



SAMSUNG

User Manual

High Definition Digital Camcorder

www.samsung.com/register

HMX-H200BP/HMX-H200SP/HMX-H200LP/HMX-H200RP
HMX-H203BP/HMX-H203SP/HMX-H203LP/HMX-H203RP
HMX-H204BP/HMX-H204SP/HMX-H204LP/HMX-H204RP
HMX-H205BP/HMX-H205SP/HMX-H205LP/HMX-H205RP
HMX-H220BP/HMX-H220SP/HMX-H220LP/HMX-H220RP

key features of your full HD camcorder

High Sensitive BSI CMOS Sensor

BSI CMOS Sensor is a image sensor newly developed by Samsung. You can get much clearer images in lower lighting condition as this sensor doubles the light sensitivity and reduces the light loss compared with the normal CMOS sensor.

Normal CMOS



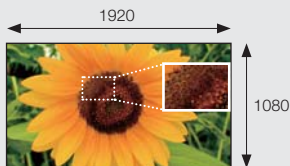
BSI CMOS



Full HD 1080 Viewing Performance

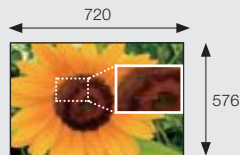
This camcorder uses advanced H.264 compression technology to realise the clearest video quality. Its full HD resolution displays your pictures clearer than normal standard (SD)-quality pictures.

High-Definition (Full HD)



<Wide Full HD Camcorder (1080i/16:9)>

Standard-Definition (SD)



<Standard Digital Camcorder (576p)>

SSD (Solid State Drive) Adopted as Built-in Storage Media (HMX-H203/H204/H205 only)

SSD based on flash memory has been adopted as internal memory for the camcorder. SSD helps the camcorder boot, read data and operate the software much faster than normal HDD (Hard Disk Drive).

Also, SSD is very stable, durable and makes less noise while in operation. It is environment-friendly because low electric power is required.

Touch panel adopted

You can play recorded images and set functions by simply tapping on the LCD screen.

Dual Recording

While recording full HD videos, you can capture still images with the simple operation of a button. Capture still images and save them to the storage.

Shooting Custom Scenes

In Scene mode, appropriate options are already set for each scene so that you can select any of them for easy shooting.



Shift over wider range of motion with Smart OIS (Optical Image Stabilization)

Smart OIS improves on existing Optical Image Stabilization by allowing the camcorder lens to shift over wider range of motion in wide/tele zoom position. This allows the camcorder to compensate for greater degrees of camcorder shake and deliver a stunning level of image smoothness.

Magic Finger Focus, Magic Finger Shot

To focus on a subject, just touch the screen and shoot. Your camcorder optimizes the focus for the touched point, enabling you professional results with this simple operation. You can also focus on your subject and take a photo with a touch of your finger.



Smart Auto with Self-Decision on Situation

In Smart Auto mode, your camcorder automatically chooses the appropriate camcorder settings based on a detected type of scene. It will be helpful if you are not familiar with the camcorder settings for various scenes.

Time Lapse Recording Catches the Moment

You can record a long scene in short intervals. Record artistic, documentary videos including the passage of clouds, blooming flowers, etc. Use this function to make UGC (User-Generated Contents) videos, educational programmes or for other various purposes.



Make All Your Recordings with a Simple tVIEW Button!

This function provides the preview of storyboard to be printed, which gives you digest of the recorded video without viewing the whole sequence of it.

Make a digest of Your Video with Storyboard Printing!

This function captures 16 still images arbitrarily from the selected video and saves them into the storage media. It presents a quick overview of your video, helping you to understand the overall topic.



Direct Upload of Your Videos to the Web!





The built-in editing Intelli-studio software installs directly from this camcorder to your PC, enabling convenient connection only with a USB cable. Intelli-studio also allows direct uploading of your contents to YouTube, Flickr, or Facebook. Sharing the contents with your friends is simpler than ever before.



before reading this user manual

SAFETY WARNINGS

What the icons and signs in this user manual mean;

 WARNING	Means that there is a potential risk of death or serious injury.
 CAUTION	Means that there is a potential risk of personal injury or damage to the product.
 CAUTION	To reduce the risk of fire, explosion, electric shock, or personal injury when using your camcorder, follow these basic safety precautions.
	Means hints or referential pages that may be helpful when operating the camcorder.

These warning signs are here to prevent injury to you and others. Please follow them explicitly. After reading this section, keep it in a safe place for future reference.

PRECAUTIONS

Warning!

- This camcorder should always be connected to an AC outlet with a protective grounding connection.
- Batteries shall not be exposed to excessive heat such as sunshine, fire or the like.

Caution

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

To disconnect the apparatus from the mains, the plug must be pulled out from the mains socket, therefore the mains plug shall be readily operable.

IMPORTANT INFORMATION ON USE

Before using this camcorder

- **This camcorder records video in H.264 (MPEG4 part10/AVC) format and in High Definition Video (HD-VIDEO) or Standard Definition Video (SD-VIDEO).**
- **Please note that this camcorder is not compatible with other digital video formats.**
- **Before recording important video, make a trial recording.**
Play back your trial recording to make sure the video and audio have been recorded properly.
- **The recorded contents cannot be compensated for:**
 - Samsung cannot compensate for any damage caused when a recording cannot be played back because of a defect in the camcorder or memory card.
Samsung cannot be responsible for your recorded video and audio.
 - Recorded contents may be lost due to a mistake when handling this camcorder or memory card, etc. Samsung shall not be responsible for compensation for damages due to the loss of recorded contents.
- **Make a backup of important recorded data.**
Protect your important recorded data by copying the files to a PC. We also recommend you to copy it from your PC to other recording media for storage. Refer to the software installation and USB connection guide.
- **Copyrights: Please note that this camcorder is intended for individual use only.**
Data recorded on the storage media in this camcorder using other digital/analogue media or devices is protected by the copyright act and cannot be used without permission of the owner of the copyright, except for personal enjoyment.

Even if you record an event such as a show, performance or exhibition for personal enjoyment, it is strongly recommended that you obtain permission beforehand.

About this user manual

Thank you for purchasing this Samsung Camcorder. Please read this user manual carefully before you use the camcorder and keep it handy for future reference. Should your camcorder fail to operate correctly, refer to Troubleshooting.

This User Manual covers HMX-H200, HMX-H220, HMX-H203, HMX-H204, and HMX-H205 models.

- The HMX-H203, HMX-H204, and HMX-H205 have a 8GB, 16GB, and 32GB built-in storage media (SSD) respectively but also use memory cards.
- The HMX-H200/H220 do not have built-in storage media (SSD) and use memory cards. Although some features of HMX-H200/H220 models are different, they operate in the same way.
- Illustrations of model HMX-H200 are used in this user manual.
- The displays in this user manual may not be exactly the same as those you see on the LCD screen.
- Designs and specifications of the camcorder and other accessories are subject to change without any notice.
- In this user manual, the icon or symbol in the parenthesis appearing in a description of a submenu item indicates it will appear on the screen when setting the corresponding item.
Ex) Submenu item of **"Video Quality"**
 - ➡ page 54
 - **"Super Fine"** (📺): Records in the Super Fine quality. (If set, corresponding icon (📺) will appear on the screen.)

before reading this user manual

The following terms are used in this manual:

- ‘Scene’ refers to the point where you press the **Record Start/Stop** button to start recording until you press again to pause the recording.
- The terms ‘photo’ and ‘still image’ are used interchangeably with the same meaning.

For Open Source License information, refer to the “OpenSource-H200.pdf” in the provided CD-ROM.



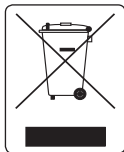
Correct disposal of batteries in this product

(Applicable in the European Union and other European countries with separate battery return systems)

This marking on the battery, manual or packaging indicates that the

batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.



Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other

household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

Notes regarding trademarks

- 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.
- The SD logo is a trademark. The SDHC logo is a trademark.
- Microsoft®, Windows®, Windows Vista® and DirectX® are either registered trademarks or trademarks of the Microsoft Corporation in the United States and/or other countries.
- Intel®, Core™, and Pentium® are the registered trademarks or trademarks of the Intel Corporation in the United States and other countries.
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- Flickr™ is a trademark of Yahoo.
- Facebook is a trademark of Facebook Inc.
- HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
- Adobe, the Adobe logo, and Adobe Acrobat are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- All the other product names mentioned here in may be the trademark or registered trademarks of their respect companies. Furthermore, “TM” and “®” are not mentioned in each case in this manual.

safety information

The safety precautions illustrated below are to prevent personal injury or material damages. Heed all instructions carefully.



WARNING

Means that there is a potential risk of serious personal injury.



CAUTION

Means that there is a potential risk of personal injury or damage to the product



Prohibited action.



Do not disassemble the product.



Unplug from the power supply.



Do not touch the product.



This precaution must be kept.



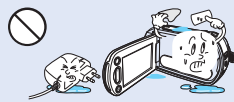
WARNING



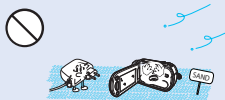
Do not overload outlets or extension cords as this may result in abnormal heat or fire.



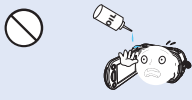
Using the camcorder at temperatures over 60°C (140°F) may result in fire. Keeping the battery at a high temperature may cause an explosion.



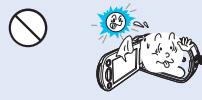
Do not allow water or metal and inflammable matter to enter the camcorder or AC power adaptor. Doing so may pose a fire hazard.



No sand or dust! Fine sand or dust entering the camcorder or AC power adaptor could cause malfunctions or defects.



No oil! Oil entering the camcorder or AC power adaptor could cause electric shock, malfunctions or defects.



Do not aim the camcorder directly into the sun. Doing so could cause eye injuries, as well as lead to malfunctioning of internal parts of the product.



Do not bend the powercord or damage the AC power adaptor by pressing on it with a heavy object. There may be a risk of fire or electric shock.

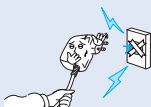


Do not disconnect the AC adaptor by pulling on its power-cord, as this could damage the power-cord.



Do not use the AC adaptor if it has damaged, split or broken cords or wires. Doing so may cause fire or electric shock.

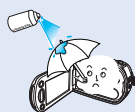
safety information



Do not connect the AC adaptor unless the plug can be fully inserted with no part of the blades exposed.



Do not dispose of battery in a fire as it may explode.



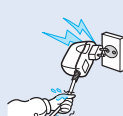
Never use cleaning fluid or similar chemicals. Do not spray cleaners directly on the camcorder.



Keep the camcorder away from water when used near the beach or pool or when it rains. There is a risk of malfunction or electric shock.



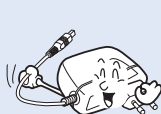
Keep the used lithium battery or memory card out of the reach of children. If the lithium battery or memory card is swallowed by children, consult physician immediately.



Do not plug or unplug the power cord with wet hands. There is a risk of electric shock.



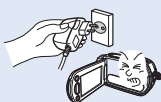
Keep the power-cord unplugged when not in use or during lightning storms. There is a risk of fire.



When cleaning the AC adaptor, unplug the power-cord. There is a risk of malfunction or electric shock.



If the camcorder makes an abnormal sound, or smell or smokes, unplug the power-cord immediately and request service from a Samsung service centre. There is a risk of fire or personal injury.

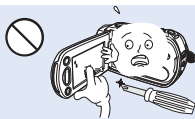


If the camcorder malfunctions, immediately detach the AC adaptor or battery from the camcorder. There is a risk of fire or injury.

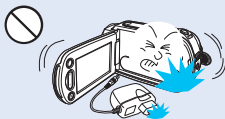


Do not attempt to disassemble, repair, or reform the camcorder or the AC adaptor to avoid a risk of fire or electric shock.

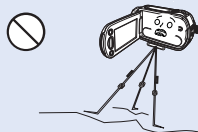
! CAUTION



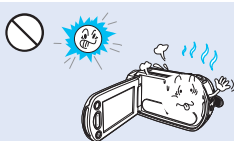
Do not press the surface of the LCD with force, or hit it with a sharp object. If you push the LCD surface, display unevenness may occur.



Do not drop or expose the camcorder, battery, AC adaptor or other accessories to severe vibrations or impact. This may cause a malfunction or injury.



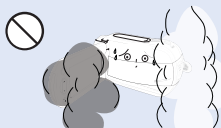
Do not use the camcorder on a tripod (not supplied) in a place where it is subject to severe vibrations or impact.



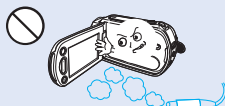
Do not use the camcorder near direct sunlight or heating equipment. This may cause a malfunction or injury.



Do not leave the camcorder in a closed vehicle for a long time, where the temperature is very high.



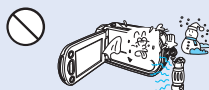
Do not expose the camcorder to soot or steam. Thick soot or steam could damage the camcorder case or cause a malfunction.



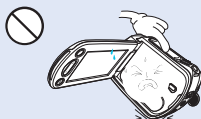
Do not use the camcorder near dense exhaust gas generated by gasoline or diesel engines, or corrosive gas such as hydrogen sulphide. Doing so may corrode the external or internal terminals, disabling normal operation.



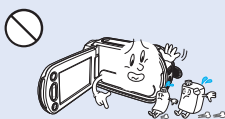
Do not expose the camcorder to insecticide. Insecticide entering the camcorder could fail the product to operate normally. Turn the camcorder off and cover it with vinyl sheet, etc. before using insecticide.



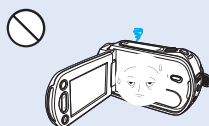
Do not expose the camcorder to sudden changes in temperature or a humid place. There is also a risk of defect or electric shock when using outdoors during lightning storms.



Do not place the camcorder with the open LCD screen down



Do not wipe the camcorder body with benzene or thinner. The exterior coating could peel off or the case surface could deteriorate.

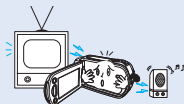


Do not leave the LCD screen open when not using the camcorder.

safety information



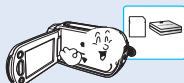
Do not hold the camcorder by the LCD monitor when lifting it. The LCD screen could detach and the camcorder may fall.



Do not use the camcorder near TV or radio: This could cause noise on the TV screen or to radio broadcasts.



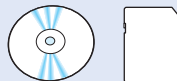
Do not use the camcorder near strong radio waves or magnetism such as speakers and a large motor. Noise could enter video or audio that are being recorded.



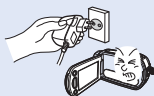
Use Samsung-approved accessories only. Using products from other manufacturers may cause overheating, fire, explosion, electric shock or personal injuries caused by abnormal operation.



Place the camcorder on a stable surface and a place with ventilation openings.



Keep important data separately. Samsung is not responsible for data loss.



Use the mains plug where it can be readily operable. If any problem occurs with the product, the mains plug must be removed to disconnect power completely. Turning off the power button on the product does not completely disconnect the power.

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quick start guide

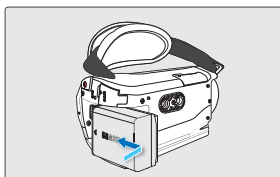
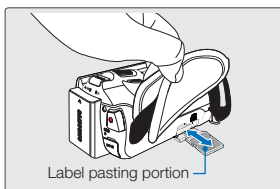
This quick start guide introduces the basic operation and features of your camcorder. See the reference pages for more information.

You can record videos in H.264 format!

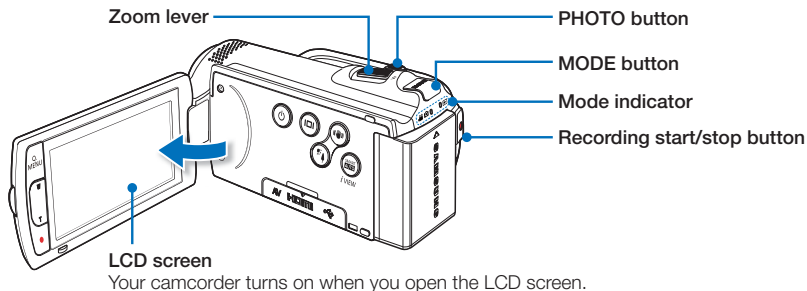
You can record videos in H.264 format that is convenient to email and share with your friends and family. You can also take photos with your camcorder.

STEP1: Get ready

1. Insert a memory card.
 - You can use commercially available SDHC (SD High Capacity) or SD memory cards with this camcorder.
 - Set the appropriate storage media.
↳ page 27 (HMX-H203/H204/H205 only)
2. Attach the battery to the camcorder. ↳ page 16
 - Align the battery with the indicator (▲) on the battery compartment, push the battery toward the arrow direction.



STEP2: Record with your camcorder



quick start guide

Recording videos with HD (high definition) image quality

Your camcorder uses advanced H.264 compression technology to realise the clearest video quality. ➡ page 54

1. Open the LCD screen.
 - Your camcorder turns on when you open the LCD screen.
2. Press the **Recording start/stop** button.
 - To stop recording, press the **Recording start/stop** button.



Recording photos

1. Open the LCD screen.
2. Press the **PHOTO** button lightly to adjust the focus, then press it fully (a shutter click sounds).



Tip Using 'Quick On STBY' by opening/closing the LCD screen. ➡ page 82

When you close the LCD screen during standby, your camcorder goes to Quick On STBY mode (power saving mode). You can start recording quickly when you open the LCD screen.







- Your camcorder is compatible with H.264 format "[HD]1080/50i" which provides highly detailed, beautiful images.
- The default setting is "[HD]1080/50i". You can also record with SD (standard definition) video quality.
- You can also take photos while recording videos. ➡ page 36

STEP3: Play back videos or photos

Viewing the LCD screen of your camcorder

You can find your desired recordings quickly by using the thumbnail index view.

1. Touch the Play () tab on the screen in STBY mode.
2. Touch the thumbnail (  ) tab, then touch the desired image.



Viewing on a high definition TV

- You can enjoy HD (high definition) videos. ➡ pages 102~103



You can also play back videos on a SD (standard definition) image quality TV.
➡ pages 104~105

STEP4: Save recorded videos or photos

Simple and fun! Enjoy the various features of Intelli-studio on your Windows computer.

Using the Intelli-studio programme built in your camcorder, you can import videos/photos onto your computer, edit or share the videos/photos with your friends. For details, see pages 110~114.



quick start guide

Importing and viewing videos/photos from the camcorder to your PC

1. Launch the Intelli-studio programme by connecting the camcorder to your PC via USB cable.
 - A new file saving screen appears with the Intelli-studio main window. Click **"Yes"**, the uploading procedure will start.
2. The new files are saved to your PC and registered to **"Contents Manager"** on the Intelli-studio programme.
 - You can arrange the files by different options such as Date, Location, etc.
3. You can double-click on the file you would like to start playback.



Sharing the videos/photos onto YouTube/Flickr/FaceBook

Share your contents with the world, by uploading videos and photos directly to web site with one click.

Click **"Share"** → **"Upload"** tab on the browser. ↪ page 113



The Intelli-studio runs automatically once the camcorder is connected to a Windows computer (when you specify **"PC Software: On"**). ↪ page 83

STEP5: Delete videos or photos

If the storage media is full, you cannot record new videos or photos. Delete videos or photos data that has been saved on a computer from the storage media. Then you can record new videos or photos on newly freed up space.

Touch the Play (⏮) tab → Menu (MENU) tab → **"Delete"** on the LCD screen. ↪ page 97

getting to know the camcorder

WHAT'S INCLUDED WITH YOUR CAMCORDER

Your new camcorder comes with the following accessories. If any of these items is missing from your box, call Samsung's Customer Care Centre.



Model name	Internal memory	Colour	Memory card slot	LCD screen	Lens
HMX-H200BP/HMX-H200SP HMX-H200LP/HMX-H200RP HMX-H220BP/HMX-H220SP HMX-H220LP/HMX-H220RP	-	Black/ Silver/ Blue/ Red	1 slot	Colour / Touch panel	20x (Optical) 200x (Digital)
HMX-H203BP/HMX-H203SP HMX-H203LP/HMX-H203RP	8GB				
HMX-H204BP/HMX-H204SP HMX-H204LP/HMX-H204RP	16GB				
HMX-H205BP/HMX-H205SP HMX-H205LP/HMX-H205RP	32GB				

- Although some features of the models are different, they operate in the same way.

Checking your accessories



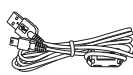
Battery
(IA-BP210E)



AC power adaptor
(AA-MA9 type)



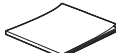
**Component/
AV cable**



USB cable



User manual CD



Quick start guide

Optional accessories



Mini HDMI cable



Memory card



Carrying case

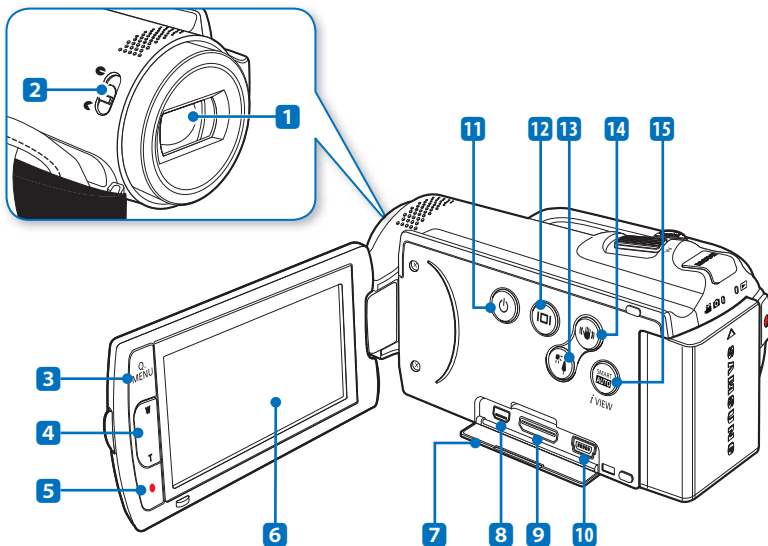


- The exact appearance of each item may vary by model.
- The contents may vary depending on the sales region.
- Parts and accessories are available for purchase at your local Samsung dealer. SAMSUNG is not responsible for reduced battery life time or malfunctions caused by any unauthorised use of accessories such as the AC power adaptor or the batteries.
- A memory card is not included. See page 29 for memory cards compatible with your camcorder.
- Your camcorder includes the user manual CD and quick start guide (printed).

getting to know the camcorder

LOCATION OF CONTROLS

Front/Left

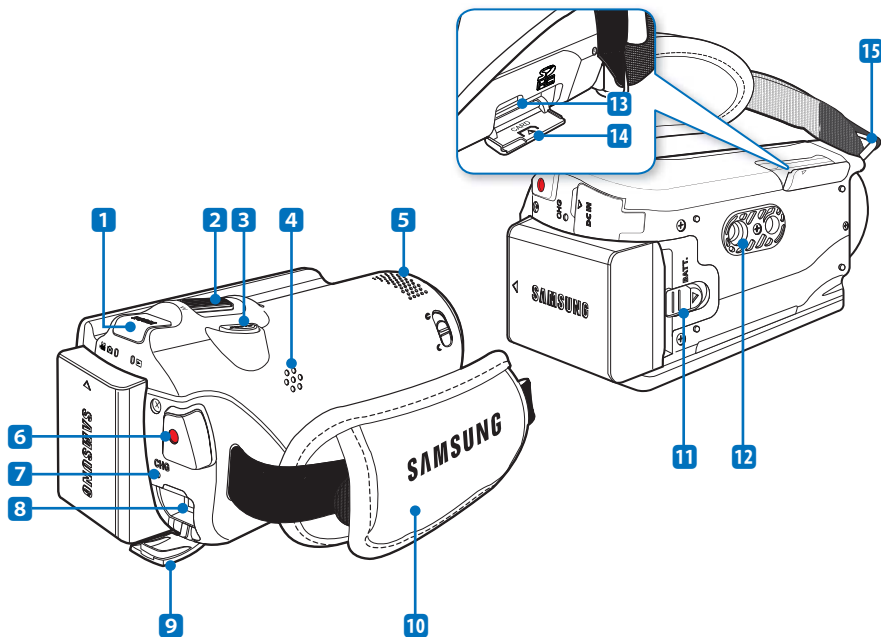


1	Lens	9	HDMI jack
2	Lens open/close switch	10	USB jack
3	Q.MENU button	11	Power (⏻) button
4	Zoom (W/T) button	12	Display (⏮) button
5	Recording start/stop button	13	Backlight (⏭) button
6	TFT LCD screen (Touch screen)	14	Anti-shake (OIS) (⏮) button
7	Jack cover (AV HDMI USB)	15	SMART AUTO / iVIEW button
8	Component/AV jack		



During a recording, be careful not to block the internal microphone and lens.

Rear/Right/Top/Bottom



- 1 MODE button / Mode indicator
 [Video/Photo icon]: Record mode (Video/Photo)
 [Play icon]: Play mode

2 Zoom (W/T) lever

3 PHOTO button

4 Built-in speaker

5 Internal microphone

6 Recording start/stop button

7 Charging (CHG) indicator

8 DC IN jack

9 Jack cover

10 Grip belt

11 Battery release switch

12 Tripod receptacle

13 Memory card slot

14 Memory card cover

15 Grip belt hook

getting to know the camcorder

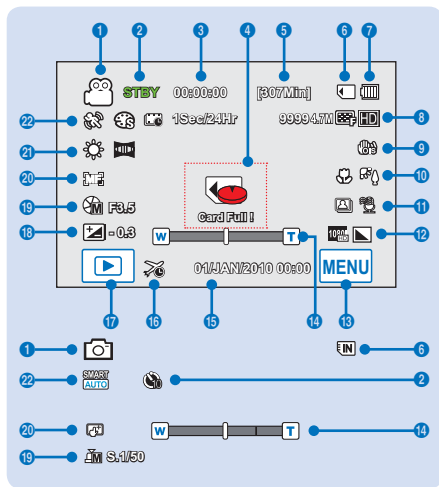
IDENTIFYING THE SCREEN DISPLAYS

The available functions vary depending on the selected operation mode, and different indicators appear depending on the setting values.

PRECHECK!

- This On Screen Display (OSD) is shown in the record (📹📷) mode only.
- Select the record mode by pressing the **MODE** button. ➡ page 23

Record mode



- 1 Record mode (Video/Photo)
- 2 Operating status (STBY (standby) / (recording)) / Self Timer*
- 3 Time counter (video recording time)
- 4 Warning indicators and messages
- 5 Remaining recordable time
- 6 Storage media (Memory card or internal memory (HMX-H203/H204/H205 only))
- 7 Battery info. (remaining battery level)
- 8 Image counter (total number of recordable photo images), Photo Resolution, Video Quality, Video Resolution
- 9 Anti-shake (OIS)
- 10 Tele Macro*, Back light
- 11 Cont. Shot, Wind cut
- 12 Analogue TV Out (when component/AV cable is connected), Photo sharpness
- 13 Menu tab
- 14 Optical zoom / Digital zoom bar
- 15 Date/Time
- 16 Time Zone (visit)
- 17 Play tab
- 18 EV (Exposure Value)*
- 19 Manual aperture* / Manual shutter*
- 20 Manual focus* / Touch Point*
- 21 White Balance, Fader*
- 22 iSCENE / Smart Auto, Digital Effect, Time Lapse REC*

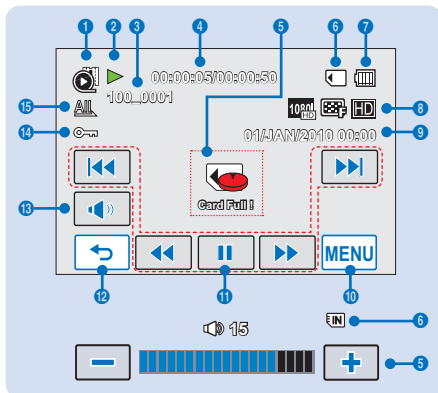


- Functions marked with * will not be retained when the camcorder is powered back on.
- The on-screen indicators are based on an 32GB SDHC memory card capacity.
- The above screen is illustrated for explanation purposes and may differ from the actual display.
- For warning indicators and messages, see pages 117~120
- The above illustrated items and their positions can be changed without notice for the purpose of better performance.
- The total number of recordable photos is counted based on available space on the storage media.
- The maximum number of recordable photo images on the On Screen Display (OSD) is "9999."
- This camcorder provides one record mode which combines the video and photo record modes. You can easily record videos or photos in the same mode without having to change it.

