cassette. It may damage the video heads.

Notes and Safety Instructions

Note regarding the Lens

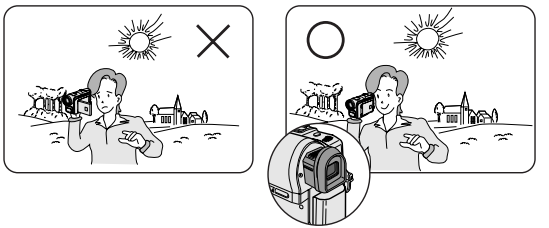
Do not film with the camera lens pointing directly at the sun.
Direct sunlight can damage the CCD(Charge Coupled Device).

Notes regarding electronic Viewfinder

1. Do not position the Camcorder such that the Viewfinder is pointing towards the sun.
   Direct sunlight can damage the inside of the Viewfinder. Be careful when placing the Camcorder under sunlight or near a window exposed to sunlight.
2. Do not pick up the Camcorder by holding the Viewfinder.
3. Applying excessive force to the Viewfinder may damage it.

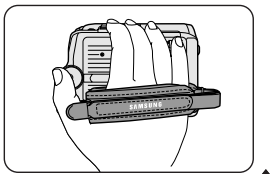
Notes regarding 'Record' or 'Playback' Using the LCD Screen

1. The LCD screen has been manufactured using high precision technology. However, there may be tiny dots (red, blue or green in color) that appear on the LCD screen. These dots are normal and do not affect the recorded picture in any way.
2. When you use the LCD screen under direct sunlight or outdoors, it maybe difficult to see the picture clearly.
   If this occurs, we recommend using the Viewfinder.
3. Direct sunlight can damage the LCD screen.



Notes regarding the Hand Strap

- To ensure a steady picture while filming, check that the hand strap is properly adjusted.
- Do not force your hand into the hand strap as you could damage it.



Notes and Safety Instructions

Precaution regarding the Lithium Battery

1. The Lithium battery maintains the clock function and user settings; even if the Battery pack or AC adapter is removed.
2. The Lithium battery for the Camcorder lasts about 6 months under normal operation from time of installation.
3. When the Lithium battery becomes weak or dead, the date/time indicator will display **---** when you set the Date/Time to on. When this occurs, replace the Lithium battery with a new one(type CR2025).
4. There is a danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.

Warning: Keep the Lithium battery out of reach of children. Should a battery be swallowed, consult a doctor immediately.

Servicing

Do not attempt to service this Camcorder yourself.
Opening or removing covers may expose you to dangerous voltage or other hazards.
Refer all servicing to qualified service personnel.

Replacement Parts

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

Getting to Know Your Camcorder

Features

- **Multi OSD Language**
  You can select the desired OSD language among English, French, Spanish, German, Italian, Portuguese, Polish and Dutch.
- **Digital Data Transfer Function with IEEE1394**
  By incorporating the IEEE 1394 (i.LINK™: i.LINK is a serial data transfer protocol and interconnectivity system, used to transmit DV data) high speed data transport port, both moving and still images can be transferred to a PC, making it possible to produce or edit various images.
- **USB Interface for Digital Image Data Transfer (SCD352/D353/D354/D355 only)**
  You can transfer images to a PC using the USB interface without an add-on card.
- **PHOTO**
  The photo function lets you capture an object as a still along with sound, while in camera mode.
- **900x Digital Zoom**
  Allows you to magnify an image up to 900 times its original size.
- **Color TFT LCD**
  A high-resolution color TFT LCD gives you clean, sharp images as well as the ability to review your recordings immediately.
- **Digital Image Stabilizer (DIS)**
  The DIS compensates for any handshake, reducing unstable images particularly at high magnification.
- **Various Digital Effects**
  The digital effects allows you to give your films a special look by adding various special effects.
- **Back Light Compensation (BLC)**
  The BLC function compensates for the bright background behind a subject you're recording.
- **Program AE**
  The program AE enables you to alter the shutter speed and aperture to suit the type of scene/action to be filmed.
- **NITE PIX (SCD352/D354/D355 only)**
  The NITE PIX function enables you to record a subject in a dark place.
- **Digital Still Camera Function (SCD353/D354/D355 only)**
  - Using Memory card, you can easily record and playback standard still images.
  - You can transfer standard still images on the Memory card to your PC using the USB interface.
- **MPEG Recording (SCD353/D354/D355 only)**
  MPEG recording makes it possible to record video onto a Memory card.
- **Multi Memory Card Slot (SCD353/D354/D355 only)**
  Multi Memory card slot is able to use the memory stick, the MMC and the SD.
- **Built-in Memory (SCD354/D355 only)**
  You can use digital still camera functions without a separate external Memory card, using the built-in memory installed in your Camcorder. **(SCD354:32MB/SCD355:64MB)**

Getting to Know Your Camcorder

Accessories Supplied with Camcorder

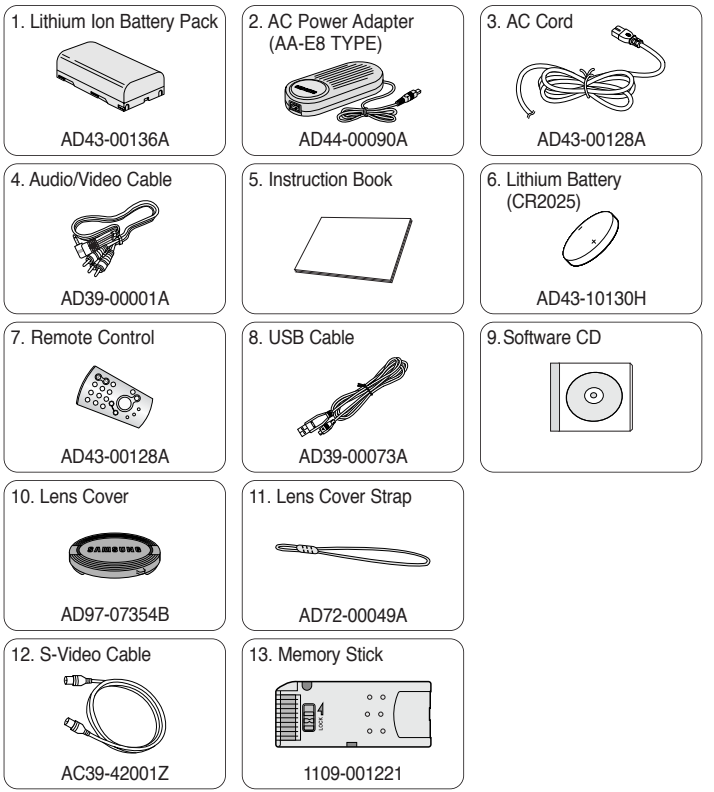
Make sure that the following basic accessories are supplied with your digital video camera.

Basic Accessories

1. Lithium Ion Battery Pack
2. AC Power Adapter (AA-E8 TYPE)
3. AC Cord
4. Audio/Video Cable
5. Instruction Book
6. Lithium Battery for Remote Control (SCD354/D355 only) or Clock. (TYPE: CR2025)
7. Remote Control (SCD354/D355 only)
8. USB Cable (SCD352/D353/D354/D355 only)
9. Software CD (SCD352/D353/D354/D355 only)
10. Lens Cover
11. Lens Cover Strap

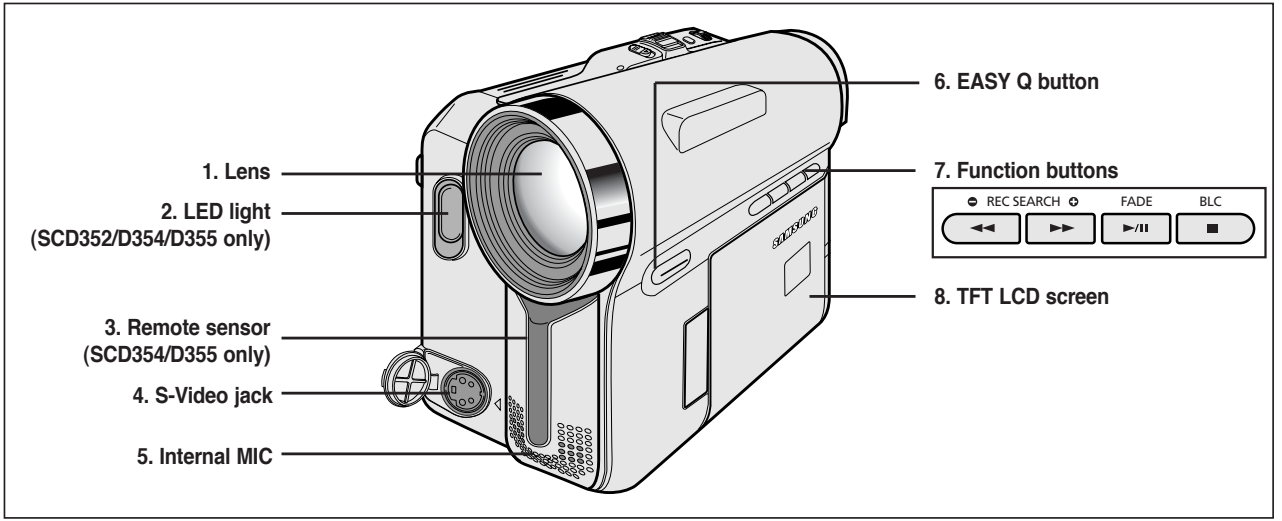
Optional Accessories

12. S-Video Cable
13. Memory Stick (SCD353/D354/D355 only)



Getting to Know Your Camcorder

Front & Left View



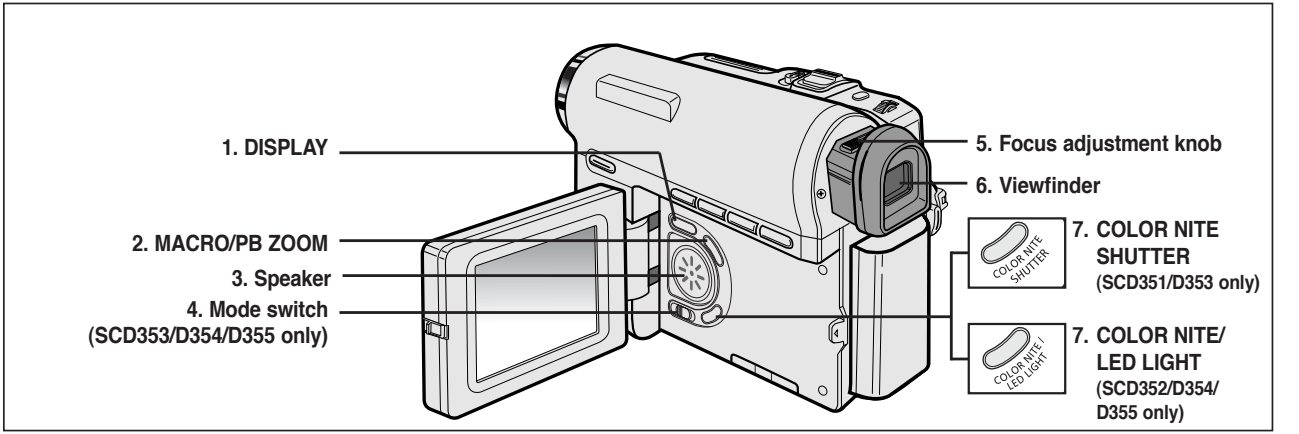
1. **Lens**
2. **LED light (see page 48) (SCD352/D354/D355 only)**
3. **Remote sensor (SCD354/D355 only)**
4. **S-Video jack**
5. **Internal MIC**
6. **EASY Q button (see page 40)**
7. **Function buttons**

PLAYER	CAMERA	M.Player (SCD353/D354/D355 only)
-	EASY	-
◀◀ : REW	REC SEARCH –	REV
▶▶ : FF	REC SEARCH +	FWD
▶/II : PLAY/STILL	FADE	SLIDE SHOW
■ : STOP	BLC	MULTI DISP.

