SAMSUNG

User Manual

High Definition Digital Camcorder

www.samsung.com/register

HMX-S10BP/HMX-S15BP/HMX-S16BP

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.
PRECHECK	Settings required before using a function.

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!

- When using the AC power adapter with your camcorder, connect the adapter to an outlet with protective grounding.
- Do not expose the camcorder battery to direct sunlight, heaters, radiators, fire, or any other source of excessive heat.

Caution

If you replace the battery with the wrong battery, you can cause an explosion.Replace only with the same battery or an 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

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-S10, HMX-S15, and HMX-S16 models.

- The HMX-S15 and HMX-S16 have a 32GB, and a 64GB built-in storage media (SSD) respectively with a built-in WIFI module but also use memory cards.
- The HMX-S10 do not have built-in storage media (SSD) and use memory cards. Although some features of HMX-S10 models are different, they operate in the same way.
- Illustrations of model HMX-S10 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 "**iSCENE**" ➥page 61
  - "**Sports**" ( ): Recording people or objects in motion. (If set, corresponding icon ( ) will appear on the screen.)

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.

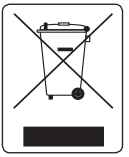
Before using this camcorder

- **This camcorder records video in H.264 (MPEG4 part10/AVC) format and in High Definition Video (HD-VIDEO) or Standard Definition Video (SD-VIDEO).**
- **You can play back and edit the video recorded by the camcorder on a personal computer with the built-in software in this camcorder.**
- **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.
- 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.
- It is recommended to use the camcorder at least once a month to maintain its performance and life.

- Check the image resolution before developing photos.
- Make sure to check all functions of the camcorder to prevent a inevitable recording failure before recording.
- This wireless equipment may have radio interference in operation so it cannot support life safety services.
- For Open Source licence information, refer to the "Opensource-S10.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.
  Furthermore, "™" and "®" are not mentioned in each case in this manual.
- The SD logo is a trademark. The SDHC logo is a trademark.
- Microsoft®, Windows®, Windows Vista®, Windows® 7, and DirectX® are either registered trademarks or trademarks of the Microsoft Corporation in the United States and/or other countries.
- Intel®, Core™, Core 2 Duo®, and Pentium® are the registered trademarks or trademarks of the Intel Corporation in the United States and other countries.
- AMD and Athlon™ are either registered trademarks or trademarks of AMD in the United States and other countries.
- Macintosh, Mac OS are either registered trademarks or trademarks of Apple Inc. in the United States and/or other countries.
- YouTube is a trademark of Google Inc.
- 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.
- Wi-Fi®, the Wi-Fi CERTIFIED logo, and the Wi-Fi logo are registered trademarks of the Wi-Fi Alliance.
- DLNA and DLNA logo are trademarks of the Digital Living Network Alliance.
- AllShare™ is a Samsung's trademark.

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.

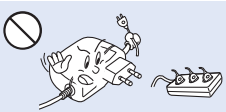
Do not disassemble the product.

Unplug from the power supply.

Do not touch the product.

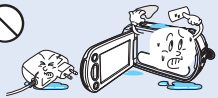
This precaution must be kept.

⚠ WARNING

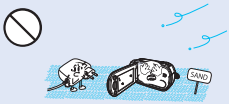


Do not overload outlets or extension cords as this may result in abnormal heat or fire.

Using the camcorder at temperatures over 60℃(140℉) 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.

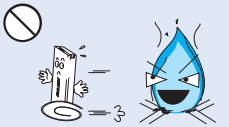
Do not bend the powercord or damage the AC power adaptor by pressing on it with a heavy object. There may be a risk of fire or electric shock.

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

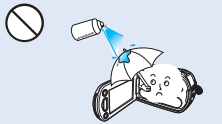
Do not use the AC adaptor if it has damaged, split or broken cords or wires. Doing so may cause fire or electric shock.

safety information

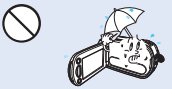
Do not connect the AC adaptor unless the plug can be fully inserted with no part of the blades exposed.



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

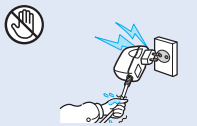


Never use cleaning fluid or similar chemicals. Do not spray cleaners directly on the camcorder.

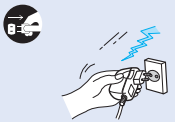


Keep the camcorder away from water when used near the beach or pool or when it rains. There is a risk of malfunction or electric shock.

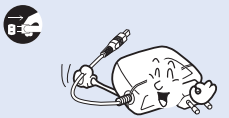
Keep the used lithium battery or memory card out of the reach of children. If the lithium battery or memory card is swallowed by children, consult physician immediately.



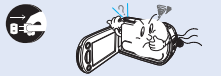
Do not plug or unplug the power cord with wet hands. There is a risk of electric shock.



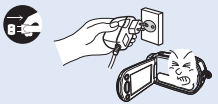
Keep the power-cord unplugged when not in use or during lightning storms. There is a risk of fire.



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



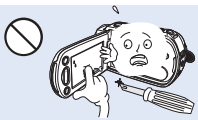
If the camcorder makes an abnormal sound, or smell or smokes, unplug the power-cord immediately and request service from a Samsung service centre. There is a risk of fire or personal injury.



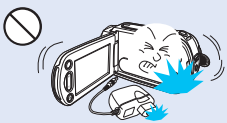
If the camcorder malfunctions, immediately detach the AC adaptor or battery from the camcorder. There is a risk of fire or injury.

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

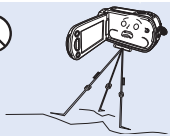
CAUTION



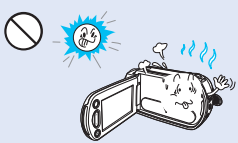
Do not press the surface of the LCD with force, or hit it with a sharp object. If you push the LCD surface, display unevenness may occur.



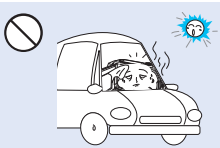
Do not drop or expose the camcorder, battery, AC adaptor or other accessories to severe vibrations or impact. This may cause a malfunction or injury.



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

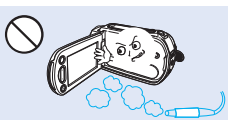


Do not use the camcorder near direct sunlight or heating equipment. This may cause a malfunction or injury.



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

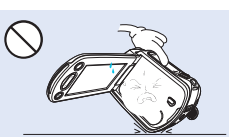
Do not expose the camcorder to soot or steam. Thick soot or steam could damage the camcorder case or cause a malfunction.



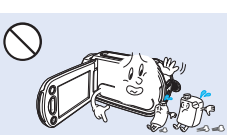
Do not use the camcorder near dense exhaust gas generated by gasoline or diesel engines, or corrosive gas such as hydrogen sulphide. Doing so may corrode the external or internal terminals, disabling normal operation.

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.

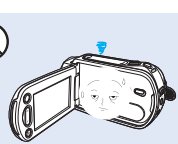
Do not expose the camcorder to sudden changes in temperature or a humid place. There is also a risk of defect or electric shock when using outdoors during lightning storms.



Do not place the camcorder with the open LCD screen down



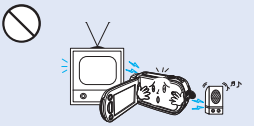
Do not wipe the camcorder body with benzene or thinner. The exterior coating could peel off or the case surface could deteriorate.



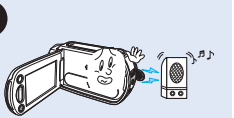
Do not leave the LCD screen open when not using the camcorder.

safety information

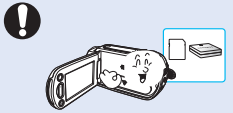
Do not hold the camcorder by the LCD monitor when lifting it. The LCD screen could detach and the camcorder may fall.



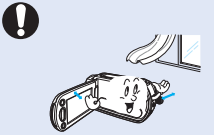
Do not use the camcorder near TV or radio: This could cause noise on the TV screen or to radio broadcasts.



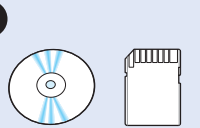
Do not use the camcorder near strong radio waves or magnetism such as speakers and a large motor. Noise could enter video or audio that are being recorded.



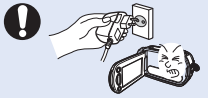
Use Samsung-approved accessories only. Using products from other manufacturers may cause overheating, fire, explosion, electric shock or personal injuries caused by abnormal operation.