PRECHECK!

- This On Screen Display (OSD) is shown in video play (HD/SD) mode only.
- Select the Play () tab on the LCD screen to select the play mode. ➔ page 23

Video play mode



- 1 Video play mode
- 2 Operating status (play/pause)
- 3 File name (file number)
- 4 Playback time/recorded time
- 5 Warning indicators and messages/Volume control
- 6 Storage media (Memory card or internal memory (HMX-H203/H204/H205 only))
- 7 Battery info.(remaining battery level)
- 8 Analogue TV Out (when component/AV cable is connected), Video Quality, Video Resolution
- 9 Date/Time
- 10 Menu tab
- 11 Playback control tabs (skip/search/play/pause/slow playback)
- 12 Return tab
- 13 Volume tab
- 14 Protect
- 15 Play Option

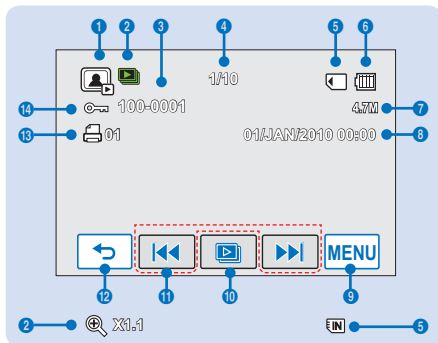


- The playback control tabs disappear a few seconds after a video playback. Touch anywhere on the screen to display them again.
- For warning indicators and messages, see pages 117~120

PRECHECK!

- This On Screen Display (OSD) is shown in photo play () mode only.
- Select the Play () tab on the LCD screen to select the play mode. ➔ page 23

Photo play mode

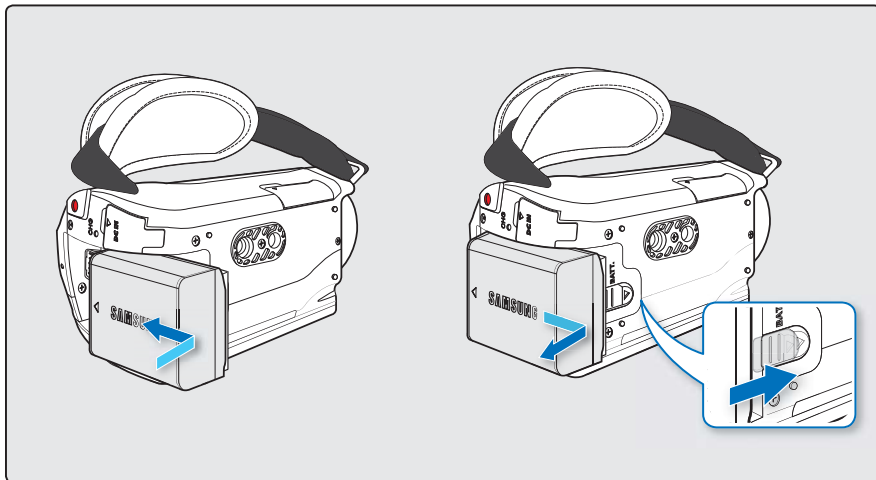


- 1 Photo play mode
- 2 Slide show/Playback zoom (X1.1 ~ X8.0)
- 3 File name (file number)
- 4 Image counter (current image/total number of recorded images)
- 5 Storage media (Memory card or internal memory (HMX-H203/H204/H205 only))
- 6 Battery info. (remaining battery level)
- 7 Photo Resolution
- 8 Date/time
- 9 Menu tab
- 10 Slide show playback tab
- 11 Previous image, Next image tab
- 12 Return tab
- 13 Print Mark
- 14 Protect

getting started

USING THE BATTERY

Purchase extra batteries to allow continuous use of your camcorder.



Attaching the battery

Align the battery with the indicator (▲) on the battery compartment, push the battery toward the arrow direction.

Detaching the battery

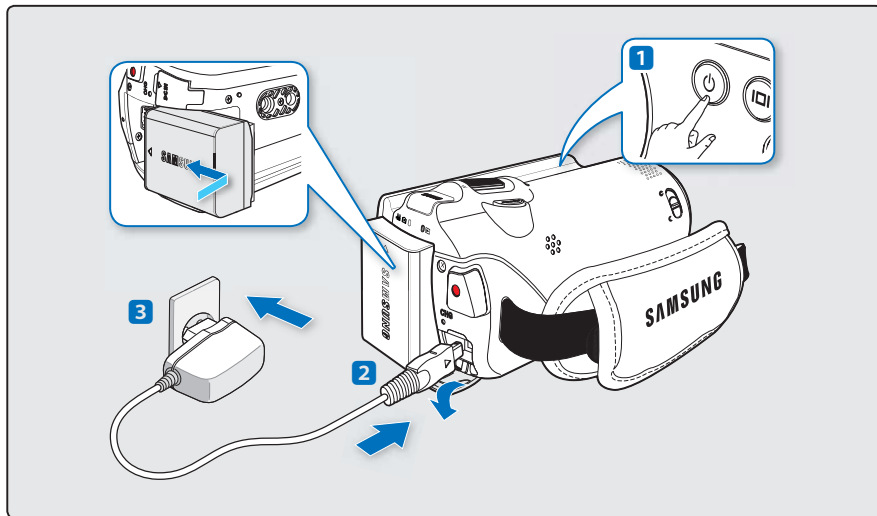
Slide the **Battery release** switch and pull out the battery.

- Gently slide the **Battery release** switch in the direction as shown in the figure.



- Use only Samsung-approved batteries. Do not use batteries from other manufacturers. Otherwise, there is a danger of overheating, fire or explosion.
- Samsung is not responsible for problems occurring due to using unapproved batteries.
- Detach the battery from the camcorder with care preventing from falling it.

Charging the battery with the AC power adaptor



PRECHECK!

Before starting the following procedure, make sure that the battery is attached in your camcorder.

1. Press the **Power** (⏻) button to turn off the camcorder and then close the LCD screen.
↳ page 21
2. Open the jack cover and connect the AC power adaptor to the DC IN jack.
3. Connect the AC power adaptor to a wall socket.
 - The charging (CHG) indicator lights up and charging starts. After the battery is fully charged, the charging (CHG) indicator turns green.



- The battery is not charged during the power saving mode, which may keep the mode indicator on or flashing. Start charging the battery after turning off the camcorder by pressing the **Power** (⏻) button.
- It is recommended you to have one or more additional batteries to allow continuous use of your camcorder.

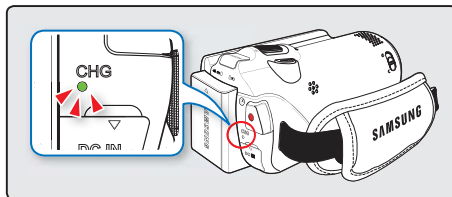
getting started

CHECKING THE BATTERY STATE

You can check the charging state and remaining battery capacity.





To check the charging state

The colour of the LED indicates the power or charging state.









Charging (CHG) indicator

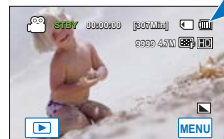
The colour of the charging indicator shows the charging state.

Charging state	Charge			
	Fully discharged	Charging	Fully charged	Error
LED colour	 (Red)	 (Orange)	 (Green)	 (Red blink)

Battery level display

The battery level display shows the amount of battery power remaining in the battery.

Battery level indicator	State	Message
	Fully charged	-
	25~50% used	-
	50~75% used	-
	75~95% used	-
	95~98% used	-
	Exhausted (flickers): The device will soon turn off. Change the battery as soon as possible.	-
-	The device will be forced to turn off after 3 seconds.	"Low Battery"





- Above figures are based on a fully charged battery at a normal temperature. Low ambient temperature may affect the use time.
- Battery capacity decreases over time and through repeated use. Keep the camcorder turned off while not operating it.
- Store the battery separately when finished charging or when not using it for a long time. This will help extend the life of the battery.

Available running time for the battery

Battery type	IA-BP210E	
Charging time	Approx. 180min.	
Video resolution	HD	SD
Continuous recording time	Approx. 120min.	Approx. 130min.
Playback time	Approx. 160min.	Approx. 180min.

(Unit: minutes.)

- Charging time: Approximate time (min.) required when you fully charge a completely exhausted battery.
- Recording/Playback time: Approximate time (min.) available when you fully charged the battery. 'HD' stands for high definition image quality, and 'SD' stands for standard image quality.

About battery

- The battery should be recharged in an environment that is between 32°F (0°C) and 104°F (40°C). However, when it is exposed to cold temperatures (below 32°F (0°C)), its usage time reduces and it may cease to function. If this happens, place the battery in your pocket or other warm, protected place for a short time, then re-attach it.
- Do not put the battery near any heat source (i.e. fire or a heater).
- Do not disassemble, apply pressure to, or heat the battery.
- Do not allow battery terminals to be short-circuited. It may cause leakage, generate heat, or cause fire.

Maintaining the battery

- The recording time is affected by temperature and environmental conditions.
- We recommend only using the original battery that is available from your Samsung retailer. When the battery reaches the end of its life, please contact your local dealer. The batteries have to be dealt with as chemical waste.
- Make sure that the battery is fully charged before starting to record.
- To preserve battery power, keep your camcorder turned off when you are not operating it.
- Even when the power is switched off, the battery will still discharge if it is left attach on the camcorder. It is recommended that you remove the battery from the camcorder.
- If the battery is not used for a long time, fully charge the battery and use it up on your camcorder once per 6 months to maintain proper function. To store the battery, remove it from your camcorder and put it in a dry, cool place.

getting started

About the battery life

- Battery capacity decreases over time and through repeated use. If decreased usage time between charges becomes significant, it is probably time to replace it with a new one.
- Each battery's life is affected by storage, operating and environmental conditions.

About the running time

- Times measured when using the camcorder at 25°C (77°F). As the environmental temperature and conditions vary, the actual battery time may differ from the approximate times given in the table.
- The recording and playback time will be shorter depending on the conditions under which you use your camcorder. In actual recording, the battery may discharge 2-3 times faster than this reference, since the Record start/stop and Zoom are being operated, and playback is performed. Assume that the recordable time with a fully charged battery is between 1/2 and 1/3 of the time in the table, so have enough batteries to allow for the time you are planning to record on the camcorder.
- The recording and playback time will be shorter when you use your camcorder in low temperatures.

On the battery

- The charging (CHG) indicator blinks during charging, or battery Info will not be correctly displayed under the following conditions:
 - The battery is not attached correctly.
 - The battery is damaged.
 - The battery is worn-out. (For the battery information only)

Using an AC power source

It is recommended that you use the AC power adaptor to power the camcorder from a household AC outlet when you perform settings on it, play back, or edit images, or use it indoors. Make the same connections as you do when charging the battery. ➡page 17

On the AC power adaptor

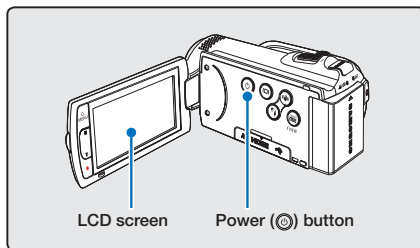
- Use a nearby wall outlet when using the AC power adaptor. Disconnect the AC power adaptor from the wall outlet immediately if any malfunction occurs while using your camcorder.
- Do not use the AC power adaptor placed in a narrow space, such as between a wall and furniture.
- Do not short-circuit the DC plug of the AC power adaptor or battery terminals with any metallic objects. This may cause a malfunction.
- Even if your camcorder is turned off, AC power is still supplied to it while connected to the wall outlet via the AC power adaptor.

basic operation of the camcorder

This chapter introduces you to the basic operation procedures of this camcorder, such as turning the power on/off, switching modes, and setting on-screen indicators.

TURNING YOUR CAMCORDER ON/OFF

1. Open the LCD screen to turn on the camcorder.
 - Your camcorder turns on automatically when you open the LCD screen.
2. To turn off the camcorder, press the **Power** (⏻) button for about one second.
 - Closing the LCD screen will not turn off the camcorder.
 - Set the date and time when using your camcorder for the first time. ➡page 25



- The camcorder operates the self-diagnosis function when powered on. If a warning message appears, refer to '**warning indicators and messages**' (pages 117~120) and take corrective action.
- If you close the LCD screen when the power is on, the power saving mode activates.

When using this camcorder for the first time

When you use your camcorder for the first time or reset it, the time zone screen appears for the start-up display. Select your geographical location and set the date and time. ➡page 25
If you do not set the date and time, the time zone screen appears every time you turn on the camcorder.

basic operation of the camcorder

SWITCHING TO THE POWER SAVING MODE

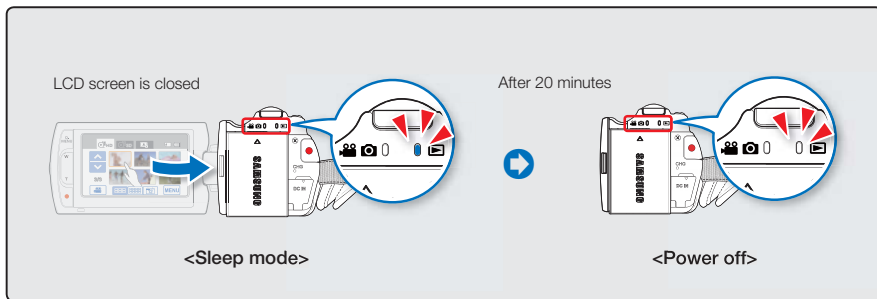
If you need to use camcorder for the extended time, the following functions enable you to prevent unnecessary energy consumption.

Quick On STBY Mode in the STBY mode

- The camcorder switches to "**Quick On STBY**" mode when the LCD screen is closed. ➡page 82

Sleep Mode in the play mode (includes the thumbnail index view)

- The camcorder switches to the sleep mode when the LCD screen is closed, and then if idle for more than 20 minutes, the camcorder turns off. However, if "**Auto Power Off: 5 Min**" is set, the camcorder turns off in 5 minutes.
- If you open the LCD screen or connect a cable to the camcorder during sleep mode, the sleep mode ends and returns back to the last used operation mode.



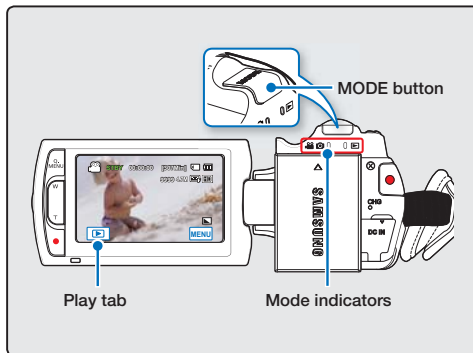
- **The power saving mode does not work in the following situations:**
 - When the camcorder has a cable connection. (USB, Component/AV, or AC power adaptor, etc.)
 - While recording, playback, or the slideshow is being operated.
 - When the LCD screen is opened.
- The camcorder consumes less battery power in the power saving mode. However, if you plan to use the camcorder for an extended time, it is recommended to turn off the camcorder by pressing the **Power** (⏻) button when not using it.

SETTING THE OPERATION MODES

You can switch the operating mode in the following order each time you press the **MODE** button.

Record mode (📹📷) ↔ Play mode (▶️).

- Each time the operation mode changes, the respective mode indicator lights on.
- Touching the Play (▶️) tab in the record mode switches the operation mode into the play mode.



Mode	Mode indicators	Functions
Record mode	📹📷	To record videos or photos.
Play mode	▶️	To play videos or photos, or edit them.



This camcorder provides one record mode which combines the video and photo record modes. You can easily record videos or photos in the same mode without having to change it.

basic operation of the camcorder

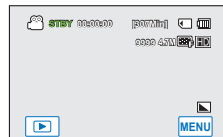
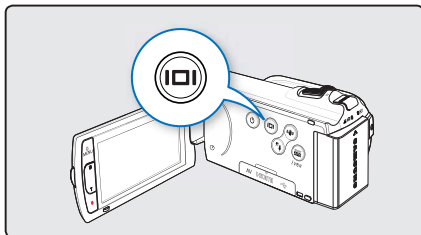
USING THE DISPLAY(II) BUTTON

Switching the information display mode

You can switch the on-screen information display mode.

Press the Display(II) button.

- The full and minimum display modes will alternate.



<Full display mode>



<Minimum display mode>



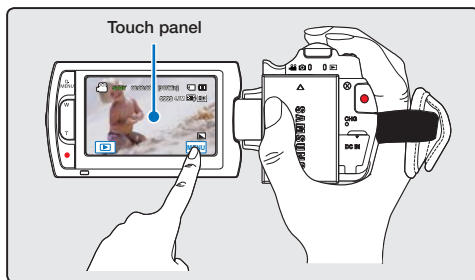
- The Warning indicators and messages may appear depending on the recording conditions.
- The **Display (II)** button does not work in the menu or quick menu screen.

USING THE TOUCH PANEL

The touch panel allows you to enjoy playback and recording with a simple touch of your finger. Place your hand on the rear side of the LCD screen to support it. Then, touch the items displayed on the screen.



- Do not place a protective film on the LCD screen.
- If a film is applied for a long while, strong cohesion on the surface of the screen may cause a malfunction of the touch panel.



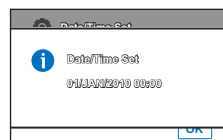
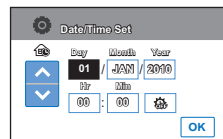
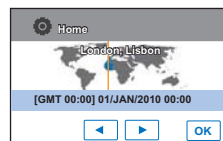
- Be careful not to accidentally press the buttons near the LCD panel while using the touch panel.
- The tabs and indicators that appear on the LCD screen depend on the current recording/playback status of your camcorder.

first time settings

SETTING THE TIME ZONE AND DATE/TIME FOR THE FIRST TIME

Set the date and time of your local area when turning on this camcorder for the first time.

1. Open the LCD screen to turn on the camcorder.
 - Your camcorder turns on automatically when you open the LCD screen.
 - The time zone ("**Home**") screen appears based on Lisbon, London (Greenwich Mean Time).
 - You can also set your current time zone from the "**Setting**" menu. ➤page 76
2. Select your local area on the map by touching the left (◀) or right (▶) tab on the LCD screen, then press the (OK) tab.
 - The "**Date/Time Set**" screen appears.
3. Touch the date and time information, and change the setting values by using the up (▲) or down (▼) tabs.
4. Make sure the clock is correctly set, then touch the (OK) tab.
 - The message "**Date/Time Set**" appears.



- The year can be set up to 2037, based on "**Home**" item.
- Set "**Date/Time Display**" to On. ➤page 78
- Activating the (⚙) icon forwards the time by 1 hour.

Built-in rechargeable battery

- Your camcorder includes a built-in rechargeable battery that retains the date and time settings even after the power is turned off.
- Once the battery is depleted, the previous date/time values are all reset to defaults, and you need to recharge the built-in rechargeable battery. The date/time must be set again.

Charging the built-in rechargeable battery

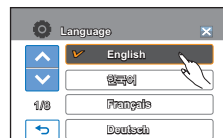
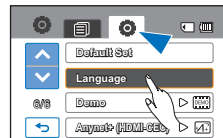
- The built-in battery is always recharged while your camcorder is connected to the AC power or while the battery is attached.
- If the camcorder is not in use for about 2 weeks without connecting to the AC power or attaching the battery, the built-in battery fully discharges. If this occurs, charge the built-in battery by connecting to the supplied AC adaptor for 24 hours.

first time settings

SELECTING THE LANGUAGES

You can select the language to display the menu screen or messages.
The language setting is retained when the camcorder is powered off.

1. Touch the Menu (MENU) → Setting (⚙️) tab.
2. Touch the up (⬆️)/down (⬇️) tab until “**Language**” is displayed.
3. Touch “**Language**,” then touch the desired OSD language.
4. Touch the Exit (⌂) or Return (↩️) tab to complete the setting.
 - The menu screen and messages are displayed in the selected language.



Submenu items

“English” → “한국어” → “Français” → “Deutsch” →
“Italiano” → “Español” → “Português” → “Nederlands” →
“Svenska” → “Suomi” → “Norsk” → “Dansk” →
“Polski” → “Čeština” → “Slovensky” → “Magyar” →
“Română” → “Български” → “Ελληνικά” → “Srpski” →
“Hrvatski” → “Українська” → “Русский” → “中文” →
“日本語” → “ไทย” → “Türkçe” → “ایرانی” →
“العربية” → “עברית”



- “Language” options may be changed without prior notice.
- Selected language is retained even without the battery or AC power adaptor.
- The date and time format may change depending on the selected language.

getting ready to start recording

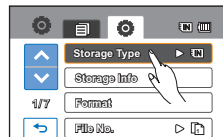
SELECTING THE STORAGE MEDIA (HMX-H203/H204/H205 ONLY)

You can record videos and photos on the internal memory or a memory card, so you should select the desired storage media before starting recording or playback.

PRECHECK!

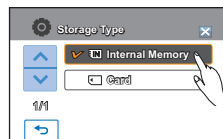
- You can use SD or SDHC cards on your camcorder. (Some cards are not compatible depending on the memory card manufacturer and memory card type.)
- Before inserting or ejecting the memory card, turn the camcorder off.

1. Touch the Menu (MENU) → Setting (⚙️) tab.
2. Touch the up (⬆️)/down (⬇️) tab until “Storage Type” is displayed.
3. Touch “Storage Type,” then touch the desired storage media.



Submenu items

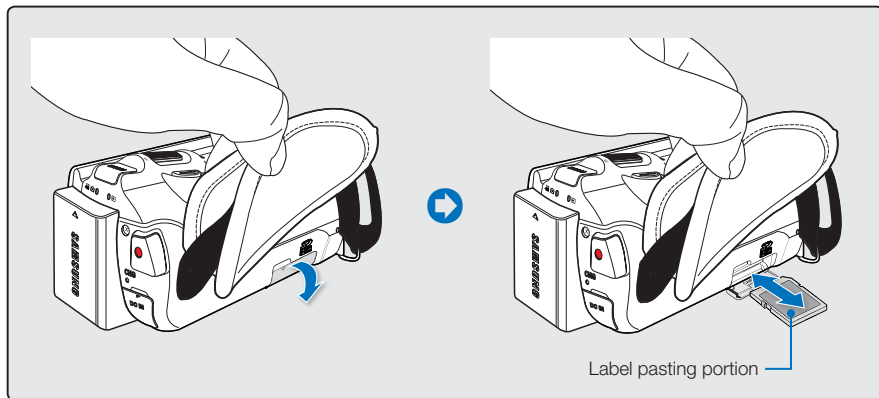
- **Internal Memory** (📁): When using the internal memory (SSD, Solid State Drive).
- **Card** (💳): When using the memory card (SD or SDHC card).



- Do not format the storage media (internal memory or memory card) on a PC.
- When you insert a memory card, the storage media setup screen appears. Touch “Yes” if you want to use a memory card, or “No” if not.
- Do not remove the power (battery or AC power adaptor) when accessing storage media for recording, playback, format, delete, etc. The storage media and its data may be damaged.
- Do not eject a memory card while it is being used in the camcorder. The memory card and its data may be damaged.
- You can also access it by using the Q.MENU button.
- SSD based on flash memory has been adopted as internal memory for the camcorder.

getting ready to start recording

INSERTING / EJECTING A MEMORY CARD (NOT SUPPLIED)



To insert a memory card

1. Open the memory card cover.
2. Insert the memory card into the card slot until it softly clicks.
 - Make sure that SD/SDHC card logo is facing up and the camcorder is placed as shown in the figure.
3. Close the memory card cover.

To eject a memory card

1. Open the memory card cover.
2. Gently push the memory card to eject it.
3. Close the memory card cover.



- To avoid the data loss, turn off the camcorder by pressing the **Power** (⏻) button for one second before inserting or ejecting the memory card.
- Be careful not to push the memory card too hard. The memory card may suddenly pop out.

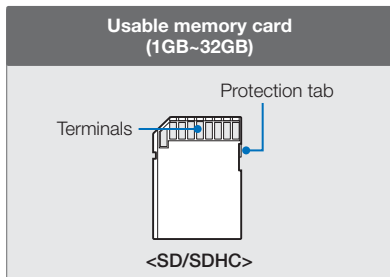


Your camcorder supports only SD (Secure Digital) and SDHC (Secure Digital High Capacity) cards. The compatibility with the camcorder may vary depending on manufacturers and types of the memory cards.

SELECTING A SUITABLE MEMORY CARD (NOT SUPPLIED)

Compatible memory cards

- This camcorder can be used with SD (Secure Digital) and SDHC (Secure Digital High Capacity) cards.
It is recommended to use an SDHC (Secure Digital High Capacity) card.
SD cards up to 2GB are supported with this camcorder. Normal operation is not guaranteed with SD cards bigger than 2GB.
- MMC (Multi Media Card) and MMC Plus are not supported.
- Compatible memory card capacity: SD 1 ~ 2GB, SDHC 4 ~ 32GB
- Use compatible memory card brands. Others are not guaranteed to work. Check the compatibility when buying a memory card.
 - SDHC/SD cards: Panasonic, SanDisk, TOSHIBA
- For video recording, use a memory card that supports faster write speeds (above SDHC Class 6 card).
- SD/SDHC memory cards have a mechanical write-protection switch. Setting the switch prevents accidental erasure of files recorded on the card. To enable writing, move the switch up in the direction of the terminals. To set write protection, move the switch down.



SDHC (Secure Digital High Capacity) cards

- SDHC (Secure Digital High Capacity) memory card
 - An SDHC card is a higher version (Ver.2.00) of SD card and supports capacity above 2GB.
 - Cannot be used with current SD enabled host devices.

Common cautions for memory cards

- Damaged data may not be recovered. It is recommended you make a back-up of important data separately on the hard disk of your PC.
- Turning the power off or removing a memory card during an operation such as formatting, deleting, recording, and playback may cause data loss.
- After you modify the name of a file or folder stored in the memory card using your PC, your camcorder may not recognise the modified file.

Handling a memory card

- It is recommended that you power off before inserting or removing the memory card to avoid data loss.
- It is not guaranteed that you can use a memory card formatted by other devices. Be sure to format your memory card using this camcorder.
- You have to format newly-purchased memory cards, memory cards with data that your camcorder cannot recognise or are saved by other devices. Note that formatting erases all data on the memory card.

getting ready to start recording

- If you cannot use a memory card that has been used with another device, format it with your camcorder. Note that formatting erases all information on the memory card.
- A memory card has a certain life span. If you cannot record new data, you have to purchase a new memory card.
- Do not bend, drop, or cause strong impact to the card.
- Do not place foreign substances on the memory card terminals. Use a soft dry cloth to clean the terminals if required.
- Do not paste anything other than label provided with the card on the label pasting section.
- Be careful to keep the memory card out of the reach of children, who might swallow it.

Notes on use

- Samsung is not responsible for data loss due to misuse.
- We recommend using a memory card case to avoid losing data from moving and static electricity.
- After a period of use, the memory card may get warm. This is normal and is not a malfunction.

The camcorder supports SD and SDHC memory cards for data storage preference!

The data storage speed may differ, according to the manufacturer and production system.

- SLC (single level cell) system: faster write speed enabled.
- MLC (multi level cell) system: only lower write speed is supported.

For best results, we recommend using a memory card that supports faster write speed.

Using a lower write speed memory card for recording video may cause difficulties when storing.

You may even lose your video data during the recording.

In an attempt to preserve any bit of the recorded video, the camcorder forcibly stores the video on the memory card and displays a warning:

“Low speed card. Please record at a lower resolution.”

If you are unavoidably using a low speed memory card, resolution and quality of the recording may be lower than the set value. ➡page 54

The higher the resolution and quality, the more memory will be used.