8. **TFT LCD screen**

Getting to Know Your Camcorder

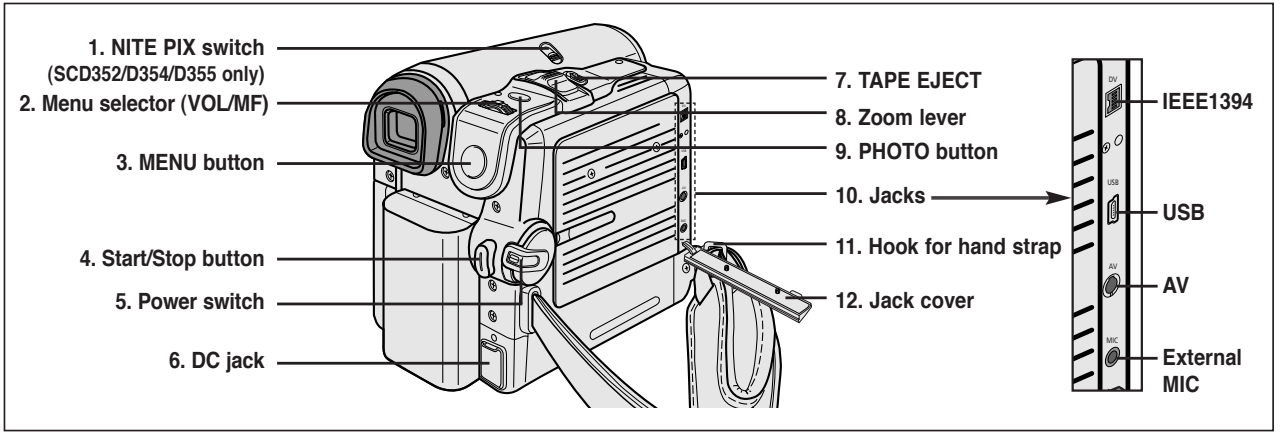
Left Side View



1. DISPLAY (see page 23)
2. MACRO/PB ZOOM (see page 44/see page 75)
3. Speaker
4. Mode switch (MEMORY CARD/TAPE) (SCD353/D354/D355 only)
5. Focus adjustment knob
6. Viewfinder
7. COLOR NITE SHUTTER (see page 47) (SCD351/D353 only)
7. COLOR NITE/LED LIGHT (see page 48) (SCD352/D354/D355 only)

Getting to Know Your Camcorder

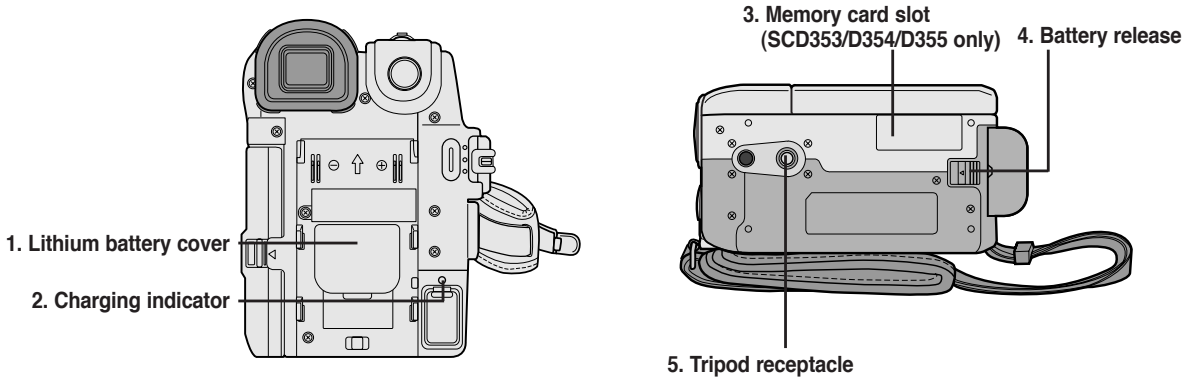
Right & Top View



1. NITE PIX switch
   (SCD352/D354/D355 only)
2. Menu selector (VOL/MF)
3. MENU button
4. Start/Stop button
5. Power switch (CAMERA or PLAYER)
6. DC jack
7. TAPE EJECT
8. Zoom lever
9. PHOTO button
   (see page 68)
10. Jacks
    (DV/USB/AV/External MIC in)
11. Hook for hand strap
12. Jack cover

Getting to Know Your Camcorder

Rear & Bottom View



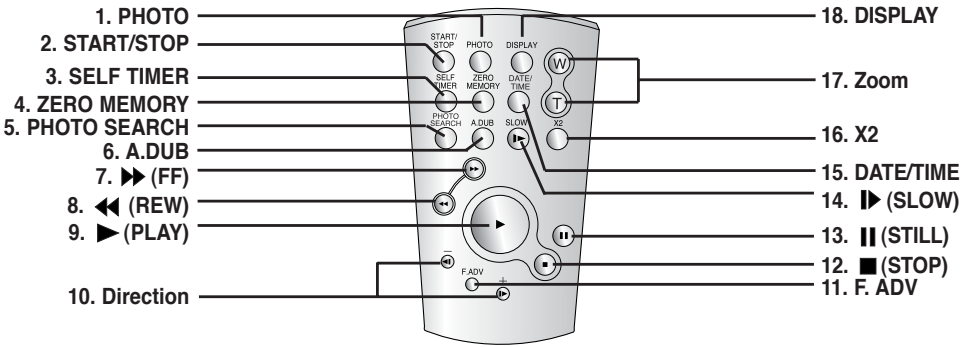
1. Lithium battery cover
2. Charging indicator
3. Memory card slot (SCD353/D354/D355 only)
4. Battery release
5. Tripod receptacle

Memory Card slot (Usable Memory Card)

SCD353 only	SCD355 only
Memory Stick	Memory Stick Memory Stick PRO
SCD354 only	SD/MMC
Memory Stick Memory Stick PRO	

Getting to Know Your Camcorder

Remote Control (SCD354/D355 only)



1. PHOTO (see page 68)
2. START/STOP
3. SELF TIMER (see page 43)
4. ZERO MEMORY (see page 42)
5. PHOTO SEARCH
6. A.DUB (see page 77)
7. ▶▶ (FF)
8. ◀◀ (REW)
9. ▶ (PLAY)
10. Direction (◀II/II▶) (see page 73)
11. F. ADV (see page 74)
12. ■ (STOP)
13. II (STILL)
14. I▶ (SLOW)
15. DATE/TIME
16. X2 (see page 74)
17. Zoom
18. DISPLAY

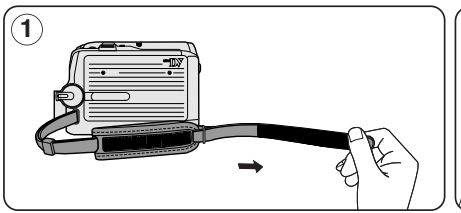
Preparation

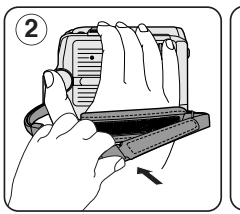
Adjusting the Hand Strap

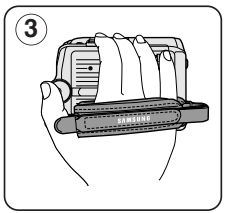
It is very important to ensure that the Hand strap has been correctly adjusted before you begin your recording.
The Hand strap enables you to:
- Hold the Camcorder in a stable, comfortable position.
- Press the **ZOOM** and **Start/Stop** button without having to change the position of your hand.

Hand Strap

1. Insert the Hand strap into the Hand strap hook on the front side of the Camcorder and pull its end through the hook.
2. Insert your hand into the hand strap and adjust its length for your convenience.
3. Closed the Hand strap.

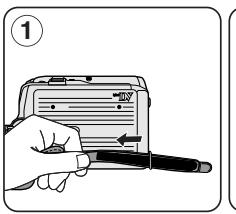


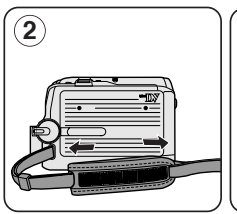


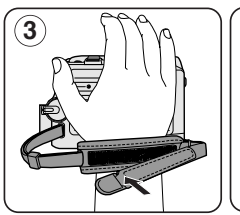


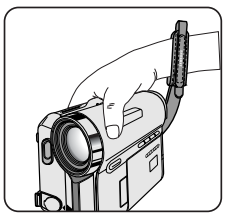
When You carry Your Camcorder

1. Pull and open the Hand strap cover to release the Hand strap.
2. Remove it from the ring and adjust its length.
3. Cloe the Hand strap cover again.



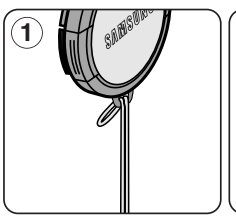


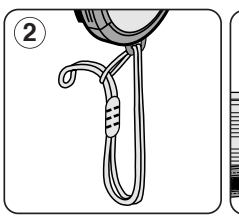


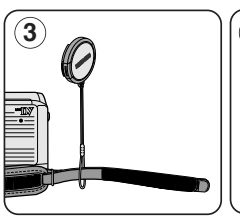


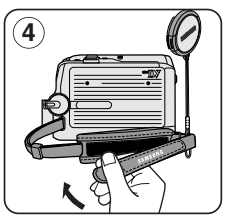
Attaching the Lens Cover

Hook up the Lens cover with the Lens cover strap as illustrated.
Hook up the Lens cover strap to the Hand strap, and adjust it following the steps as described for the Hand strap.







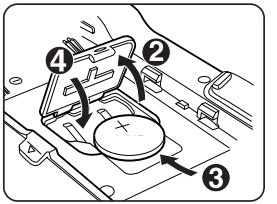


Preparation

Lithium Battery Installation

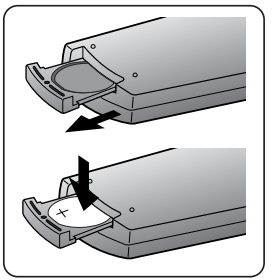
Battery Installation for the Internal Clock

- The Lithium battery maintains the clock function and preset contents of the memory; even if the Battery pack or AC Power adapter is removed.
- The Lithium battery for the Camcorder lasts about 6 months under normal operation from the time of installation.
- When the Lithium battery becomes weak or dead, the date/time indicator will display **---** when you set the Date/Time to on.
  When this occurs, replace the Lithium battery with CR2025 type.



1. Remove the Lithium-ion battery from the backside of the Camcorder.
2. Open the Lithium battery cover on the rear of the Camcorder.
3. Position the Lithium battery in the Lithium battery cover, with the negative (⊖) terminal face down.
4. Close the Lithium battery cover.

Battery Installation for the Remote Control (SCD354/D355 only)



- You need to insert or replace the Lithium battery when:
  - You purchase the Camcorder.
  - The remote control doesn't work.
- Ensure that you insert the Lithium battery correctly, following the + and - markings.
- Be careful not to reverse the polarity of the battery.

[Note]
The Lithium battery must be inserted in the correct direction.

Warning: Keep the Lithium battery out of the reach of the children.
Should any battery be swallowed, consult a doctor immediately.

Preparation

Connecting a Power Source

There are two types of power source that can be connected to your Camcorder.
- The AC Power adapter and AC Cord: used for indoor recording.
- The Battery pack: used for outdoor recording.

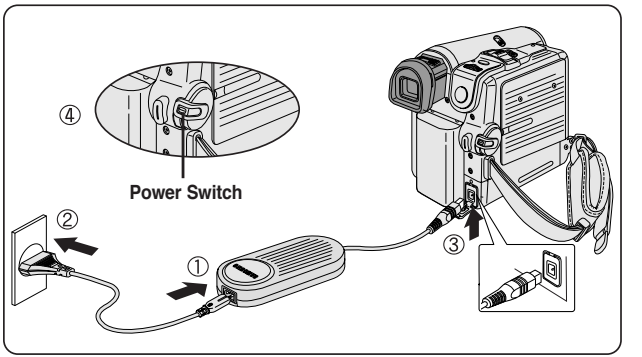
To use the AC Power Adapter and DC Cable

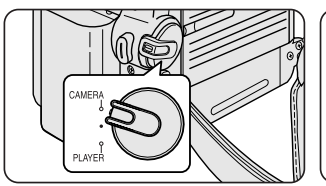
1. Connect the AC Power adapter to the AC Cord.
2. Connect the AC Cord to a wall socket.