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.

contents

QUICK START GUIDE

07

GETTING TO KNOW THE CAMCORDER

11

11 What's included with your camcorder
12 Location of controls
14 Using the remote control
16 Identifying the screen displays

GETTING STARTED

20

20 Attaching/detaching the battery
21 Charging the battery
22 Checking the battery state

BASIC OPERATION OF THE CAMCORDER

25

25 Turning your camcorder on/off
26 Switching to the power saving mode
27 Setting the operation modes
27 Using the display(▭) button
28 Using the touch panel

FIRST TIME SETTINGS

29

29 Setting the time zone and date/time for the first time
30 Selecting the languages

GETTING READY TO START RECORDING

31

31 Selecting the storage media (HMX-S15/S16 only)
32 Inserting / ejecting a memory card (Not supplied)
33 Selecting a suitable memory card (Not supplied)
35 Recordable time and capacity
36 Attaching the grip belt
36 Adjusting the lcd screen
37 Basic camcorder positioning
37 Attaching the ferrite core

BASIC RECORDING

38

38 Recording videos
40 Capturing photos during video recording
41 Recording photos
42 Recording with ease for beginners (Smart auto)
43 Capturing photos while playing back videos
44 Zooming
45 Setting the anti-shake (OIS: optical image Stabiliser)
46 Using back light compensation mode

contents

47 Using the flash
48 Using the manual dial

BASIC PLAYBACK
49

49 Changing the playback mode
50 Playing back videos
53 Viewing photos

USING THE MENU ITEMS
55

55 Handling menus and quick menus
57 Menu items
60 Quick menu items

ADVANCED RECORDING
61

61 iSCENE
62 Resolution
63 Slow Motion
64 White Balance
65 ISO
66 Aperture
67 Shutter
68 EV
69 Super C.Nite
70 Focus
71 Face Detection
72 Magic Touch
73 Metering
73 xvYCC
74 Digital Effect
75 Fader
76 Tele Macro
77 Cont. Shot
77 Wind Cut
78 Zoom MIC
79 Voice Reduction
79 MIC Level
80 Digital Zoom
80 Self Timer
81 Time Lapse REC

ADVANCED PLAYBACK
83

83 Play Option
83 Background Music
84 Highlight
85 *i*VIEW
86 Story-board Print
86 Slide Show Start

87 Slide Show Music
87 Slide Show Interval
88 Slide Show Effect
88 File Info

SYSTEM SETTING

89

89 LCD Brightness
89 LCD Enhancer
90 Guideline
90 Date/Time Display
91 TV Type
91 TV Display
92 HDMI TV Out
92 Auto LCD Off
93 Remote
93 PC Software
94 USB Connect
94 TV Connect Guide
95 Anynet+ (HDMI-CEC)
96 Storage Type (HMX-S15/S16 Only)
96 Storage Info
97 Format
97 File No.
98 Time Zone
98 Date/Time Set
99 Date Type
99 Time Type
100 Beep Sound
100 Shutter Sound
101 Auto Power Off
102 Quick On STBY
103 Manual Dial
103 REC Lamp
104 Default Set
104 Language
105 Demo

EDITING VIDEO CLIPS

106

106 Deleting a section of a video (partial delete)
107 Dividing a video
108 Combining videos

FILE MANAGEMENT

109

109 Protection from accidental erasure
110 Deleting files
111 Copying files (HMX-S15/S16 only)

contents

WIRELESS NETWORK CONNECTION AND CONFIGURATION (HMX-S15/S16 ONLY) 112

112 Auto connecting to a network
114 Manual network connection
115 Device information

USING THE WIRELESS NETWORK (HMX-S15/S16 ONLY) 116

116 Playing videos/photos on the TV screen
117 Sharing the videos/photos
118 saving the videos/photos to the PC

CONNECTING TO A TV 119

119 Connecting to a high definition TV
121 Connecting to a regular TV
122 Viewing on a TV screen

DUBBING VIDEOS 123

123 Dubbing to a VCR or DVD/HDD recorder

PRINTING PHOTOS 124

124 Direct printing with a PictBridge printer

USING WITH A WINDOWS COMPUTER 126

126 What you can do with a windows computer
127 Using the intelli-studio programme
131 Using as a removable storage device

TROUBLESHOOTING

133 Warning indicators and messages
139 Symptoms and solutions

MAINTENANCE & ADDITIONAL INFORMATION

148 Maintenance
149 Using your camcorder abroad

SPECIFICATIONS

150 Specifications

quick start guide

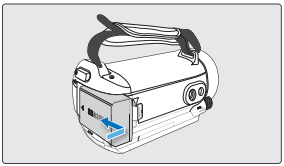
This quick start guide introduces the basic operation and features of your camcorder. See the reference pages for more information.

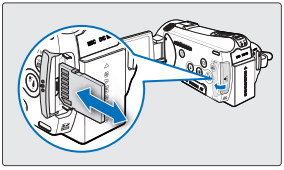
You can record videos in H.264 format!

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

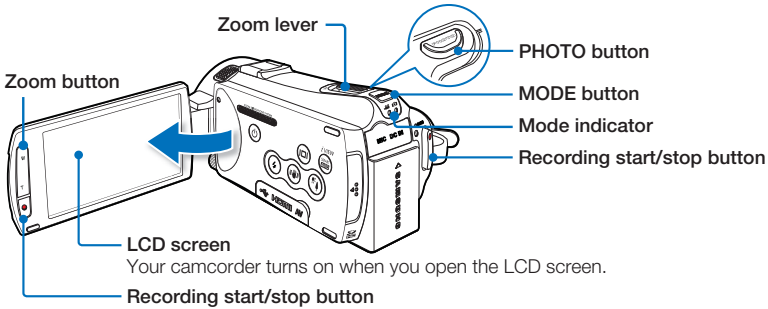
STEP1: Get ready

1. Attach the battery to the camcorder. ➥page 20
   - Align the battery grooves with the battery compartment, and then slide the battery into place in the direction of the arrow.
2. Charge the battery fully. ➥page 21
   - The battery is fully charged when the CHG (charging) indicator light turns green.
3. Insert a memory card. ➥page 32
   - You can use commercially available SDHC (SD High Capacity) or SD memory cards with this camcorder.
   - Set the appropriate storage media. ➥page 31 (HMX-S15/S16 only)





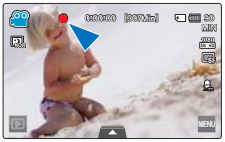
STEP2: Record with your camcorder



Recording videos

Your camcorder uses advanced H.264 compression technology give you the clearest video quality.

1. Open the LCD screen.
   - Your camcorder turns on when you open the LCD screen.
2. Select the Video record (🎥) mode by pressing the **MODE** button.
3. Press the **Recording start/stop** button.
   - To stop recording, press the **Recording start/stop** button.



Recording photos

1. Open the LCD screen.
2. Select the Photo record (📷) mode by pressing the **MODE** button.
3. Press the **PHOTO** button lightly to adjust the focus, then press it fully (a shutter click sounds).

Using 'Quick On STBY' by opening/closing the LCD screen.

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.
➥page 102

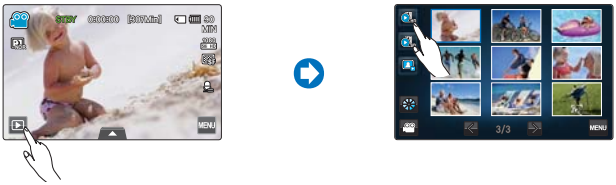
- Your camcorder is compatible with H.264 format "**1080/50i (SF)**" which provides highly detailed, beautiful images.
- The default setting is "**1080/50i (SF)**". You can also record with SD (standard definition) video quality.
- You can also take photos in the Video record mode. ➥page 40

STEP3: Play back videos or photos

Viewing videos or photos on the LCD screen

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

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



Viewing on a high definition TV

You can enjoy HD (high definition) videos. ➥page 119

You can also play back videos on a SD (standard definition) image quality TV.
➥page 121

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 into your camcorder, you can import videos/photos into your computer, and edit or share the videos/photos with your friends and family.
For details, see pages 126~132.

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 Face, Date, 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 a web site with one click.
Click "Share ( )" → "Upload" tab on the browser. ➥page 130

The Intelli-studio runs automatically once the camcorder is connected to a Windows computer (when you specify "**PC Software: On**"). ➥page 93

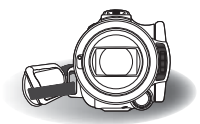
STEP5: Delete videos or photos

If the storage media is full, you cannot record new videos or photos. Delete videos or photos that you have saved to a computer from the camcorder's storage media. Then you can record new videos or photos on newly freed up space.

Touch the Play ( ) tab → Menu ( ) tab → "Delete" on the LCD screen. ➥page 110

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	Wi Fi module
HMX-S10BP	-	Black	Yes	Colour / Touch panel	Optical zoom ratio: x15 (Intelli zoom ratio: x18) Digital zoom ratio: x10 (Video recording mode only)	-
HMX-S15BP	32GB	Black		Colour / Touch panel		Yes
HMX-S16BP	64GB	Black		Colour / Touch panel		Yes

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

Checking your accessories

Battery (IA-BP210E)

Remote control & button type battery

AC power adaptor (AA-MA9 type)

Audio/Video cable

Mini HDMI cable

USB cable

Ferrite Core

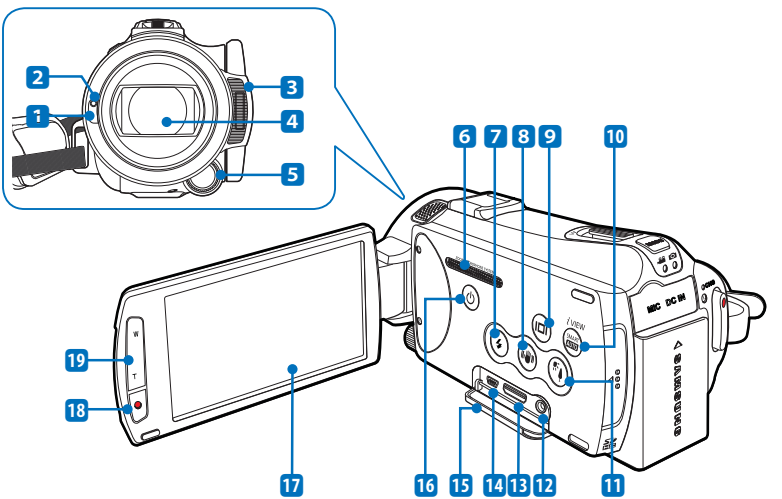
User manual CD

Quick start guide

- The exact appearance of each item may vary by model.
- The contents may vary depending on the sales region.
- Parts and accessories can be purchased after consulting with 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 33 for memory cards compatible with your camcorder.
- Your camcorder includes the user manual CD and printed quick start guide.