RECORDABLE TIME AND CAPACITY

Recordable time available for video

Resolution	Quality	Storage media (Capacity)					
		1GB	2GB	4GB	8GB	16GB	32GB
[HD]1080/50*	Super Fine	8min	15min	30min	61min	125min	253min
	Fine*	9min	18min	36min	74min	152min	307min
	Normal	12min	23min	46min	94min	193min	390min
[HD]720/50p	Super Fine	11min	21min	42min	86min	177min	357min
	Fine*	14min	28min	57min	115min	235min	475min
	Normal	21min	42min	84min	171min	351min	708min
[SD]576/50p	Super Fine	32min	63min	126min	254min	521min	1051min
	Fine*	42min	83min	166min	336min	688min	1387min
	Normal	62min	123min	244min	494min	1011min	2039min

(Unit: Approximate minutes of recording)

Recordable number of photos

Photo resolution	Storage media (Capacity)					
	1GB	2GB	4GB	8GB	16GB	32GB
2880x1620*	656	1251	2482	5014	9999	9999
1920x1080	1173	2346	4654	9402	9999	9999

(Unit: Approximate number of images)

1GB \approx 1,000,000,000 bytes : actual formatted capacity may be less as the internal firmware uses a portion of the memory.

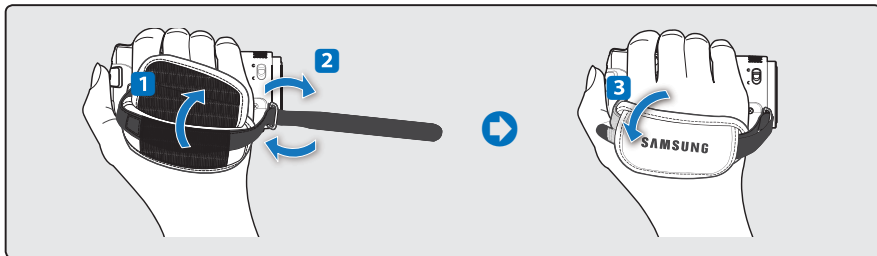


- The figures in the table may differ depending on the actual recording conditions and subject.
- The higher the quality and resolution, the more memory is used.
- Lower resolution and quality increases the recording time, but the image quality may suffer.
- The bit rate automatically adjusts to the recording image. Accordingly, the recording time may vary.
- Memory cards bigger than 32GB may not operate normally.
- When a video file exceeds 1.8GB, the next video file is created automatically.
- The maximum number of recordable photo and video files is 9999, respectively.
- The above items marked with * indicate the default setting.
- The recording length of a Time Lapse REC may vary depending on settings.

getting ready to start recording

ATTACHING THE GRIP BELT

Adjust the length of grip belt so that the camcorder is stable when you press the **Recording start/stop** button with your thumb.

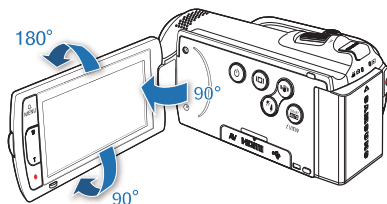


Please note if the grip belt is adjusted too tight and you use excessive force to insert your hand, the grip belt hook of the camcorder may be damaged.

ADJUSTING THE LCD SCREEN

The wide LCD screen on your camcorder offers high quality image viewing.

1. Open the LCD screen with your finger.
 - The screen opens up to 90°.
2. Rotate the LCD screen towards the lens.
 - You can rotate it up to 180° towards the lens and up to 90° backward. To view recordings more conveniently, rotate the screen by 180° towards the lens, then fold it back to the body.



Excessive rotation may damage the connective hinge between the screen and the camcorder.



Clean fingerprints or dust on the screen with a soft cloth.

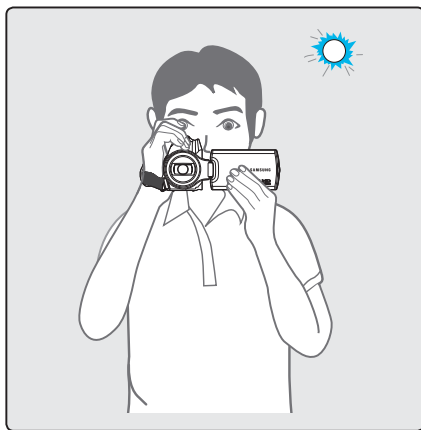
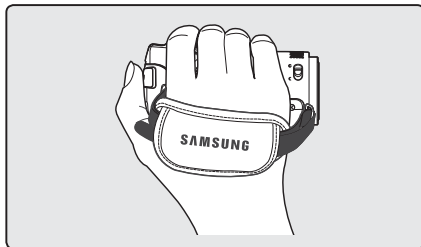
BASIC CAMCORDER POSITIONING

Use both hands while taking a video or photo to prevent the camcorder from shaking. Try to avoid any slight movement while shooting.

Adjusting the shooting angle

Aim the camcorder as shown in the illustration.

1. Hold the camcorder with your both hands.
2. Hook up the grip belt to your hand.
3. Make sure your footing is stable and there is no danger of colliding with another person or object.
4. Aim and focus as shown in the illustration.



It is recommended to keep the sun behind you while shooting.

basic recording

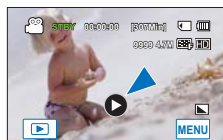
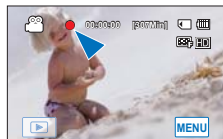
RECORDING VIDEOS

- This camcorder supports both High Definition(HD) and Standard Definition(SD) image resolutions. Set your desired resolution before recording. ➔page 54
- This camcorder provides one record mode which combines the video and photo record modes. You can easily record videos or photos in the same mode without having to change it.

PRECHECK!

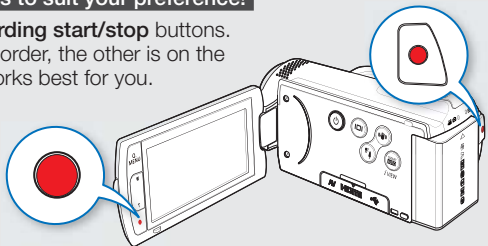
- Insert a memory card.
- Set the appropriate storage media. (HMX-H203/H204/H205 only) ➔page 27
- Open the LCD screen to turn on the camcorder.
- Your camcorder turns on automatically when you open the LCD screen.
- Set the Lens open/close switch to open (L). ➔page 12

1. Select a subject to record.
 - Adjust the LCD panel to the best angle for recording.
 - Use the **Zoom** lever or **Zoom** button to adjust the size of the subject. ➔page 40
2. Press the **Recording start/stop** button.
 - The recording (●) indicator appears, and recording starts.
3. To stop recording, press the **Recording start/stop** button again.
 - The Quick View icon appears on the screen.
4. Touch the Quick View (▶) icon to view the most recently recorded video.
 - After Quick View is complete, your camcorder returns to the standby mode.



Two recording start/stop buttons to suit your preference!

This camcorder features two **Recording start/stop** buttons. One is on the rear side of the camcorder, the other is on the LCD screen. Select the one that works best for you.





- If power is interrupted or an error occurs during recording, the video may not be recorded/edited.
 - Samsung is not responsible for any damage occurred by a failure of normal recording or playback operation because of memory card error.
 - Note that damaged data cannot be recovered.
-



- Videos are compressed in the H.264 (MPEG-4.AVC) format.
 - Eject the battery when you have finished recording to prevent unnecessary battery power consumption.
 - For the on-screen information display, see page 14.
 - For approximate recording time, see page 31.
 - Sound is recorded from the internal stereo microphone at the top of the lens. Make sure that the microphone is not blocked.
 - Before recording an important video, make sure to test the recording function by checking if there is any problem with the audio and video recording.
 - The brightness of the LCD screen can be adjusted in the menu options. Adjusting the LCD screen does not affect the image being recorded. ➔ page 79
 - For various functions available during recording, see "Recording menu items." ➔ pages 53-69
 - Do not turn off the camcorder or remove the memory card while accessing the storage media. Doing so may damage the storage media or the data in the storage media.
 - If the power cable/battery is disconnected or recording is disabled during recording, the system is switched to the data recovery mode. While data is being recovered, no other function is enabled.
 - The menu setting tabs shown on the LCD screen do not affect the image being recorded.
 - In the record mode, you can set the Quick View menu option. The Quick View icon appears when you have set the Quick View menu option to On.
 - Under some low light conditions that may be encountered, the video motion may not be fluid as under normal light conditions.
-

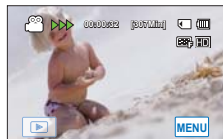
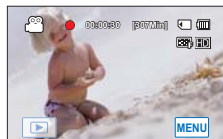
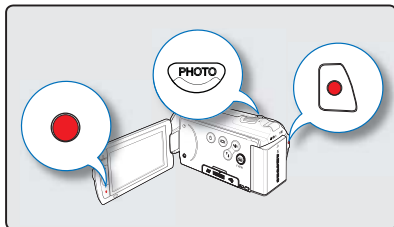
CAPTURING PHOTOS DURING VIDEO RECORDING (DUAL RECORDING)

Your camcorder can capture photos without interrupting video recording.

PRECHECK!

- Insert a memory card.
- Set the appropriate storage media.
(HMX-H203/H204/H205 only) ➡ page 27
- Open the LCD screen to turn on the camcorder.
- Your camcorder turns on automatically when you open the LCD screen.
- Set the Lens open/close switch to open (☑). ➡ page 12

1. Press the **Recording start/stop** button.
 - The recording (●) indicator will display, and recording will start.
2. Press the **PHOTO** button at the scene you want while recording videos.
 - When the (▶▶▶) indicator disappears, the photo image is recorded without a shutter sound.
 - Video keeps recording, even while photos are taken.
 - To stop recording, press the **Recording start/stop** button again.



<Dual recording during video recording>



- **You cannot capture photos in the following conditions:**
 - When time lapse recording is performed.
- Photo is captured in 1920x1080 resolution regardless of the resolution of the video recording.

RECORDING PHOTOS

You can take photos and store them in the storage media. Set the desired resolution before recording. ➡ page 55

PRECHECK!

- Insert a memory card.
- Set the appropriate storage media.
(HMX-H203/H204/H205 only) ➡ page 27
- Open the LCD screen to turn on the camcorder.
- Your camcorder turns on automatically when you open the LCD screen.
- Set the Lens open/close switch to open (☑). ➡ page 12

1. Select a subject to record.

- Adjust the LCD panel to the best angle for recording.
- Use the **Zoom** lever or **Zoom** button to adjust the size of the subject. ➡ page 40

2. Adjust the subject at the centre of the LCD screen, and half-press the **PHOTO** button.

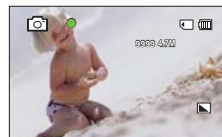
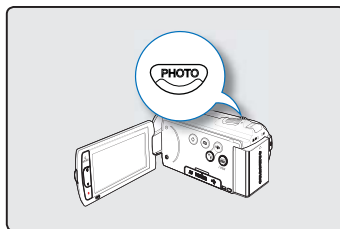
- Your camcorder adjusts to the ideal aperture and focus automatically (if “**Aperture**” and “**Focus**” are set to “**Auto**” ➡ pages 56, 60).
- When the subject is in focus, (●) indicator appears green. If it appears red, readjust the focus.

3. Fully press the **PHOTO** button.

- The shutter sound is heard. (when “**Shutter Sound: On**” is set).
- To continue recording, wait until the current photo is completely saved on the storage media.
- When the photo is recorded on the storage media, the Quick View icon appears on the screen.

4. Touch the Quick View (▶) icon to view the most recently recorded photo.

- To return to the standby mode, touch the Return (⏮) tab.



- Recordable number of photos varies depending on the photo resolution. ➡ page 31
- Audio is not recorded when taking photos.
- If focusing is difficult, use the manual focus function. ➡ page 60
- Do not turn off the camcorder or remove the memory card when taking photos as it may damage the storage media or data.
- For the on-screen display information, see page 14.
- Adjust brightness of the LCD screen using menu items. Doing so does not affect the recorded image. ➡ page 79
- Photo files conform to the DCF (Design rule for Camera File system) standard, established by JEITA (Japan Electronics and Information Technology Industries Association.)



basic recording






RECORDING WITH EASE FOR BEGINNERS (SMART AUTO)

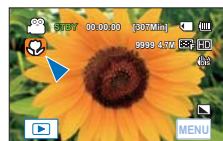
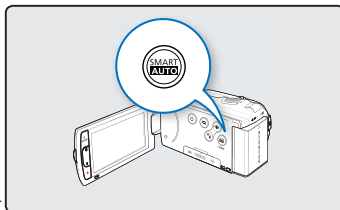
In Smart Auto mode, your camcorder automatically chooses the appropriate camcorder settings based on a detected type of scene. It will be helpful if you are not familiar with the camcorder settings for various scenes.

PRECHECK!

Select the record mode by pressing the **MODE** button. ➡ page 23

1. Press the **SMART AUTO** button.
 - Smart Auto () and Anti-shake () indicator is displayed on the LCD screen.
2. Align your subject in the frame.
 - The camcorder automatically detects the scene when aligning focus with the camcorder.
 - The appropriate scene icon is displayed on the LCD screen.

	Appears when recording a very bright scene. (White)
	Appears when recording an outdoor scene. (Landscape)
	Appears when recording indoors. (Indoor)
	Appears when recording at night. (Night)
	Appears when recording with a close-up. (Macro)





<When recording with close-up>

3. Press the **Recording start/stop** button or **PHOTO** button.
➡ pages 34, 36
 - To record videos, press the **Recording start/stop** button.
 - To record photos, press the **PHOTO** button.
4. To cancel Smart Auto mode, press the **SMART AUTO** button again.



Unavailable buttons during Smart Auto operation:

- Menu () tab / **Q.MENU** button/ etc. Most settings are automatically adjusted in Smart Auto mode. To set or adjust functions on your own, release the Smart Auto mode first.
- Smart Auto function is not available while recording. Set this function before recording.
- When the camcorder is failed to recognise the recording situations, it records in the basic setting () .
- The camcorder may not select the correct scene depending on shooting environments, such as camcorder shake, lighting and distance to the subject.
- When recording more than one scenes at the same time, Smart Auto prioritizes as below: Macro → White → Landscape → Night → Indoor
For example, a) If White and Indoor can be applied at the same time, then White is selected and corresponding icon displays.
b) If White and Landscape are applied at the same time, then White is selected and corresponding icon displays.

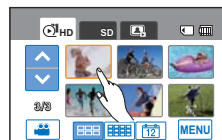
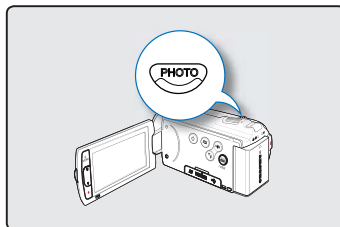
CAPTURING PHOTOS WHILE PLAYING BACK VIDEOS

You can capture photos during video playback.

PRECHECK!

- Insert a memory card.
- Set the appropriate storage media. (HMX-H203/H204/H205 only) ↪ page 27
- Touch the Play (⏮) tab on the LCD screen to select the play mode. ↪ page 23

1. Recorded videos appear in a thumbnail index view.
 - Touch the up (⏮)/down (⏭) tab to move to the previous/next page.
2. Touch the video clip you want.
 - The selected video is played.
3. Press the **PHOTO** button halfway at the scene you want to capture.
 - The playback screen is paused.
4. Press the **PHOTO** button fully down.
 - The captured still image is recorded in JPEG format.
5. When the photo is recorded on the storage media, touch the Return (⏮) tab to view the thumbnail index.
 - Touch the Photo (📷) tab to view the recorded photos. ↪ page 46



- **You cannot capture photos in the following conditions:**
 - The time lapse videos cannot be captured as a still image.
 - Photo is captured in 1920x1088 resolution regardless to the resolution of the video recording.

basic recording

ZOOMING

This camcorder allows you to record using optical 20x power zoom and digital zoom with the **Zoom** lever or the **Zoom** button on the LCD panel.

PRECHECK!

Select the record mode by pressing the **MODE** button. ➡ page 23

To zoom in

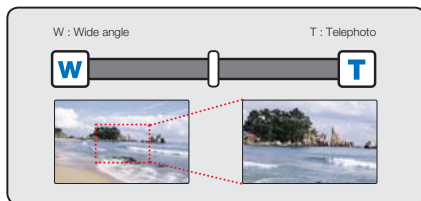
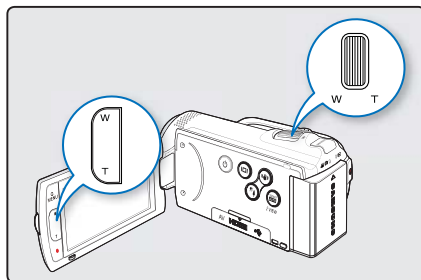
Press the **T** (zoom) button on the LCD panel or slide the zoom lever towards **T** (telephoto).

- The distant subject is gradually magnified and can be recorded.

To zoom out

Press the **W** (zoom) button on the LCD panel or slide the zoom lever towards **W** (wide angle).

- The subject moves further away.



Tip When using the zoom function, its speed can be decreased by slowly moving the **Zoom** (W/T) lever. A fast moving increases the zoom speed. However, the **Zoom** (W/T) button on the LCD panel cannot adjust the zoom speed.



- Using the optical zoom does not degrade the image quality and clarity.
- Use the digital zoom when you want to zoom more than the optical zoom range. ➡ page 64
- Focusing may become unstable when recording with a fast zoom or zooming into a subject standing too far away. In this case, use the manual focus function. ➡ page 60
- The minimum possible distance between camcorder and subject while maintaining sharp focus is about 1cm (about 0.4 inches) for wide angle and about 1m (about 39.4 inches) for telephoto. If you want to shoot the object close to the lens at a wide angle, use the Tele Macro function. ➡ page 63
- When using the zoom function while holding the camcorder with your hand, use Anti-shake (OIS) for stable recording. ➡ page 41
- Frequent use of the zoom function consumes more power.

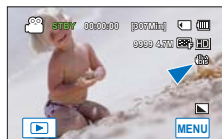
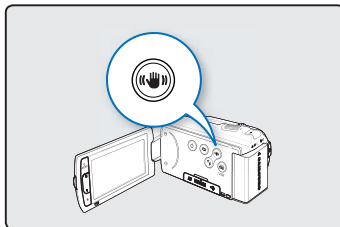
SETTING THE ANTI-SHAKE (OIS: OPTICAL IMAGE STABILISER)

Use the Anti-shake (OIS: Optical Image Stabiliser) function to compensate for unstable images caused by shaking movements when holding the camcorder.

PRECHECK!

Select the record mode by pressing the **MODE** button. ➞page 23

Press the **Anti-shake (OIS)** (👉) button to toggle the Anti-shake (OIS) mode between On and Off.



Tip

Use the Anti-Shake function in the following cases:

- When recording while walking or when recording in a moving car.
- When recording with the zoom function.
- When recording subjects of a small size.



- The Smart Auto mode automatically sets the Anti-shake (OIS) to On.
- Gross camcorder shake may not be entirely corrected even if the Anti-shake is set to On. Firmly hold the camcorder with both hands.
- When this function is set to On, the actual movement of the subject and the movement displayed on the screen may be slightly different.
- When recording in dark lighting at high magnification while this function is set to On, after-images may stand out. In this case, we recommend using a tripod (not supplied) and turning the Anti-shake to Off.

basic recording

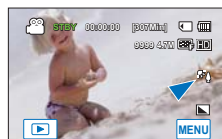
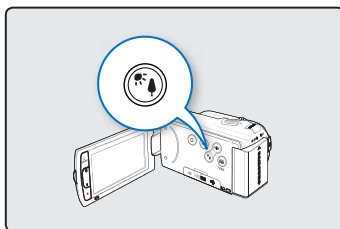
USING BACK LIGHT COMPENSATION MODE

When a subject is lit from behind, this function will compensate for lighting so that the subject is not too dark.

PRECHECK!

Select the record mode by pressing the **MODE** button. ➔ page 23

Press the **Back light** (🔦) button to toggle the back light mode between On and Off.



Tip 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.



basic playback

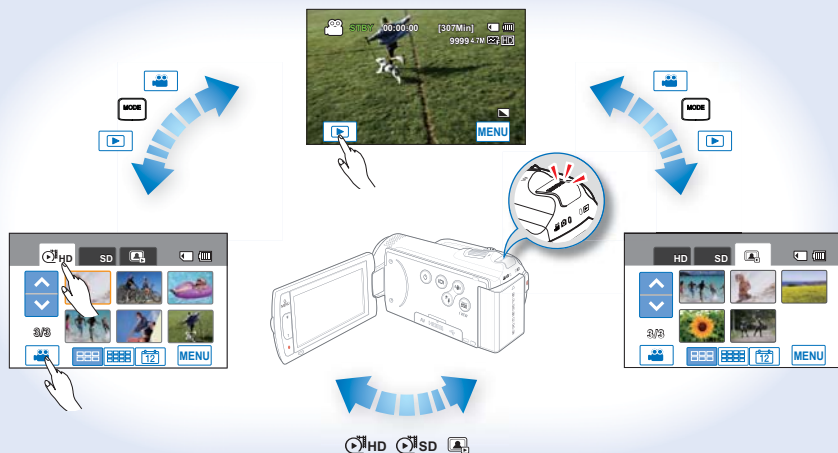
CHANGING THE PLAYBACK MODE

- You can set the record mode and the play mode in turn with the **MODE** button.
- You can also switch the operation mode directly into the playback thumbnail display by touching the Play (▶) tab on the LCD screen. You will find the most recently created file is highlighted in the thumbnail view.
- The thumbnail display options are selected depending on the standby mode that was used for the last time, however, you can choose the video (HD or SD) or photo thumbnail view display options by touching the HD (HD), SD (SD), or photo (A) tab on the LCD screen.



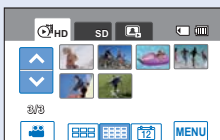
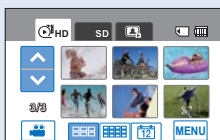
Understanding how to change the operation modes

You can simply change the operation modes by touching the LCD screen or using the buttons as shown in the following figures:



Tip

You can choose the thumbnail display options from 3x2 (3x2), 4x3 (4x3), and Date (Date).



basic playback

PLAYING BACK VIDEOS

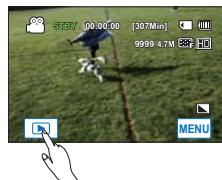
You can preview recorded videos in a thumbnail index view. Find your desired video quickly, and playback directly.

PRECHECK!

- Insert a memory card.
- Set the appropriate storage media. (HMX-H203/H204/H205 only) ➔page 27
- Touch the Play ([P]) tab on the LCD screen to select the play mode. ➔page 23

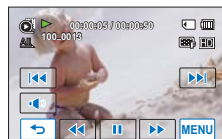
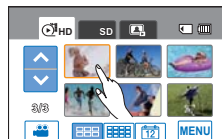
1. Touch the HD ([HD]) or SD ([SD]) tab.

- Video thumbnails corresponding to the selected video resolution appear on the screen.
- To change the current thumbnail view, select the ([SEE]), ([SEE]), or ([7]) tab on the screen.
- If you select the thumbnail display by the date ([DATE]), you can sort videos by specific dates. ➔page 43
- To change the current thumbnail page, touch the up([UP]) or down([DOWN]) tab.



2. Touch the desired video clip.

- The selected video is played and playback control tabs appear briefly. They reappear when touching anywhere on the screen.
- You can set playback settings using the “Play Option” menu. ➔page 70
- To stop playback and return to the thumbnails, touch the Return ([RETURN]) tab.



- It may take some time to start playback, depending on the size and quality of the selected video.
- **The camcorder may not play the following video files:**
 - A video edited by using the different software that was not built-in your camcorder, or whose file name is changed on a PC
 - A video recorded on other devices
 - A video whose file format is not supported on the camcorder
- You can use various play options during the video playback. ➔page 45
- The recorded videos can be played on a TV or PC. ➔pages 102, 110
- If you touch the Menu ([MENU]) tab or **Q.MENU** button during playback, play is paused and the menu screen appears.

Various playback operations

Playback / Pause / Stop

- Playback and pause alternates when touching the Play (▶) / Pause (⏸) tab during playback.
- Touch the Return (⏮) tab to stop playback.

Search playback

During playback, each touch of the Reverse search (⏮) / Forward search (⏭) tab increases the play speed:

- RPS (Reverse Playback Search) rate: $x2 \rightarrow x4 \rightarrow x8 \rightarrow x2$
- FPS (Forward Playback Search) rate: $x2 \rightarrow x4 \rightarrow x8 \rightarrow x2$

Skip playback

Touch the Reverse skip (⏮) / Forward skip (⏭) tab during playback.

- Touching the Forward skip (⏭) tab plays the next video.
- Touching the Reverse skip (⏮) tab plays the beginning of the scene. If reverse skip (⏮) is touched within 3 seconds from the start of the file, the previous video is played.
- Place and hold your finger on the Reverse skip (⏮) / Forward skip (⏭) tab to search the desired video number quickly. When you lift off your finger, the selected video is played.

Slow playback

During a pause, touching the Reverse slow (⏮) / Forward slow (⏭) tab reduces the playback speed:

- Reverse/forward playback slow rate: $x1/2 \rightarrow x1/4 \rightarrow x1/8 \rightarrow x1/2$

Frame by frame playback

- During pause, touch the Reverse frame advance (⏮) / Forward frame advance (⏭) tab makes play go reverse or forward one frame at a time.

To adjust the volume

You can hear the recorded sound from the built-in speaker.

The sound level is adjusted between "0~19." When the level is at "0," you cannot hear sound.

1. Touch the Volume (🔊) tab on the LCD screen.
2. Touch the (⏮)/(⏭) tab to increase or decrease audio volume.
 - If you touch the (⏮)/(⏭) tab for a long time, the sound level will be adjusted continuously.



basic playback

VIEWING PHOTOS

You can view recorded photos by using various playback functions.

PRECHECK!

- Insert a memory card.
- Set the appropriate storage media. (HMX-H203/H204/H205 only) ➡ page 27
- Touch the Play (⏮) tab on the LCD screen to select the play mode. ➡ page 23

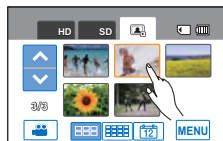
1. Touch the Photo (🖼) tab.

- The thumbnail view appears.
- To change the current thumbnail view, select (🔍), (📅), or (🗓) tab on the screen.
- If you select the thumbnail display by the date (🗓), you can sort photos by specific dates. ➡ page 43
- To change the current thumbnail page, touch the up (⬆) or down (⬇) tab.

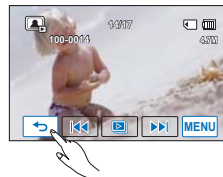


2. Touch your desired photo to play back.

- The selected photo is displayed in full screen and playback control tabs appear briefly. They reappear when touching anywhere on the screen.
- Touch previous image (⏮)/ next image (⏭) tab to view the previous and next photo.
- Place and hold your finger on the previous image (⏮)/next image (⏭) tab to search the desired photo number quickly. When you lift off your finger, the selected photo is displayed.



3. To return to the thumbnails, touch the Return (⏮) tab.



- Do not power off or eject the memory card during photo playback. Doing so may damage the recorded data.
- **Your camcorder may not playback the following photo files normally:**
 - A photo with its file name changed on a PC.
 - A photo recorded on other devices.
 - A photo with a file format not supported on this camcorder (does not conform to DCF standards).



Loading time may vary depending on the size and quality of the selected photo.

VIEWING A SLIDE SHOW

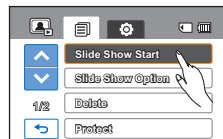
You can view a photo slide show.

PRECHECK!

- Insert a memory card.
- Set the appropriate storage media. (HMX-H203/H204/H205 only) ↪ page 27
- Touch the Play (⏮) tab on the LCD screen to select the play mode. ↪ page 23

1. Touch the Photo (📷) tab.

- The thumbnail view appears.
- To change the current thumbnail page, touch the up (⬆) or down (⬇) tab.