[Notes]

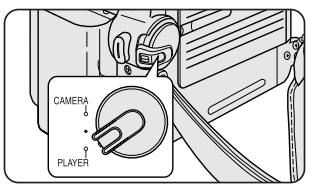
- You must use the AC Power adapter of AA-E8 TYPE.
- The plug and wall socket type may differ according to your resident country.

3. Connect the DC cable to the DC jack socket of the Camcorder.
4. Set the Camcorder to each mode by holding down the tab on the **Power** switch and turning it to the **CAMERA** or **PLAYER** mode.





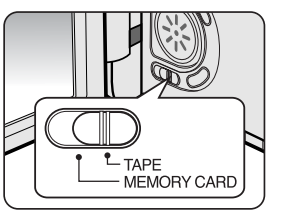
<CAMERA mode>



<PLAYER mode>

To Select the Camcorder Mode (SCD353/D354/D355 only)

✤ If you want to use this unit as a Camcorder, set the **Mode** switch to **TAPE**.
✤ If you want to use this unit as a DSC (Digital Still Camera), set the **Mode** switch to **MEMORY CARD**.

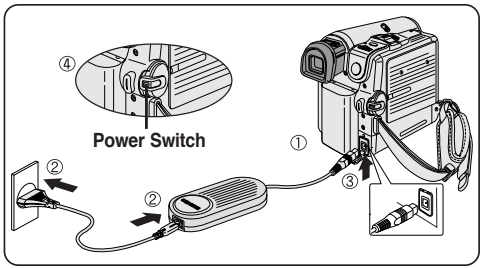


Preparation

Using the Lithium Ion Battery Pack

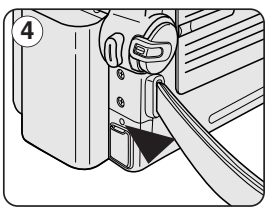
✤ The amount of continuous recording time available depends on
- The type and capacity of the Battery pack you are using.
- How often the zoom function is used.
  It is recommended that you have several batteries available.

Charging the Lithium Ion Battery Pack



1. Attach the Battery pack to the Camcorder.
2. Connect the AC Power adapter to an AC Cord and connect the AC Cord to a wall socket.
3. Connect the DC cable to the DC jack socket on the Camcorder.
4. Turn the **Power** switch to **Off**, and the charging indicator will start to flash, showing that the battery is charging.

Blinking time	Charging rate
Once per second	Less than 50%
Twice per second	50% ~ 75%
Three times per second	75% ~ 90%
Blinking stops and stays on	90 ~ 100%
On for a second and off for a second	Error - Reset the Battery pack and the DC cable



5. When the battery is fully charged, disconnect the Battery pack and the AC Power adapter from the Camcorder.
   Even with the **Power** switched **Off**, the Battery pack will still discharge.

[Notes]

- The Battery pack may be charged a little at the time of purchase.
- To prevent reduction in the life and capacity of the Battery pack, always remove it from the Camcorder after it is fully charged.
- The amount of continuous recording time available depends on:
  - The type and capacity of the Battery pack you are using. How often the zoom is used.
  - Type of use (Camcorder/Camera/With LCD screen etc.). Ambient temperature.
    It is recommended to have additional battery packs available.
- Even when the Power switched Off, the Battery pack will still discharge if it is left attached to the device.

Preparation

Table of continuous Recording Time based on Model and Battery Type.

- ❖ If you close the LCD screen, it switches off and the Viewfinder switches on automatically.
- ❖ The continuous recording time given in the table below are approximations.
  Actual recording time depends on usage.

Time / Battery	Charging time	Continuous recording time	
		LCD ON	VIEWFINDER ON
SB-LSM80	Approx. 1hr 20min	Approx. 1hr 20min	Approx. 1hr 30min
SB-LSM160	Approx. 3hr	Approx. 2hr 40min	Approx. 3hr

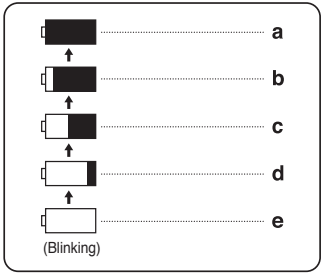
[Notes]

- The Battery pack should be recharged in an environment between 32 °F (0 °C)and 104 °F (40 °C).
- The Battery pack should never be charged in a room with a temperature that is below 32 °F (0 °C).
- The life and capacity of the Battery pack will be reduced if it is used in temperatures below 32 °F (0 °C) or left in temperatures above 104 °F (40 °C)for a long period of time, even when it is fully recharged.
- Do not put the Battery pack near any heat source (i.e.fire or a heater).
- Do not disassemble, apply pressure to or heat the Battery pack.
- Do not allow the **+** and **–** terminals of the Battery pack to be short-circuited.
  It may cause leakage, heat generation, induce overheating or fire.
- Use SB-LSM80 or SB-LSM160 Battery pack only.
- Use only an approved Battery pack to replace a Battery pack.

Preparation

Battery Level Display

The battery level display indicates the amount of power remaining in the Battery pack.



a. Fully charged
b. 20~40% used
c. 40~80% used
d. 80~95% used
e. Completely used (flickers)
(The Camcorder will turn off soon, change the battery as soon as possible)

[Notes]

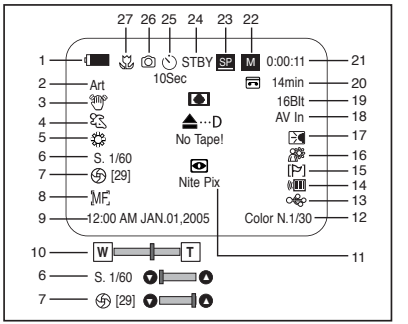
- Please refer to the Table on page 22 for approximate continuous recording time.
- The recording time is affected by temperature and environmental conditions.
- The recording time shortens dramatically in a cold environment.
  The continuous recording times in the operating instructions are measured using a fully charged Battery pack at 77 °F (25 °C).
  As the environmental temperature and conditions may differ from your actual use of the Camcorder, the remaining battery time may differ from the approximate continuous recording times given in the instructions.

Preparation

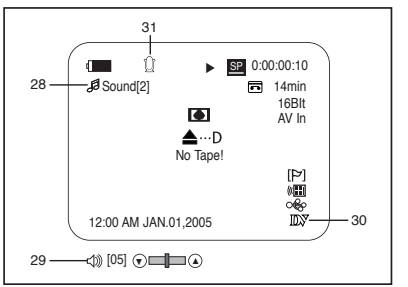
OSD (On Screen Display in Camera/Play Modes)

1. Battery level (see page 23)
2. Digital effects mode (see page 65)
3. DIS (see page 61)
4. Program AE (see page 63)
5. White balance mode (see page 59)
6. Shutter speed (see page 57)
7. Exposure (see page 57)
8. Manual focus (see page 58)
9. Date/Time (see page 33)
10. Zoom position (see page 44)
11. NITE PIX (see page 49) (SCD352/D354/D355 only)
12. Color nite (see page 48)
13. USB (SCD352/D353/D354/D355 only)
14. Remote (see page 28) (SCD354/D355 only)
15. Wind cut (see page 56)
16. BLC (Back Light Compensation) (see page 46)
17. LED LIGHT (SCD352/D354/D355 only) (see page 48)
18. AV IN (SCD355 only)
19. Audio recording mode (see page 55)
20. Remaining tape (measured in minutes)
21. Tape counter
22. Zero memory (SCD354/D355 only) (see page 42)
23. Record speed mode
24. Operating mode
25. Self timer (SCD354/D355 only)
26. Photo image
27. Tele MACRO (see page 44)
28. Audio playback
29. Volume control (see page 70)
30. DV IN (DV data transfer mode) (see page 80)
31. Audio dubbing (SCD354/D355 only) (see page 77)

OSD in Camera Mode



OSD in Player Mode

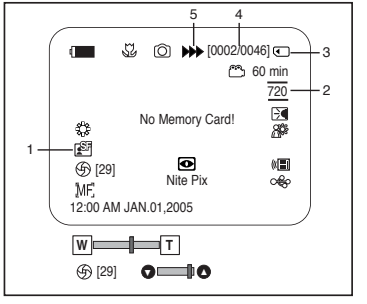


Preparation

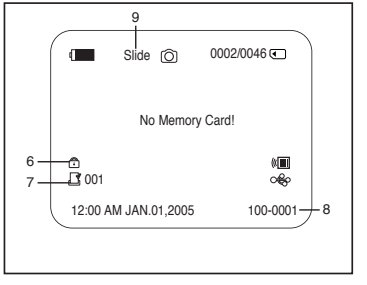
OSD (On Screen Display in M.Cam/M.Player Modes) (SCD353/D354/D355 only)

1. **Photo quality**
2. **Movie screen size**
3. **CARD (Memory Card) indicator**
4. **Image counter**
   Current still image/Total number of recordable still images.
5. **Image recording and loading indicator**
6. **Erase protection indicator (see page 94)**
7. **Print mark (see page 107)**
8. **Folder number-file number (see page 86)**
9. **Slide show**

OSD in M.Cam Mode



OSD in M.Play Mode



Turning the OSD On/Off (On Screen Display)

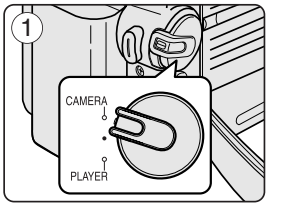
- **Turning OSD on/off**
  Press the **DISPLAY** button on the left side panel.
  - Each press of the button toggles the OSD function on and off.
  - When you turn the OSD off,
    In CAMERA Mode: The STBY, REC modes are always displayed on the OSD, even when the OSD is turned off and the key input is displayed for 3 seconds then turned off.
    In PLAYER Mode: When you press any function button, the function is displayed on the OSD for 3 seconds before it turns off.
- **Turning the Date/Time on/off**
  - The Date/Time is not affected when the OSD function is switched on or off.
  - To turn the Date/Time on or off, access the menu and change the Date/Time mode. (see page 33)

System Menu Setting

Selecting OSD Language

- ✤ Select the appropriate OSD Language among English, French, Spanish, German, Italian, Portuguese, Polish and Dutch.
- ✤ The Language function works in Camera/Player/M.Cam/M.Player modes.

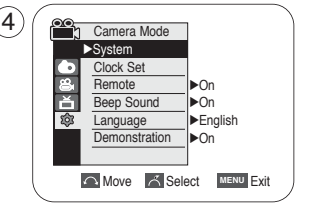
1. Set the **Power** switch to **CAMERA** or **PLAYER**.



2. Set the **Mode** switch to **TAPE** or **MEMORY CARD**. (SCD353/D354/355 only)

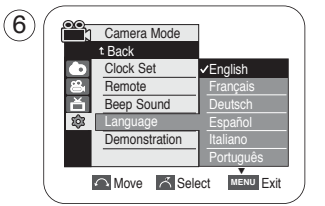
3. Press the **MENU** button.
   - The menu list will appear.

4. Move the **Menu selector** to the left or right to select **System**, then press the **Menu selector**.



5. Move the **Menu selector** to the left or right to select **Language**, then press the **Menu selector**.
   - The available language options are listed.

6. Move the **Menu selector** to the left or right to select desired OSD language, then press the **Menu selector**.
   - The OSD language is refreshed in selected language.



7. To exit, press the **MENU** button.

[Note]
The “Language” is always indicated in English.

System Menu Setting

Setting the Clock

✤ Clock setup works in Camera/Player/M.Cam/M.Player modes.
✤ The Date/Time is automatically recorded onto a tape.
Before recording, please set the Date/Time.