LOCATION OF CONTROLS

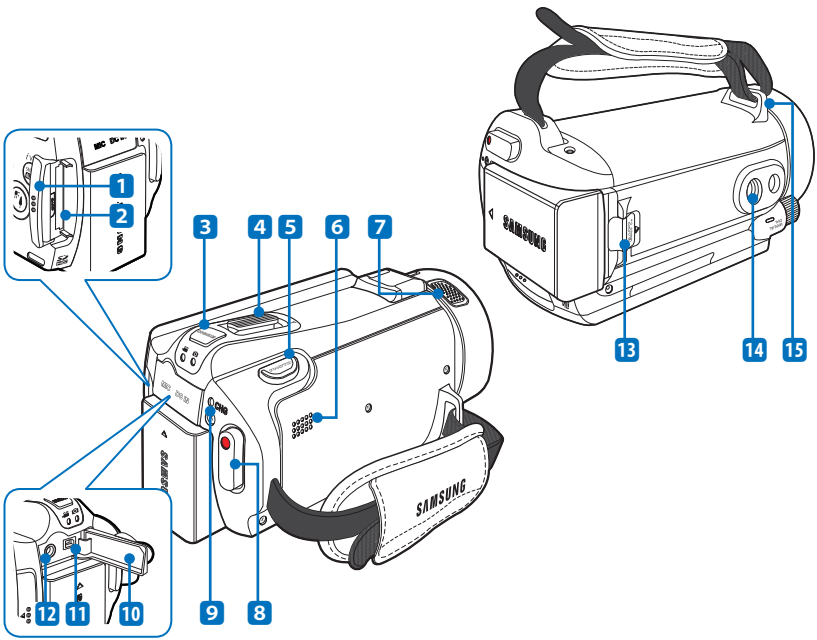
Front/Left



1	Remote control sensor
2	Recording indicator
3	Built-in flash
4	Lens
5	Manual button/dial
6	ZOOM MICROPHONE SYSTEM
7	Flash ( ) button
8	Anti-shake (OIS) ( ) button
9	Display ( ) button
10	SMART AUTO / ℓVIEW button
11	Backlight ( ) button
12	AV jack (Composite)
13	HDMI jack
14	USB jack
15	Jack cover (HDMI AV)
16	Power ( ) button
17	TFT LCD screen (Touch screen)
18	Recording start/stop button
19	Zoom (W/T) button

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

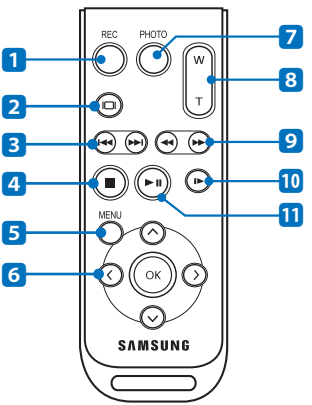
Rear/Right/Top/Bottom



1	Memory card cover
2	Memory card slot
3	MODE button / Mode indicator : Video mode : Photo mode
4	Zoom (W/T) lever
5	PHOTO button
6	Built-in speaker
7	Internal microphone
8	Recording start/stop button
9	Charging (CHG) indicator
10	Jack cover (MIC DC IN)
11	DC IN jack
12	External microphone (MIC) jack
13	Battery release switch
14	Tripod receptacle
15	Grip belt hook

USING THE REMOTE CONTROL

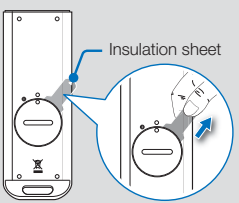
You can operate the camcorder at a distance with a remote control.



1	REC (Recording start/stop) button
2	Display (⊡) button
3	Skip (⏮/⏭) button
4	Stop (■) button
5	MENU button
6	Control (▲/▼/◀/▶/●) buttons
7	PHOTO button
8	Zoom (W/T) button
9	Search (◀◀/▶▶) button
10	Slow playback (▶) button
11	Play/Pause (▶II) button

Remove the insulation sheet before using the remote control!

Remove the insulation sheet before using the remote control as shown in the illustration.

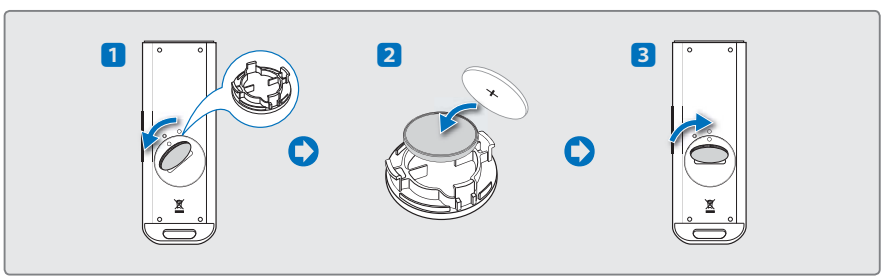


The remote control may malfunction or not work when two buttons are pressed at the same time.

- The buttons on the remote control function the same as those on the camcorder.
- You can use the remote control conveniently when recording yourself with the camcorder fixed on a tripod (not supplied).
- When using the remote control, point it to the receiver of the camcorder.

Installing the button type battery (CR2025) in the remote control

1. Turn the battery holder counter clockwise (as indicated with (◎) mark) using a coin to open it.
   - The battery holder opens.
2. Insert the battery into the battery holder with the positive (+) terminal facing down and press it firmly until you hear a locking sound.
3. Place the battery holder back in the remote control, match its (◎) mark with the (○) mark on the remote control, and turn the battery holder clockwise to lock it.



- There is a danger of explosion if the button type battery is incorrectly replaced. Replace only with the same or equivalent type.
- Lithium battery has a expected lifetime of 5~6 months and it depends on the use time of the remote control.
- You can purchase the lithium battery in your nearest Samsung dealer and replace with new one when the remote control does not work due to the low battery. (CR2025 type)
- Do not pick up the battery using tweezers or other metal tools. This will cause a short circuit.
- Do not recharge, disassemble, heat or immerse the battery in water, to avoid the risk of explosion.
- Keep the button type battery out of the reach of the children. Should any battery be swallowed, consult a doctor immediately.

IDENTIFYING THE SCREEN DISPLAYS

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

PRECHECK!

- This On Screen Display (OSD) is shown in the Video record mode only.
- Select the Video record (🎥) mode by pressing the **MODE** button. ➥page 27

Video record mode

Centre of the LCD screen

Indicator	Meaning
STBY / ● /	Operating status (standby / recording) / Self Timer*
0:00:00	Time counter (video recording time)
[307Min]	Remaining recordable time
1Sec/24Hr	Time Lapse REC*
	Face Detection frame
	Touch Point
	Optical zoom / Digital zoom
	Quick menu tab

Left of the LCD screen

Indicator	Meaning
/	Video record mode / Smart Auto mode
F2.8 1/30 /	Manual aperture*, Manual shutter* / Super C.Nite*
	iSCENE
+0.3EV	Exposure value*
	White Balance
	Digital Effect
,	Fader*, xvYCC
	Play tab

Right of the LCD screen

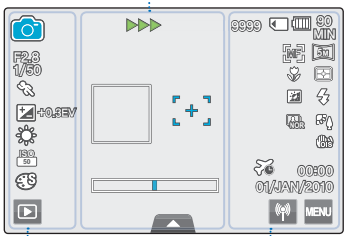
Indicator	Meaning
/	Storage media (memory card or internal memory (HMX-S15/S16 only))
90MIN	Battery info. (remaining battery level)
/ / , / /	Manual focus* / Touch Point* / Face Detection, Video resolution / Slow Motion*
,	Tele Macro, Video quality
,	LCD Enhancer, Wind Cut
, ,	Voice Reduction, Zoom MIC, MIC Level
,	Back light, Anti-shake (OIS)
	Time Zone (visit), Date/Time
, MENU	Wireless Networking tab (HMX-S15/S16 only), Menu tab

- Settings of functions marked with * are not retained when the camcorder is turned off.
- 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 133~138
- The above illustrated items and their positions can be changed without notice for the purpose of better performance.

PRECHECK!