2. Touch the Menu (MENU) tab → “Slide Show Start”

- The (📷) indicator is displayed. The slide show starts from the current selected photo.
- All photos are play back continuously in the set slide show option (“Interval,” “Music,” “Effect.”)
- If you select the thumbnail display by the date (📅), photos only taken on the corresponding date play back in a slide show. ↪ page 43
- You can adjust the background music’s volume level using the Volume (🔊) tab while playing back the slide show with music.
- To stop the slide show, touch the Return (⏮) tab.
- Every time you touch the LCD screen, the play related tabs appear on the LCD screen.



Tip

- To start the slide show during a playback of a single photo, touch the slide show (📷) tab on the LCD screen, or you can touch the Menu (MENU) tab → “Slide Show Start.”
- A slide show is available also in the quick menu. ↪ page 52



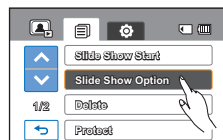
basic playback

Using the Slide Show Option

While playing back the slide show, you can use the “**Slide Show Option**” menus as follows:

Submenu items

- **Interval:** Photos play back continuously in the set slide show interval (1sec or 3sec).
- **Music:** You can turn the built-in background music on or off.
This camcorder has 7 tunes of background music by default, stored in the boot-up flash memory. Starting a slide show begins to play back 7 background music in shuffle mode.
- **Effect:** Continuously plays back photos with the fade in / out effect between image transitions.

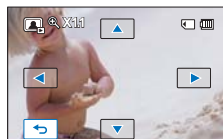
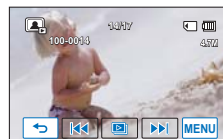


ZOOMING DURING PHOTO PLAYBACK

You can magnify a playback image. Touch the up (▲)/down (▼)/left (◀)/right (▶) to select the desired area to magnify.

PRECHECK!

- Insert a memory card.
 - Set the appropriate storage media. (HMX-H203/H204/H205 only) ➔ page 27
 - Touch the Play (▶) tab on the LCD screen to select the play mode. ➔ page 23
1. Touch the Photo (📷) tab.
 - The thumbnail view appears.
 - To change the current thumbnail page, touch up the (▲) or down (▼) tab.
 2. Touch the desired photo to magnify.
 - The selected photo is displayed on the full screen.
 3. Adjust the magnification with the **Zoom (W/T)** button or **Zoom (W/T)** lever.
 - Magnification starts from the the centre of the photo.
 - You can zoom in from x1.1 to x8.0.
 - While the playback zoom is in use, other images cannot be selected.
 4. Touch the up (▲)/down (▼)/left (◀)/right (▶) tab to view the area you want on the magnified photo.
 5. To cancel, touch the Return (⏮) tab.



Photos recorded on other devices or those edited on a PC cannot be magnified.

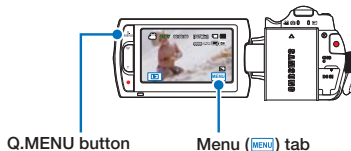
advanced recording

HANDLING MENUS AND QUICK MENUS

Follow the instructions below to use each of the menu items listed in this manual.
This chapter uses “Aperture,” and “Focus” functions of the record mode as an example.

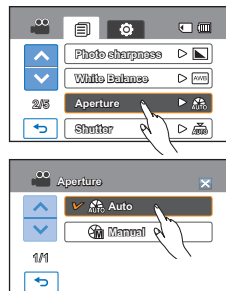
PRECHECK!

- Open the LCD screen to turn on the camcorder.
- Your camcorder turns on automatically when you open the LCD screen.
- Select the record mode by pressing the **MODE** button.
→ page 23



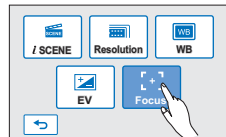
Using the Menu (MENU) tab

1. Touch the Menu (MENU) tab on the touch panel.
 - The menu screen appears.
 - To change the current page, touch the up (▲)/down (▼) tab.
2. Touch “Aperture.” (The Aperture function is used here as an example.)
3. Touch the desired option.
 - Adjust the setting values accordingly.
 - Touch the decrease (◀) or increase (▶) tab to adjust the aperture as you want.
 - To exit the menu, touch the Exit (✕) or Return (↶) tab.

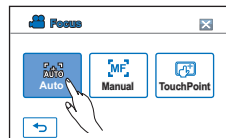


Using the Q.MENU button

1. Press the **Q.MENU** button on your camcorder to see the available menu options.
 - The quick menu screen appears.
2. Touch “Focus.” (The Focus function is used here as an example.)
3. Touch the desired option.
 - Adjust the setting values accordingly.
 - To exit the menu, touch the Exit (✕) or Return (↶) tab.



- When using the Menu (MENU) or Quick menu items, some menu items can not be used at the same time, or may be greyed out.
- For more information, see the Troubleshooting page 127.
- For the purpose of easy understanding, all the menu setting examples from this page are explained based on the simplest methods. The menu setting methods can be different depending on the user's chosen menu options.



advanced recording

MENU ITEMS

- Accessible items in menu vary depending on the operating mode.
- For operation details, see the corresponding page.

Recording menu items

Items	Default value	Page
SCENE	Auto	53
Video Resolution	[HD]1080/50i	54
Video Quality	Fine	54
Photo Resolution	2880x1620	55
Photo Sharpness	Normal	55
White Balance	Auto	56
Aperture	Auto	58
Shutter	Auto	59
EV	0	59
Focus	Auto	60
Digital Effect	Off	61
Fader	Off	62
Tele Macro	Off	63
Cont. Shot	Off	63
Wind Cut	Off	64
Digital Zoom	Off	64
Self Timer	Off	65
Time Lapse REC	Off	66
Quick View	On	68
Guideline	Off	69

Playback menu items

Operation mode		Video (Thumbnail)	Video (Single)	Photo (Thumbnail/Single)	Default value	Page
Items						
	Play Option	●	●	X	Play All	70
	Highlight	●	●	X	-	71
	Playlist	●	X	X	-	93
	Delete	●	●	●	-	97
	Protect	●	●	●	Off (Single)	96
	Story-Board Print	●	●	X	-	73
	Copy *	●	●	●	-	98
Edit	Divide	●	●	X	-	90
	Combine	●	X	X	-	91
	File Info	●	●	●	-	73
	Slide Show Start	X	X	●	-	47
	Slide Show Option	X	X	●	-	48
	Print Mark (DPOF)	X	X	●	-	99

● : available, X : not available



Items marked with * are available only with HMX-H203/H204/H205 models.

Setting menu items

Items	Default value	Page
Storage Type *	Internal Memory	74
Storage Info *	-	74
Card Info **	-	74
Format	-	75
File No.	Series	76
Time Zone	Home	76
Date/Time Set	01/JAN/2010 00:00 (Summer Time : Off)	77
Date Type	01/JAN/2010	77
Time Type	24 Hr	78
Date/Time Display	Off	78
LCD Brightness	18	79
Auto LCD Off	Off	79
Beep Sound	On	80
Shutter Sound	On	80
Auto Power Off	5 Min	81
Quick On STBY	5 Min	82
PC Software	On	83
USB Connect	Mass Storage	84
HDMI TV Out	Auto	84
Analogue TV Out	Component 1080i	85
TV Connect Guide	-	86
TV Display	On	87
Default Set	-	87
Language	-	88
Demo	On	88
Anynet+(HDMI-CEC)	On	89



- These Items and Default values may be changed without notice.
- There are some functions you cannot activate simultaneously in the menu. You cannot select the grey menu items.
- Items marked with * are available only with HMX-H203/H204/H205 models.
- Items marked with ** are available only with HMX-H200/H220 models.
- The time type may change depending on the selected language.

advanced recording

QUICK MENU ITEMS

Your camcorder provides quick menus consisting of the functions you may frequently use. Pressing the **Q.MENU** button will let you start making settings directly.

Recording menu items

Items	Default value	Page
Storage *	Int. Memory	27
iSCENE	Auto	53
Resolution	1080/50i, 2880x1620	54, 55
WB	Auto	56
EV	0	59
Focus	Auto	60

Playback menu items

Operation mode		Video (Thumbnail)	Video (Single)	Photo (Thumbnail/Single)	Page
Item					
Storage *		●	●	●	27
Highlight		●	●	X	71
Playlist		●	X	X	93
Delete		●	●	●	97
Protect		X	●	●	96
Edit	Divide	●	●	X	90
	Combine	●	X	X	91
File Info		●	●	●	73
Slide Show		X	X	●	47
Print Mark		X	X	●	99

● : available, x : not available



Items marked with * are available only with HMX-H203/H204/H205 models.

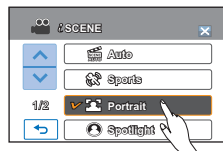
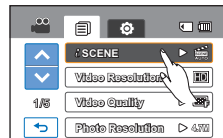
iSCENE

This camcorder automatically sets the shutter speed and aperture according to the subject and brightness for optimal recording.

PRECHECK!

Select the record mode by pressing the **MODE** button. ➡ page 23

1. Touch the Menu (MENU) tab → “iSCENE.”
2. Touch the desired submenu item.
 - To change the current page, touch the up (▲)/down (▼) tab.
3. To exit the menu, touch the Exit (X) or Return (↩) tab.



Submenu items

- **Auto:** In normal conditions, recording naturally.
- **Sports (♾):** Recording people or objects in motion.
- **Portrait (♀):** Recording skin colour naturally.
- **Spotlight (☀):** When strong light strikes the object.
- **Beach/Show (☀):** Where reflection of light is intense like a snowfield or beach.
- **Food (🍴):** Represent colour of food more colourful.
- **Candle Light (🕯):** Recording the soft glow of candlelight.
- **Indoor (💡):** Indoor with artificial light.



When you specify “**Aperture:Manual**” or “**Shutter:Manual**,” the iSCENE mode is cancelled.
(Manual Aperture/Manual Shutter priority)

advanced recording

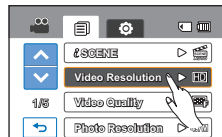
Video Resolution

You can select the resolution of video to be recorded on storage media.

PRECHECK!

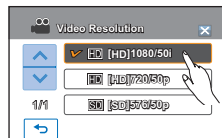
Select the record mode by pressing the **MODE** button. ➡ page 23

1. Touch the Menu (**MENU**) tab → “**Video Resolution.**”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (**ESC**) or Return (**↵**) tab.



Submenu items

- **[HD]1080/50i** (**[HD]**): Records in the HD (1920x1080/50i) format.
- **[HD]720/50p** (**[HD]**): Records in the HD (1280x720/50p) format.
- **[SD]576/50p** (**[SD]**): Records in the SD (720x576/50p) format.



- “50i” indicates the camcorder will record in interlaced scan mode at 50 fields per second.
- “50p” indicates the camcorder will record in progressive scan mode at 50 frames per second.
- Recorded files are encoded with Variable Bit Rate (VBR). VBR is an encoding system that automatically adjusts the bit rate according to the recording image.
- The available video recording time differs according to the selected video resolution.

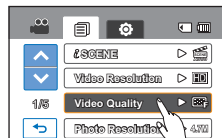
Video Quality

You can select the quality of video to be recorded.

PRECHECK!

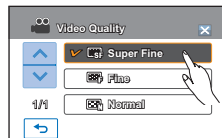
Select the record by pressing the **MODE** button. ➡ page 23

1. Touch the Menu (**MENU**) tab → “**Video Quality.**”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (**ESC**) or Return (**↵**) tab.



Submenu items

- **Super Fine** (**[SF]**): Records videos at the super fine image quality.
- **Fine** (**[F]**): Records videos at the fine image quality.
- **Normal** (**[N]**): Records videos at the normal image quality.






The higher the resolution is, the shorter the recording time becomes, on the other hand, the lower the resolution, the longer the recording time.

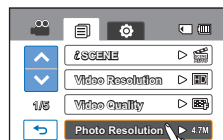
Photo Resolution

You can select the resolution of photo to be recorded.



PRECHECK!

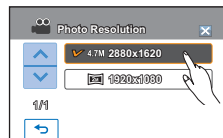
Select the record mode by pressing the **MODE** button. ➡ page 23

1. Touch the Menu () tab → “Photo Resolution.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit () or Return () tab.



Submenu items

- **2880x1620** (): Records in the 2880x1620 resolution.
- **1920x1080** (): Records in the 1920x1080 resolution.






- The number of recordable images differs according to the selected photo resolution.
- Photos that are recorded on your camcorder may not playback properly on other digital devices that do not support this photo size.

Photo Sharpness

This function allows the user to obtain sharper photo images by processing the image after recording photos.




PRECHECK!

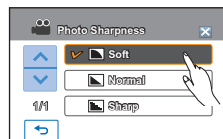
Select the record by pressing the **MODE** button. ➡ page 23

1. Touch the Menu () tab → “Photo Sharpness.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit () or Return () tab.



Submenu items

- **Soft** (): Smooths the edges of photo images.
- **Normal** (): The photo images appear with sharp edges and are suitable for printing.
- **Sharp** (): Enhances to sharpen the edges of photo images.



advanced recording

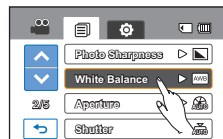
White Balance

This camcorder automatically adjusts the colour of the subject. You can record in natural colours depending on the subject and lighting conditions.

PRECHECK!

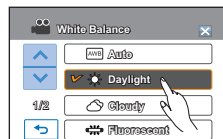
Select the record by pressing the **MODE** button. ➡ page 23

1. Touch the Menu (**MENU**) tab → “**White Balance**.”
2. Touch the desired submenu item.
 - To set the white balance manually, see page 57.
3. To exit the menu, touch the Exit (**X**) or Return (**↩**) tab.



Submenu items

- **Auto**: Controls the white balance automatically depending on the recording conditions.
- **Daylight** (☀): Controls the white balance according to the outdoor lighting.
- **Cloudy** (☁): When recording in the shade or cloudy weather.
- **Fluorescent** (💡): When recording under white fluorescent lights.
- **Tungsten** (💡): When recording under halogen lamps and incandescent lights.
- **Custom WB** (⚙): You can manually adjust the white balance to match the light source or situation.

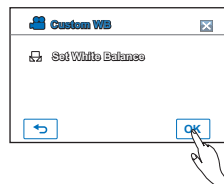
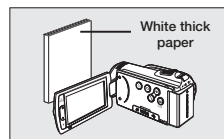
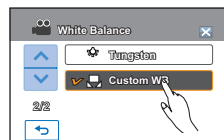


Understanding White Balance

White balance (WB) is the process of removing unrealistic colour casts, so that objects which appear white are rendered white in your image. Proper white balance has to take into account the “colour temperature” of a light source, which refers to the relative warmth or coolness of white light.

To set the white balance manually

1. Touch the Menu (MENU) tab → “White Balance” → “Custom WB.”
 - The “(WB) Set White Balance” indicator is displayed.
2. Fill the screen with a white object, and touch the (OK) tab.
 - The white balance setting is stored.
3. To exit the menu, touch the Exit (X) or Return (RETURN) tab.
 - The stored white balance setting will be applied the next time you record.



- When setting the white balance manually, the subject must be white, otherwise, your camcorder may not detect an appropriate setting value.
- The adjusted setting remains until you set the white balance again.
- During normal outdoor recording, setting to “Auto” may provide better results.
- Cancel the digital zoom function for clear and precise setting.
- Reset the white balance if light conditions change.




advanced recording

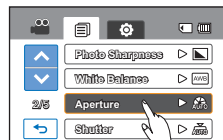
Aperture

The camcorder adjusts the aperture automatically depending on the subject and recording conditions. You can also manually adjust the Aperture to your preference.




PRECHECK!

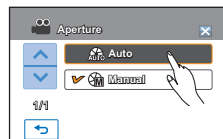
Select the record by pressing the **MODE** button. ➔page 23

1. Touch the Menu () tab → “Aperture”.
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit () or Return () tab.



Submenu items

- **Auto:** Sets the aperture value automatically.
- **Manual** ( **FX**): Touch decrease () or increase () tab to adjust the aperture as you want.
The setting values are as follows:
F1.8, F2, F2.8, F4, F5.6, F8, F11, F16



Understanding Aperture

The aperture value can be adjusted to control the amount of light reaching the image sensor.

The aperture value needs to be adjusted in the following cases:

- When shooting against the light or when the background is too bright.
- When shooting on a reflective natural background such as at the beach or when skiing.
- When the background is overly dark (for example, night scenery).



When you specify “**Aperture: Manual**,” the **iSCENE** mode is cancelled and “**Shutter**” is set to “**Auto**” automatically. (Manual Aperture priority)

Shutter


The camcorder automatically sets the shutter speed depending on the scene's brightness. You can also manually adjust the shutter speed according to the scene conditions.

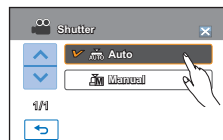
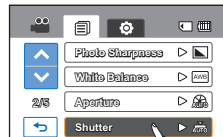
PRECHECK!

Select the record by pressing the **MODE** button. ➡ page 23

1. Touch the Menu (**MENU**) tab → “**Shutter**.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (**X**) or Return (**↩**) tab.

Submenu items

- **Auto:** The camcorder automatically sets the appropriate shutter speed value.
- **Manual ( 1/XX):** Touch decrease (**◀**) or increase (**▶**) tab to adjust the setting values as you want. The setting values are as follows: 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, or 1 /10000.




- The image may not seem smooth when a high shutter speed is set.
- When recording with a shutter speed of 1/1000 or higher, make sure the sun is not directly shining into the lens.
- When you specify “**Shutter: Manual**,” the **tSCENE** mode is cancelled and “**Aperture**” is set to “**Auto**” automatically. (Manual Shutter priority)
- In case of photo, the maximum shutter speed is limited to 1/2000.

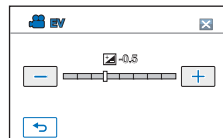
EV

Using the EV function, you can manually adjust the video and photo image brightness.

PRECHECK!

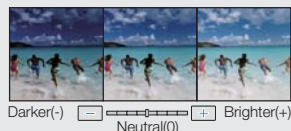
Select the record mode by pressing the **MODE** button. ➡ page 23

1. Touch the Menu (**MENU**) tab → “**EV**.”
2. Touch the decrease (**−**) or increase (**+**) tab to adjust the setting values as you want.
 - EV values (): -2.0, -1.5, -1.0, -0.5, 0, +0.5, +1.0, +1.5, +2.0
3. To exit the menu, touch the Exit (**X**) or Return (**↩**) tab.



Understanding EV (Exposure Value)

Exposure value is the total amount of light allowed to fall on the photographic medium (Image sensor) during the process of taking photos or videos as well.






advanced recording

Focus





The camcorder usually focuses on a subject automatically (auto focus). When the camcorder is turned on, auto-focus will always be set. You can also manually focus a subject depending on the recording conditions.

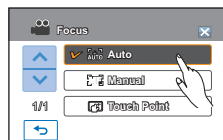
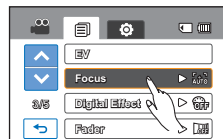
PRECHECK!

Select the record mode by pressing the **MODE** button. ➔ page 23

1. Touch the Menu () tab → “Focus.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit () or Return () tab.

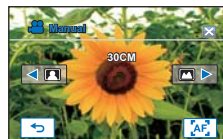
Submenu items

- **Auto:** 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 ():** Manual focusing may be necessary under certain conditions that make automatic focusing difficult or unreliable.
Touch () or () tab to adjust the setting values you want.
- **Touch Point ():** You can simply touch the subject shown on the LCD screen you would like to focus.




Focusing manually during recording


This camcorder automatically focuses a subject from close-up to infinity. However, the correct focus may not be obtained depending on the recording conditions. In this case, use the manual focus mode.







Focusing in a nearer subject

To focus on a nearer subject, touch the nearer subject () tab.

Focusing on a further subject

To focus on a further subject, touch the further subject () tab.

- The nearer or further icon () / () appears in the centre when focus adjustment reaches the end.
- The adjusted value is applied right after touching the () or () tab.



<Nearer subject>



<Further subject>

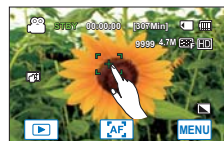
Tip

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

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

Using the touch point

Using the Touch Point function, you can focus on a small section of the picture. Focus on the particular point by touching the desired point.



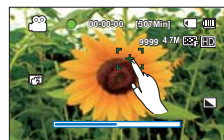
Tip

To activate the touch point with a long touch

You can activate the touch point by pressing the same point for about 1 second on the LCD screen.

One-touch photo recording

You can focus on your subject and take a photo with a touch of your finger. When the touch point function is enabled, simply touch the subject shown on the LCD screen that you would like to focus on, then hold for about 3 seconds.



- The Auto Focus (AF) setting is useful when you operate the zoom function because you might not be able to keep accurate focus after the zoom ratio has been changed.
- In the manual focus setting menu screen, auto focus is available by using the AF (AF) tab on the screen. you can return to manual focus by touching the manual focusing tabs.
- When the Touch Point function is enabled, you can touch the AF (AF) tab on the LCD screen to set the "Focus" to "Auto."
- To disable the Touch Point function, set "Focus" to "Auto."

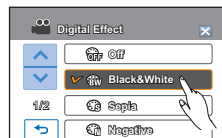
Digital Effect

Using the Digital Effect function gives your recording a creative look.

PRECHECK!

Select the record mode by pressing the **MODE** button. → page 23

1. Touch the Menu (MENU) tab → "Digital Effect."
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (X) or Return (RETURN) tab.



Examples of 5 Digital Effect options



Off

Without any Digital Effect, a normal, natural image is displayed during recording or playback.



Black & White (BW)

This mode changes the image to black and white.



Sepia (SEP)

This mode gives the image a reddish brown look.



Negative (NEG)

This mode reverses the colours, creating a negative image.



Art (ART)

This mode helps adjust for facial imperfections.

advanced recording

Fader

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.

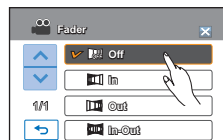
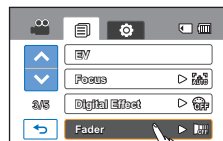
PRECHECK!

Select the record mode by pressing the **MODE** button. ➔page 23

1. Touch the Menu (MENU) tab → “Fader.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (X) or Return (RETURN) tab.

Submenu items

- **Off:** Disables the function
- **In (I):** As soon as you start recording, it will fade in.
- **Out (O):** When the recording is done, it will fade out.
- **In-Out (IO):** When you start or stop recording, the fader will be function accordingly.



Recording a video with Fade effect

Fade in

Press the **Recording start/stop** button when “Fader” is set to “In.”

Recording starts with a dark screen and then the image and sound are faded in.

Fade out

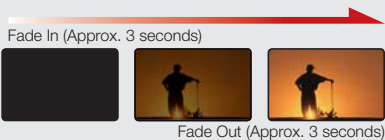
Press the **Recording start/stop** button when “Fader” is set to “Out.”

Recording stops as the image and sound are faded out.

Fade in-out

Press the **Recording start/stop** button when “Fader” is set to “In-Out.”

Recording starts with a dark screen and then the image and sound are faded in.
Recording stops as the image and sound are faded out.



This function is disabled after being used one time.

Tele Macro

Using the Tele Macro function, you can get close up images which were created by focusing on a small portion of a large object at a wide angle. The effective focal distance in the Tele Macro mode is between 1 to 50 cm. (0.4 to 19.7 inches)

PRECHECK!

Select the record mode by pressing the **MODE** button. ➡ page 23

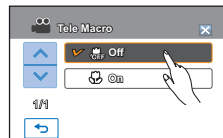
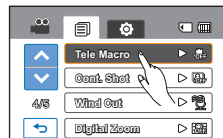
1. Touch the Menu (MENU) tab → “Tele Macro.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (X) or Return (RETURN) tab.

Submenu items

- **Off:** Disable the function.
- **On (ON):** You can focus on a small portion of a large object at a wide angle.



- When recording in Tele Macro mode, the focus speed may be lowered.
- Use a tripod (not supplied) 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, move the **Zoom** button or **Zoom** lever to adjust the focus.



Cont. Shot

This function allows you to capture photos in succession to give you more photo-taking opportunities when recording moving subjects.

PRECHECK!

Select the record mode by pressing the **MODE** button. ➡ page 23

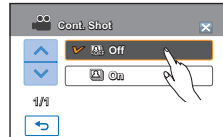
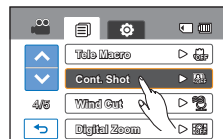
1. Touch the Menu (MENU) tab → “Cont. Shot.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (X) or Return (RETURN) tab.

Submenu items

- **Off:** Records only one photo image.
- **On (ON):** When pressing the **PHOTO** button, you can take up to 8 photos in 1second.



- When an error occurs (internal memory full, etc.) during continuous shot, the recording stops and an error message is displayed.
- When “**Cont. Shot**” is set to “**On**,” the photo resolution is fixed to 1920 x 1080.



advanced recording

Wind Cut

Using the Wind Cut function, you can reduce wind noise when recording sound from the built-in microphone.

PRECHECK!

Select the record mode by pressing the **MODE** button. ➡ page 23

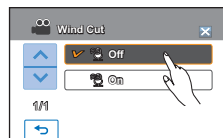
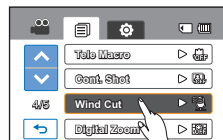
1. Touch the Menu (MENU) tab → “Wind Cut.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (X) or Return (RETURN) tab.

Submenu items

- **Off:** Disables the function.
- **On (ON):** Reduces wind noise when recording sound from the built-in microphone.



Using the Wind Cut function also removes some low-frequency sound with the wind noise.



Digital Zoom

The digital zoom enables higher zoom magnification than the optical zoom ratio.

The optically magnified image by the lens can be electronically magnified up to maximum 4000 times.

PRECHECK!

Select the record mode by pressing the **MODE** button. ➡ page 23

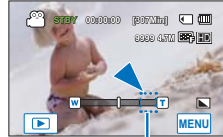
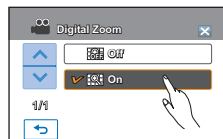
1. Touch the Menu (MENU) tab → “Digital Zoom.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (X) or Return (RETURN) tab.

Submenu items

- **Off:** Disables the function.
- **On:** Enables higher zoom magnification.



With the digital zoom, the image is digitally processed more than the optical zoom modes. As a result, the image resolution may deteriorate.



The right side of the bar shows the digital zooming zone. The zooming zone appears when you move the zoom lever.

Self Timer

When the self-timer is enabled, there is a time delay after you actually press the **Record Start/Stop** or **PHOTO** button. You can use this function when you want to take a shot of many people including yourself.

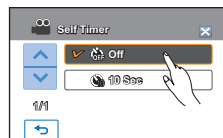
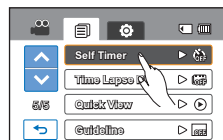
PRECHECK!

Select the record mode by pressing the **MODE** button. ➡ page 23

1. Touch the Menu (MENU) tab → “Self Timer.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (X) or Return (↩) tab.

Submenu items

- **Off:** Disables the function
- **10 Sec** (🕒): There is a time delay for 10 seconds when you press the **Record Start/Stop** or **PHOTO** button.



This function is disabled after used for one time.

advanced recording

Time Lapse REC

Using the time lapse feature, your camcorder can be programmed to automatically record a number of frames over a period of time or with a certain time interval between each frame. For instance, a camcorder on a tripod (not supplied) in time lapse mode could be set up to shoot frames of a flower opening or a bird building a nest.

PRECHECK!

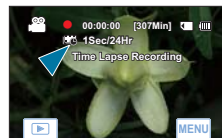
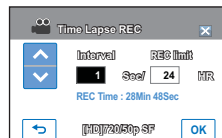
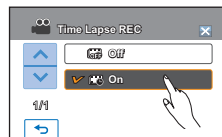
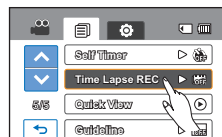
Select the record mode by pressing the **MODE** button. ➔page 23

To record in the Time Lapse REC mode, you need to set the recording interval and the total recording time from start to finish using the menu.