1. Set the **Power** switch to **CAMERA** or **PLAYER**.

2. Set the **Mode** switch to **TAPE** or **MEMORY CARD**. (SCD353/D354/D355 only)

3. Press the **MENU** button.
   ■ The menu list will appear.

4. Move the **Menu selector** to the left or right to select **System**, then press the **Menu selector**.

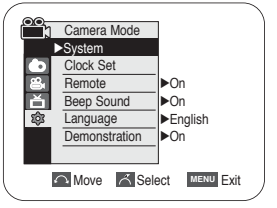
5. Move the **Menu selector** to the left or right to select **Clock Set**, then press the **Menu selector**.
   ■ The year will highlight first.

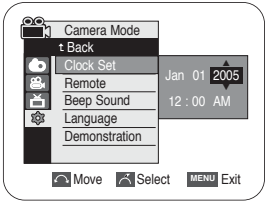
6. Move the **Menu selector** to the left or right to set current Year, then press the **Menu selector**.
   ■ The month will highlight.

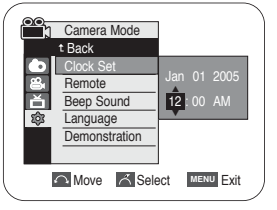
7. You can set the month, day, hour and minute following the same producedure for setting the year.
   (Select the Year, Month, Day, Hour or Min by pressing the **Menu selector**, then move the **Menu selector** to the left or right to set current value.)

8. Press the **Menu selector** after setting the minutes.
   ■ The message **Complete!** will be displayed.

9. To exit, press the **MENU** button.

4


5


7


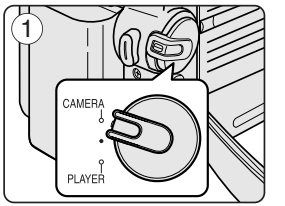
[Notes]
■ After the Lithium battery is exhausted (about 6 months) the clock will be reset.
■ You can set the year up to 2038.
■ If the Lithium battery is not installed, any input data will not be backed up.

System Menu Setting

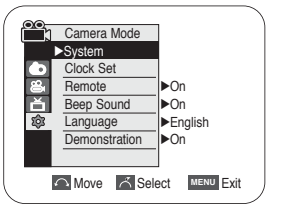
Setting the Wireless Remote Control Acceptance (Remote) (SCD354/D355 only)

- ✤ The Remote function works in Camera/Player/M.Cam/M.Player modes.
- ✤ The Remote option allows you to enable or disable the remote control for use with the Camcorder.

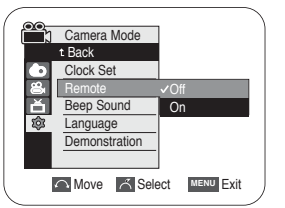
1. Set the **Power** switch to **CAMERA** or **PLAYER**.
2. Set the **Mode** switch to **TAPE** or **MEMORY CARD**. (SCD353/D354/D355 only)
3. Press the **MENU** button.
   ■ The menu list will appear.
4. Move the **Menu selector** to the left or right to select **System**, then press the **Menu selector**.
5. Move the **Menu selector** to the left or right to select **Remote**, then press the **Menu selector**.
6. Move the **Menu selector** to the left or right to select **On** or **Off**, then press the **Menu selector**.
7. To exit, press the **MENU** button.



4



6



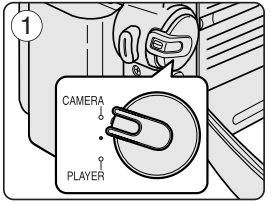
[Note]
If you set the Remote to Off in the menu and try to use it,the remote control icon( ) will blink for 3 seconds on the LCD screen and then disappear.

System Menu Setting

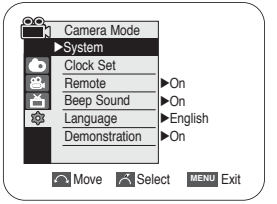
Setting the Beep Sound

- The Beep Sound function works in Camera/Player/M.Cam/M.Player modes.
- You can turn on or off the Beep Sound for each press of a button for Camcorder use.

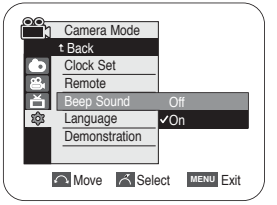
1. Set the **Power** switch to **CAMERA** or **PLAYER**.
2. Set the **Mode** switch to **TAPE** or **MEMORY CARD**. (SCD353/D354/D355 only)
3. Press the **MENU** button.
   ■ The menu list will appear.
4. Move the **Menu selector** to the left or right to select **System**, then press the **Menu selector**.
5. Move the **Menu selector** to the left or right to select **Beep Sound**, then press the **Menu selector**.
6. Move the **Menu selector** to the left or right to select **On** or **Off**, then press the **Menu selector**.
7. To exit, press the **MENU** button.



4



6

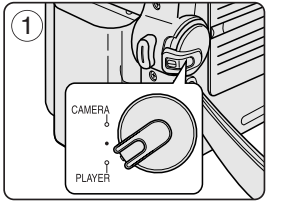


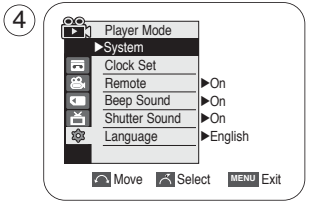
System Menu Setting

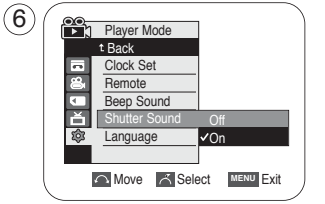
Setting the Shutter Sound (SCD353/D354/D355 only)

- ✤ The Shutter Sound function works in both Player and M.Cam modes.
- ✤ You can turn on or off the Shutter Sound for each press of the PHOTO button.

1. Set the **Power** switch to **CAMERA** or **PLAYER**.
2. Set the **Mode** switch to **TAPE** or **MEMORY CARD**. (SCD353/D354/D355 only)
3. Press the **MENU** button.
   - The menu list will appear.
4. Move the **Menu selector** to the left or right to select **System**, then press the **Menu selector**.
5. Move the **Menu selector** to the left or right to select **Shutter Sound**, then press the **Menu selector**.
6. Move the **Menu selector** to the left or right to select **On** or **Off**, then press the **Menu selector**.
7. To exit, press the **MENU** button.



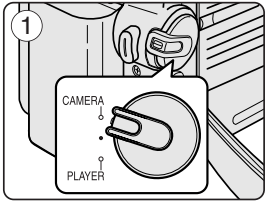




System Menu Setting

Viewing the Demonstration

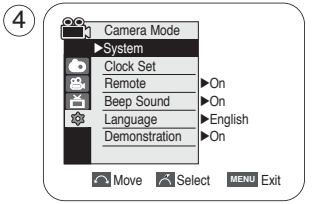
- ✤ Before you begin : Make Sure that there is no tape inserted in the Camcorder. (see page 36)
- ✤ Demonstration automatically shows you the major functions that are included with your Camcorder so that you may use them more easily.
- ✤ The Demonstration function may only be used in the camera mode without a tape inserted in the Camcorder.
- ✤ The Demonstration operates repeatedly until the Demonstration mode switched Off.



1. Set the **Power** switch to **CAMERA**.

2. Set the **Mode** switch to **TAPE**. (SCD353/D354/D355 only)

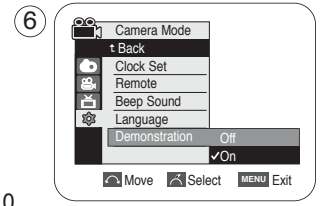
3. Press the **MENU** button.
   - The menu list will appear.



4. Move the **Menu selector** to the left or right to select **System**, then press the **Menu selector**.

5. Move the **Menu selector** to the left or right to select **Demonstration**, then press the **Menu selector**.

6. Move the **Menu selector** to the left or right to select **On**, then press the **Menu selector**.
   - The Demonstration will begin.



7. To quit the Demonstration, press the **MENU** button.

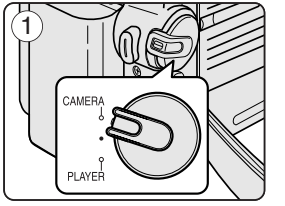
[Notes]

- The Demonstration function only works without a tape inserted.
- The Demonstration mode is automatically activated when the Camcorder is left idle for more than 10 minutes after switching to the Camera mode (no tape is inserted in the Camcorder).
- If you press other buttons (FADE, BLC, PHOTO, EASY Q) during the Demonstration mode, the demonstration stops temporarily and resumes 10 minutes later if you do not operate any other functions.
- While setting the NITE PIX to ON, the Demonstration function does not work. (SCD352/D354/D355 only)

Display Menu Setting

Adjusting the LCD screen

- ✤ Your Camcorder is equipped with a 2.5 inch color Liquid Crystal Display(LCD) screen, which enables you to view what you are recording or playing back directly.
- ✤ This function works in Camera/Player/M.Cam/M.Player modes.
- ✤ Depending on the conditions under where you are using the Camcorder (indoors or outdoors for example), you can adjust;
  - LCD Bright
  - LCD Color

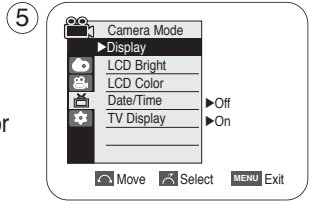


1. Set the **Power** switch to **CAMERA** or **PLAYER**.

2. Set the **Mode** switch to **TAPE** or **MEMORY CARD**. (SCD353/D354/D355 only)

3. Open the LCD screen, and the LCD screen switches on.

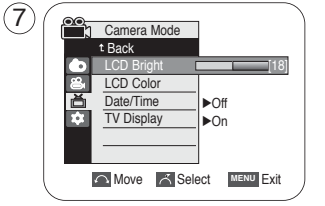
4. Press the **MENU** button.
   ■ The menu list will appear.



5. Move the **Menu selector** to the left or right to select **Display**, then press the **Menu selector**.

6. Move the **Menu selector** to the left or right to select the item you want to adjust(**LCD Bright** or **LCD Color**), then press the **Menu selector**.

7. Move the **Menu selector** to the left or right to adjust the value of the selected item(**LCD Bright** or **LCD Color**), then press the **Menu selector**.
   ■ You can set values for **LCD Bright** and **LCD Color** between 0~35.



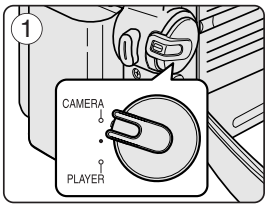
8. To exit, press the **MENU** button.

Display Menu Setting

Displaying the Date/Time

✤ The Date/Time function works in Camera/Player/M.Cam/M.Play modes.
✤ The date and time are automatically recorded on a special data area of the tape.

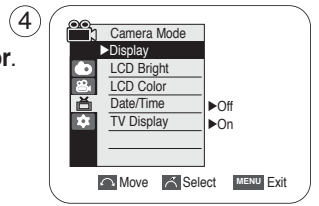
1. Set the **Power** switch to **CAMERA** or **PLAYER**.



2. Set the **Mode** switch to **TAPE** or **MEMORY CARD**. (SCD353/D354/D355 only)

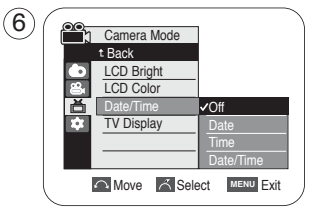
3. Press the **MENU** button.
   ■ The menu list will appear.

4. Move the **Menu selector** to the left or right to select **Display**, then press the **Menu selector**.



5. Move the **Menu selector** to the left or right to select **Date/Time**, then press the **Menu selector**.

6. Move the **Menu selector** to the left or right to select the display type of the Date/Time, then press the **Menu selector**.
   ■ Display type of the Date/Time: Off, Date, Time, Date/Time.