- This On Screen Display (OSD) is shown in the Photo record mode only.
- Select the Photo record ( ) mode by pressing the **MODE** button. ➥page 27

Photo record mode



Centre of the LCD screen

Indicator	Meaning
● / ▶▶▶ /	Operating status (focus / recording)/ Self Timer*
	Face Detection frame
	Magic Touch point
	Optical zoom
	Quick menu tab

Left of the LCD screen

Indicator	Meaning
/	Photo record mode / Smart Auto mode
F2.8 1/50	Manual aperture*, Manual shutter*
	iSCENE
+0.3EV	Exposure value*
	White Balance
ISO 50	ISO
	Digital Effect
	Play tab

Right of the LCD screen

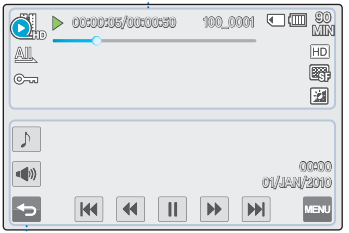
Indicator	Meaning
9999	Image counter (total number of recordable photo images)
/ IN	Storage media (memory card or internal memory (HMX-S15/S16 only))
90MIN	Battery info. (remaining battery level)
/ / ,	Manual focus* / Magic Touch* / Face Detection, Video quality
,	Tele Macro, Metering
,	LCD Enhancer, Flash
,	Cont. Shot, Back light
	Anti-shake (OIS)
00:00 01/JAN/2010	Time Zone (visit), Date/Time
, MENU	Wireless Networking tab (HMX-S15/S16 only), Menu tab

- Settings of functions marked with * are not retained when the camcorder is turned off.
- The total number of recordable photos is counted based on available space on the storage media.
- The number of recordable photos may remain if the available space on the storage media rarely changes after recording.
- The maximum number of recordable photos on the On Screen Display (OSD) is “9999.”

PRECHECK!

- This On Screen Display (OSD) is shown in the Video play mode only.
- Select the Play ( ) tab on the LCD screen to select the Video play (/) mode. ➥page 49

Video play mode



Top of the LCD screen

Indicator	Meaning
/	Video play mode
/	Operating status (play, pause, etc.) / Highlight
00:00:05/00:00:50	Time code (elapsed time/recorded time)
100_0001	File name (file number)
/	Storage media (memory card or internal memory (HMX-S15/S16 only))
90MIN	Battery info. (remaining battery level)
	Playback progress bar
	Play Option
	Erase protection
HD	Video resolution
SF	Video quality
	LCD Enhancer

Bottom of the LCD screen

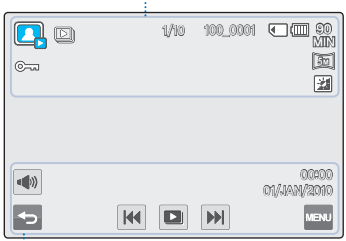
Indicator	Meaning
	Background music
/	Volume tab / Play related function tab (frame advance)
	Return tab
	Play related function tab (skip/search/ playback/pause/slow playback)
MENU	Menu tab
00:00 01/JAN/2010	Date/Time

The On-Screen Display, such as play control, volume and return tab appears briefly. They reappear when touching anywhere on the screen.

PRECHECK!

- This On Screen Display (OSD) is shown in the Photo play mode only.
- Select the Play ( ) tab on the LCD screen to select the Photo play ( ) mode. ➥page 49

Photo play mode



Top of the LCD screen

Indicator	Meaning
	Photo play mode
/ X1.1	Slide show / Playback zoom (X1.1~X8.0)
1/10	Photo image counter (current image / total number of recorded images)
100_0001	File name (file number)
/ IN	Storage media (memory card or internal memory (HMX-S15/S16 only))
90MIN	Battery info. (remaining battery level)
	Erase protection
	Photo resolution
	LCD Enhancer

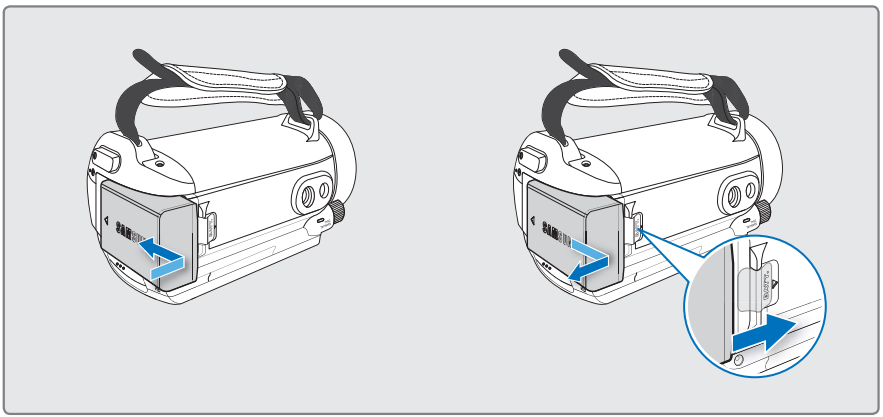
Bottom of the LCD screen

Indicator	Meaning
	Volume tab (when activating slide show)
	Return tab
	Previous image/Next image tab
	Slide show start tab
00:00 01/JAN/2010	Date/Time
MENU	Menu tab

The On-Screen Display, such as play control, volume and return tab appears briefly. They reappear when touching anywhere on the screen.

ATTACHING/DETACHING THE BATTERY

Purchase extra batteries to allow continuous use of your camcorder.



To attach the battery

Align the battery grooves with the battery compartment, and then slide the battery into place in the direction of the arrow.

To detach 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.

- Samsung is not responsible for problems that are caused by using unapproved batteries. If you use batteries from other manufacturers, there is a danger of overheating, fire, or explosion.
- Detach the battery from the camcorder with care to prevent it from falling.

CHARGING THE BATTERY

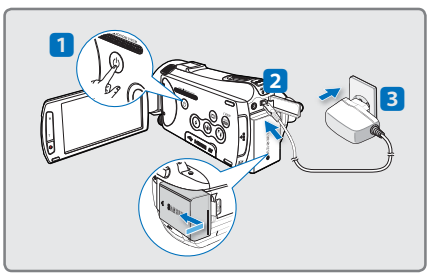
You can charge the battery using the AC power adaptor or USB cable.

PRECHECK!

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

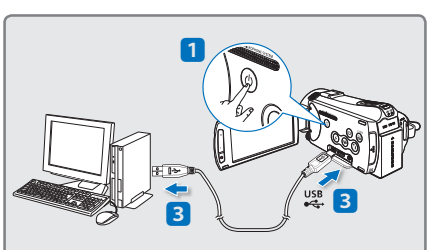
To charge the battery with the AC power adaptor

1. Press the **Power** (⏻) button to turn off the camcorder. ➥page 25
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.



To charge the battery with the USB cable

1. Press the **Power** (⏻) button to turn off the camcorder. ➥page 25
2. Open the jack cover.
3. Connect the included USB cable to the USB jack on the camcorder and to a USB jack on a running PC.
   - The charging (CHG) indicator lights up and charging starts. After the battery is fully charged, the charging (CHG) indicator turns green.



- Please make sure that there are no foreign substances in the plug and socket when you connect the AC power supply to the camcorder.
- Charging the battery at low temperature may take longer or fail to fully charge (green indicator will not turn on).

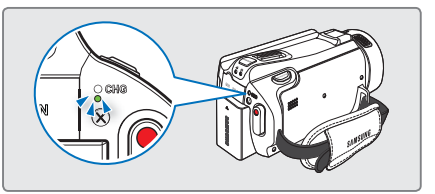
- The battery is not charged during the power saving mode, which may keep the mode indicator on or flashing. Start charging the battery after turning off the camcorder by pressing the **Power** (⏻) button.
- We recommend you charge the battery pack in a place with ambient temperature of 10°C ~ 30°C (50°F~86°F).
- When charging, if both the USB cable and AC power adaptor are connected, the AC power adaptor will override the USB.
- The camcorder does not operate with USB power only. Use the power adaptor or battery to operate the camcorder.
- Charging time may depend on a type of the USB host (PC).

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.



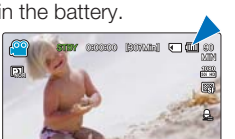
Charging (CHG) indicator

The colour of the charging indicator shows the charging state.

Charging state	Remaining battery capacity is below 5%	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.
- The battery is charged over 95% after about 2 hours, and the indicator colour changes to green. It takes about 2 hours and 40 minutes for the battery to charge 100%.

Available running time for the battery

Battery type	IA-BP210E	
Charging time	Using the AC power adaptor: approx. 160 min. Using the USB cable: approx. 390 min.	
Video resolution	HD	SD
Continuous recording time	Approx. 90min.	Approx. 120min.
Playback time	Approx. 110min.	Approx. 130min.

- Charging time: Approximate time in minutes required to fully charge a completely exhausted battery.
- Recording/Playback time: Approximate time available when you have fully charged the battery. 'HD' stands for high definition image quality and 'SD' stands for standard image quality.
- The time is only for reference. Figures shown above are measured under Samsung's test environment, and may differ according to user and condition.
- The recording and playback time will be shorter when you use your camcorder in low temperatures.
- We recommend using the AC power adaptor when using the Time Lapse REC function.

Continuous Recording (without zoom)

The continuous recording time of the camcorder in the table shows the available recording time when the camcorder is in the recording mode without using any other function after recording starts. When actually recording, the battery pack may discharge 2-3 times faster than this reference, since the record start/stop and zoom functions are being operated, and playback is performed. Prepare additional charged battery pack(s) to allow for the time you are planning to record on the camcorder.

The charging time will vary depending on the remaining battery level.