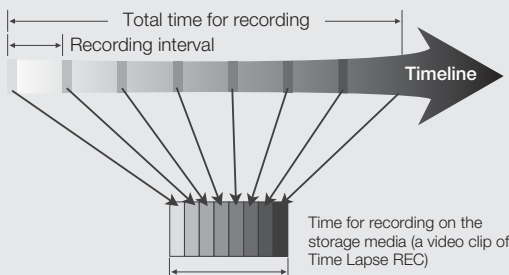
1. Touch the Meun (MENU) tab. ➔ “Time Lapse REC” ➔ “On.”
 - The menu screen appears.
2. Touch the desired items (Interval, Rec Limit) and then touch the up (▲) or down (▼) tab to set the values.
3. Touch the (OK) tab to finish the setting.
4. To exit the menu, touch the Exit (X) or Return (↩) tab.
5. After setting the Time Lapse REC mode, press the **Recording start/stop** button.
 - Then the Time Lapse recording starts.
 - For Time Lapse REC, the [HD]720/50p resolution and Super Fine quality are supported only.

Submenu items

- **Off:** Disables the function.
- **On (📷):**
 - Interval (“Sec”): Image of the subject is captured by set interval. Images are automatically shot a frame at a time at the specified interval and stored in the storage media. 1 ➔ 3 ➔ 5
 - REC Limit (“Hr”): Total time from start to finish of recording. 24 ➔ 48 ➔ 72



Example of Time Lapse Recording



The Time Lapse Recording function records image frames at the predefined interval over the total recording time to produce a time-lapse video.

For example, the Time Lapse Recording is useful for filming in the following situations:

- Blooming flowers
- A bird building a nest
- Clouds rolling by in the sky



- Time lapse recording mode is released once recording has been finished. To start another Time Lapse Recording, repeat steps 1-5.
- 50 captured images compose a video of 1 second length. Since the minimum length of a video to be saved by your camcorder is one second, the interval defines how long the time lapse recording should be taken. For example, if you set the interval to **"30 Sec."**, time lapse recording should be taken for at least **1** hour to record a minimum video length of 2 seconds (100 images).
- Once the time lapse recording finishes recording for its total recording time, it switches to the standby mode.
- Press the **Recording start/stop** button if you want to stop the time lapse recording.
- Audio is not recorded during time lapse recording.
- When a video recording fills up 1.8GB of storage memory, a new recording file is automatically started at that point.
- When the battery charge was exhausted during the time lapse recording, it saves recording up to that point and switches to standby mode. After a while, it displays a warning message, then turns off automatically.
- When the memory space of the storage media is insufficient during the time lapse recording, it switches to the standby mode after saving the recording up to its maximum.
- During Time Lapse REC, the zoom and focus functions are fixed so that you cannot change the settings. Even though the subject is moved, the focus cannot be changed.
- When a time lapse recording starts, the **"Time Lapse Recording"** message blinks on the screen and it appears that the screen has stopped. This is a normal operation; do not remove the power source or memory card from the camcorder.
- We recommend using the AC power adaptor for a time lapse recording.

advanced recording

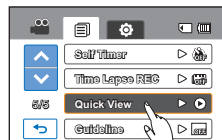
Quick View

Using the Quick View function, you can view the most recently recorded video and photo images as soon as the recording is finished.

PRECHECK!

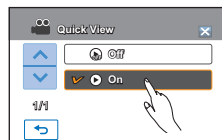
Select the record mode by pressing the **MODE** button. ➡ page 23

1. Touch the Menu (MENU) tab → “Quick View.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (X) or Return (RETURN) tab.

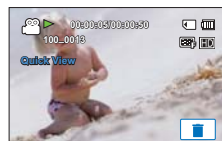


Submenu items

- **Off:** Quick View icon does not appear on the screen after you finish the recording.
- **On:** Quick View icon appears on the screen as soon as you finish the recording. Touch the Quick View icon to view the most recent video or photo you have recorded. After the Quick View is completed, your camcorder switches back to the standby mode.



Tip If you touch the delete (DELETE) tab during Quick View, the file is deleted.



- **The Quick View function is not available in the following conditions:**
 - If the mode has been changed after the recording
 - If the USB cable is connected to the camcorder.
 - If the camcorder has been restarted after the recording
 - After playing Quick View
- For photos recorded with the “**Cont. Shot,**” only the most recent file is played.

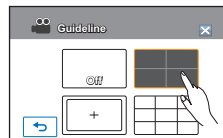
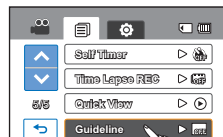
Guideline

Guideline displays straight line patterns on the LCD screen that can help you set the image composition when recording images. The camcorder provides 3 types of guidelines.




PRECHECK!

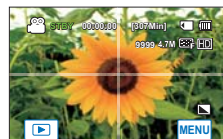
Select the record mode by pressing the **MODE** button. ➡ page 23

1. Touch the Menu (MENU) tab → “Guideline.”
2. Touch the desired guideline according to the subject.
 - The selected guideline appears on the screen.
3. To exit the menu, touch the Exit (X) or Return (RETURN) tab.



Submenu items

- **Off**: Disables the function.
- : Placing the subject at the centre cross point puts the subject in the middle of the frame.
- : Positioning subjects within the Safety Zone rectangle ensures they will be recorded.
- : For recording multiple subjects. Putting subjects at or near the grid cross points creates a balanced composition.



- Positioning a subject at the cross point of a guideline provides a balanced composition.
- Guidelines are not recorded.

advanced playback

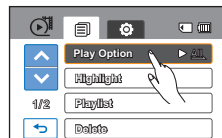
Play Option

You can set a specific playback style according to your preference.

PRECHECK!

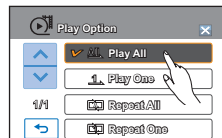
Touch the Play (▶) → HD (HD) or SD (SD) tab on the LCD screen. → page 43

1. Touch the Menu (MENU) tab → “Play Option.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (X) or Return (↩) tab.



Submenu items


- **Play All (ALL):** Plays video clips in succession starting from the selected video to the last one, then returns to the thumbnail index view.
- **Play One (1):** Plays the selected video only and returns to the thumbnail view.
- **Repeat All (REPEAT):** Repeats playing all the video clips until the Return (↩) tab is touched.
- **Repeat One (REPEAT):** Repeats playing the selected video only until the Return (↩) tab is touched.






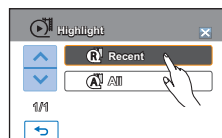
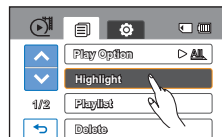
Highlight

This camcorder shows a section of the recorded video(s) at random.



PRECHECK!

Touch the Play () → HD () or SD () tab on the LCD screen. ➔ page 43

1. Touch the Menu () tab. ➔ “Highlight.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit () or Return () tab.
 - When the highlight view is finished, the video thumbnail view appears.
 - In the highlight play mode, you can adjust the volume by touching the screen and can also cancel the playback.



Submenu items

- **Recent** (): Shows a section of the videos that were created within the last 24 hours.
- **All** (): Shows a section of all video files.

Tip

Highlight playback time to the recording time for a video

Time recorded	Highlight playback time
Less than 5 sec.	Full playback
5 to 30 sec.	Plays 5 seconds.
30 sec. to 5 min.	Plays 5 seconds of each 30 second section.
5 min. to 10 min.	Plays 11 seconds of each 2 minute section.
Over 10 min.	Plays 15 seconds of each 3 minute section.



If you execute the Highlight function in the date thumbnail display, all the files in the selected date set appear on the LCD screen.

advanced playback

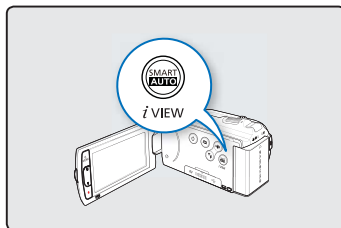
iVIEW

This function provides the preview of storyboard to be printed, which gives you digest of the recorded video without viewing the whole sequence of it.

PRECHECK!

Touch the Play (▶) → HD (HD) or SD (SD) tab on the LCD screen. → page 43

1. Press the **iVIEW** button.
2. Touch the desired video.
 - Sampling 16 i-Frame images appears on the LCD screen.
 - The images from the selected video are selected arbitrarily, and compose the preview of storyboard to be printed.
 - When a thumbnail is selected among 16 i-Frame images, playback starts from the thumbnail.
3. To save the storyboard image on the storage media, touch the Story-board print (Print) tab → “Yes.”
 - You can find the saved storyboard image in the photo thumbnail view.



In the following case, it can not be extracted with all 16 i-Frame thumbnails:

- In case thumbnail is displayed by the date (DATE).
- Recorded video is too short (to extract 16 i-Frame thumbnails from a video, its recorded time should be longer than 32 seconds.)

Story-Board Print

Using the storyboard printing, you can make the digest image of your video abridging its story. This function captures 16 still images arbitrarily from the selected video and makes up one still image of 16-splits to save it into the storage media. It presents a quick overview of your video, helping you to understand the whole story of the video.

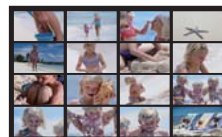
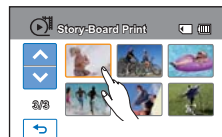
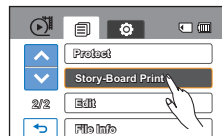
PRECHECK!

Touch the Play (▶) → HD (HD) or SD (SD) tab on the LCD screen. ➡ page 43

1. Touch the Menu (MENU) tab → **“Story-Board Print.”**
2. Touch the desired video → **“Yes.”**
 - Printed storyboard image file appears on the LCD screen for a while.
 - Images to be captured are selected arbitrarily, and composes storyboard of one still image with 16-split still frames.
 - You can also find the saved storyboard image in the photo thumbnail view.



- **The Story-Board Print function is not available in the following conditions:**
 - If free space available on the storage is insufficient.
- **The storyboard printing may not show all 16 i-Frame thumbnails in following case:**
 - Recorded video is too short (to extract 16 i-Frame thumbnails from a video, its recorded time should be longer than 32 seconds.)



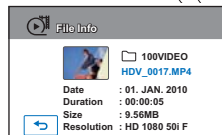
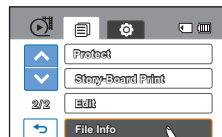
File Info

You can see the image information for all images.

PRECHECK!

Touch the Play (▶) tab on the LCD screen to select the play mode. ➡ page 23

1. Touch the Menu (MENU) tab → **“File Info.”**
2. Select the desired file to view the file information.
 - The information of the selected file appears.
3. To exit the menu, touch the Return (⏮) tab.



system setting

Storage Type (HMX-H203/H204/H205 only)

You can record videos and photos on the internal memory or a memory card, so you should select the desired storage media before starting recording or playback. ➡ page 27

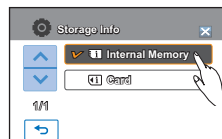
Storage Info (HMX-H203/H204/H205 only)

This function shows you the storage information of the selected storage media, such as used and available memory space, etc.

PRECHECK!

Insert a memory card in the camcorder before viewing the storage information.

1. Touch the Menu (MENU) → Setting (⚙️) tab → “Storage Info.”
2. Touch the desired submenu item.
 - Used memory space, available memory space for use, and the recordable time depending on the selected video resolution appears.
3. To exit the menu, touch the Return (⏪) tab.



Submenu items

- **Internal Memory:** Displays the storage information of the internal memory.
- **Card:** Displays the storage information of the memory card.

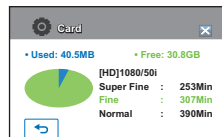
Card Info (HMX-H200/H220 only)

This function shows you the storage information of the memory card, such as used and available memory space, etc.

PRECHECK!

Insert the memory card in the camcorder before viewing the storage information.

1. Touch the Menu (MENU) → Setting (⚙️) tab → “Card Info.”
 - Used memory space, available memory space for use, and the recordable time depending on the selected video resolution appears.
2. To exit the menu, touch the Return (⏪) tab.



Format

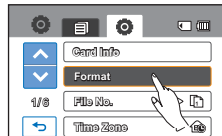
Use this function if you want to delete all files completely or to correct problems on the storage media.

PRECHECK!

You can completely delete all files and options on the storage media, including protected files. This enables stable speeds and operation when accessing the storage media.

Be aware that all files and data including protected files will be erased.

1. Touch the Menu (MENU) → Setting (⚙️) tab → “Format.”
2. Touch the desired submenu item. (HMX-H203/H204/H205 only)
 - A message appears asking about formatting the memory card.
3. Touch “Yes.”
 - The format is executed with a message.



Submenu item (HMX-H203/H204/H205 only)

- **Internal Memory:** Formats the internal memory.
- **Card:** Formats the memory card.



- Do not remove the storage media or perform any other operation (such as turning off the power) during formatting. Also, be sure to use the provided AC power adapter, as the storage media may be corrupted if the battery becomes exhausted during formatting.
- If the storage media becomes corrupted, format it again.



- **Do not format the storage media on a PC or other device.**
Make sure to format the storage media on this camcorder.
- A memory card with the protection tab set to lock will not be formatted. ➡ page 29
- If there is no storage media inserted, it can not be selected. Then it will be dimmed on the menu.
- The memory card format is executed by touching “Format.” (HMX-H200/H220 only)

system setting

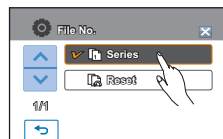
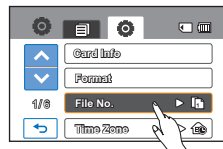
File No.

File names (numbers) are assigned to recorded images according to the selected numbering option.

1. Touch the Menu (MENU) → Setting (⚙️) tab → “File No.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (⌂) or Return (↩️) tab.

Submenu items

- **Series** : Assigns file numbers in sequence even after you replace or format the storage media or delete all files. Each file is given with a unique file number that allows convenient image management on a PC.
- **Reset** : Resets the file number to 0001 after formatting or deleting all files or inserting a new memory card.



When you set “File No.” to “Series,” each file is assigned with a different number so as to avoid duplicating file names. It is convenient when you want to manage your files on a computer.

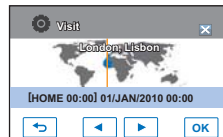
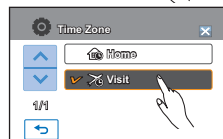
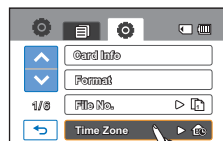
Time Zone

You can easily set the clock to the local time when using your camcorder while traveling.

1. Touch the Menu (MENU) tab → Setting (⚙️) tab → “Time Zone” → “Visit.”
2. Touch the left (◀️) or the right (▶️) tab to select the visited area.
3. Touch the (OK) tab when the time zone setting is completed.
 - The time zone set value is not applied if you finish the setting with the (↩️) tab without touching the (OK) tab.

Submenu items

- **Home** : The clock will be used according to your setting on the Date/Time Set menu. Select it when using this camcorder for the first time or when returning the clock to your hometown date/time setting.
- **Visit** (📍): When you visit a different time zone, it allows you to use the local time without changing your hometown time setting. The clock will be adjusted in accordance with the time difference between the two locations.



Cities used to set the time zone

Cities	Time zone	Cities	Time zone
London, Lisbon	+00:00	Adelaide	+09:30
Rome, Paris, Berlin, Stockholm, Madrid, Frankfurt	+01:00	Guam, Sydney, Brisbane	+10:00
Athens, Helsinki, Cairo, Ankara	+02:00	Solomon Islands	+11:00
Moskva, Riyadh	+03:00	Wellington, Fiji	+12:00
Teheran	+03:30	Samoa, Midway	-11:00
Abu Dhabi, Muscat	+04:00	Honolulu, Hawaii, Tahiti	-10:00
Kabul	+04:30	Alaska	-09:00
Tashkent, Karachi	+05:00	LA, San Francisco, Vancouver, Seattle	-08:00
Calcutta, New Delhi	+05:30	Denver, Phoenix, Salt Lake City	-07:00
Kathmandu	+05:45	Chicago, Dallas, Houston, Mexico City	-06:00
Almaty, Dacca	+06:00	New York, Miami, Washington D.C., Montreal, Atlanta	-05:00
Yangon	+06:30	Caracas, Santiago	-04:00
Bangkok	+07:00	Buenos Aires, Brasilia, Sao Paulo	-03:00
Hong Kong, Beijing, Taipei, Singapore, Manila	+08:00	Fernando de Noronha	-02:00
Seoul, Tokyo, Pyongyang	+09:00	Azores, Cape Verde	-01:00

Date/Time Set

By setting the date and time, you can display the date and time of the recording during playback. ➡ page 25

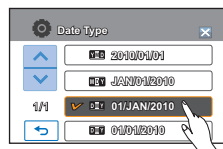
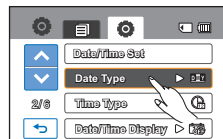
Date Type

You can set the display type for the date set according to the selected option.

1. Touch the Menu (MENU) → Setting (⚙️) tab → “Date Type.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (X) or Return (↩️) tab.

Submenu items

- **2010/01/01** : The date is displayed in the order of year/month (two-digit)/date.
- **JAN/01/2010** : The date is displayed in the order of month/date/year.
- **01/JAN/2010** : The date is displayed in the order of date/month/year.
- **01/01/2010** : The date is displayed in the order of date/month (two-digit)/year.



This function depends on “Date/Time Display” setting.

system setting

Time Type

You can set the display type for the time set according to the selected option.

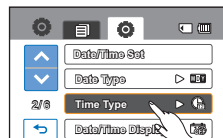
1. Touch the Menu (MENU) → Setting (⚙️) tab → “Time Type.”
2. Touch the desired display option.
3. To exit the menu, touch the Exit (⌂) or Return (↩️) tab.

Submenu items

- **12Hr** : Displays the time information in 12 hour units.
- **24Hr** : Displays the time information in 24 hour units.



This function depends on “Date/Time Display” setting.



Date/Time Display

You can set the date and time to be displayed on the LCD screen according to the selected option.

PRECHECK!

Before you use the “Date/Time Display” function, you must set the date and time. ➡ page 78

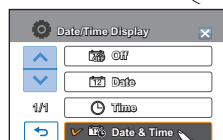
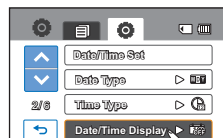
1. Touch the Menu (MENU) → Setting (⚙️) tab → “Date/Time Display.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (⌂) or Return (↩️) tab.
 - The date/time is displayed on the LCD screen according to the selected option.

Submenu items

- **Off** : Current date/time information is not displayed.
- **Date** : Displays the current date.
- **Time** : Displays the current time.
- **Date & Time** : Displays the current date and time.



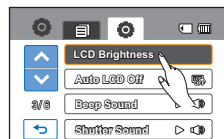
- The date/time will read “01/JAN/2010 00:00” in the following cases:
 - When the built-in rechargeable battery is depleted.
- This function depends on “Date Type” and “Time Type” setting.



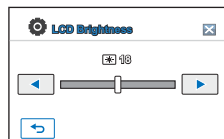
LCD Brightness

You can adjust the brightness of the LCD screen to compensate for ambient lighting conditions.

1. Touch the Menu (MENU) → Setting (⚙️) tab → “LCD Brightness”
2. Touch the decrease (◀️) or increase (▶️) tab to adjust the setting values as you want.
 - You can set values for LCD brightness between 0 and 35.
3. To exit the menu, touch the Exit (⌂) or Return (↩️) tab.



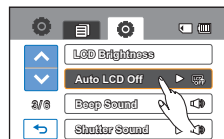
- If the surrounding is too bright, adjust the brightness of the LCD screen.
- Adjusting the LCD screen does not affect the image being recorded.
- Brighter LCD screen consumes more power.



Auto LCD Off

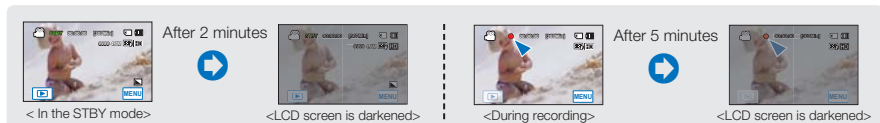
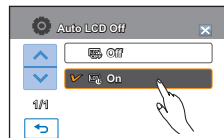
To reduce power consumption, the brightness of the LCD screen is automatically dimmed if the camcorder is idle for more than 2 minutes.

1. Touch the Menu (MENU) → Setting (⚙️) tab → “Auto LCD Off.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (⌂) or Return (↩️) tab.



Submenu items

- **Off** : Disable the function.
- **On** : When the camcorder is idle for more than 2 minutes in the STBY mode, or for more than 5 minutes when recording a video, the power saving mode starts by dimming the LCD screen.



- When this “Auto LCD Off” function is enabled, you can press any button on the camcorder to return LCD brightness to normal.
- **Auto LCD Off will be disabled in the following cases:**
 - If the AC power adaptor is connected.
 - While the Demo function is in operation.

system setting

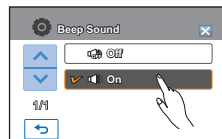
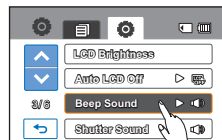
Beep Sound

This setting allows operations such as touching tabs and buttons on the screen to be signaled by a beep.

1. Touch the Menu (MENU) → Setting (⚙️) tab → “Beep Sound.”
2. Touch the desired submenu item.
3. To exit, touch the Exit (⌂) or Return (↩️) tab until the menu disappears.

Submenu items

- **Off** : Disables the function.
- **On** : You will hear a beep sound when operating buttons or tabs such as the **Power** (⏻) button or **recording start/stop** button.



The Beep Sound is cancelled in the following cases:

- During recording, playing
- When the camcorder has a cable connection. (component/AV cable, HDMI cable, etc.)

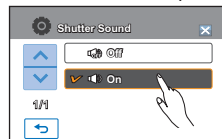
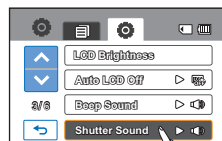
Shutter Sound

You can turn the shutter sound on or off when pressing the **PHOTO** button.

1. Touch the Menu (MENU) → Setting (⚙️) tab → “Shutter Sound.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (⌂) or Return (↩️) tab.

Submenu items

- **Off** : Disable the function.
- **On** : You will hear the shutter sound when operating the **PHOTO** button.



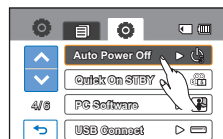
The Shutter Sound is not heard in the following conditions:

- In case of using the **PHOTO** button during video recording.
- When the camcorder has a cable connection. (component/AV cable, HDMI cable, etc.)

Auto Power Off

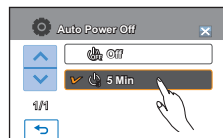
You can set your camcorder to automatically turn off if it is idle for 5 minutes without an operation. This function will prevent unnecessary power consumption.

1. Touch the Menu (MENU) → Setting (⚙️) tab → “Auto Power Off.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (⏮️) or Return (⏭️) tab.



Submenu items

- **Off** : Disable the function.
- **5 Min** : The camcorder turns off if idle for 5 minutes without an operation.



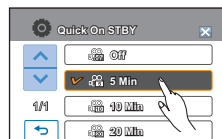
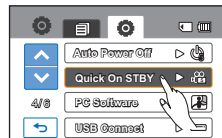
- **Auto Power Off does not work in the following situations:**
 - When the camcorder has a cable connection. (HDMI cable, component/AV cable, USB cable, etc.)
 - While the Quick On STBY function is in operation.
 - While the Demo function is in operation.
 - While in recording, playing (except pause), photo slide show.
- To operate the camcorder again, press the **Power** (⏻) button.

system setting

Quick On STBY

When you are going to record frequently for an extended time, use the Quick On STBY function. In standby mode, closing the LCD screen will commence the Quick On STBY mode to reduce energy consumption. Once you are ready to record again, this function enables to the camcorder to come on quickly from the power saving mode.

1. Touch the Menu (MENU) → Setting (⚙️) tab → “Quick On STBY.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (⌂) or Return (↩️) tab.
 - In the standby mode, closing the LCD screen will soon execute the Quick On STBY mode, and then the camcorder turns off after the selected time setting.



Submenu items

- **Off** : In the standby mode, closing the LCD screen turns off the camcorder.
- **5 Min** : In the standby mode, closing the LCD screen will soon execute the Quick On STBY mode, and then the camcorder turns off after 5 minutes.
- **10 Min** : In the standby mode, closing the LCD screen will soon execute the Quick On STBY mode, and then the camcorder turns off after 10 minutes.
- **20 Min** : In the standby mode, closing the LCD screen will soon execute the Quick On STBY mode, and then the camcorder turns off after 20 minutes.

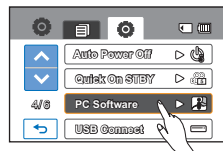


- Turning off the camcorder after use is always recommended to reduce the energy consumption, however, you can effectively use the Quick On STBY function for the frequent shooting conditions in the specified time schedule.
- The mode indicator keeps blinking in the Quick On STBY mode.
- **The Quick On STBY mode is not available in the following conditions:**
 - When the LCD screen is open.
 - When a video cable (HDMI, Component/AV) or the USB cable is connected to the camcorder.
 - When operating the buttons on the camcorder.

PC Software

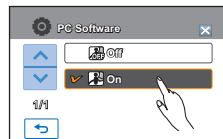
If you set PC Software to On, you can simply use the PC software by connecting the USB cable between the camcorder and your PC. You can download the stored video and photo images on the camcorder to your PC's hard disk. Editing video/photo files is also available using the PC software.

1. Touch the Menu (MENU) → Setting (⚙️) tab → "PC Software."
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (⏮️) or Return (⏭️) tab.



Submenu items

- **Off** : Disables the function.
- **On** : The built-in editing software launches when the camcorder is connected to the PC.



- **The PC Software function is not available in the following conditions:**
 - If "USB Connect" is set to "PictBridge"
- To enable the PC Software function, set "USB Connect" to "Mass Storage," in the system setting menu option.
- The PC Software is compatible with the Windows OS only.

system setting

USB Connect

You can transfer data to a PC or print photos directly by establishing the USB connection.

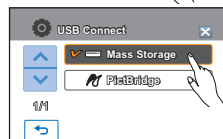
1. Touch the Menu (MENU) → Setting (⚙️) tab → “USB Connect.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (⌂) or Return (↩️) tab.

Submenu items

- **Mass Storage** : Connect to a PC to transfer videos or photos. ➡ page 115
- **PictBridge** : Connect to a PictBridge printer to print photos directly (when using the PictBridge function). ➡ page 100



Before connecting a USB cable, check whether the current USB mode is appropriate for the function to be used.



HDMI TV Out

You can set the HDMI video output to match the TV you have connected.

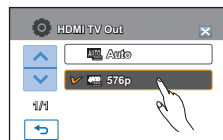
PRECHECK!

Using the HDMI cable (not supplied), connect the camcorder to your TV. ➡ page 102

1. Touch the Menu (MENU) → Setting (⚙️) tab → “HDMI TV Out.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (⌂) or Return (↩️) tab.

Submenu items

- **Auto** : The video signals are output in the same format as the recorded file. Use this setting only when connecting to an HDTV.
- **576p** : The recorded file is output in the 720x576p format. Use this setting only when connecting to a regular TV which supports the progressive scan at the SD (Standard Definition) level by using the HDMI jacks.



Analogue TV Out

You can set the component or composite video output to match the TV you have connected.

PRECHECK!

- Using the component/AV cable provided with your camcorder, connect the camcorder to your TV.
→ page 103~104
- This camcorder provides the two-in-one component/AV cable that fits the purpose of the component and the AV cable. Therefore, when using the component/AV cable, you must check the right method for the TV output by setting the "Analogue TV Out" menu.

1. Touch the Menu (MENU) → Setting (⚙️) tab → "Analogue TV Out."
2. Touch the desired submenu item.
 - Check the TV type, connection jack, and the resolution of the recorded video before you choose the desired submenu item.
3. To exit the menu, touch the Exit (⌂) or Return (↩️) tab.