7. To exit, press the **MENU** button.

[Notes]

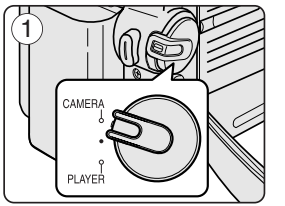
■ The Date/Time is not affected by the DISPLAY(OSD on/off) button.
■ The Date/Time will read **- - -** in the following conditions.
  - During playback of a blank section of a tape.
  - If the tape was recorded before setting the Date/Time in the camera's memory.
  - When the Lithium battery becomes weak or dead.
■ Before you use the Date/Time function, you must set the clock. See Setting the Clock on page 27.

Display Menu Setting

Setting the TV Display

- ✤ The TV Display function works in Camera/Player/M.Cam/M.Play modes.
- ✤ You can select the output path of the OSD (On Screen Display).
  - Off: The OSD appears in the LCD screen and Viewfinder only.
  - On: The OSD appears in the LCD screen, Viewfinder and TV.
  - Use the DISPLAY button located at the left side of the Camcorder to turn the OSD on/off displayed on the LCD screen /Viewfinder/TV.

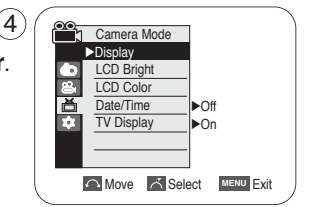
1. Set the **Power** switch to **CAMERA** or **PLAYER**.



2. Set the **Mode** switch to **TAPE** or **MEMORY CARD**. (SCD353/D354/D355 only)

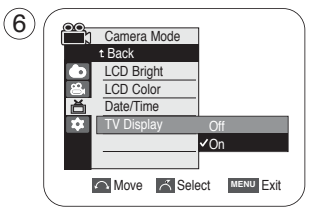
3. Press the **MENU** button.
   ■ The menu list will appear.

4. Move the **Menu selector** to the left or right to select **Display**, then press the **Menu selector**.



5. Move the **Menu selector** to the left or right to select **TV Display**, then press the **Menu selector**.

6. To activate TV Display function, move the **Menu selector** to the left or right to select **On** or **Off**. And then press the **Menu selector**.



7. To exit, press the **MENU** button.

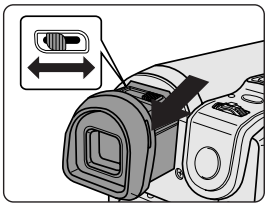
Basic Recording

Using the Viewfinder

✤ In the PLAYER mode, the Viewfinder will work when the LCD screen is closed.
✤ In the CAMERA mode, the Viewfinder will work when the LCD screen is closed or rotated counterclockwise 180°.

Adjusting the Focus

The focus adjustment knob of the Viewfinder enables individuals with vision problems to see clearer images.



1. Close the LCD screen and pull out the Viewfinder.
2. Use the focus adjustment knob of the Viewfinder to focus the picture.

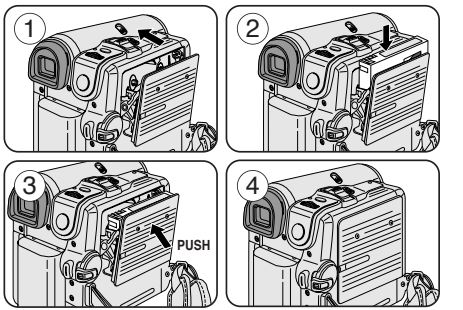
[Notes]

- Viewing the sun or any strong light source through the Viewfinder for a prolonged periods may be harmful, or cause temporary impairment.
- The Viewfinder will work either in play mode with LCD screen closed or in camera mode with LCD screen closed or facing the front.

Basic Recording

Inserting and Ejecting a Cassette

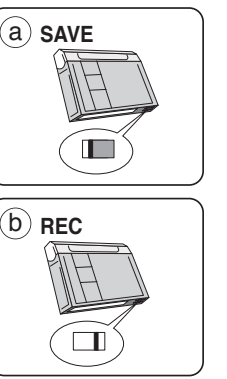
- ✤ When inserting a tape or closing a cassette holder, do not apply excessive force. This may cause a malfunction.
- ✤ Do not use any tape other than Mini DV cassettes.



1. Connect a power source and slide the **TAPE EJECT** switch.
   - The cassette door opens automatically.
2. Insert a tape into the cassette holder with the tape window facing outward and the protection tab toward the top. (Inserting a Cassette)
   - Remove the cassette tape, which is automatically ejected by pulling the cassette out. (Ejecting a Cassette)
3. Press the area marked **PUSH** on the cassette door until it clicks into place. The cassette is loaded automatically.

[Note]

When you have recorded something that you wish to keep, you can protect it so that it will not be accidentally erased.



a. Protecting a tape:
Push the safety tab on the cassette so that the hole is uncovered.

b. Removing the tape protection:
If you no longer wish to keep the recording on the cassette, push the safety tab back so that it covers the hole.

How to store a tape

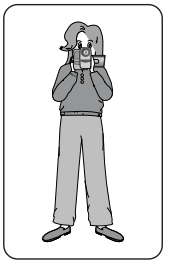
a. Avoid places with magnets or magnetic interference.
b. Avoid humidity and dust prone places.
c. Keep the tape in an upright position and avoid storing it in direct sunlight.
d. Avoid dropping or knocking your tapes.

Basic Recording

Hints for Stable Image Recording

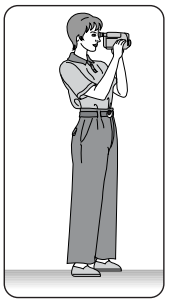
- ✤ While recording, it is very important to hold the Camcorder correctly.
- ✤ Fix the lens cover firmly by clipping it to the hand strap. (see page 18)

Recording with the LCD Screen



1. Hold the Camcorder firmly using the hand strap.
2. Place your right elbow against your side.
3. Place your left hand under or beside the LCD screen to support and adjust it.
   Do not touch the built-in microphone.
4. Choose a comfortable, stable position for the shots that you are taking.
   You can lean against a wall or on a table for greater stability.
   Do not forget to breathe gently.
5. Use the LCD frame as a guide to determine the horizontal plane.
6. Whenever possible, use a tripod.

Recording with the Viewfinder



1. Hold the Camcorder firmly using the hand strap.
2. Place your right elbow against your side.
3. Place your left hand under the Camcorder to support it.
   Be sure not to touch the built-in microphone.
4. Choose a comfortable, stable position for the shots that you are taking.
   You can lean against a wall or on a table for greater stability.
5. To view an object through the Viewfinder, pull it out until you hear the click sound.
   Excessive force may cause damage to the Viewfinder.
6. Place your eye firmly against the Viewfinder eyecup.
7. Use the Viewfinder frame as a guide to determine the horizontal plane.
8. Whenever possible, use a tripod.

Basic Recording

Various Recording Techniques

✤ In some situations different recording techniques may be required for more dramatic results.

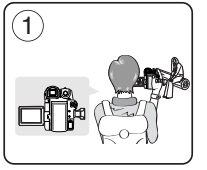
1. **General recording.**

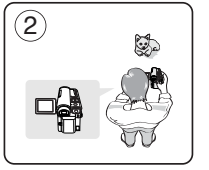
2. **Downward recording.**
   Making a recording with a top view of the LCD screen.

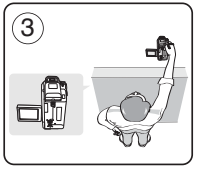
3. **Upward recording.**
   Making a recording viewing the LCD screen from below.

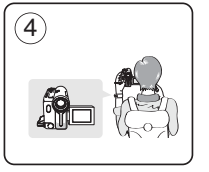
4. **Self recording.**
   Making a recording viewing the LCD screen from the front.

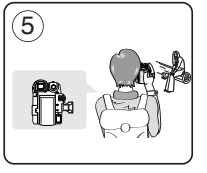
5. **Recording with the Viewfinder.**
   In circumstances where it is difficult to use the LCD screen, the Viewfinder can be used as a convenient alternative.







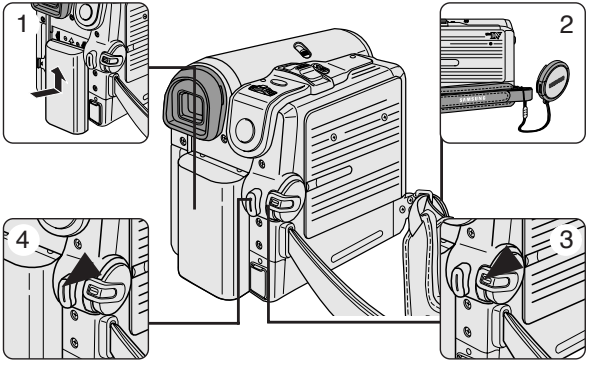




[Note]
Please rotate the LCD screen carefully as excessive rotation may cause damage to the inside of the hinge that connects the LCD screen to the Camcorder.

Basic Recording

Making your First Recording



1. Connect a power source to the Camcorder. (see page 20)
   (A Battery pack or a AC Power adapter)
   Insert a cassette. (see page 36)

2. Remove the Lens cover.

3. Set the **Power** switch to the **CAMERA**.
   - Open the LCD screen.
   - Set the **Mode** switch to the **TAPE**.
     Make sure that **STBY** is displayed.
   - If the write protection tab of the cassette is open(set to save), **STOP** and **Protection!** will be displayed.
     Release the write protection tab to record.
   - Make sure the image you want to record appears on the LCD screen or Viewfinder.
   - Make sure the battery level indicates that there is enough remaining power for your expected recording time.

4. To start recording, press the **Start/Stop** button.
   - The **REC** ● is displayed on the LCD screen.

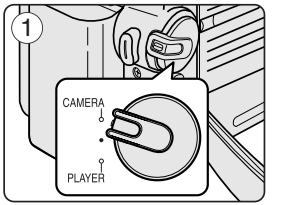
   To stop recording, press the **Start/Stop** button again.
   - The **STBY** is displayed on the LCD screen.

[Note]
Detach the Battery pack when you are finished recording to prevent unnecessary battery power consumption.

Basic Recording

Using EASY Q Mode (for Beginners)

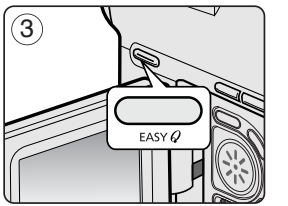
- ✤ The EASY Q mode works only in Camera mode.
- ✤ The EASY Q mode allows a beginner to easily make good recordings.



1. Set the **Power** switch to **CAMERA**.

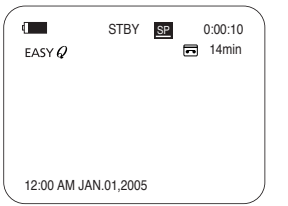
2. Set the **Mode** switch to **TAPE**. (SCD353/D354/D355 only)

3. By pressing the **EASY Q** button, all functions on the camera will be set to off and the recording settings will be set to the following basic modes:
   - Battery level, recording mode, counter, date/time, and DIS (☞) will be displayed.
   - The word **EASY Q** will appear on the LCD screen at the same time.
     However, the Date/Time will only be seen if it has been previously set. (see page 33)



4. Press the **Start/Stop** button to start recording.
   Recording will begin using the basic automatic settings.

5. Press the **EASY Q** button again in the **STBY** mode and then turn the EASY Q mode off.
   - The EASY Q function will not turn off while you are recording.
   - The camera will return to the settings that were set prior to activating EASY Q mode.



[Notes]

- In EASY Q mode, certain functions are not available, such as Menu, BLC, AF/MF.
  If you want to use these functions, you must first switch the EASY Q mode off.
- The EASY Q mode settings are deleted when the Battery pack is uninstalled from the Camcorder and therefore, they must be reset when a Battery pack has been replaced.
- EASY Q mode will not turn off during a recording.