About the battery

- **Battery Properties**
  A lithium-ion battery is small-sized and has a high capacity. The low ambient temperature (below 10C°) may shorten its life-span and affect its function properly. In this case, put the battery into the pocket to make it warm then install it in the camcorder.
- **Make sure to store the battery separately after use.**
  - A small amount of battery power is consumed when the battery is stored in the camcorder even if the camcorder power is off.
  - If the battery is installed and left in the camcorder for a long time, the battery is discharged. The battery can not be used even if charged.
  - Keep the battery out of reach of children.
  - 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.
- **Prepare the extra battery when using the camcorder outdoors.**
  - The cold temperature may shorten the recordable time.
  - Carry the supplied AC power adaptor to charge the battery while travelling.
- **Check whether the battery terminal is damaged when the battery is fallen down.**
  - If the battery with the damaged terminal is installed in the camcorder, the camcorder may be damaged.
- **Remove the battery and the memory card from the camcorder and disconnect the AC power adaptor after use.**
  - Store the battery in a stable, cool and dry place.
    (Recommended temperature : 15C°~ 25C°, Recommended humidity: 40%~ 60%)
  - Too high or low temperature shortens the battery lifetime.
  - The battery terminals can be rusty or malfunction if the battery is stored in a smoky or dusty place.
- **Do not throw the battery into fire.**
  - Heating or burning the battery may cause a risk of explosion.
- **Throw away the dead battery into a recycling bin.**
- **The battery lifetime is limited.**
  - The battery reaches the end of its lifetime if operation time is shortened after fully charged. Replace with new one.
  - The battery lifetime may depend on the storing, operation and use conditions.

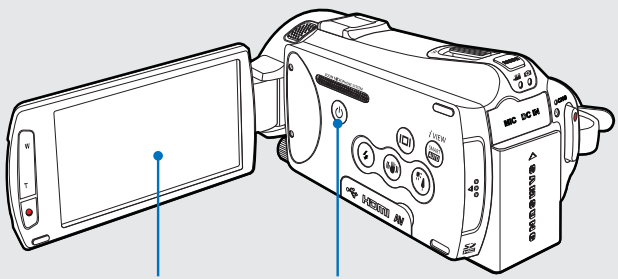
Using an AC power source

We recommend that you use the AC power adaptor to power the camcorder from a household AC outlet when you set function settings, play back, or edit images, or use it indoors. Make the same connections as you do when charging the battery. ➥page 21

- Make sure to turn off the camcorder before disconnecting the AC power adaptor. Unless, the storage media or data may be damaged.
- 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 in a narrow space, such as between a wall and furniture.

- Be sure to use the specified AC power adaptor to power the camcorder. Using other AC power adaptors could cause electric shock or result in fire.
- The AC power adaptor can be used around the world. An AC plug adaptor is required in some foreign countries. If you need one, purchase it from your distributor.

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.
   - The lens opens automatically when the camcorder is powered on.
   - You can also turn the camcorder on by pressing the **Power** (⏻) button.
   - Set the date and time when using your camcorder for the first time. ➥page 29
2. To turn off the camcorder, press the **Power** (⏻) button for about one second.
   - Closing the LCD screen will not turn off the camcorder.

- The camcorder operates the self-diagnosis function when powered on. If a warning message appears, refer to '**warning indicators and messages**' (pages 133~138) and take corrective action.
- If you close the LCD screen when the power is on, the power saving mode activates. ➥page 26

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 29
If you do not set the date and time, the time zone screen appears every time you turn on the camcorder.

SWITCHING TO THE POWER SAVING MODE

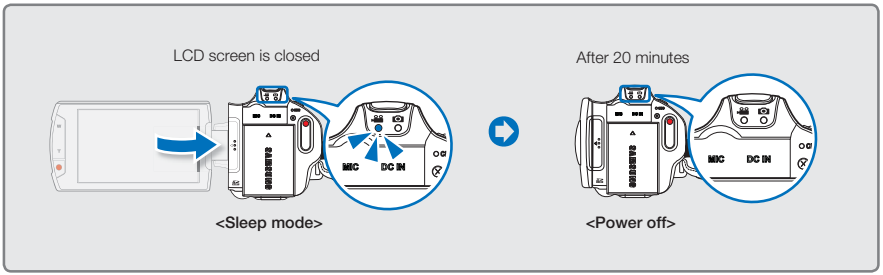
If you need to use camcorder for the extended time, setting the following functions prevents unnecessary energy consumption.

Quick On STBY Mode in the STBY mode

- The camcorder switches to "**Quick On STBY**" mode when the LCD screen is closed.
➥page 102

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 during sleep mode, the sleep mode ends and the camcorder returns to the last operation mode used.

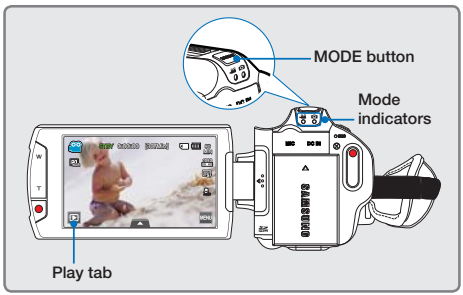


- **The power saving mode does not work in the following situations:**
  - When the camcorder has a cable connection. (Audio/Video, Mini HDMI, USB, or AC power adaptor, etc.)
  - While recording, playback, or the slideshow is being operated.
  - When the LCD screen is opened.
- The camcorder consumes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

SETTING THE OPERATION MODES

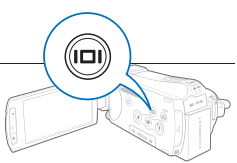
You can switch the operating mode in the following order each time you press the **MODE** button: Video mode ( ) ↔ Photo mode ( ).

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



Mode	Mode indicators	Functions
Video mode		To record and play videos.
Photo mode		To record and play photos.

USING THE DISPLAY( ) BUTTON



You can switch the on-screen information display mode.

Switching the information display mode

Press the Display( ) button.

- The full and minimum display modes will alternate.

Full display mode

The on-screen information is displayed on the full screen.

Minimum display mode

Only operation status is displayed on the LCD screen.

- The Warning indicators and messages may appear depending on the recording conditions.
- The Display ( ) button does not work in the thumbnail, menu and network 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.

Touch

Slightly touch the items to select or execute with your finger.

Drag

Drag the touch screen to left or right to select the desired items or files.

- 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.
- The camcorder does not recognise properly when touching more than two points on the screen at the same time. Touch one point at a time.
- Using a tool, such as finger nail and pen, may not be recognised properly.

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).
2. Select the time zone, then touch the (OK) tab.
   - Select the time zone by touching the (∧)/(∨)/(<)/(>) tab on the LCD screen.
3. Set the date.
   - Set the date by touching the corresponding item or dragging it up or down.
4. Touch the time ( ) tab, then set the time.
   - Set the time by touching the corresponding item or dragging it up or down.
5. 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 90
- You can change the time zone and date/time options in the setting menu. ➥pages 98~99
- 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.

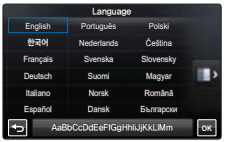
Charging the built-in rechargeable battery

- 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.

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.
   - You can view the language list more by touching the (▮) tab.
4. Touch the (OK) tab to complete the setting.
   - The menu screen and messages are displayed in the selected language.



Supported languages

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

SELECTING THE STORAGE MEDIA (HMX-S15/S16 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.

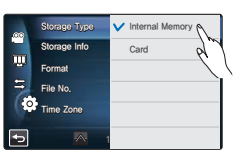
PRECHECK!

- 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) → Other setting (⚙) tab.
2. Touch "**Storage Type**."
3. Touch the desired storage media.

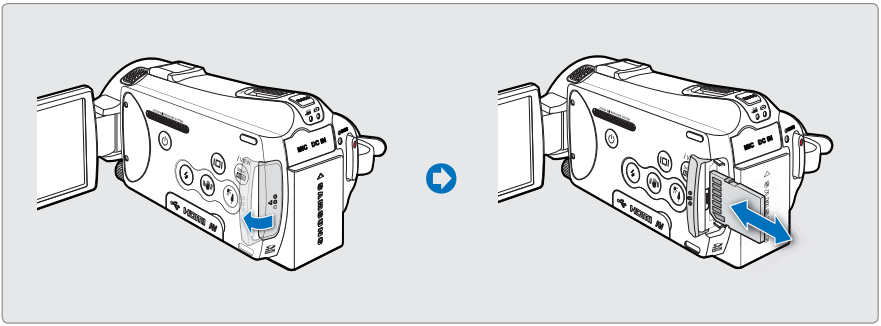
Submenu items

- **Internal Memory (IN)**: 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.
- SSD based on flash memory has been adopted as internal memory for the camcorder.

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 the terminal portion is facing left 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.

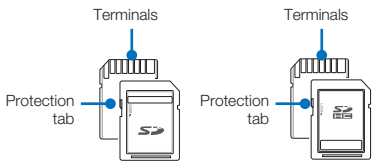
Your camcorder supports only SD (Secure Digital) and SDHC (Secure Digital High Capacity) cards. The compatibility with the camcorder may vary depending on manufacturers and types of the memory cards.

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 1GB ~ 2GB, SDHC 4GB ~ 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.

Usable memory card (1GB~32GB)



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.
- 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.
- Do not use the damaged memory card.
- Be careful to keep the memory card out of the reach of children, who might swallow it.

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 62

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

- 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.