Submenu items

- **Component 1080i (1080i)**: The recorded file is output in the 1920x1080i format. Use this setting only when connecting to an HDTV by using the component (Y/Pb/Pr, Audio) jacks.
- **Component 576p (576p)**: The recorded file is output in the 720x576p format. Use this setting only when connecting to a regular TV which supports the progressive scan at the SD (Standard Definition) level by using the component (Y/Pb/Pr, Audio) jacks.
- **Component 576i (576i)**: The recorded file is output in the 720x576i format. Use this setting only when connecting to a regular TV which only supports the SD (Standard Definition) resolution without the progressive scan by using the component (Y/Pb/Pr, Audio) jacks.
- **Composite (COMP)**: The composite video signals are output via the component/AV cable (blue). Use this setting only when connecting to a regular TV that has no component video jacks.



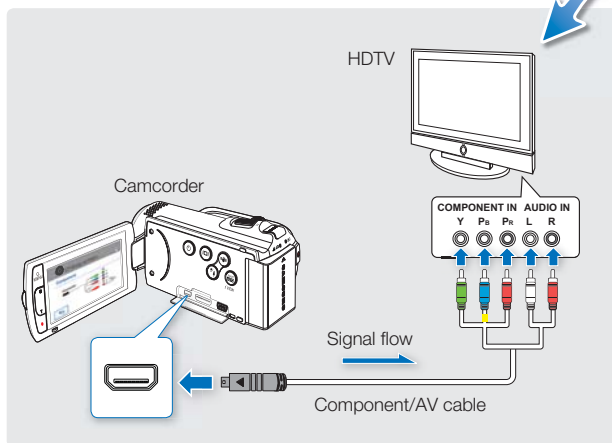
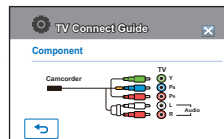
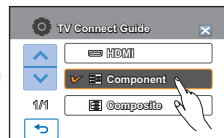
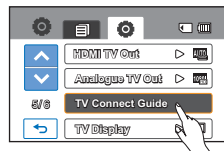
- The Analogue TV Out indicator is displayed only when the camcorder is connected to a TV.
- For details on TV specification, refer to the user manual of the connected TV.

system setting

TV Connect Guide

You can view the TV Connect Guide before you connect the camcorder to your TV set.

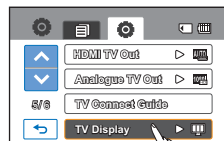
1. Touch the Menu (MENU) tab → Setting (⚙️) tab → “TV Connect Guide.”
2. Touch the desired submenu item.
 - TV Connect Guide appears depending on the selected submenu items.
 - Refer to the TV Connect Guide when connect your camcorder with other external devices.
3. To exit the menu, touch the Exit (⌂) or Return (↩️) tab.



TV Display

You can enable or disable the On Screen Display (OSD) that appears on the TV screen when connecting your camcorder to a TV.

1. Touch the Menu (MENU) → Setting (⚙️) tab → “TV Display.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (⏮️) or Return (⏭️) tab.



Submenu items

- **Off** : The OSD (On Screen Display) menus are only shown on the LCD screen.
- **On** : The OSD menus are shown on the LCD screen and the TV screen as well.

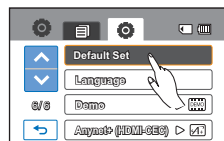


The thumbnail display and demo screens are shown on the TV even if you set “TV Display” to “Off.”

Default Set

You can restore all menu settings to the default conditions.

1. Touch the Menu (MENU) → Setting (⚙️) tab → “Default Set.”
 - A message appears asking for your confirmation.
2. Touch “Yes” if you want all the settings return to the default.
 - The Time Zone screen appears after all settings return to the default.
3. Set the date and time again. ➡ page 25



- Do not turn off the power while using this function.
- Initialising the camcorder settings to factory defaults does not affect recorded images.

system setting

Language

You can select a desired language to display the menu and messages. ➡page 26

Demo

Demo mode automatically shows you the major functions that are included with your camcorder so that you may use them more easily.

1. Touch the Menu (MENU) → Setting (⚙️) tab → “Demo.”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (⏮️) or Return (⏭️) tab.

Submenu items

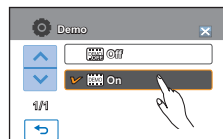
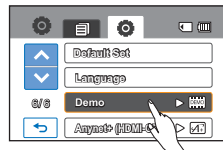
- **Off** : Disable the function.
- **On**: Enables the Demo function.

Using the Demo function

The Demo mode is cancelled in the following cases:

- If the LCD screen is touched.
- If any button is operated (**Recording start/stop**, **Q.MENU**, **Display** (I/O), **SMART AUTO**, **MODE**, **PHOTO**, etc.)

However, the camcorder will enter the Demo mode automatically after 5 minutes in STBY mode if it is idle for 5 minutes without an operation. If you don't want the Demo function starts, set “Demo” to “Off”.



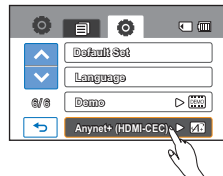
The Demo function does not operate in the following cases:

- If “Auto Power Off” is set to “5 Min”(uses the battery as main power), the Auto Power Off function will turn the camcorder off before Demo can run.

Anynet+ (HDMI-CEC)

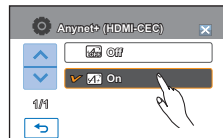
This camcorder supports Anynet+. Anynet+ is an AV network system that enables you to control all connected Samsung AV devices with an Anynet+ supported Samsung TV remote control.

1. Touch the Menu (MENU) → Setting (⚙️) tab → “Anynet+ (HDMI-CEC).”
2. Touch the desired submenu item.
3. To exit the menu, touch the Exit (🔍) or Return (↩️) tab.
 - When the camcorder is connected to the Anynet+ supported TV, you can operate some functions of the camcorder using the TV's remote control.



Submenu items

- **Off:** Disable the function.
- **On:** The Anynet+ function is enabled.



- When you turn on the camcorder that is connected to an Anynet+ supporting TV with an HDMI cable, the TV (Anynet+ supported) is automatically turned on. If you do not want to use this Anynet+ function, set the “Anynet+ (HDMI-CEC)” to “Off.”
- For details on the Anynet+ (HDMI-CEC) function, refer to the user manual of Samsung's Anynet+ supported TV.

editing video clips

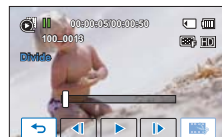
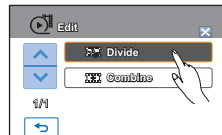
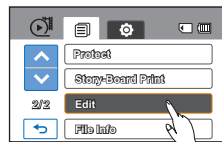
DIVIDING A VIDEO

You can divide a video into two, and easily delete a section you no longer need. As this function edits the original file, make sure to back up important recordings separately.

PRECHECK!

- Insert a memory card.
- Set the appropriate storage media. (HMX-H203/H204/H205 only) ↪ page 27
- Touch the Play (▶) → HD (HD) or SD (SD) tab on the LCD screen.
↪ page 43

1. Touch the Menu (MENU) tab → “Edit” → “Divide.”
2. Touch the desired video to edit.
 - The selected video is displayed as paused.
3. Search the point of division by touching playback control tabs.
 - Playback control tabs: ▶/⏏/⏮/⏭/⏪/⏩/▶
4. Touch the pause (⏏) tab at the point of division, then touch the Cutting (✂) tab.
 - A message appears asking for your confirmation.
5. Touch “Yes.”
 - The selected video is divided into two video clips.
 - The second clip of the divided video is displayed as the last thumbnail.
 - After the division, you can partially delete a unnecessary section or combine with other videos.



Do not eject a memory card or power off while editing a video recorded on the storage media. Doing so may damage the storage media or data.



- You can not divide files that are protected (Ⓢ) indicator is written on. Cancel the protect function first. ↪ page 96
- The divided video may drift before or after the division point by approx. 2 seconds.
- **The Divide function is not available in the following conditions:**
 - If the total recorded time of the video is less than 6 seconds.
 - If you trying to divide sections without leaving 3 seconds at the beginning and the end.
 - If the video file is recorded in the Time Lapse REC mode.
 - If the remaining section of the memory space is less than 15MB.
 - Videos recorded or edited by other devices.
 - Photos cannot be divided.
- The division function does not work if available space on the storage is insufficient. Delete unnecessary videos.
- When the video is divided into two, only the first video clip is stored in the playlist again.

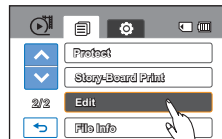
COMBINING VIDEOS

You can combine two different videos. As this function edits the original file, make sure to back up important recordings separately.

PRECHECK!

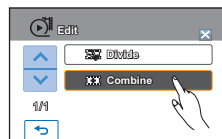
- Insert a memory card.
- Set the appropriate storage media. (HMX-H203/H204/H205 only) ↪ page 27
- Touch the Play (▶) → HD (HD) or SD (SD) tab on the LCD screen.
↪ page 43

1. Touch the Menu (MENU) tab → “Edit” → “Combine.”



2. Touch the video thumbnails to be combined.

- The (L) indicator and the order number are displayed on the selected videos. Touching the video thumbnail toggles the image between being selected (L) or not selected.
- The (L) indicator does not appear if there is a different resolution between selected videos files.

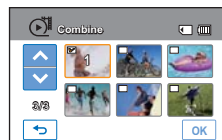


3. Touch the (OK) tab.

- A message appears asking for your confirmation.

4. Touch “Yes.”

- The selected video files are combined in the chosen order and stored as one video.
- The thumbnail of the first video will appear in the combined video.



Do not eject a memory card or power off while editing a video recorded on the memory card. Doing so may damage the storage media or data.



- You can not combine files with the protect (Ⓢ) indicator is written on. Cancel the protect function first. ↪ page 96
- The original video will not be preserved.
- **The combine function is not available in the following conditions:**
 - Videos in different resolution formats (Videos recorded at “Video Resolution: [HD]1080/50i” and “Video Resolution: [HD]720/50p”) cannot be combined.
 - The file size of the combined videos cannot exceed 1.8 GB.
 - The video file recorded in the Time Lapse REC mode cannot be edited.
 - If the remaining section of the memory space is less than 15MB, the files cannot be combined.
 - Videos recorded or edited by other devices.
 - Photos cannot be combined.

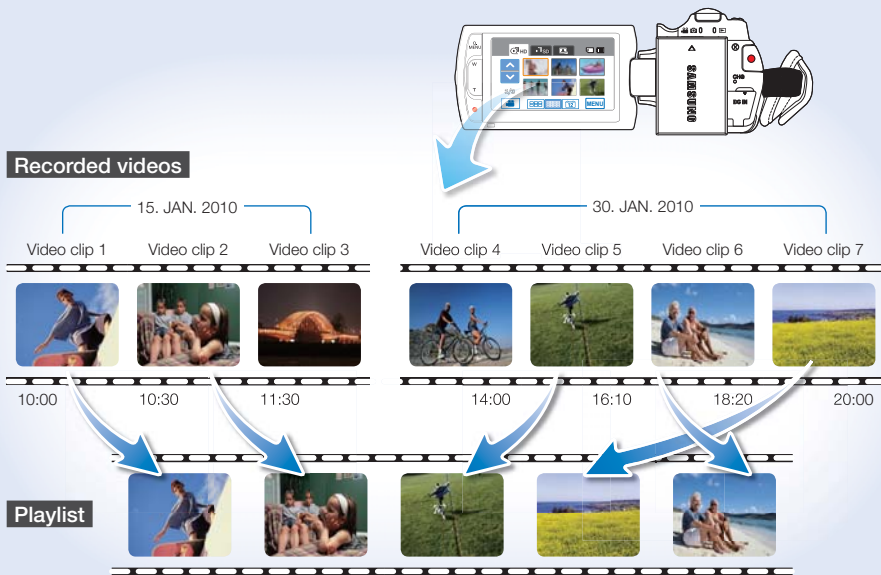
editing the playlist

PLAYLIST

What's a "Playlist?"

You can create a playlist on the same storage media by gathering your favourite scenes from the recorded videos. Adding or deleting videos from a playlist does not affect the original video images.

Example: You have recorded a few scenes on the storage media. You want to save the original recording, but you also want to create a digest by putting your favourite scenes together. In this case, you can create a playlist by selecting your favourite scenes, leaving the original recording as it is.




- One playlist can be created per each resolution set, "HD (High definition)" and "SD (Standard Definition)."
- The maximum number of videos on the playlist: 9999 videos.
- If original videos are deleted, scenes on the playlist created with these videos are also deleted.

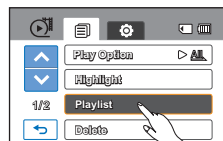
CREATING THE PLAYLIST

You can create a playlist by gathering your desired videos from the recorded video.

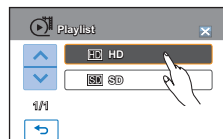
PRECHECK!




- Insert a memory card.
- Set the appropriate storage media. (HMX-H203/H204/H205 only) ↪ page 27
- Touch the Play () tab on the LCD screen to select the play mode. ↪ page 23

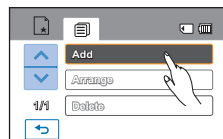
1. Touch the Menu () tab → **“Playlist.”**
 - The menu window appears for selecting the video resolution.




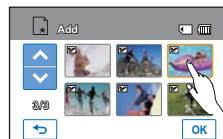
2. Touch **“HD”** or **“SD.”**
 - The thumbnail display appears according to the selected resolution.



3. Touch the Menu () tab, then touch **“Add.”**
 - Video thumbnails corresponding to the selected video resolution appear on the screen.
4. Touch the desired video to be added to the playlist.
 - The () indicator is displayed on the selected video. Touching the video toggles the image between being selected () and not selected.



5. Touch the () tab.
 - A message appears asking for your confirmation.
6. Touch **“Yes.”**
 - The playlist is created.
 - You can play the playlist in the same manner as you play a video.



While editing the playlist, do not eject the memory card or power off the camcorder. Doing so may damage the storage media or data.



- If available space on the storage is insufficient, you can not create or add a playlist. Delete unnecessary videos.
- You cannot select two different resolution images for placement in the playlist.

editing the playlist

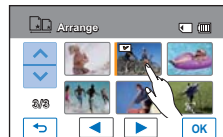
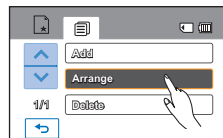
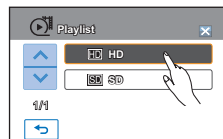
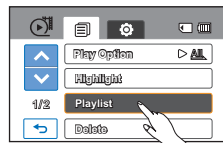
ARRANGING VIDEOS IN THE PLAYLIST

You can change the order of videos on the playlist.

PRECHECK!

- Insert a memory card.
- Set the appropriate storage media. (HMX-H203/H204/H205 only) ↗page 27
- Touch the Play (⏮) tab on the LCD screen to select the play mode. ↗page 23

1. Touch the Menu (MENU) tab → “Playlist.”
2. Touch “HD” or “SD.”
 - Video thumbnails corresponding to the selected video quality appear on the screen.
3. Touch the Menu (MENU) tab, then touch “Arrange.”
 - The playlist appears.
4. Touch the video you want to move.
 - The (✓) indicator and the selection bar appear on the selected video. Touching the video toggles the image between being selected (✓) and not selected.
5. Touch the previous (◀)/ next (▶) tab to move the bar to the position you want, then touch the (OK) tab.
 - A message appears asking for your confirmation.
6. Touch “Yes.”
 - The video moves to the selected position.









While editing the playlist, do not eject the memory card or power off the camcorder. Doing so may damage the storage media or data.

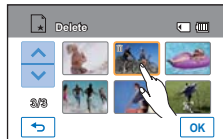
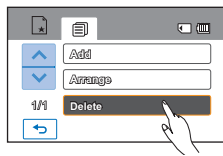
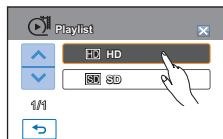
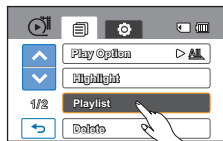
DELETING VIDEOS FROM THE PLAYLIST

You can delete undesired videos from the playlist.

PRECHECK!

- Insert a memory card.
- Set the appropriate storage media. (HMX-H203/H204/H205 only) ↗page 27
- Touch the Play () tab on the LCD screen to select the play mode. ↗page 23

1. Touch the Menu () tab → “Playlist.”
2. Touch “HD” or “SD.”
 - Video thumbnails corresponding to the selected video quality appear on the screen.
3. Touch the Menu () tab, then touch “Delete.”
 - The playlist appears.
4. Touch the video you want to delete.
 - The () icon and the selection bar appear on the selected video. Touching the video toggles the image between being selected () and not selected.
5. Touch the () tab.
 - A message appears asking for your confirmation.
6. Touch “Yes.”
 - The selected videos are deleted from the playlist.



While editing the playlist, do not eject the memory card or power off the camcorder. Doing so may damage the storage media or data.

file management

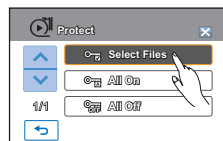
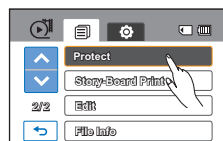
PROTECTION FROM ACCIDENTAL ERASURE

You can protect important recordings from accidental erasure. The protected videos and photos are not deleted unless they are formatted or the protection is cancelled.

PRECHECK!

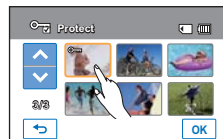
- Insert a memory card.
- Set the appropriate storage media. (HMX-H203/H204/H205 only) ↪ page 27
- Touch the Play ([P]) tab on the LCD screen to select the play mode. ↪ page 23

1. Touch the HD ([HD]), SD ([SD]) or Photo ([P]) tab.
 - Videos or photos appear as thumbnails.
2. Touch the Menu ([MENU]) tab → “Protect.”
3. Touch the desired submenu item.
 - The corresponding message to the selected option appears.
4. Touch “Yes.”
 - The protection is set to on or off.
 - The (⊞) indicator appears on the protected file.



Submenu items

- **Select Files:** Protects individual images.
 - Touch the images to protect from erasure.
 - The (⊞) indicator is displayed on the selected images.
 - Touching the thumbnail image toggles the image between being selected (⊞) or not selected.
 - Touch the ([OK]) tab.
- **All On:** Protects all images.
- **All Off:** Releases the protected images all at once.








- You can also operate this function in the full and single image display mode.
- If the write protection tab on the memory card is set to lock, you cannot set this function.
↪ page 29

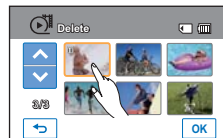
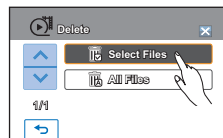
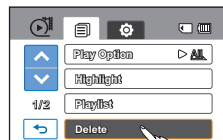
DELETING FILES

You can erase your recordings one by one, or at once.




PRECHECK!

- Insert a memory card.
- Set the appropriate storage media. (HMX-H203/H204/H205 only) ↪ page 27
- Touch the Play () tab on the LCD screen to select the play mode. ↪ page 23

1. Touch the HD (), SD () or Photo () tab.
 - Videos or photos appear as thumbnails.
2. Touch the Menu () tab → “Delete.”
3. Touch the desired submenu item.
4. The corresponding message to the selected option appears.
Touch “Yes.”
 - The selected image is deleted.



Submenu items

- **Select Files:** Deletes individual images.
Touch the images you want to delete.
The () indicator is displayed on the selected images.
Touching the thumbnail image toggles the image between being selected () or not selected.
Touch the () tab.
- **All Files:** Deletes all images.



- Deleted images cannot be recovered.
- Do not eject a memory card or power off while deleting videos recorded on the storage media. Doing so may damage the storage media or data.



- To protect important images from accidental erasure, activate the image protection function in advance. ↪ page 96
- You can not delete protected files. Cancel the protect function first.
- If the write protection tab on the memory card is set to lock, you cannot delete the images. ↪ page 29
- You can also operate this function in the full and single image display mode.
- The delete function does not work if battery charge is insufficient. It is recommended to use AC power to continue power supply during the deletion.

file management

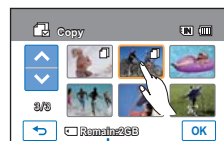
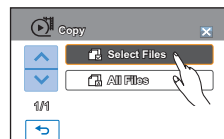
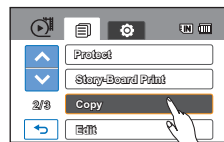
COPYING FILES (HMX-H203/H204/H205 ONLY)

Videos and photos stored in the internal memory can be copied to the external flash memory card. Copying to the memory card does not delete originals in the internal memory.

PRECHECK!

- Insert the memory card in your camcorder.
- Touch the Play (⏮) tab on the LCD screen to select the play mode. ➡ page 23

1. Touch the HD (📺HD), SD (📺SD) or Photo (📷) tab.
 - Videos or photos appear as thumbnails.
2. Touch the Menu (MENU) tab → “Copy.”
3. Touch the desired submenu item.
4. The corresponding message to the selected option appears.
Touch “Yes.”
 - The selected images are copied.



Remaining free space in the destination memory card

Submenu items

- **Select Files:** Copy individual images.
Touch the images you want to copy.
The (📺) indicator is displayed on the selected images.
Touching the thumbnail image toggles the image between being selected (📺) or not selected.
Touch the (OK) tab.
- **All Files:** Copy all images.



- You can also operate this function in the full and single image display mode.
- If the write protection tab on the memory card is set to lock, you cannot copy the images.
➡ page 29
- You can not copy a file if the memory card has insufficient free space. Remove unnecessary files before proceeding. ➡ page 97
- The copy function does not work if battery charge is insufficient. It is recommended to use AC power to continue power supply during the copying.

printing photos

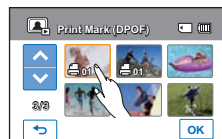
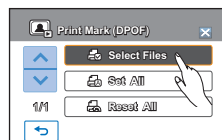
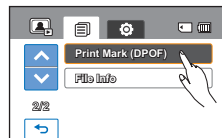
DPOF PRINTING SETTING

On your memory card, you can write the print-out information including the number of copies to print. The saved information is used when you connect your camcorder with a DPOF-compatible printer.

PRECHECK!

- Insert a memory card in your camcorder.
- Touch the Play (▶) tab on the LCD screen to select the play mode. ➡ page 23

1. Touch the Photo (📷) tab.
 - The photo thumbnails are displayed.
2. Touch the Menu (MENU) tab → “Print Mark (DPOF).”
3. Touch the desired submenu item.
4. The corresponding message appears to the selected option.
Touch “Yes.”
 - The print mark is selected or removed.
 - The (01) indicator appears on the print-marked photos.



Submenu items

- **Select Files:** Print-marks individual images.
The print marks indicator is displayed on the selected images. Touching the thumbnail image toggles the image between being selected (01) or not selected. Touch the (OK) tab.
- **Set All:** Print-marks all images.
- **Reset All:** Removes all the print-marks.

Understanding DPOF

DPOF (Digital Print Order Format) allows you to set which still images on the memory card are to be printed, together with information on the number of copies to be printed.

Tip

In single display mode, you can set the number of prints by using the decrease ([-]) or increase ([+]) tab.

- Touch the Menu (MENU) tab → “Print Mark (DPOF)” → decrease ([-]) or increase ([+]) tab.
- Up to 99 copies can be set to print of each image.



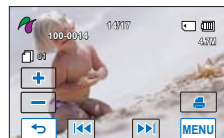
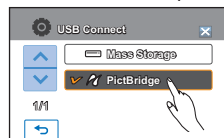
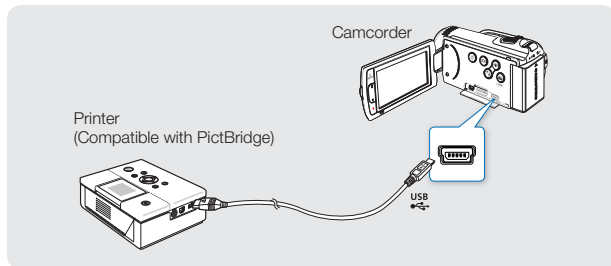
- When you select the “Set All” option, the number of copies to be printed is set to 01.
- Selecting the “Set All” or “Reset All” options may take a long time depending on the number of the selected copies.

printing photos

DIRECT PRINTING WITH A PICTBRIDGE PRINTER

You can print photos directly by connecting this camcorder to a PictBridge printer (sold separately) and a USB cable.

1. Touch the Menu (MENU) → Setting (⚙️) tab → “USB Connect” → “PictBridge.”
2. Use a USB cable to connect your camcorder to the printer.
3. Turn your printer power on.
 - The photo thumbnails appear.
4. Touch the photos to be print, then touch the Print (🖨️) tab.
 - The selected photo is printed.



To set the number of prints

Touch the decrease ([-]) / increase ([+]) tab to set the number of copies to print.

- The number of copies is set.

To cancel the print setting

Touch the Return ([↩️]) tab on the LCD screen.

To stop printing after printing starts

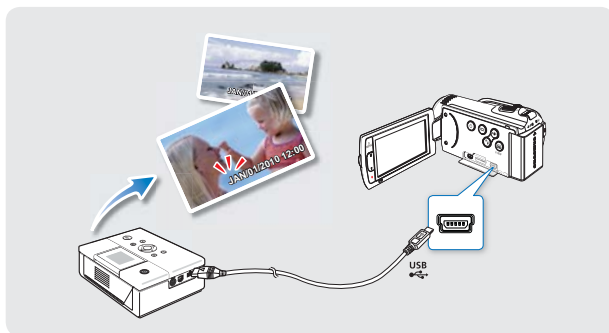
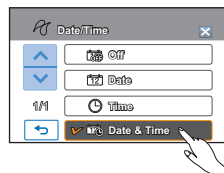
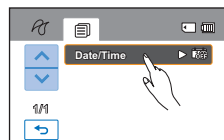
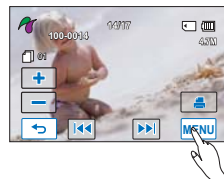
Touch “Cancel” on the screen.



- If the camcorder is connected to a printer while “USB Connect” is set to “Mass Storage,” the message “Fail USB Connecting Change ‘USB Connect’” appears. Set the “USB Connect” to the “PictBridge” then connect the USB cable again.
- Use the supplied USB cable.

To set the date/time imprint

1. In the printer mode, touch the Menu (MENU) tab.
 - The print options appear on the screen.
2. Touch “Date/Time.”
3. Touch the desired submenu item.
 - The selected date and time display option is set.
4. To exit the menu, touch the Exit (X) or Return (RETURN) tab.
 - The selected date and time will be printed on the photos.



- The date/time imprint option may not be supported by all printers. Check with your printer manufacturer. The “Date/Time” menu cannot be setup if the printer does not support this option.
- PictBridge™ is a registered trademark of CIPA (Camera & Imaging Products Association), an image transfer standard developed by Canon, Fuji, HP, Olympus, Seiko Epson, and Sony.
- Use the AC power adaptor for your camcorder during PictBridge direct printing. Turning the camcorder off during printing might damage data on the storage media.
- Video images cannot be printed.
- Photos recorded on other devices cannot be printed.
- Various printing options are available depending on the printer. Refer to the printer's user manual for details.

connecting to a TV

CONNECTING TO A HIGH DEFINITION TV

You can enjoy High Definition (HD) quality videos, recorded in “[HD]1080/50i” or “[HD]720/50p” resolution using an HDTV. The connection methods and quality of the image viewed on the TV screen differ depending on what type of TV is connected, and the connectors used. To playback high quality videos from your camcorder, check if your TV set supports the “[HD]1080/50i” resolution. This HD camcorder supports both HDMI and component output to deliver high-definition video transfer.

PRECHECK!

- Select the HDMI or the component jack on your TV. For more information about the connectors and the connection methods, refer to the TV user manual.
- This HD camcorder provides a two-in-one component/AV cable that functions as an component and AV cable. Therefore, when using the component/AV cable, you must select the right method for the TV output by setting the “**Analogue TV Out**” menu. ➡ page 85

Understanding the HDMI cable

HDMI (High Definition Multimedia Interface) is a compact audio/video interface for transmitting uncompressed digital data.