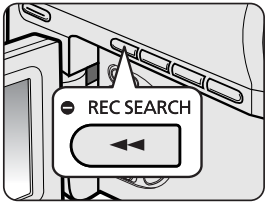
Basic Recording

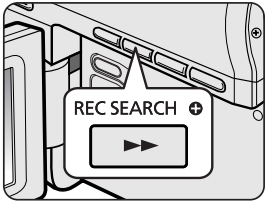
When a cassette is loaded and the Camcorder is left in the STBY mode for more than 5 minutes without being used, it will switch off automatically.
To use it again, press the Start/Stop button or set the Power switch to Off and then back to CAMERA.
This auto power off feature is designed to save battery power.

Record Search (REC SEARCH)

- You can view a recording using the **REC SEARCH +, -** function in **STBY** mode.
  REC SEARCH - enables you to play the recording backwards and
  REC SEARCH + enables you to play it forwards, for as long as you keep each button pressed down.

- If you press the **REC SEARCH -** button in **STBY** mode, your Camcorder will play in reverse for 3 seconds and return to the original position automatically.



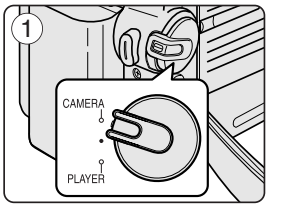


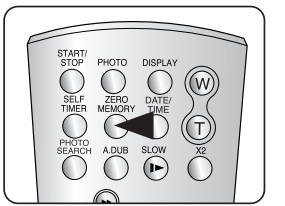
[Note]
Mosaic shaped distortion may appear on the screen while in Record Search mode.

Basic Recording

Setting the Zero Memory (SCD354/D355 only)

- ✤ The ZERO MEMORY function works in both Camera and Player modes.
- ✤ You can mark a point on a tape that you want to return to following playback.





1. Set the **Power** switch to **CAMERA** or **PLAYER**.

2. Set the **Mode** switch to **TAPE**. (SCD353/D354/D355 only)

3. Press the **ZERO MEMORY** button on the remote control before the recording or during playback at the point you wish to return.
   - The time code is changed to a tape counter that is set to zero memory with the **M 0:00:00** (Zero memory indicator).
   - If you want to cancel the zero memory function, press the **ZERO MEMORY** button again.

4. Finding the zero position.
   - When you have finished playback, fast forward or rewind the tape.
     The tape stops automatically when it reaches the zero position.
   - When you have finished recording, press the **Power** switch on the **PLAYER** and press the ◀◀ (REW) button.
     The tape stops automatically when it reaches the zero position.

5. The tape counter with the **M** (Zero memory indicator) disappears from the display and the tape counter is changed to the time code.

[Notes]

- In the following situations, ZERO MEMORY mode may be canceled automatically:
  - At the end of the section marked with the ZERO MEMORY function.
  - When the tape is ejected.
  - When you remove the Battery pack or power supply.
- The ZERO MEMORY may not function correctly where there is a break between recordings on the tape.

Basic Recording

Self Record using the Remote Control (SCD354/D355 only)

When you use the Self Timer function on the remote control, the recording begins automatically in 10 seconds.

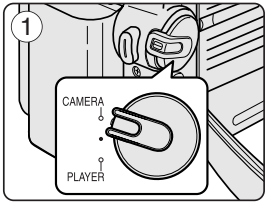
1. Set the **Power** switch to **CAMERA**.

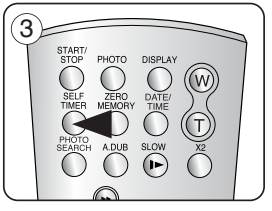
2. Set the **Mode** switch to **TAPE** or **MEMORY CARD**.

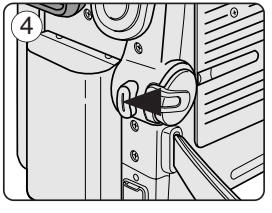
3. Press the **SELF TIMER** button until the appropriate indicator is displayed in the LCD screen.

4. Press the **Start/Stop** button to start the timer.
   - Self Timer starts counting down from 10 with a beep sound.
   - In the last one second of the countdown, the beep sound gets faster, then recording starts automatically.
   - If you want to cancel the Self Timer function before recording, press the **SELF TIMER** button.

5. Press the **Start/Stop** button again when you wish to stop recording.







[Notes]

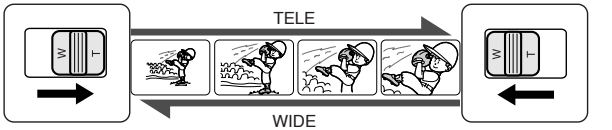
- Do not obstruct the remote control sensor by putting obstacles between the remote control and Camcorder.
- The remote control range is 4 ~5m (13 ~17 ft).
- The effective remote control angle is up to 30 degrees left /right from the center line.
- Using a tripod is recommended for delayed recording.

Basic Recording

Zooming In and Out

- ✤ The Zoom function works in both Camera and M.Cam modes.
- ✤ Zooming is a recording technique that lets you change the size of the subject in a scene. For more professional looking recordings, do not use the Zoom function too often.
- ✤ You can zoom using variable zoom speeds.
- ✤ Use these features for different shots. Please note that over-use of the Zoom feature can lead to unprofessional looking results and a reduction of battery usage time.

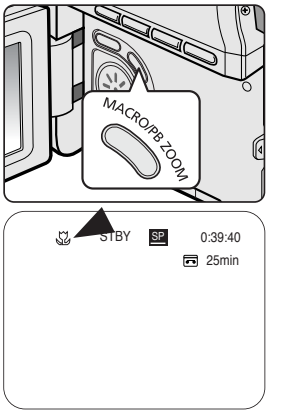
1. Move the Zoom lever slightly for a gradual zoom, move it further for a high-speed zoom.
   - ■ Your zooming is monitored on the OSD.
2. T(Telephoto) side: Subject appears closer.
3. W(Wide angle) side: Subject appears farther away.
   - ■ You can record a subject that is about 10mm (about 0.5 inch) away from the lens surface in the Wide position.



Using the Tele Macro

- ✤ Tele Macro Function works in both Camera and M.Cam mode.
- ✤ Effective focal distance in tele macro mode is 50 Cm (19.7 inches) ~ 100 Cm (39.4 inches).

1. Press the **MACRO** button.
   - ■ Tele Macro Icon ( ) will be displayed.
2. If you want to cancel the Tele Macro function, press the **MACRO** button again.



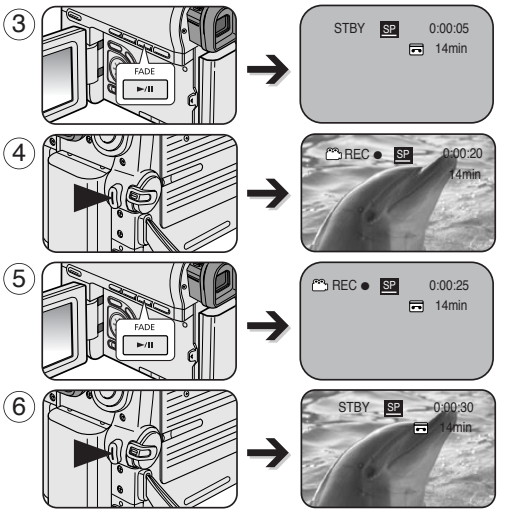
[Notes]

- ■ When recording in Tele Macro mode, the focus speed may be slow.
- ■ When you operate the Zoom function in the Tele Macro mode, then the recording subject maybe out of focus.
- ■ Use a tripod to prevent hand shake in the Tele Macro mode.
- ■ Avoid shadows when recording in the Tele Macro mode.
- ■ As the distance to the subject decreases, focusing area narrows.
- ■ When you can not get proper focus, use the Zoom lever.

Basic Recording

Using the Fade In and Out

- ✤ The FADE function works only in Camera mode.
- ✤ You can give your recording a professional look by using special effects such as fade in at the beginning of a sequence or fade out at the end of a sequence.



To Start Recording

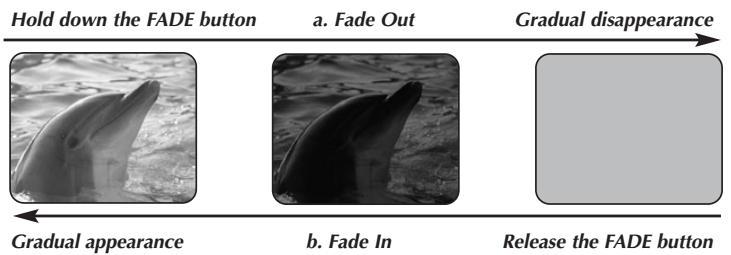
1. Set the **Power** switch to **CAMERA**.
2. Set the **Mode** switch to **TAPE**. (SCD353/D354/D355 only)
3. Before recording, hold down the **FADE** button.
   ■ The picture and sound gradually disappear (fade out).
4. Press the **Start/Stop** button and at the same time release the **FADE** button.
   Recording starts and the picture and sound gradually appear (fade in).

To Stop Recording (use Fade In/Fade Out)

5. When you wish to stop recording, hold down the **FADE** button.
   ■ The picture and sound gradually disappear (fade out).
6. When the picture has disappeared, press the **Start/Stop** button to stop recording.

a. Fade Out
(Approx. 4 seconds)

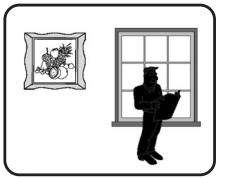
b. Fade In
(Approx. 4 seconds)



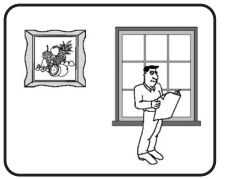
Basic Recording

Using Back Light Compensation Mode (BLC)

- ✤ BLC works in both Camera and M.Cam modes.
- ✤ Back lighting exists when the subject is darker than the background:
  - The subject is in front of a window.
  - The person to be recorded is wearing white or shiny clothes and is placed against a bright background; the person's face is too dark to distinguish his/her features.
  - The subject is outdoors and the background is overcast.
  - The light sources are too bright.
  - The subject is against a snowy background.



<BLC off>



<BLC on>

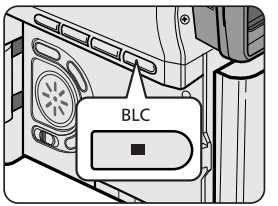
1. Set the **Power** switch to **CAMERA**.

2. Set the **Mode** switch to **TAPE** or **MEMORY CARD**. (SCD353/D354/D355 only)

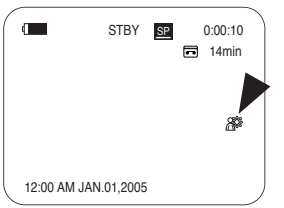
3. Press the **BLC** button.
   - BLC icon ( ) will be displayed.

4. To exit BLC mode, press the **BLC** button again.
   - Each press of the **BLC** button toggles: Normal → BLC → Normal.

3



4



[Notes]

- When NITE PIX to set to ON, the BLC function does not work. (SCD352/D354/D355 only)
- The BLC function will not operate in EASY Q mode.

Basic Recording

Using the Color Nite Shutter

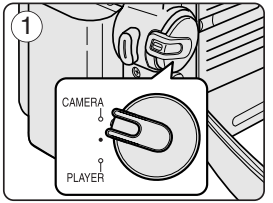
- ✤ COLOR NITE SHUTTER function works only in Camera mode.
- ✤ Shutter speed can be controlled, allowing you to record slow moving objects.
- ✤ COLOR NITE SHUTTER function may product a brighter image.

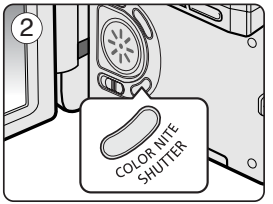
1. Set the **Power** switch to **CAMERA**.