RECORDABLE TIME AND CAPACITY

The followings are the recordable video time and the number of photos that can be taken based on the memory size and resolution. Refer to the recordable video time and the number of photos when recording videos or taking photos.

Recordable time available for video

Resolution	Memory card / Internal memory*						Internal memory*
	1GB	2GB	4GB	8GB	16GB	32GB	64GB
1080/50i (XF)	5	10	21	42	84	167	337
1080/50i (SF)	7	14	29	60	121	236	474
1080/50i (F)	11	22	45	92	185	364	731
1080/25p	7	14	29	60	121	236	474
720/50p	11	22	45	92	185	364	731
576/50p	23	47	99	200	404	790	1587

(Unit: Approximate minutes of recording)

Recordable number of photos

Resolution	Memory card / Internal memory*						Internal memory*
	1GB	2GB	4GB	8GB	16GB	32GB	64GB
[10M] 4224x2376 (16:9)	166	333	676	1376	2828	5522	9999
[5M] 2960x1664 (16:9)	262	524	1063	2149	4444	8678	9999
[3M] 2224x1664 (4:3)	367	734	1489	3008	6222	9999	9999
[2M] 1920x1080 (16:9)	573	1147	2326	4701	9722	9999	9999
[VGA] 640x480	1530	3059	6205	9999	9999	9999	9999

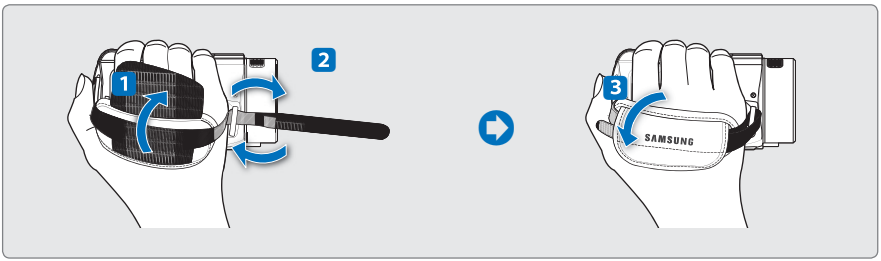
(Unit: Approximate number of images)

1GB ≒ 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.
- The maximum number of recordable photo and video files is 9999, respectively.
- The recording length of a Time Lapse REC may vary depending on settings.
- Items marked with * are available only with HMX-S15/S16 models.

ATTACHING THE GRIP BELT

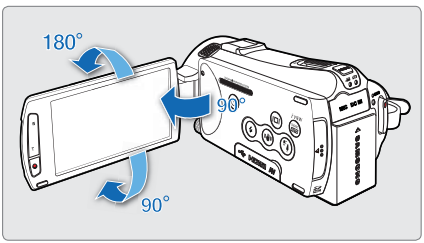
Adjust the length of grip belt so that the camcorder is stable when you press the **Recording start/stop** button with your thumb.



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.

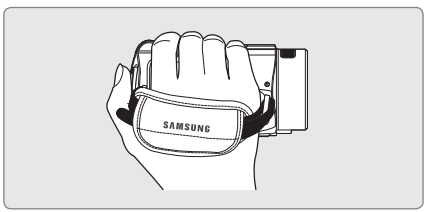
BASIC CAMCORDER POSITIONING

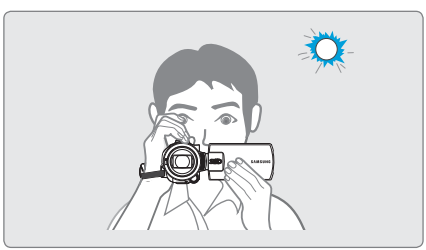
Use both hands while taking a video or photo to prevent the camcorder from shaking.
Try to avoid any slight movement while shooting.

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.



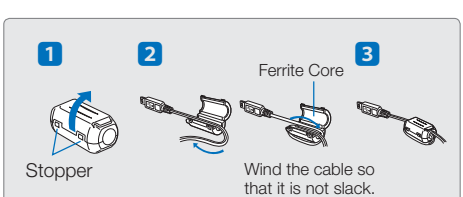


We recommend you keep the sun behind you while shooting.

ATTACHING THE FERRITE CORE

Attach the ferrite core to the cables. The ferrite core reduces interference.

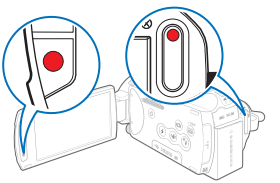
1. To open the ferrite core, release the stoppers on both ends of the ferrite core.
2. Attach the ferrite core to the cable near its connecter as shown in the figure.
3. Close the ferrite core until it clicks shut.



Take care not to damage the cable.

RECORDING VIDEOS

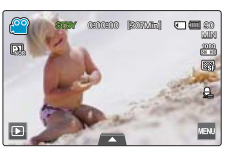
This camcorder supports both High Definition(HD) and Standard Definition(SD) image resolutions. Set your desired resolution before recording. ➥page 62

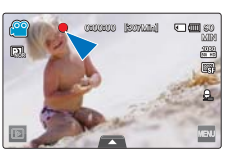


PRECHECK!

- Insert a memory card. ➥page 32
- Set the appropriate storage media. (HMX-S15/S16 only) ➥page 31
- Select the Video record (🎥) mode by pressing the **MODE** button. ➥page 27

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 44
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.





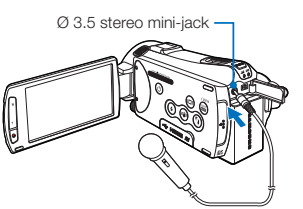
Two recording start/stop buttons to suit your preference!

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.

Using the external microphone (not supplied)

Using the built-in microphone for recording may record mechanical noise of the camcorder. When recording in a quiet environment, it is recommended to utilize an external microphone.

Connect an external microphone (not supplied) to the external microphone jack of this camcorder.



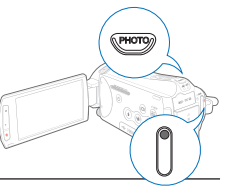
- The internal microphone is automatically turned off and records through the external microphone.
- Zoom MIC and Voice Reduction functions are automatically turned off.
- The sensitivity level may differ depending on microphone. Use the MIC Level menu to find adequate recording sound level. Otherwise, recording loud sound may produce distorted sound.

- 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.
- 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.

- 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 16
- For approximate recording time, see page 35.
- Sound is recorded from the internal stereo microphone at the top of the lens. Make sure that the microphone is not blocked. Also, when using a zoom microphone, be careful not to cover the internal zoom microphone on the left of the camcorder.
- 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.
- For various functions available during recording, see “Video/photo record menu items.” ➥pages 61~82
- 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 brightness of the LCD screen can be adjusted in the menu options. Adjusting the LCD screen does not affect the image being recorded. ➥page 89
- The menu setting tabs shown on the LCD screen do not affect the image being recorded.

CAPTURING PHOTOS DURING VIDEO RECORDING

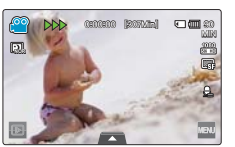
You can capture photos at the video STBY mode or during video recording with simple operation of buttons. It is convenient to record a video and photo at the same time without switching modes.



PRECHECK!

- Insert a memory card. ➥page 32
- Set the appropriate storage media. (HMX-S15/S16 only) ➥page 31
- Select the Video record (🎥) mode by pressing the **MODE** button. ➥page 27

To capture photos during video recording



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.
3. To stop recording, press the **Recording start/stop** button again.

To capture photos in video standby mode

Align the subject in the frame in video standby mode, then press the **PHOTO** button.

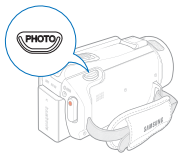
- When the (▶▶▶) indicator appears with a shutter sound, the photo image is recorded.

- **You cannot capture photos in the following condition:**
  - When time lapse recording is performed.
  - During slow motion recording
- Flash is not available while capturing photos in video record mode.
- The resolution of the captured photos depends on the resolution of the video as follows.

Video resolution	Resolution of captured photo
1080/50i (XF), 1080/50i (SF), 1080/50i (F), 1080/25p	1920x1080
720/50p	
576/50p	

RECORDING PHOTOS

You can take photos and store them in the storage media. Set the desired resolution before recording. ➥page 35



PRECHECK!

- Insert a memory card. ➥page 32
- Set the appropriate storage media. (HMX-S15/S16 only) ➥page 31
- Select the Photo record ( ) mode by pressing the **MODE** button. ➥page 27

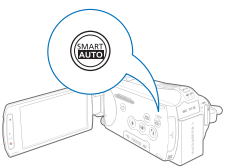
1. Select a subject to record.
   - Adjust the LCD panel to the best angle for recording.
   - Use the **Zoom** lever or **Zoom** button to adjust the size of the subject. ➥page 44
2. Adjust the subject at the centre of the LCD screen, and half-press the **PHOTO** button.
   - Your camcorder adjusts to the ideal aperture and focus automatically (if "**Aperture**" and "**Focus**" are set to "**Auto**" ➥pages 66, 70).
   - When the subject is in focus, the (●) indicator appears green. If it appears red, readjust the focus.
3. Fully press the **PHOTO** button.
   - A shutter sound is heard (when "**Shutter Sound: On**" is set), and the photo is recorded.