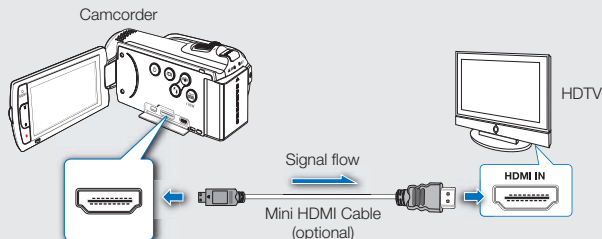
What is Anynet+ function?

You can use the same remote control for devices that support the Anynet + function.

You can use the Anynet + function if the camcorder is connected with an HDMI cable to an Anynet+ supported TV. For more information, refer to the Anynet+ support TV's user manual.

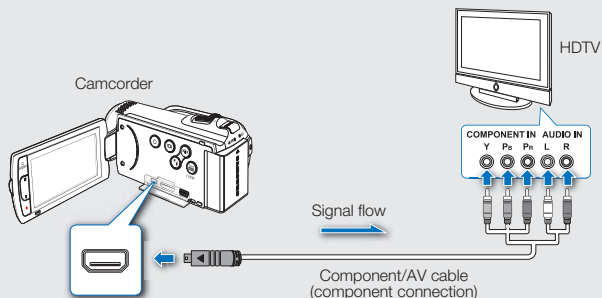
Type A: Using a mini HDMI cable

1. Turn on the camcorder and connect a Mini HDMI cable (optional) to the HDMI jack on your TV.
 - When connecting via HDMI, the connected device may not be recognised if the camcorder is turned off.
2. Turn on your TV and set the TV's input selector to the Input your camcorder is connected to. Refer to the TV's instruction manual to see how to select the TV input.



Type B: Using a component/AV cable

1. Connect the provided component/AV cable to the component jack, **Y-P_B-P_R** (Video) and **L-R** (Audio) on your TV.
 - After the connection is complete, set **"Analogue TV Out"** to **"Component 1080i."**
→page 85
2. Turn on your TV and set the TV's input selector to the Input your camcorder is connected to. Refer to the TV's instruction manual to see how to select the TV input.



If the **P_B**, **P_R**, or **Y** jack is not connected correctly, the TV screen may appear red or blue.



- When connecting to TV using the component/AV cable, match the colours between the cables and the corresponding jacks.
- Videos recorded using the HD camcorder will playback on an HDTV in the original resolution you set in the camcorder. Videos recorded in SD quality cannot playback on an HDTV in the HD quality. For example, videos recorded in HD quality (resolution of "[**HD**]1080/50i" or "[**HD**]720/50p") playback in HD quality while the videos recorded in SD quality (resolution of "[**SD**]576/50p") playback in the SD quality.
- This camcorder is provided with the **"TV Connect Guide"** menu function. If you try to connect the camcorder to a TV (without using the user manual), use the **"TV Connect Guide"** menu function.
→page 86
- You must use the provided component/AV cable. Do not use cables from other manufacturers.
- Only a C to A type Mini HDMI cable can be used with this camcorder.
- The HDMI jack on the camcorder is provided for the output usage only.
- If the Anynet+ supported TV is connected with the camcorder, turning on the camcorder may turn the TV's TV power on. (Anynet+ function) If you don't want this function, set **"Anynet+ (HDMI-CEC)"** to **"Off."** →page 89
- Use only the HDMI 1.3 cable when connecting to the HDMI jack of this camcorder. If the camcorder is connected with other HDMI cables, the screen display may not work.

connecting to a TV

CONNECTING TO A REGULAR TV

You can enjoy images recorded with your HD camcorder on a regular TV that supports standard definition. **Images recorded with HD (high definition) image quality (i.e. resolution of "[HD]1080/50i" or "[HD]720/50p") are played back with SD (standard definition) image quality.**

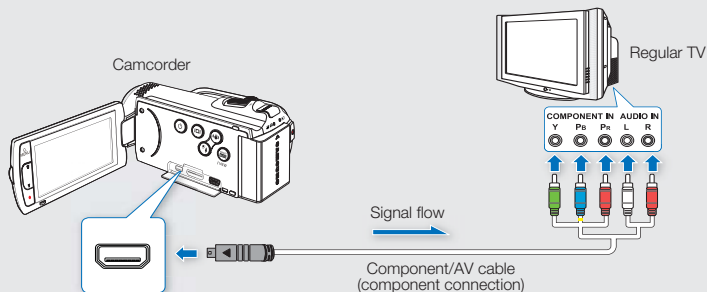
The connection methods and quality of the image viewed on the TV screen differ depending on what type of TV is connected, and the connectors used. This HD camcorder supports both component and composite output for standard definition video transfer.

PRECHECK!

- Check your TV connection jack and select the connection method depending on the component or the composite jack. For more information about the connection jack and the method, refer to the TV user manual.
- This HD camcorder provides a two-in-one component/AV cable that functions as an component and AV cable. Therefore, when using the component/AV cable, you must select the right method for the camcorder's output by setting the **"Analogue TV Out"** menu. ↪page 85

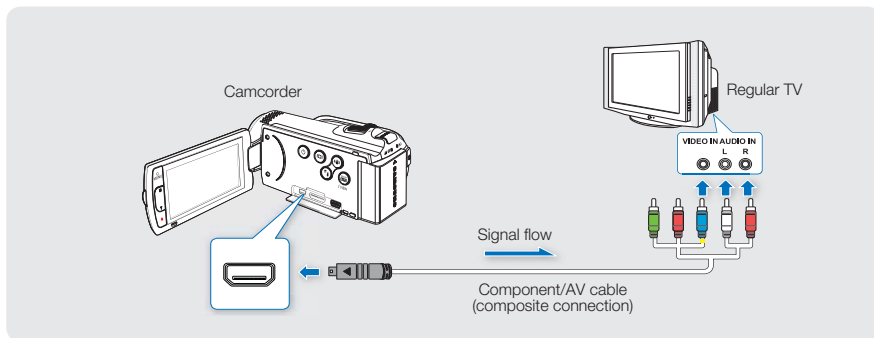
Type A: Connecting a component/AV cable for the component output

1. Connect the provided component/AV cable to the component jack, **Y-Pb-Pr** (Video) and **L-R** (Audio) on your TV.
 - After the connection is complete, set **"Analogue TV Out"** to **"Component 576p** or **Component 576i."** ↪page 85
2. Turn on your TV and set the TV's input selector to the Input your camcorder is connected to. Refer to the TV's instruction manual to see how to select the TV input.



Type B: Connecting a component/AV cable for the composite output

1. Connect the provided component/AV cable to the composite jack, **Video** and **L-R** (Audio) on TV. Use the blue plug with the yellow label to connect to the Video input on your TV.
 - After the connection is complete, check the desired TV out method by setting "**Analogue TV Out**" to "**Composite.**" ➔page 85
2. Turn on your TV and set the TV's input selector to the Input your camcorder is connected to.
 - This is often referred to as "line."
 - Refer to the TV's instruction manual to see how to select the TV input.



If the **P_B**, **P_R**, or **Y** jack is connected incorrectly, the TV screen may appear red or blue.



- Check the connection status between the HD camcorder and TV, the TV screen may not deliver the right video information if connected incorrectly.
- When the camcorder is connected to a TV with more than one cable, the output signal is followed in the order of priority: HDMI → component/AV output.
- Do not use excessive force when connecting the cables.
- For more information about the TV connection jack and the connecting method, refer to the TV user manual.
- Following method **Type B** above, the blue plug may not match the Video input on your TV due to the VIDEO input being labelled differently. Sometimes the TV has a **Y** input jack instead of **VIDEO**.

connecting to a TV

VIEWING ON A TV SCREEN

You can enjoy the enjoy widescreen videos on a HDTV (or a regular TV) after recording videos using the camcorder.

1. You see video from the camcorder on your TV if the connection status is set correctly.

➡ pages 102~105



- The TV jacks are connected with the right cables?
- If the component/AV cable is used, "**Analogue TV Out**" is set correctly?
- Input source list is correctly set to view the playback from the camcorder?

2. Select the playback mode on your camcorder and start to playback videos. ➡ page 44



- Adjust the volume to a moderate level. If the volume is too high, the video information may include noise.
- If the "**TV Display**" is set "**Off**," the TV screen does not include the OSD (On Screen Display) menus. ➡ page 87
- You will only hear audio from the camcorder on your TV in the video play mode.

Playback on a TV

Recording ratio	Wide (16:9) TV	4:3 TV
Images recorded in a 16:9 ratio <ul style="list-style-type: none">• Video images• Photo images• Photo capture images		

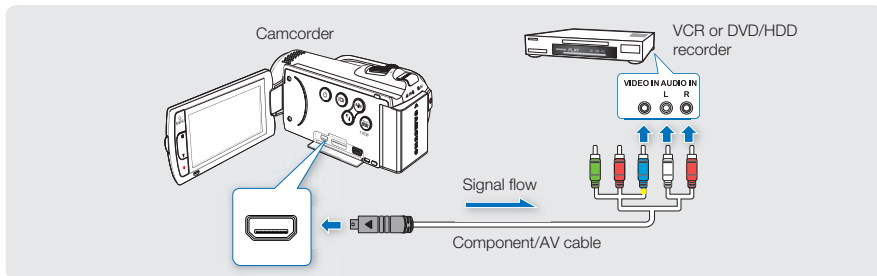
dubbing videos


DUBBING TO A VCR OR DVD/HDD RECORDER

You can dub images played back on your camcorder to other recording devices, such as VCRs or DVD/HDD recorders. Be sure to connect your camcorder to the wall outlet using the supplied AC power adaptor for this function.

PRECHECK!

Since dubbing is performed via analogue data transfer (composite connection), use the supplied component/AV cable.



1. Turn on your camcorder and touch the play () tab.
 - Set the camcorder's output signal to the TV using the **"Analogue TV Out"** function.
↳ page 85
2. Insert the recording media in the recording device.
 - If your recording device has an input selector, set it to the input mode.
3. Connect your camcorder to the recording device (VCR or DVD/HDD recorder) with the supplied component/AV cable (composite connection).
 - Connect your camcorder to the input jacks of the recording device.
4. Start the playback on your camcorder, and record it on the recording device.
 - Refer to the instruction manuals supplied with your recording device for details.
5. When dubbing is finished, stop the recording device, and then your camcorder.



- Videos recorded on this camcorder can be dubbed by connecting with the supplied component/AV cable. All the recorded videos will be dubbed with SD (standard definition) image quality, regardless of the recording resolution (HD/SD).
- You cannot dub to a recorder with an HDMI cable.
- To copy a video recorded with HD (high definition) image quality, use the built-in software of your camcorder, and copy the images to your computer.
- Since dubbing is performed via analogue data transfer, the image quality may deteriorate.
- To hide the screen indicators (such as a counter, etc.) on the screen of the monitor device connected, set **"TV Display: Off."** ↳ page 87
- When you are connecting your camcorder to a monaural device, connect the blue plug of the component/AV cable to the video input jack, and the red (right channel) or the white (left channel) plug to the audio input jack on the device.

using with a Windows computer

CHECKING YOUR COMPUTER TYPE

This chapter explains how to connect the camcorder to a computer using the USB cable.
Read this chapter carefully and be free from your burden of handling two devices at the same time.

Check your computer type before using!!!

To view your recordings on a computer, you need to check your computer type first. Then, take the steps below according to your computer type.



If you are using a Windows PC

Connect your camcorder to the computer using the USB cable.

- The built-in editing software, Intelli-studio runs on the PC automatically once the camcorder is connected to Windows computer. (When you specify "**PC Software: On**"). ➡page 83

Play back or edit your recordings on the computer using the built-in Intelli-studio application.

➡page 112

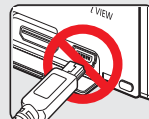
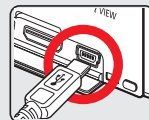
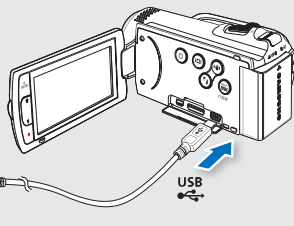
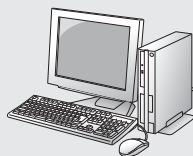
You can also upload your recordings to YouTube or other web sites using the Intelli-studio.

➡page 113



If you are using a Macintosh

- The built-in software on your camcorder, 'Intelli-studio' is not Macintosh compliant.



WHAT YOU CAN DO WITH A WINDOWS COMPUTER

You can enjoy the following operations by connecting your camcorder to your Windows computer by using the USB cable.

Main functions

- By using the built-in Intelli-studio editing software on your camcorder, you can enjoy the following operations.
 - Playing back recorded videos or photos. ➡ page 112
 - Editing recorded videos or photos. ➡ page 112
 - Uploading the recorded videos and photos to YouTube, Flickr, Facebook, etc. ➡ page 113
- You can transfer or copy the files (videos and photos) saved on the storage media into your computer. (the mass storage function) ➡ page 115

System requirements

The following requirements must be satisfied to use built-in editing software (Intelli-studio):

Items	Requirement
OS	Microsoft Windows XP SP2, Vista, or Windows 7
CPU	Intel® Core 2 Duo® 1.66 GHz or higher is recommended AMD Athlon™ X2 Dual-Core 2.2 GHz or higher is recommended (Notebook: Intel Core2 Duo 2.2GHz or AMD Athlon X2 Dual-Core 2.6GHz or higher recommended)
RAM	1 GB and above recommended
Video Card	nVIDIA Geforce 7600GT or higher Ati X1600 series or higher
Display	1024 x 768, 16-bit colour or higher (1280 x 1024, 32-bit colour recommended)
USB	USB 2.0
Direct X	DirectX 9.0c or higher



- System requirements mentioned above are recommendations. Even on a system that satisfies the requirements, operations may not be ensured depending on the system.
- On a slower computer than recommended, video playback may skip frames or operate unexpectedly.
- When the version of DirectX on your computer is lower than 9.0c, install the programme with the version of 9.0c or higher.
- It is recommended to transfer the recorded video data to a PC before playing back or editing the video data.
- For doing this, a laptop computer requires higher system requirements than a desktop PC.

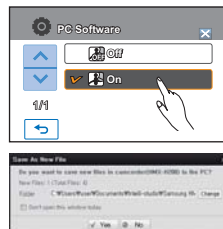
using with a Windows computer

USING THE Intelli-studio PROGRAMME

Using the Intelli-studio programme built-in your camcorder, you can transfer video/photo files onto your PC and edit them on your computer. Intelli-studio offers the most convenient way for you to manage the video/photo files by using the simple USB cable connection between the camcorder and your PC.

Step 1. Connecting the USB cable

1. Set the **“USB Connect: Mass Storage”** and **“PC Software: On.”**
 - You will find the default menu settings are set as the above.
2. Connect the camcorder and the PC with the USB cable.
 - A new file saving screen appears with the Intelli-studio main window.
 - According to your computer type, the corresponding removable disk window appears.
3. Click **“Yes,”** the uploading procedure will start. Click **“Yes”** to confirm.
 - If you do not want to save a new file, select **“No.”**



To disconnect the USB cable

After completing the data transfer, make sure to disconnect the cable in the following way:

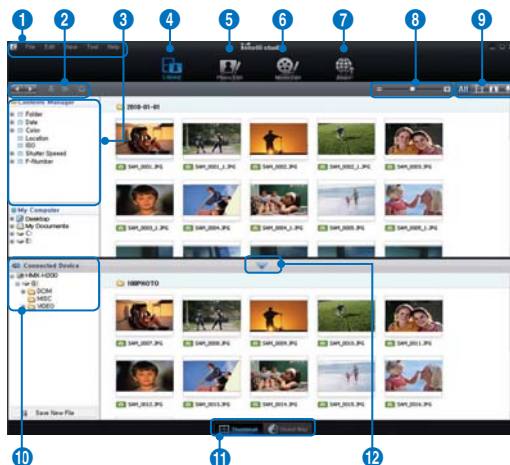
1. Click the **“Safely Remove Hardware icon”** icon on the taskbar.
2. Select **“USB Mass Storage Device,”** and then click **“Stop.”**
3. If the **“Stop a Hardware device”** window appears, click **“OK.”**
4. Disconnect the USB cable from the camcorder and PC.



- Use the provided USB cable. (Supplied by Samsung)
- Don't apply excessive force when inserting or extracting the USB cable into/from a USB jack.
- Insert a USB after checking the direction of its insertion is correct.
- We recommend using the AC power adaptor as the power supply instead of the battery.
- When the USB cable is connected, turning the camcorder on or off may cause the PC to malfunction
- If you disconnect the USB cable from the PC or the camcorder while transferring, the data transmission will stop and the data may be damaged.
- If you connect the USB cable to a PC via a USB HUB or simultaneously connect the USB cable along with other USB devices, the camcorder may not work properly. If this occurs, remove all USB devices from the PC and reconnect the camcorder.
- According to your computer type, the Intelli-studio programme may not automatically run. In this case, open the desired CD-ROM drive that has the Intelli-studio programme in My Computer and run iStudio.exe.
- When an USB cable is connected, according to the application programme (e.g. EmoDio) installed on your computer, the corresponding programme may start first of all.

Step 2. About the Intelli-studio main window

When the Intelli-studio starts up, thumbnails of videos and photos are displayed in the main window.



1. Menu items
2. Shortcut icons
 - ◀ Navigates files (previous and next).
 - 🖨 Prints selected photo(s).
 - 📍 Views location of selected photo(s) with GPS information.
 - 📁 Registers to Contents Manager.
3. Shows directories of Contents Manager and My Computer
 - Contents Manager: You can classify and manage videos and photos on your computer.
 - My Computer: You can view videos and photos saved in the selected directory of your computer.
4. Switches to Library of the computer and connected camcorder.
5. Switches to Photo Edit mode.
6. Switches to Movie Edit mode.
7. Switches to Share mode.
8. Changes the size of thumbnails.
9. Displays all files (videos and photos).
 - Displays video files only.
 - Displays photo files only.
 - Displays voice files only.
10. Selects the connected device.
11. Displays videos and photos in various ways.
 - Thumbnails: Displays video and photo thumbnails
 - Global Map: Displays the location of shooting place with a map.
12. Minimises the connected device screen.



Intelli-studio is a programme commonly used in Samsung camcorders or digital cameras. Some functions may not work depending on the purchased product.

using with a Windows computer

Step 3. Playing back the videos (or photos)

You can play back the recordings conveniently using the Intelli-studio application.

1. Run the Intelli-studio programme. ↗page 110
2. Click the desired folder to display your recordings.
 - Video (or photo) thumbnails appear on the screen, according the selected source.
3. Choose the video (or photo) that you want to play.
 - You can check the file information by moving the mouse on over the file.
 - Clicking on a video thumbnail once will show the video playback inside the thumbnail frame, allowing you to search for a desired video with ease.
4. Once you select the desired video (or photo), double-click to play back.
 - Playback starts and playback controls appear.



The following is the file format supportable in Intelli-studio:

- Video formats: MP4 (Video: H.264, Audio: AAC), WMV (WMV 7/8/9)
- Photo formats: JPG, GIF, BMP, PNG, TIFF

Step 4. Editing the videos (or photos)

With Intelli-studio, you can edit the videos or photos in various ways.

(Change Size, Fine-Tuning, Image Effect, Insert Frame, etc.)

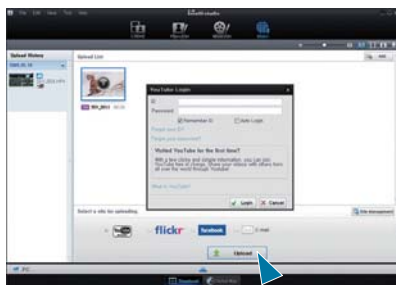
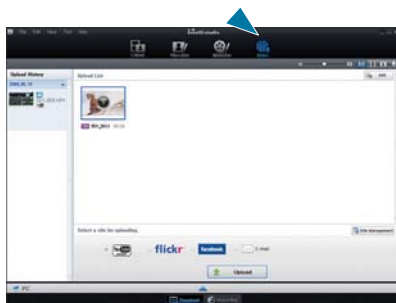
- To edit a file using the Intelli-studio, ensure to use a copy of the desired file saved in My Computer before clicking on the “Movie Edit” or “Photo Edit” icon.



Step 5. Sharing the videos/photos online

Share your contents with the world, by uploading photos and videos directly to a web site with one click.

1. Select the desired videos or photos to share.
2. Click **"Share"** on the browser.
 - The selected file appears on the sharing window.
3. Click the web site you would like to upload files.
 - You can choose "YouTube," "Flickr," "Facebook," or the specified web site you want to set for your uploading management.
4. Click **"Upload"** to start uploading.
 - A pop up window appears asking your ID and the password.
5. Enter your ID and the password to access.
 - Access to the web site contents can be limited depending on your web access environment.



For more information about Intelli-studio use, see the Help Guide by clicking **"Help."**

flickr

facebook

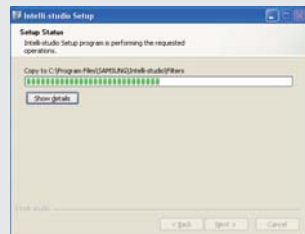
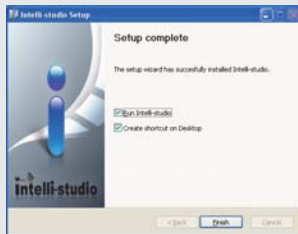
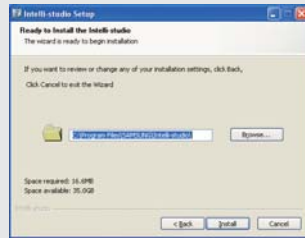


- Flickr is an image and video hosting website, web services suite, and online community platform. In addition to being a popular website for users to share personal photographs, the service is widely used by bloggers as a photo repository.
 - <http://www.flickr.com/>
- Facebook is a global social networking website that is operated and privately owned by Facebook, Inc. Users can add friends and send messages, and update their personal profiles to notify friends about themselves. Additionally, users can join networks organized by city, workplace, school, and region.
 - <http://www.facebook.com/>
- YouTube is a video sharing website. Users can upload, view, and share personalized video clips. The San Bruno-based service uses Adobe Flash technology to display a wide variety of users-generated contents including video clips, TV clips and music videos, as well as amateur contents such as video blogging and short original videos.
 - <http://www.youtube.com/>

using with a Windows computer

Installing Intelli-studio application on the Windows computer

- When the Intelli-studio application is installed on a Windows computer, it will run faster after connecting the camcorder to your computer. Moreover, the application can be updated automatically and run directly in the Windows computer.
- The Intelli-studio application can be installed on a Windows computer as follows:
Click the **"Tool"** → **"Install Intelli-studio on PC"** on the Intelli-studio screen.

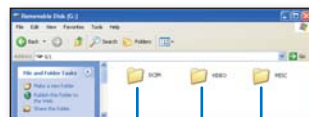
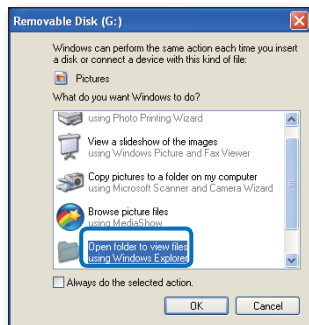


USING AS A REMOVABLE STORAGE DEVICE

You can copy video or photo files recorded by the camcorder to a Windows computer by connecting the USB cable to the camcorder.

Viewing the contents of storage media

1. Check out the **“USB Connect: Mass Storage”** setting.
→ page 84
2. Check out the **“PC Software: Off”** setting. → page 83
3. Check out the storage media.
4. Connect the camcorder to the PC with the USB cable.
→ page 110
 - The “Removable Disk” or “Samsung” window appears on the PC’s screen after a moment.
 - The removable disk appears when connecting a USB.
 - Select “Open folders to view files using Windows Explorer” and click “OK.”
5. The folders in the storage media appear.
 - Different file types are stored in different folders.
6. Select the desired folder (or files) to copy, then drag and drop it into the destination folder.
 - The folder (or files) is copied from the storage media to the PC.

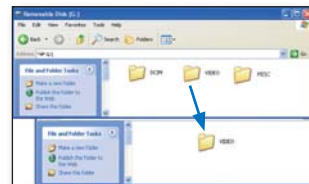


Photos Videos

Setting data (DPOF, Playlist, etc.)



- If the “Removable Disk” window does not appear, confirm the connection (→ page 110 or perform steps 1 and 4 again).
- When the removable disk does not appear automatically, open the removable disk folder of My Computer.
- If the connected camcorder’s disk drive does not open or the context menu that appears when right clicking your mouse (open or browse) appears broken, your computer is suspected to be infected by Autorun virus. It is recommended to update the anti-virus software for its latest version.



using with a Windows computer

Structure of folders and files on the storage media

- The folder and file structure for storage media is as follows:
- The file naming follows DCF (Design rule for Camera File System).

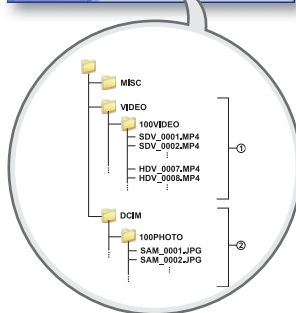
Video file (H.264) ①

- The HD-quality videos have HDV_####.MP4 format.
- The SD-quality videos have SDV_####.MP4 format.
- The file number automatically increases when a new video file is created.
- A new folder is created when the number of files in a folder exceeds 999~1,000.
- The folder names are given in order of 100VIDEO, 101VIDEO. The maximum number of the folders is 999.
- The maximum of 9,999 files can be created in a storage media by using the camcorder.



Photo file ②

- As in video files, the file number automatically increases when a new photo file is created.
- The photos have SAM_####.JPG format.
- A new folder is created when the number of files in a folder exceeds 999~1,000.
- The folder names are given in order of 100PHOTO, 101PHOTO. The maximum number of the folders is 999.
- The maximum of 9,999 files can be created in a storage media by using the camcorder.



File format

Video files

- Video files are compressed in H.264 format. The file extension is “.MP4.”
- Refer to page 54 for the video resolution.

Photo files

- Photo images are compressed in JPEG (Joint Photographic Experts Group) format. The file extension is “.JPG.”
- Refer to page 55 for the photo resolution.



The name of a video file recorded by the camcorder should not be modified, since proper playback by the camcorder requires original folder and file naming convention.

troubleshooting

Before contacting a Samsung authorised service centre, perform the following simple checks. They may save you the time and expense of an unnecessary call.





WARNING INDICATORS AND MESSAGES

Problems may occur because of the following reasons. Check the information and take corrective action.





Battery

Message	Icon	Informs that...	Action
Low Battery	-	The battery is almost discharged.	<ul style="list-style-type: none">• Replace with a charged battery or connect the AC power adaptor.
Check the authenticity of this battery	-	The battery can not pass authenticity check.	<ul style="list-style-type: none">• Check whether the battery is authentic and change to new one.• It is recommended that only genuine Samsung batteries are used in this camcorder.

Storage media

Message	Icon	Informs that ...	Action
Internal Memory Full		There is not enough space to record on the internal memory.	<ul style="list-style-type: none">• Delete unnecessary files on the internal memory.• Back-up files to your PC or another storage media and delete files.• Use a memory card.
Insert card		There is no memory card inserted in the memory card slot.	<ul style="list-style-type: none">• Insert a memory card.
Card Full		There is not enough space to record on memory card.	<ul style="list-style-type: none">• Delete unnecessary files on the memory card.• Back-up files to PC or another storage media and delete files.• Change memory card to another one has enough free space.
Card Locked		The write protection tab on an SD or SDHC card has been set to lock.	<ul style="list-style-type: none">• Release write protection tab.


troubleshooting

Message	Icon	Informs that ...	Action
Card Error		The memory card has some problem and can not be recognised.	<ul style="list-style-type: none"> • Change memory card with another one.
Not Formatted		The memory card is not formatted.	<ul style="list-style-type: none"> • Format the memory card using the menu.
Not Supported Format		The memory card may have been formatted by another device and may still have existing images on it.	<ul style="list-style-type: none"> • The image format is not supported. Check the supported file format. • Format the memory card using menu item.
Not Supported Card		The memory card is not supported in this camcorder.	<ul style="list-style-type: none"> • Change the memory card with the one recommended.
Low speed card. Please record at a lower resolution.	-	The memory card does not have enough performance to record.	<ul style="list-style-type: none"> • Record video at a lower quality. • Change memory card with a one.