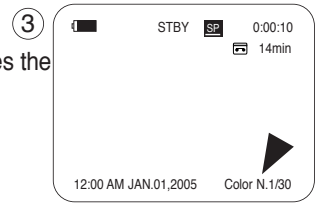
2. Set the **Mode** switch to **TAPE**. (SCD353/D354/D355 only)

3. Press the **COLOR NITE SHUTTER** button.

4. Each time you press the **COLOR NITE SHUTTER** button, shutter speed is changed to **Color N. 1/30**, **Color N. 1/15**, **Color N. 1/15**( ) (SCD352/D354/D355 only) and off.







[Notes]

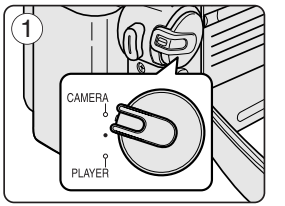
- When using COLOR NITE SHUTTER the image takes on a slow motion like effect.
- The COLOR NITE SHUTTER function will not operate in EASY Q mode.
- While using the COLOR NITE SHUTTER function, you cannot use the following functions: Program AE, DIS, Digital Zoom, Shutter Speed, Exposure, 16:9 wide (among of the Digital Effect function).
- When using the COLOR NITE SHUTTER function, the focus is adjusted slowly and sometimes the the screen, this is not a fault.

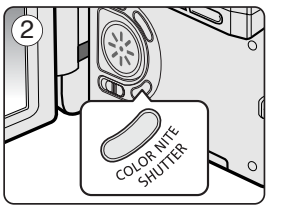
Basic Recording

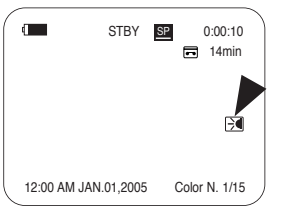
Using the Color Nite Shutter with LED Light (SCD352/D354/D355 only)

- ✤ LED light enables you to record a subject in dark places without sacrificing color.
- ✤ The LED light can be used with COLOR NITE SHUTTER function only.

1. Set the **Power** switch to **CAMERA**.
2. Set the **Mode** switch to **TAPE**. (SCD353/D354/D355 only)
3. Press the **COLOR NITE/LED LIGHT** button until **Color N. 1/15** ( ) appears on the display.







[Note]
The range of the LED light is limited (up to 6.6ft (2m))

Danger

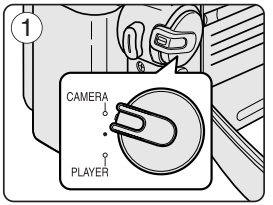
- The LED light can become extremely hot.
- Do not touch it while in operation or soon after turning it off, otherwise serious injury may result.
- Do not place the Camcorder into the carrying case immediately after using the LED light, since it remains extremely hot for some time.
- Do not use near flammable or explosive materials.

Basic Recording

Nite Pix (0 lux recording) (SCD352/D354/D355 only)

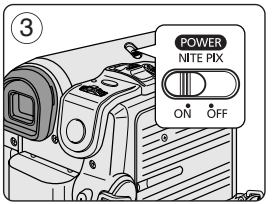
✤ The Nite Pix function works in both Camera and M.Cam modes.
✤ The Nite Pix function enables you to record a subject in darkness.

1. Set the **Power** switch to **CAMERA**.

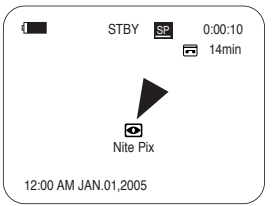


2. Set the **Mode** switch to **TAPE** or **MEMORY CARD**. (SCD353/D354/D355 only)

3. Slide the **NITE PIX** switch to **ON.**
   - Nite Pix indicator ( ) appears on the LCD screen.
   - The infrared(invisible rays) light is turned on automatically.



4. To cancel the Nite Pix function, slide the **NITE PIX** switch to **OFF**.



[Notes]

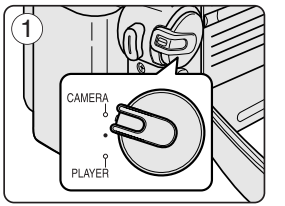
- The maximum recording distance using the infrared light is about 3 m (about 10 feet).
- If you use the Nite Pix function in normal recording situations (ex. outdoors by day), the recorded picture may be tinted green.
- In the Nite Pix mode, certain functions are not available, such as Exposure, White Balance, Program AE, Digital Effect and BLC.
- If focusing is difficult with the auto focus mode when using the Nite Pix function, focus manually.
- Do not cover the Infrared Light with the hand.
- Do not set the NITE PIX to ON in bright lighting. It might damage the CCD (Charge Coupled Device).

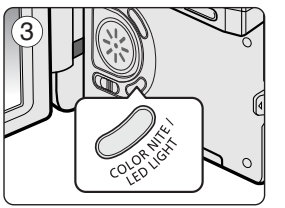
Basic Recording

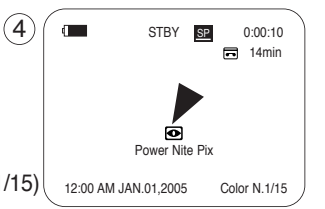
Power Nite Pix (SCD352/D354/D355 only)

- ✤ The Power Nite Pix function works only in Camera mode.
- ✤ The Power Nite Pix function can record a subject more brightly in darkness than the Nite Pix function.
- ✤ The Power Nite Pix is displayed for three seconds by LCD screen if you press the COLOR NITE SHUTTER button in state that a NITE PIX switch is turned ON.
- ✤ When you work in Power Nite Pix mode, Power Nite Pix icon appears on the LCD screen continuously.

1. Set the **Power** switch to **CAMERA**.
2. Set the **Mode** switch to **TAPE**. (SCD353/D354/D355 only)
3. Turn on the **NITE PIX** switch, and then press the **COLOR NITE SHUTTER** button.
4. Press the **COLOR NITE SHUTTER** button to set shutter speed.
   - The slow shutter function enables you to record a subject more brightly.
5. When using Power Nite Pix the image takes on a slow motion like effect.
6. To cancel the Power Nite Pix function, press the **COLOR NITE SHUTTER** button to set to off and then turn off the **NITE PIX** switch.







[Notes]

- The maximum recording distance using the infrared light is about 3 m (about 10 feet).
- If you use the Power Nite Pix function in normal recording situations (ex. outdoors by day), the recorded picture may contain unnatural colors.
- In the Power Nite Pix mode, certain functions are not available, such as Exposure White Balance, Program AE, Digital Effect and BLC.
- When the subject is too bright, press the COLOR NITE SHUTTER button (Color N.1/30 → Color N.1/15) to obtain better quality recordings.

Advanced Recording

Use of various Functions

Setting menu items

Main Menu	Sub Menu	Functions	Available mode				Page
			Camera	Player	M·Cam ①	M·Player ①	
Camera	Program AE	Selecting the Program AE Function	✔				63, 64
	White Balance	Setting White Balance	✔		✔		59
	Digital Effect	Setting the Digital special effect	✔				65, 66
	DIS	Selecting the Digital Image Stabilizing	✔				61
	Digital Zoom	Selecting Digital Zoom	✔				67
Tape	Photo Search	Searching pictures recorded in Tape		✔			68
	Photo Copy	Copying still images from a cassette to Memory card		✔			78
	Audio Select	Selecting the Audio playback channel		✔			103
Record	Rec Mode	Selecting the recording speed	✔	✔			54
	Audio Mode	Selecting Sound Quality for recording	✔	✔			55
	Wind Cut	Minimizing wind noise	✔	✔			56
	AV In/Out ②	Selecting the AV input/output		✔			76
Memory ①	Memory Type ③	Selecting the memory type		✔	✔	✔	87
	Photo Quality	Selecting Image Quality			✔		88, 89
	M.Play Select	Selecting Storage Media (Photo, Movie) to playback				✔	100, 101
	Delete	Deleting Files				✔	96, 97
	Delete All	Deleting All files				✔	96
	Protect	Preventing Accidental Erasure				✔	94, 95
	Print Mark	Print images recorded on a Memory Card				✔	106, 107
	Copy To ③	Copying the image of Memory card to int. memory				✔	104
	Format	Formatting the Memory Card				✔	98
	File No.	File Naming Options			✔		90

(①): SCD353/D354/D355 only
(②): SCD355 only
(③): SCD354/D355 only

Advanced Recording

Main Menu	Sub Menu	Functions	Available mode				Page
			Camera	Player	M·Cam ①	M·Player ①	
Display	LCD Bright	Setting the Brightness tone of the LCD screen	✔	✔	✔	✔	32
	LCD Color	Setting the Color tones of the LCD screen	✔	✔	✔	✔	32
	Date/Time	Setting the Date and Time	✔	✔	✔	✔	33
	TV Display	Selecting OSD on/off of TV	✔	✔	✔	✔	34
System	Clock Set	Setting the time	✔	✔	✔	✔	27
	Remote ③	Using the remote control	✔	✔	✔	✔	28
	Beep Sound	Setting the Beep sound	✔	✔	✔	✔	29
	Shutter Sound ①	Setting the Shutter sound		✔	✔		30
	USB Version ④	Setting the USB Version	✔	✔	✔	✔	51
	USB Connect ④	Setting the USB				✔	105
	Language	Selecting the OSD language	✔	✔	✔	✔	26
	Demonstration	Demonstration	✔				31

(①): SCD353/D354/D355 only
(③): SCD354/D355 only
(④): SCD352/D353/D354/D355 only

Advanced Recording

Availability of functions in each mode

Operating Mode \ Requested Mode	Digital functions				Digital Effects	NITE PIX
	DIS	Digital Zoom	PHOTO (TAPE)	SLOW SHUTTER		
DIS		O	O	△	O	O
Digital Zoom	O		O	* △	O	O
PHOTO	×	×		×	×	O
Digital Effects	O	O	O	O		△
NITE PIX (☆)	O	O	O	O	×	

O : The requested mode will work in this operating mode.
× : You can not change the requested mode.
△ : The operating mode will be released and the requested mode will work.
* : The operating mode will be released and the requested mode will work.
(operating mode data will be backed up.)
(☆): This Function works on models SCD352/D354/D355 only.

[Notes]

- When a menu item on the LCD screen is marked with an ☒, that item cannot be activated.
- When you select an item that cannot be changed, an error message will be displayed.

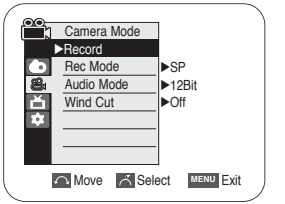
Advanced Recording

Selecting the Record Mode

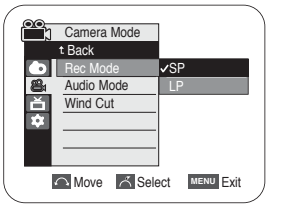
- ✤ The Rec Mode function works in both Camera and Player(DV IN) modes.
- ✤ This Camcorder records and plays back in SP (standard play) mode and in LP (long play) mode.
  - SP (standard play): This mode permits 60 minutes of recording time with a DVM60 tape.
  - LP (long play): This mode permits 90 minutes of recording time with a DVM60 tape.

1. Set the **Power** switch to **CAMERA** or **PLAYER**.
2. Set the **Mode** switch to **TAPE**. (SCD353/D354/D355 only)
3. Press the **MENU** button.
   - The menu list will appear.
4. Move the **Menu selector** to the left or right to select **Record**, then press the **Menu selector**.
5. Move the **Menu selector** to the left or right to select **Rec Mode**, then press the **Menu selector**.
6. Move the **Menu selector** to the left or right to select desired record mode(**SP** or **LP**), then press the **Menu selector**.
7. To exit, press the **MENU** button.

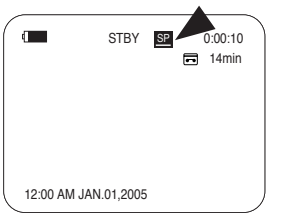
4



6



7



[Notes]

- We recommend that you use this Camcorder to play back any tapes recorded on this Camcorder. Playing back a tape recorded in other equipments may produce mosaic shaped distortion.
- When you record a tape in SP and LP modes, or LP mode only, the playback picture may be distorted or the time code may not be written properly between scenes.
- Record using SP mode for best picture and sound quality.