- Recordable number of photos varies depending on the photo resolution. ➥page 35
- Audio is not recorded when taking photos.
- If focusing is difficult, use the manual focus or the Magic Touch function. ➥pages 70, 72
- Do not turn off the camcorder or remove the memory card when taking photos as it may damage the storage media or data.
- Adjust brightness of the LCD screen using menu items. Doing so does not affect the recorded image. ➥page 89
- For the on-screen display information, see page 17.
- For the advanced recording, see pages 61~82
- Photo files conform to the DCF (Design rule for Camera File system) standard, established by JEITA (Japan Electronics and Information Technology Industries Association.)

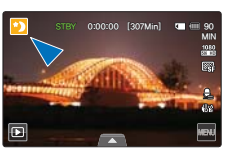
RECORDING WITH EASE FOR BEGINNERS (SMART AUTO)

User-friendly SMART AUTO optimises your camcorder to the recording conditions automatically, providing beginners with the best performance.

1. Press the **SMART AUTO** button.
- Smart Auto (/) and Anti-shake () indicators are displayed on the LCD screen.
- In the photo recording mode, the smart flash () icon appears.



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 at night>

	Appears when recording at night. (Night)
	Appears when recording persons outdoors at night. (Night Portrait)
	Appears when recording images of landscapes with backlighting. (Backlight)
	Appears when recording persons under backlight condition. (Backlight Portrait)
	Appears when recording persons. (Portrait)
	Appears when recording very bright scene. (White)
	Appears when recording outdoor scene. (Landscape)

	Appears when taking photos with close-up. (Macro)
	Appears when taking photos of clear skies. (Blue sky)
	Appears when taking photos of forested areas. (Natural green)
	Appears when taking photos of sunsets. (Sunset)
	Appears when the camcorder and subject are stable for a while. (Tripod)
	Appears when taking photos of actively moving subjects. (Action)

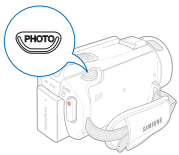
3. Press the **Recording start/stop** button or **PHOTO** button. ➥pages 38, 41

4. To cancel Smart Auto mode, press the **SMART AUTO** button again.

- **Unavailable buttons during Smart Auto operation:**
  Menu () tab, Quick menu ( ) tab, etc. Most settings are automatically adjusted in Smart Auto mode. To set or adjust functions on your own, release the Smart Auto mode first.
- 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.
- The camcorder recognises a night scene only when taking photos with the flash off.
- The camcorder cannot detect the portrait mode according to the direction or the brightness of faces.
- Tripod () mode is detected only when recording scenes or portraits at night, the Action () mode is available when recording except for scenes and portraits at night.
- Tripod () mode may not be recognized depending on the subject's movement even if using a tripod.
- When recording more than one scenes at the same time, Smart Auto prioritizes as below:
  For example, a) If White and Portrait can be applied at the same time, then Portrait is selected and corresponding icon displays.
  b) If White and Backlight are applied at the same time, then Backlight is selected and corresponding icon displays.

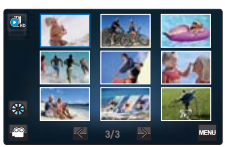
CAPTURING PHOTOS WHILE PLAYING BACK VIDEOS

You can capture photos during video playback.



PRECHECK!

Touch the Play ( ) tab on the LCD screen to select the Video play (/) mode. ➥page 49



1. Recorded videos appear in a thumbnail index view.
   - Touch the left ( )/light ( ) 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.

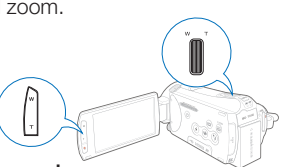
4. Press the **PHOTO** button fully down.
   - The captured still image is recorded in JPEG format.
5. When the photo is recorded on the storage media, touch the Return ( ) tab to view the thumbnail index.
   - Touch the Photo ( ) tab to view the recorded photos. ➥page 53

The resolution of the captured photos depends on the resolution of the video as follows.

Video resolution	Resolution of captured photo
1080/50i (XF), 1080/50i (SF), 1080/50i (F), 1080/25p	1920x1080
720/50p	1280x720
576/50p	720x408
Slow Motion: [SD]300Frame/Sec, [SD]500Frame/Sec	368x208, 192x112

ZOOMING

Use the zoom function for close-up or wide-angle recording. This camcorder allows you to record using 15x optical power zoom, 18x Intelli-zoom and digital zoom.



To zoom in

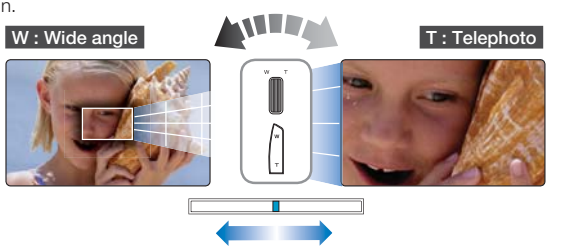
Press the **T** (zoom) button on the LCD panel or slide the zoom lever towards **T** (telephoto).

- The distant subject is gradually magnified and can be recorded.
- The most magnified zoom ratio is 18x zoom in the normal zoom-in.

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.
- The smallest zoom ratio is the subject's original size in the zoom-out.



Zoom speed

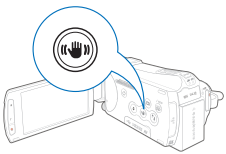
When using the zoom function, its speed can be decreased by slowly moving the Zoom (W/T) lever. A fast moving increases the zoom speed. However, the Zoom (W/T) button on the LCD panel cannot adjust the zoom speed.

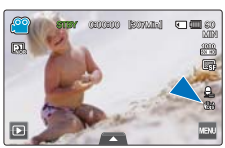
- Using the optical zoom does not degrade the image quality and clarity.
- Use the digital zoom when you want to zoom more than the optical zoom range (Video recording mode only). ➥page 80
- Focusing may become unstable when recording with a fast zoom or zooming into a subject standing too far away. In this case, use the manual focus function. ➥page 70
- The minimum possible distance between camcorder and subject while maintaining sharp focus is about 1cm (about 0.4 inches) for wide angle and about 50cm (about 19.7 inches) for telephoto. If you want to shoot the object close to the lens at a wide angle, use the Tele Macro function. ➥page 76
- When using the zoom function while holding the camcorder with your hand, use Anti-shake (OIS) for stable recording. ➥page 45
- Frequent use of the zoom function consumes more power.
- Zooming sound by using the **Zoom** lever or **Zoom** button can be recorded.

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.

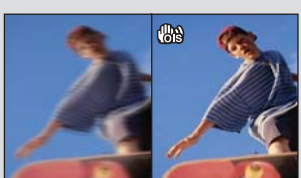
Press the **Anti-shake (OIS)** ( ) button to toggle the Anti-shake (OIS) mode between On and Off.





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.

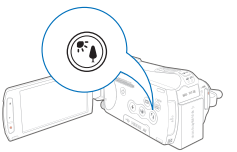


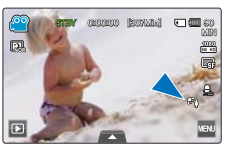
- The Smart Auto mode automatically sets the Anti-shake (OIS) to On.
- Gross camcorder shake may not be entirely corrected even if the Anti-shake is set to On. Firmly hold the camcorder with both hands.
- When this function is set to On, the actual movement of the subject and the movement displayed on 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.

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.

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





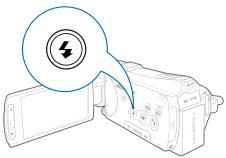
<Video record mode>

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.

USING THE FLASH

Using the flash, you can capture clear and bright photos even under shadows, at night or indoors which need more light.

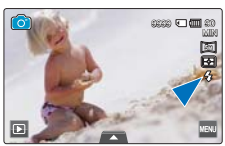


PRECHECK!

Select the Photo record ( ) mode by pressing the **MODE** button. ➥page 27

Press the **Flash** ( ) button to select the flash mode you want.

- The selected flash mode is displayed.



Display	Meaning
	Disables the flash.
	Flash works automatically when the subject or background is dark.
	If the object or background is dark, a flash of the camcorder operates automatically and performs as pre-flash that helps reduce the incidence of red eyes.
	Flash always works regardless of brightness. Light intensity is adjusted automatically.
	Flash works as the shutter speed is slow. • It is suitable for use around sundown or in dark places. • It is recommended to use the tripod (purchase separately) to prevent camcorder shake.
	In Smart Auto mode, the smart flash icon appears automatically. According to the brightness for subject and background, the flash automatically works.

- Do not use the flash with a hand covered on it.
- Do not use a flash too close to eyes of a person.

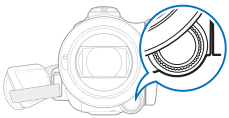
- Select a flash and press the **PHOTO** button. The camcorder performs pre-flash to make sure the recording conditions (distance from objects and light amount for recording) Do not move until the second flash performs.
- As using flash consumes more power, the more the flash is used, the shorter the battery time is.
- While charging the flash, the flash does not operate with its icon turned red.
- Flash charging time is within 5 seconds, however, it may take longer to charge the flash when the battery is low.
- You can capture bright and clear photos in the recordable range with use of a flash.
- When you recording a strongly reflecting object or out of the recordable range, bright and clear images cannot be captured.
- When you are recording with use of a flash in a dark place, foreign substances like dust can be reflected to the flash light so that blur and white dots (such as round dots, white circle) may appear on images. This is not the camcorder's malfunction.
- You cannot use a flash in the following conditions.
  - when the continuous shooting is set
  - when capturing photos in the video record mode.