Recording

Message	Icon	Informs that ...	Action
Write Error	-	Some problem occurred while writing data to storage media.	<ul style="list-style-type: none"> • Turn the camcorder's power off and on for data recovery. • If a file is not recovered, format storage media using menus after back-up important files to PC or another storage media.
Release the Smart Auto	-	You can not operate some functions manually when Smart Auto is activated.	<ul style="list-style-type: none"> • Release Smart Auto function.
Recovering Data... Don't power off and keep card inside.	-	The file was not created normally.	<ul style="list-style-type: none"> • Wait until data recovery is finished. • Never turn off the power or eject memory card during recording.
The number of video files is full. Cannot record video.	-	The number of video files that can be stored is 9,999.	<ul style="list-style-type: none"> • Delete unnecessary files on the storage media. • Back up files to your PC or another storage media and delete files. • Change with another card which has enough free space.

Recording

Message	Icon	Informs that ...	Action
The number of photo files is full. Cannot take a photo.	-	The number of photo files that can be stored is 9,999.	<ul style="list-style-type: none"> Delete unnecessary files on the storage media. Back up files to your PC or another storage media and delete files. Change with another card which has enough free space.
File number is full. Cannot record video.	-	Folder and file number have reached maximum number and you can not record.	<ul style="list-style-type: none"> Set "File No." to "Reset" and format the storage media.
File number is full. Cannot take a photo.	-	Folder and file number have reached maximum number and you can not record.	<ul style="list-style-type: none"> Set "File No." to "Reset" and format the storage media.
Check the lens cover		Lens cover is closed.	<ul style="list-style-type: none"> Open the lens cover.

Playback

Message	Icon	Informs that ...	Action
Total file size is over 1.8GB.	-	Total file size that can be combined is limited to 1.8GB.	<ul style="list-style-type: none"> Combined files must be less than 1.8GB.
Select 2 files for combine.	-	You can not combine more than 2 different videos into one.	<ul style="list-style-type: none"> It is possible to combine up to 2 different videos into one.
Cannot select different resolution	-	The files you want to combine have different resolutions.	<ul style="list-style-type: none"> It is not possible to combine the files that have different resolutions.
Read Error	-	Some problems occurred when reading data from the storage media.	<ul style="list-style-type: none"> Format the storage media using menus after backing up important files to a PC or another storage device.
Corrupted file	-	This file can not be read.	<ul style="list-style-type: none"> Format the storage media using menus after back up important files to a PC or another storage device.
Not enough free space in Internal Memory	-	File editing functions can not be performed because there is not enough free space in the internal memory.	<ul style="list-style-type: none"> Delete unnecessary files on the storage media. Back up files to a PC or another storage media and delete files.
Not enough free space in Card	-	File editing functions can not be performed because there is not enough free space in the memory card.	<ul style="list-style-type: none"> Delete unnecessary files on the storage media. Back up files to a PC or another storage media and delete files.

troubleshooting

USB

Message	Icon	Informs that...	Action
Fail Printer Connecting Change 'USB Connect'	-	A problem occurred when connecting the camcorder via USB to a printer.	<ul style="list-style-type: none">• Check the USB cable.• Try the connection procedure again.• Switch "USB connect" function to "PictBridge."
Fail USB Connecting Change 'USB Connect'	-	A problem occurred when connecting the camcorder via USB to a PC.	<ul style="list-style-type: none">• Check the USB cable.• Try the connection procedure again.• Switch "USB connect" function to "Mass Storage."
Ink Error	-	There is a problem with the ink cartridge.	<ul style="list-style-type: none">• Check the ink cartridge.• Put a new ink cartridge in the printer.
Paper Error	-	There is a problem with the paper.	<ul style="list-style-type: none">• Check the paper in the printer. If there is no paper, insert the paper.
File Error	-	There is a problem with the file.	<ul style="list-style-type: none">• Your camcorder does not support this file format.• Try another file recorded on your camcorder.
Printer Error	-	There is a problem with the printer.	<ul style="list-style-type: none">• Turn the printer's power off and on.• Contact the printer manufacturer's service centre.
Print Error	-	A problem occurred during printing.	<ul style="list-style-type: none">• Do not remove power source or eject memory card during printing.



When there is dew condensation, put the camcorder aside for a while before using

- What is dew condensation?
Dew condensation happens when a camcorder is moved to a place where there is a significant temperature difference from the previous place. The Dew condenses on the external or internal parts of the camcorder, and on the reflection lens. When this happens, it may cause a malfunction or damage to the camcorder when using the device with the power on while there is dew condensation.
- What can I do?
Turn the power off and detach the battery, and leave it in a dry area for 1~2 hours before using it.
- When does the dew condensation occur?
When the device is relocated to a place with a higher temperature than the previous location, or when using it in a hot area suddenly, it will cause condensation.
 - When recording outside in cold weather during the winter and then using it in indoors.
 - When recording outside in hot weather after being indoors or inside a car where the A/C was running.

SYMPTOMS AND SOLUTIONS

If these instructions do not solve your problem, contact your nearest Samsung authorised service centre.

Power

Symptom	Explanation/Solution
The camcorder does not turn on.	<ul style="list-style-type: none">• The battery may not be installed on your camcorder. Insert the battery to the camcorder.• The inserted battery may be discharged. Charge the battery or replace it with a charged one.• If you use the AC power adaptor, make sure it is properly connected to a wall outlet.
The power turns off automatically.	<ul style="list-style-type: none">• Is "Auto Power Off" set to "5 Min"? If no button is pressed for about 5 minutes, the camcorder is automatically turned off ("Auto Power Off"). To disable this option, change the setting of "Auto Power Off" to "Off." ➔page 81• The battery is almost exhausted. Charge the battery or replace it with a charged one.
Power cannot be turned off.	<ul style="list-style-type: none">• Remove the battery or unplug AC power adaptor, and connect the power supply to the camcorder again before turning it on.
The battery is quickly discharged.	<ul style="list-style-type: none">• The temperature is too low.• The battery is not fully charged. Charge the battery again.• The battery reached its lifespan and cannot be recharged. Use another battery.

Display

Symptom	Explanation/Solution
The TV screen or LCD display has distorted images or has stripes at the top/bottom or on the left/right.	<ul style="list-style-type: none">• It can occur when recording or viewing a 16:9-ratio image on a 4:3-ratio TV, or vice versa. For more details, see the display specification. ➔page 106
Unknown image appears on the LCD screen.	<ul style="list-style-type: none">• The camcorder is in Demo mode. If you do not want to see Demo image, change the setting "Demo" to "Off." ➔page 88
Unknown indicator appears on the screen.	<ul style="list-style-type: none">• A warning indicator or message appears on the screen. ➔pages 117~120
The afterimage remains on the LCD screen.	<ul style="list-style-type: none">• This occurs if you disconnect the AC power adaptor or remove the battery before turning the power off.
The image on the LCD screen looks dark.	<ul style="list-style-type: none">• Ambient light too bright. Adjust the brightness and angle of LCD.

troubleshooting

Recording

Symptom	Explanation/Solution
Pressing the Recording start/stop button does not start recording.	<ul style="list-style-type: none"> Press the MODE button to set the record mode. ➡page 23 There is not enough free space to record on the storage media. Check if memory card is not inserted or write-protect tab is set to lock.
The actual recording time is less than the estimated recording time.	<ul style="list-style-type: none"> The estimated recording time may vary depending on content and features used. When you record an object that moves fast, the actual recording time may be shortened.
The recording stops automatically.	<ul style="list-style-type: none"> There is no more free space for recording on the storage media. Back up important files on your PC and format the storage media or delete the unnecessary files. If you make recordings or delete files frequently, the performance of the storage media will be deteriorated. In this case, format the storage media again. If you use the memory card with low writing speed, the camcorder automatically stops recording the videos and the corresponding message appears on the LCD screen.
When recording a subject illuminated by bright light, a vertical line appears.	<ul style="list-style-type: none"> This is not a malfunction.
When the screen is exposed to direct sunlight during recording, the screen becomes red or black for an instant.	<ul style="list-style-type: none"> This is not a malfunction.
During recording, the date/time does not display.	<ul style="list-style-type: none"> "Date/Time Display" is set to "Off." Set the "Date/Time Display" to On. ➡page 78
You cannot record a photo image.	<ul style="list-style-type: none"> Set your camcorder to the record mode. ➡page 23 Release the lock on the write-protection tab of the memory card if any. The storage media is full. Use a new memory card or format the storage media. ➡page 75 Or remove unnecessary images. ➡page 97
The shutter sound is not heard when you record a photo image.	<ul style="list-style-type: none"> Set "Shutter Sound" to "On." During dual recording, the Shutter Sound is not heard.
The beep sound is not heard.	<ul style="list-style-type: none"> Set "Beep Sound" to "On." Beep sound is temporally off while recording videos.

Recording

Symptom	Explanation/Solution
There is a time difference between the point where you press the Recording start/stop button and the point where the recorded video starts/stops.	<ul style="list-style-type: none">On your camcorder, there may be a slight time delay between the point when you press the Recording start/stop button and the actual point where the recorded video starts/stops. This is not an error.
Horizontal stripes appear on the images.	<ul style="list-style-type: none">This occurs when recording images under a fluorescent lamp, sodium lamp, or mercury lamp. This is not a malfunction.

Storage Media

Symptom	Explanation/Solution
Memory card functions are not operable.	<ul style="list-style-type: none">Insert a memory card into your camcorder properly. ➡ page 28If you use a memory card formatted on a computer, format it again directly on your camcorder. ➡ page 75
Image cannot be moved or deleted.	<ul style="list-style-type: none">Release the lock on the write-protect tab of the memory card (SDHC/SD memory card), if any. ➡ page 29You cannot move or delete the protected images. Release the protection of the image on the storage media. ➡ page 96
You cannot format the memory card.	<ul style="list-style-type: none">Release the lock on the write-protect tab of the memory card (SDHC/SD memory card), if any. ➡ page 29The memory card is not supported on your camcorder or card has some problems.
The data file name is not indicated correctly.	<ul style="list-style-type: none">The file may be corrupted.The file format is not supported by your camcorder.Only the file name is displayed if the directory structure complies with the international standard.

troubleshooting

Adjusting the image during recording

Symptom	Explanation/Solution
Focus does not adjust automatically.	<ul style="list-style-type: none">• Set "Focus" to "Auto." ➡page 60• The recording conditions are not suitable for auto focus. Adjust the focus manually. ➡page 60• The lens is dusty on the surface. Clear the lens and check the focus.• Recording is being made in a dark location. Use a light to brighten the area.
The image appears too bright or flickering, or changes in colour.	<ul style="list-style-type: none">• This may occur when you make a recording under a fluorescent sodium or or mercury lamp. Cancel "tSCENE" to avoid or minimise this phenomenon. ➡page 53
Image's colour balance is not natural.	<ul style="list-style-type: none">• White balance adjustment is required. Adjust to the proper "White Balance." ➡page 56
The subject passing by the frame appears very quickly.	<ul style="list-style-type: none">• This is called the focal plane phenomenon. This is not a malfunction. Because of the way the image device (CMOS sensor) reads out video signals, the subject passing by the frame rapidly may appear to bend, depending on the recording condition.

Playback on your camcorder

Symptom	Explanation/Solution
Playback (play/pause) function does not work.	<ul style="list-style-type: none">• Image files recorded using another device may not be played on your camcorder.• Check out the memory card compatibility. ➡page 29
Photo images stored on a storage media are not displayed in the actual size.	<ul style="list-style-type: none">• Photo images recorded on other device may not appear in the actual size. This is not an error.
Playback is interrupted unexpectedly.	<ul style="list-style-type: none">• Check if the AC power adaptor or battery back is properly connected and secure.

Playback on other devices (TV, etc.)

Symptom	Explanation/Solution
You cannot view the image or hear the sound from the connected device.	<ul style="list-style-type: none">• Connect the audio of the component/AV cable to your camcorder or connected device (TV, HD recorder, etc.). (Red colour- right, White colour- left)• The connection cable (component/AV cable) is not connected properly. Make sure that the connection cable is connected to the proper jack. ➡pages 103~104• When you are using the component/AV cable, make sure the red and white plugs of your component/AV cable are connected. ➡pages 103~104• This camcorder does not support the audio output signal when the camcorder is connected with TV in the record mode. The audio output signal is supported as long as the camcorder is connected in the video playback mode. This is not an error.
The image appears distorted on a TV.	<ul style="list-style-type: none">• This phenomenon is caused by connecting to the TV with 4:3 aspect ratio.
You cannot view the image or hear the sound from a TV connected using the HDMI cable.	<ul style="list-style-type: none">• Images will not be output from the HDMI jack if the material is copyright protected.

Connecting/Dubbing with other devices (Recorder, PC, Printer, etc.)

Symptom	Explanation/Solution
You cannot dub correctly using the HDMI cable.	<ul style="list-style-type: none">• You cannot dub images using the HDMI cable.
You cannot dub correctly using the component/AV cable.	<ul style="list-style-type: none">• The component/AV cable is not connected properly. Make sure that the component/AV cable is connected to the proper jack, i.e. to the input jack of the device used for dubbing images from your camcorder. ➡page 107
Printouts cannot be made using a PictBridge printer.	<ul style="list-style-type: none">• Your printer may not print images edited on a computer or recorded using other device. This is not an error.

troubleshooting

Connecting to a computer

Symptom	Explanation/Solution
The computer does not recognise your camcorder.	<ul style="list-style-type: none">• Disconnect the USB cable from the computer and camcorder, restart the computer, then connect it again correctly.
Cannot play a video file properly on a PC.	<ul style="list-style-type: none">• A video codec is needed to play the file recorded on your camcorder. Install the software provided with your camcorder. ➡page 114• Make sure you insert the connector in the correct direction, and connect the USB cable to the USB jack on your camcorder firmly.• Disconnect the cable from the computer and camcorder, restart the computer. Connect it again properly.• To play back an HD video file, a computer with better specification is required. Check a computer with recommended specification. ➡page 109
Intelli-studio does not function properly.	<ul style="list-style-type: none">• Exit the Intelli-studio application, and restart the Windows computer.
Intelli-studio is not performed.	<ul style="list-style-type: none">• Set PC Software to On in the Settings menu or install Intelli-studio in the computer. ➡pages 83, 114
The image or sound on your camcorder is not played on your computer properly.	<ul style="list-style-type: none">• Video playback or sound may stop temporarily depending on your computer. The video or sound copied to your computer is not affected.• If your camcorder is connected to a computer that does not support Hi-speed USB (USB2.0), the image or sound may not be played correctly. The image and sound copied to your computer are not affected.
The playback screen is paused or distorted.	<ul style="list-style-type: none">• Check the system requirements to play a video.• Exit other all applications running on the current computer.• If a recorded video is played on your camcorder connected to a computer, the image may not play smoothly, depending on the transfer speed. Please copy the file to your PC, and then play it back.

Overall operations

Symptom	Explanation/Solution
The date and time are incorrect.	<ul style="list-style-type: none"> Has the camcorder been left unused for a long period of time? The backup built-in rechargeable battery may be discharged. → page 25

Menu items that cannot be used at the same time

Symptom	Cannot use	Because of the following settings
Menu items are greyed out	"iSCENE"	"Aperture : Manual," "Shutter : Manual"
	"Aperture: Manual"	"Shutter : Manual," "iSCENE"
	"Shutter: Manual"	"Aperture : Manual," "iSCENE"
	"Video Resolution," "Video Quality," "Fader"	"Time Lapse REC"
	"Photo Resolution"	"Cont. Shot"

- You cannot select greyed items in the current recording/playback mode.
- There are some functions you cannot activate simultaneously.
The list shown above shows examples of unworkable combinations of functions and menu items.
- Menu and quick menu cannot be used in Smart Auto mode.
- The following functions cannot be used during video recording:
"Video Resolution," "Video Quality," "Photo Resolution," "Photo Sharpness," "Fader,"
"Cont.Shot," "Digital Zoom," "Self Timer," "Time Lapse REC."
- The following functions are automatically set to Off or Auto mode in the Smart Auto mode:
"iSCENE," "Shutter," "Digital Effect," "Tele Macro", etc.
- In the Smart Auto mode, your camcorder automatically chooses the appropriate camcorder settings based on a detected type of scene. Most settings are automatically adjusted in Smart Auto mode. And so, to set or adjust functions on your own, release the Smart Auto mode first.

maintenance & additional information

MAINTENANCE

Your camcorder is a product of superior design and craftsmanship and should be treated with care.

The suggestions below will help you fulfill any warranty obligations and allow you to enjoy this product for many years.

- For safekeeping of the camcorder, turn off the camcorder.
 - Remove the battery and AC power adaptor. ➡ pages 16, 20
 - Remove the memory card. ➡ page 28

Cautions when storing

- **Do not leave the camcorder in a place where the temperature is very high for a long period of time:**
The temperature inside a closed vehicle or trunk can become very high in a hot weather. If you leave the camcorder in such a place, it could malfunction or the case could be damaged. Do not expose the camcorder to a direct sunlight or place it near a heater.
- **Do not store the camcorder in a place where the humidity is high or in a dusty place:**
Dust entering the camcorder could cause a malfunction. If humidity is high, the lens could become mouldy, and the camcorder could become inoperative. It is recommended that you put the camcorder in a box together with a small silica bag when storing it in a closet, etc.
- **Do not store the camcorder in a place subject to strong magnetism or intense vibration:**
This could cause malfunctions.
- **Detach the battery from the camcorder and store it in a cool place:**
Leaving the battery attached or storing it at a high temperature could shorten its life.

Cleaning the camcorder

Before cleaning, turn off the camcorder and remove the battery and AC power adaptor.

- **To clean the exterior**
 - Wipe gently with a soft dry cloth. Do not apply excessive force when cleaning, gently rub the surface.
 - Do not use benzene or thinner to clean the camcorder. The coating of exterior could peel off or the case could deteriorate.
- **To fix the case the LCD screen**
Wipe gently with a soft dry cloth. Be careful not to damage the monitor.
- **To clean the lens**
Use an optional air blower to blow out dirt and other small objects. Do not wipe the lens with cloth or your fingers.
If necessary, wipe gently with lens with a paper.
 - Mould may form if the lens is left dirty.
 - If the lens looks dim, turn off the camcorder and leave it for about 1 hour.

ADDITIONAL INFORMATION

Storage media

- **Be sure to follow the guidelines below to prevent corruption or damage to your recorded data.**
 - Do not bend or drop the storage media, or subject it to strong pressure, jolts or vibrations.
 - Do not splash the storage media with water.
 - Do not use, replace, or store the storage media in locations that are exposed to a strong static electricity or electrical noise.
 - Do not turn off the camcorder power or remove the battery or AC power adaptor during recording, playback, or when accessing the storage media.
 - Do not bring the storage media near to objects that have a strong magnetic field or that emit strong electromagnetic waves.
 - Do not store the storage media in locations with high temperature or high humidity.
 - Do not touch the metal parts.
- **Copy the recorded files to your PC. Samsung shall not be responsible for any lost data. (It is recommended that you copy the data from your PC to other media for storage.)**
- **A malfunction may cause the storage media to fail to operate properly. Samsung will not provide any compensation for any lost contents.**

LCD screen

Before cleaning, turn off the camcorder and remove the battery and AC power adaptor.

- **To clean the exterior**
 - Do not push it too hard or knock it on anything.
 - Do not place the camcorder with the LCD screen facing the bottom.
- **To prolong the service life, avoid rubbing it with a coarse cloth.**
- **Be aware of the following phenomena for LCD screen use. They are not malfunctions.**
 - While using the camcorder, the surface around the LCD screen may heat up.
 - If you leave power on for a long time, the surface around the LCD screen becomes hot.

maintenance & additional information

USING YOUR CAMCORDER ABROAD

- Each country or region has its own electric and colour systems.
- Before using your camcorder abroad, check the following items.

Power sources

The provided AC adaptor features automatic voltage selection in the AC range from 100 V to 240 V. You can use your camcorder in any countries/regions using the AC power adaptor supplied with your camcorder within the AC 100 V to 240 V, 50/60 Hz range.

Use a commercially available AC plug adaptor, if necessary, depending on the design of the wall outlet.

Viewing videos recorded with HD (high definition) image quality

In countries/regions where 1080/50i is supported, you can view the images with the same HD (high definition) image quality as that of the recorded images. You need an **PAL**-system-based and 1080/50i compatible TV (or monitor) with an HDMI or component/AV cable connected.

Viewing videos recorded with SD (standard definition) image quality

To view images recorded with SD (standard definition) image resolution, you need an **PAL**-system-based TV with audio/video or component input jacks, and an component/AV cable connected.

On TV colour systems

Your camcorder is an **PAL**-system-based camcorder.

If you want to view your recordings on a TV or to copy it to an external device, it must be an **PAL**-system-based TV or an external device and have the appropriate Audio/Video jacks. Otherwise, you may need to use a separate video format transcoder (PAL-NTSC format converter).



The format transcoder is not provided by Samsung.

PAL-compatible countries/regions

Australia, Austria, Belgium, Bulgaria, China, CIS, Czech Republic, Denmark, Egypt, Finland, France, Germany, Greece, Great Britain, Holland, Hong Kong, Hungary, India, Iran, Iraq, Kuwait, Libya, Malaysia, Mauritius, Norway, Romania, Saudi Arabia, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Syria, Thailand, Tunisia, etc.

NTSC-compatible countries/regions

Bahamas, Canada, Central America, Japan, Korea, Mexico, Philippines, Taiwan, United States of America, etc.



You can make recordings with your camcorder and view pictures on the LCD screen from anywhere in the world.

specifications

Model name	HMX-H200BP/HMX-H200SP/HMX-H200LP/HMX-H200RP HMX-H203BP/HMX-H203SP/HMX-H203LP/HMX-H203RP HMX-H204BP/HMX-H204SP/HMX-H204LP/HMX-H204RP HMX-H205BP/HMX-H205SP/HMX-H205LP/HMX-H205RP HMX-H220BP/HMX-H220SP/HMX-H220LP/HMX-H220RP	
System	Video signal PAL Picture compression format H.264 (MPEG-4.AVC) Audio compression format AAC (Advanced Audio Coding) Image device 1/4.1", 3.32M Pixel CMOS Lens F1.8 ~ F3.7, 20x optical zoom, 200x digital zoom Focal length 3.2mm ~ 64mm Filter diameter Ø 34	
LCD screen	Size/dot number 2.7" Wide Touch LCD (960x240) / 230k LCD screen method TFT LCD	
Connectors	Composite output 1Vp-p (75 Ω terminated) Component output Y: 1 Vp-p, 75 Ω Pb/Pb: 0.350Vp-p, 75 Ω HDMI output C type connector Audio output -7.5 dBs (600 Ω terminated) USB output mini USB-B type (USB2.0 High Speed)	
General	Power source DC 5 V, Lithium Ion battery pack 3.7 V Power source type Lithium Ion battery pack, Power supply (100 V ~ 240 V) 50/60 Hz Power consumption (Recording) 3.2W (LCD on) Operating temperature 0 °C ~ 40 °C (32 °F ~ 104 °F) Storage temperature -20 °C ~ 60 °C (-4 °F ~ 140 °F) Storage media Internal memory (SSD) (HMX-H203/H204/H205 only), Memory card (SD/SDHC) (optional) External dimensions (WxHxD) Approx. 58.5 mm (2.3 inches) x 59.3 mm (2.33 inches) x 111.65 mm (4.4 inches) Weight Approx. 283 g (0.62 lb, 9.98 oz) (Except for Lithium Ion battery) Internal MIC Omni-directional stereo microphone	

※ These technical specifications and design may be changed without notice.

Power Sources (United Kingdom Only)

The mains lead on the power adapter is supplied with a moulded plug incorporating a fuse.

The value of the fuse is indicated on the pin face of the plug and, if it requires replacing, a fuse approved to BS1362 of the same rating must be used.

Never use the plug with the fuse cover omitted if the cover is detachable.

If a replacement fuse cover is required, it must be of the same colour as the pin face of the plug. Replacement covers are available from your dealer.

If the fitted plug is not suitable for the power points in your house or the cable is not long enough to reach a power point, you should obtain a suitable safety approved extension lead or consult your dealer for assistance.

However, if there is no alternative to cutting off the plug, remove the fuse and then safely dispose of the plug.

Do NOT connect the plug to a mains socket as there is a risk of shock hazard from the bared flexible cord.

IMPORTANT

The wires in the mains lead are coloured in accordance with the following code:

BLUE = NEUTRAL

BROWN = LIVE

As these colours may not correspond to the coloured markings identifying the terminals in your plug, proceed as follows:

The wire coloured BLUE must be connected to the terminal marked with the letter N or coloured BLUE or BLACK.

The wire coloured BROWN must be connected to the terminal marked with the letter L or coloured BROWN or RED.



Do not connect either wire to the earth terminal marked with the letter E or the earth symbol, , or coloured GREEN or GREEN and YELLOW.



This page is applicable to Great Britain only.

Contact SAMSUNG WORLDWIDE

If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care centre.

Region	Country	Contact Centre ☎	Web Site
North America	CANADA	1-800-SAMSUNG(726-7864)	www.samsung.com
	MEXICO	01-800-SAMSUNG(726-7864)	www.samsung.com
	U.S.A	1-800-SAMSUNG(726-7864)	www.samsung.com
	ARGENTINE	0800-333-3733	www.samsung.com
	BRAZIL	0800-124-421, 4004-0000	www.samsung.com
	CHILE	800-SAMSUNG(726-7864)	www.samsung.com
	Nicaragua	00-1800-5077267	www.samsung.com
	Honduras	800-7919267	www.samsung.com
	COSTA RICA	0-800-507-7267	www.samsung.com
	ECUADOR	1-800-10-7267	www.samsung.com
Latin America	EL SALVADOR	800-6225	www.samsung.com
	GUATEMALA	1-800-299-0013	www.samsung.com
	JAMAICA	1-800-234-7267	www.samsung.com
	PANAMA	800-7267	www.samsung.com
	PUERTO RICO	1-800-482-3180	www.samsung.com
	REP. DOMINICA	1-800-751-2676	www.samsung.com
	TRINIDAD & TOBAGO	1-800-SAMSUNG(726-7864)	www.samsung.com
	VENEZUELA	0-800-100-5303	www.samsung.com
	COLOMBIA	01-800011212	www.samsung.com
	AUSTRIA	0610 - SAMSUNG (7267864, € 0.07/min)	www.samsung.com
Europe	BELGIUM	02-201-24-18	www.samsung.com/be (Dutch)
	CZECH	800 - SAMSUNG(800-726786)	www.samsung.com/be_fr (French)
	DENMARK	70 70 19 70	www.samsung.com
	FINLAND	030 - 6227 515	www.samsung.com
	FRANCE	01 48 63 00 00	www.samsung.com
	GERMANY	01805 - SAMSUNG(726-7864 € 0.14/Min)	www.samsung.com
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	ITALY	800-SAMSUNG(726-7864)	www.samsung.com
	LUXEMBURG	261 03 710	www.samsung.com
	NETHERLANDS	0900-SAMSUNG (0900-7267864) (€ 0.10/Min)	www.samsung.com
	NORWAY	815-56 480	www.samsung.com
	POLAND	0 801 15 SAMSUNG(172678), 022-607-93-33	www.samsung.com
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	JAPAN	0120-327-527	www.samsung.com
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	SINGAPORE	1800-SAMSUNG(726-7864)	www.samsung.com
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	Jordan	800-22273	
	Egypt	0800-726786	
	KSA	8200-21230	www.samsung.com
	Qatar	800-2265	
	Syria	1825-22 73	



RoHS compliant

Our product complies with “The Restriction Of the use of certain Hazardous Substances in electrical and electronic equipment”, and we do not use the 6 hazardous materials- Cadmium(Cd), Lead (Pb), Mercury (Hg), Hexavalent Chromium (Cr +6), Poly Brominated Biphenyls (PBBs), Poly Brominated Diphenyl Ethers(PBDEs)- in our products.