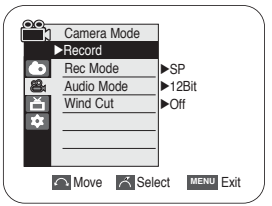
Advanced Recording

Selecting the Audio Mode

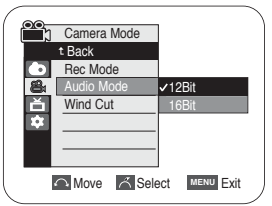
- ✤ The Audio Mode function works in both Camera and Player modes.
- ✤ This Camcorder records sound in two ways. (12bit, 16bit)
  - 12bit: You can record two 12bit stereo sound tracks.
    The original stereo sound can be recorded onto the Main (Sound1) track.
    Additional stereo sound can be dubbed onto the Sub (Sound2) track.
  - 16bit: You can record one high quality stereo sound using the 16bit recording mode.
    Audio dubbing is not possible when using this mode.

1. Set the **Power** switch to **CAMERA** or **PLAYER**.
2. Set the **Mode** switch to **TAPE**. (SCD353/D354/D355 only)
3. Press the **MENU** button.
   ■ The menu list will appear.
4. Move the **Menu selector** to the left or right to select **Record**, then press the **Menu selector**.
5. Move the **Menu selector** to the left or right to select **Audio Mode**, then press the **Menu selector**.
6. Move the **Menu selector** to the left or right to select desired audio mode(**12Bit** or **16Bit**), then press the **Menu selector**.
7. To exit, press the **MENU** button.

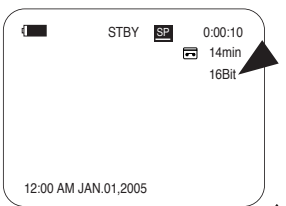
4



6



7



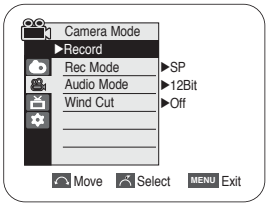
Advanced Recording

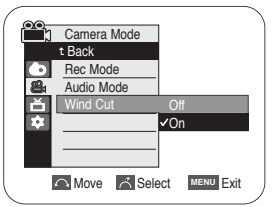
Cutting Off Wind Noise (Wind Cut)

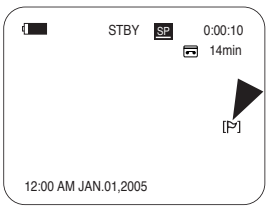
✤ The Wind Cut function works in both Camera and Player (Audio dubbing) modes.
Use the Wind Cut when recording in windy places such as the beach or near buildings.

✤ The Wind Cut function minimizes wind noise or other noise while recording.
- When the wind cut is on, some low sounds are eliminated along with the sound of the wind.

1. Set the **Power** switch to **CAMERA** or **PLAYER**.
2. Set the **Mode** switch to **TAPE**. (SCD353/D354/D355 only)
3. Press the **MENU** button.
   ■ The menu list will appear.
4. Move the **Menu selector** to the left or right to select **Record**, then press the **Menu selector**.
5. Move the **Menu selector** to the left or right to select **Wind Cut**, then press the **Menu selector**.
6. To activate the Wind Cut function, move the **Menu selector** to the left or right to select **On**. And then press the **Menu selector**.
   ■ [⚐] is shown in the LCD screen when you turn the Wind Cut On.
7. To exit, press the **MENU** button.

4


6


7


[Notes]

■ Make sure Wind Cut is set to off when you want the microphone to be as sensitive as possible.
■ When the Wind Cut function is set to On, low pitched tones might be eliminated along with the wind noise.

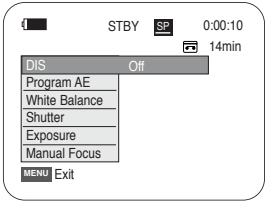
Advanced Recording

Setting the Shutter Speed & Exposure

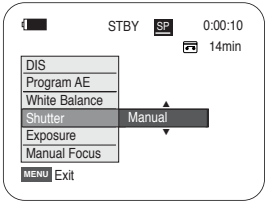
- ✤ You can set Shutter Speed only in Camera mode.
- ✤ The Exposure function works in both Camera and M.Cam modes.
- ✤ Shutter Speed and Exposure values can only be set in the Quick Menu.

1. Set the **Power** switch to **CAMERA**.
2. Set the **Mode** switch to **TAPE**. (SCD353/D354/D355 only)
3. Press the **Menu selector**.
   - Quick menu list will appear.
4. Move the **Menu selector** to the left or right to select **Shutter** or **Exposure**, then press the **Menu selector**.
5. Move the **Menu selector** to the left or right to select **Manual**, then press the **Menu selector**.
6. Move the **Menu selector** to the left or right to select desired shutter speed or exposure, then press the **Menu selector**.
   - Shutter speed can be set to **1/60**, **1/100**, **1/250**, **1/500**, **1/1000**, **1/2000**, **1/4000** or **1/10000**.
   - Exposure value can be set between **00** and **29**.
7. To exit, press the **MENU** button.

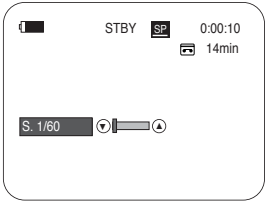
3



5



6



Recommended Shutter Speeds when Recording

- ✤ Outdoor sports such as golf or tennis: 1/2000 or 1/4000.
- ✤ Moving cars or trains or other rapidly moving vehicles such as roller coasters: 1/1000, 1/500 or 1/250
- ✤ Indoor sports such as basketball: 1/100

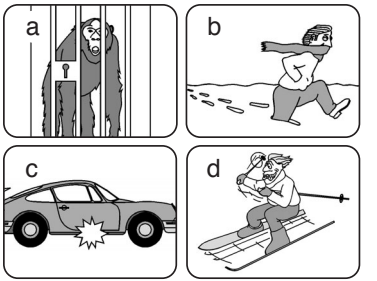
[Notes]

- If you want to use the selected Shutter Speed and Exposure value, you should begin the recording with the Shutter Speed and the Exposure adjustment screens displayed on the LCD screen.
- If you manually change the Shutter Speed and the Exposure value when Auto-exposure option is selected, manual changes are applied first.
- The image may not seem as smooth when a high Shutter Speed is set.
- The Camcorder returns to the auto shutter setting and auto exposure setting when you set the NITE PIX to ON, or change to the EASY Q modes. (SCD352/D354/D355 only)
- When recording with a Shutter Speed of 1/1000 or higher, make sure the sun is not shining into the lens.

Advanced Recording

Auto Focus/Manual Focus

- ✤ The Auto Focus/Manual Focus function works in both Camera and M.Cam mode.
- ✤ In most situations, it is better to use the automatic focus feature, as it enables you to concentrate on the creative side of your recording.
- ✤ Manual focusing may be necessary under certain conditions that make automatic focusing difficult and/or unreliable. Manual Focus can be set in the Quick Menu.



Auto Focusing

- ✤ If you are inexperienced in the use of Camcorders, we recommend that you make use of Auto Focus.

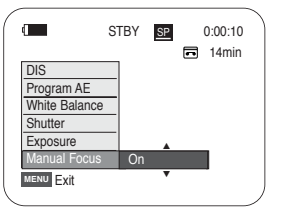
Manual Focusing

- ✤ In the following situations, you may obtain better results by adjusting the focus manually.

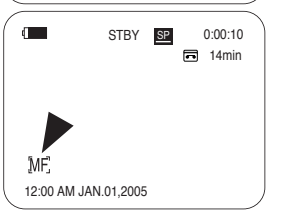
a. A picture containing several objects, some close to the Camcorder, others further away.
b. A person enveloped in fog or surrounded by snow.
c. Very shiny or glossy surfaces like a car.
d. People or objects moving constantly or quickly like an athlete or a crowd.

1. Set the **Power** switch to **CAMERA**.
2. Set the **Mode** switch to **TAPE** or **MEMORY CARD**. (SCD353/D354/D355 only)
3. Press the **Menu selector**.
4. Move the **Menu selector** to the left or right to select **Manual Focus**, then press the **Menu selector**.
5. Move the **Menu selector** to the left or right to select **On**, then press the **Menu selector**. M.Focus(MF) will display.
6. Move the **Menu selector** to the left or right until the object is in focus.

4



5



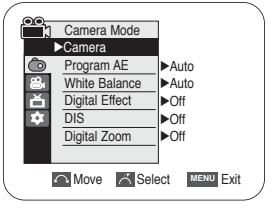
[Note]
Manual Focus is not available in the EASY Q mode.

Advanced Recording

Setting the White Balance

- ✤ The White Balance function works in both Camera and M.Cam mode.
- ✤ The White Balance is a recording function that preserves the unique image color of the object in any recording condition.
- ✤ You may select the appropriate White Balance mode to obtain good quality color of the image.
  - ■ Auto (A): This mode is generally used to control the White Balance automatically.
  - ■ Hold ( ):This fixes the current White Balance value.
  - ■ Indoor ( ): This controls the White Balance according to the indoor ambience.
    - Under halogen or studio/video lighting
    - Subject is of one dominant color
    - Close up
  - ■ Outdoor ( ): This controls the White Balance according to the outdoor ambience.
    - In daylight, especially for close up and where the subject is of one dominant color.

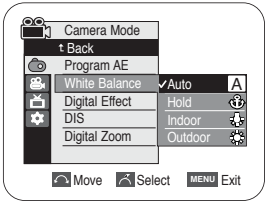
4



1. Set the **Power** switch to **CAMERA**.

2. Set the **Mode** switch to **TAPE** or **MEMORY CARD**. (SCD353/D354/D355 only)

6

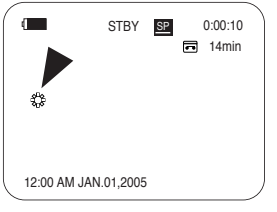


3. Press the **MENU** button.
   - ■ The menu list will appear.

4. Move the **Menu selector** to the left or right to select **Camera**, then press the **Menu selector**.

5. Move the **Menu selector** to the left or right to select **White Balance**, then press the **Menu selector**.

7



6. Move the **Menu selector** to the left or right to select desired mode(**Auto**, **Hold**, **Indoor** or **Outdoor**), then press the **Menu selector**.

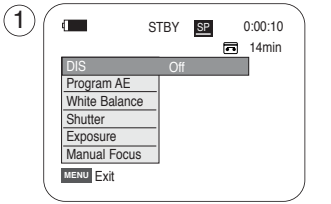
7. To exit, press the **MENU** button.

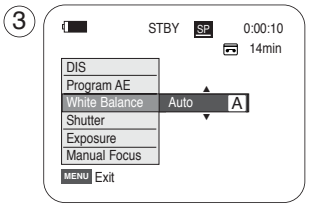
Advanced Recording

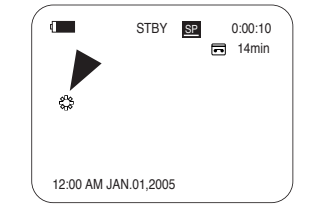
Using Quick Menu: White Balance

- ✤ Quick menu is used to access Camcorder functions by simply using the **Menu selector**.
- ✤ Quick menu provides easier access to the frequently used menus without using the Menu button.

1. Press the **Menu selector**.
2. Move the **Menu selector** to the left or right to select **White Balance**, then press the **Menu selector**.
3. Move the **Menu selector** to the left or right to select desired mode(**Auto**, **Hold**, **Indoor** or **Outdoor**), then press the **Menu selector**.







[Notes]

- When NITE PIX is set to ON, the White Balance function does not work. (SCD352/D354/D355 only)
- The White Balance function will not operate in EASY Q mode.
- Turn the Digital Zoom off (if necessary) to set a more accurate white balance.
- Reset the white balance if lighting conditions change.
- During normal outdoor recording, setting to Auto may provide better results.