USING THE MANUAL DIAL

With the manual dial, you can simply set the frequently used functions (Focus, Aperture, Shutter, Exposure Value) during recording. It is convenient to set functions easily without using the menu.

PRECHECK!

Set the manual dial to the frequently used function (Focus, Aperture, Shutter, Exposure Value). ➥page 103



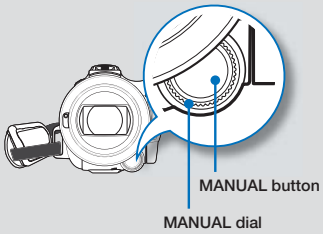
Ex) The manual dial set to Focus

1. Press the **MANUAL** button.
   - Press the **MANUAL** button to toggle focus between Auto and Manual.
2. Adjust the focus turning the **MANUAL** dial.
   - You can adjust aperture, shutter, exposure value in a same way to set focus. (when one function is assigned to the manual dial. ➥page 103

Menus to be assigned to the manual dial

The following menus can be assigned to the manual dial.
Refer to the following pages for the details of each function.

- Focus ➥page 70
- Aperture ➥page 66
- Shutter ➥page 67
- EV ➥page 68



- Only one function can be assigned to the manual dial. ➥page 103
- Even if one of functions unavailable at the same time in the menu is assigned to the manual dial, you can set the function with the manual dial, however, not in the menu.
  For example) When Aperture is assigned to the manual dial
  Aperture cannot be used if Shutter is set to Manual in the menu, however, when using the manual dial, the Shutter is automatically set to Auto in the menu, you can adjust the aperture.

CHANGING THE PLAYBACK MODE

- You can switch the record mode into the play mode by touching the Play ( ) tab on the LCD screen.
- Recorded images are displayed in the thumbnail display and the most recently recorded file is highlighted.
- According to the last recorded video or photo, the corresponding thumbnail display is switched.
- You can choose the thumbnail view display options by touching the HD ( ), SD ( ), or photo ( ) 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:

To change thumbnail display type

You can choose the thumbnail display type variously as follows.

Choose the thumbnail display type you want by touching the 3x3 ( ) tab, date ( ) tab on the LCD screen and using the **Zoom** (W/T) lever.

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. ➥page 32
- Set the appropriate storage media. (HMX-S15/S16 only) ➥page 31
- Touch the Play ( ) tab on the LCD screen to select the play mode. ➥page 49

To play back videos

1. Touch the HD ( ) or SD ( ) tab.
   - Video thumbnails corresponding to the selected video resolution appear on the screen.
   - To change the current thumbnail page, touch the left ( ) or light ( ) tab.
   - To change the thumbnail display type, touch the 3x3 ( ) tab, date ( ) tab on the LCD screen or use the **Zoom** (W/T) lever.
   - If you select the thumbnail display by the date ( ), you can sort videos by specific dates. ➥page 49
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 83
   - To turn on the background music, touch Background music ( ) tab. ➥page 83
   - To stop playback and return to the thumbnails, touch the Return ( ) tab.

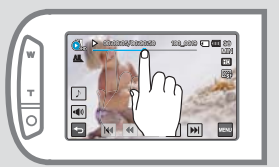
Using the Touch Screen

Drag to left or right on the LCD screen like turning pages.

- You can select previous or next file.

Touch the point or drag the pointer to left or right in the playback progress bar on the LCD screen.

- You can move directly to the position you want.



Do not power off or eject the memory card during photo playback. Doing so may damage the recorded data.

- 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 whose file format is not supported on the camcorder
- You can use various play options during the video playback. ➥page 52
- The recorded videos can be played on a TV or PC. ➥pages 119~122, 126~132
- If you touch the Menu (MENU) tab during playback, play is paused and the menu screen appears.
- If you turn on the background music while playing a video, its audio is muted and the background music is heard. At the moment, the video plays from the beginning.

To adjust the volume during video playback

You can hear the sound through the built-in speaker of the camcorder while the video is playing back on the LCD screen.

1. Touch the Volume ( ) tab on the LCD screen.
2. Adjust the volume by dragging the volume control dial toward the desired direction on the LCD screen.

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

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 and return to the thumbnail.

Search playback

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

- RPS (Reverse Playback Search)/FPS (Forward Playback Search) rate: x2 → x4 → x8 → x16 → x32 → 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(⏮) 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 → x1/4 → x1/8 → 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.

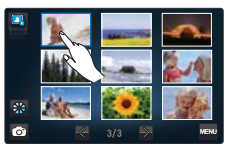
- Various playback operations are available with same buttons on the remote control.
- Touch the Play (▶) tab to play back in normal speed.
- You can hear the sound only when the playback is in normal speed.

VIEWING PHOTOS

You can view recorded photos by using various playback functions.

PRECHECK!

- Insert a memory card. ➥page 32
- Set the appropriate storage media. (HMX-S15/S16 only) ➥page 31
- Touch the Play ( ) tab on the LCD screen to select the play mode. ➥page 49



1. Touch the Photo ( ) tab.
   - The thumbnail view appears.
   - To change the current thumbnail page, touch the left ( ) or light ( ) tab.
   - To change the thumbnail display type, touch the 3x3 ( ) tab, date ( ) tab on the LCD screen or use the **Zoom** (W/T) lever.
   - If you select the thumbnail display by the date ( ), you can sort photos by specific dates. ➥page 49

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.

Using the Touch Screen

Drag to left or right on the LCD screen like turning pages.

- You can select previous or next file.

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 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 with background music.

Touch the Slide Show (▣) tab during photo playback.

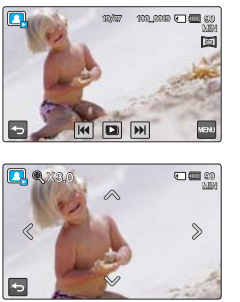
- The (▣) indicator is displayed. The slide show starts from the current selected photo.
- All photos are played back continuously in the set slide show option. ➥pages 87~88
- If you select the thumbnail display by the date (▦), photos only taken on the corresponding date play back in a slide show.
- 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.

A slide show is available also in the menu. ➥page 86

Zooming during photo playback

You can magnify a playback image.
Touch the up (∧)/down (∨)/left (≪)/right (≫) to select the desired area to magnify.

1. Touch the desired photo.
   - The selected photo is displayed on the full screen.
2. Adjust the magnification with the **Zoom** (W/T) button or **Zoom** (W/T) lever.
   - Magnification starts from 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.
3. Touch the up (∧)/down (∨)/left (≪)/right (≫) tab to view the area you want on the magnified photo.
4. To cancel, touch the Return (↩) tab.



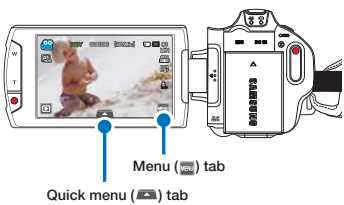
Photos recorded on other devices or those edited on a PC cannot be magnified.

HANDLING MENUS AND QUICK MENUS

The instructions below are examples of how to access and use menu items using the Menu (MENU) tab and the Quick menu ( ) tab. When you access and use other menu items, use these examples as guides.

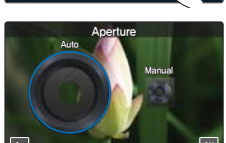
PRECHECK!

- 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 27



Using the Menu (MENU) tab

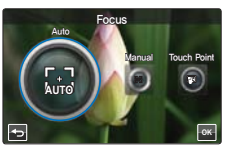
1. Touch the Menu (MENU) tab on the touch panel.
   - The menu screen appears.
   - To change the current page, touch the up ( )/down ( ) tab.
2. Touch "**Aperture.**" (The Aperture function is used here as an example.)
3. Touch the desired option.
   - Set the values according to the selected item.
   - Drag toward the direction indicated on the LCD screen or touch the desired setting value.
   - Touch the (OK) tab to complete the setting. If you touch the Return ( ) tab not the (OK) tab, the setting values are not applied and returns to the previous values.
4. To exit the menu, touch the Return ( ) tab.



using the menu items

Using the Quick menu ( ) tab

Quick menu enables you to quickly access your favourite functions. You can easily select the desired menu with one-touch.



1. Touch the **Quick menu** tab on the LCD screen 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.
   - Touch the (OK) tab to complete the setting.

- When using the 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 145.
- 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.

MENU ITEMS

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

Video/photo record menu items

● : available, X : not available

Items \ Operation mode	Video	Photo	Default value	Page
iSCENE	●	●	Auto	61
Resolution	●	●	1080/50i (SF) [5M] 2960x1664 (16:9)	62
Slow Motion	●	X	Off	63
White Balance	●	●	Auto	64
ISO	X	●	Auto	65
Aperture	●	●	Auto	66
Shutter	●	●	Auto	67
EV	●	●	0	68
Super C.Nite	●	X	Normal	69
Focus	●	●	Auto	70
Face Detection	●	●	Off	71
Magic Touch	X	●	Off	72
Metering	X	●	Multi	73
xvYCC	●	X	Off	73
Digital Effect	●	●	Off	74
Fader	●	X	Off	75
Tele Macro	●	●	Off	76
Cont. Shot	X	●	Off	77
Wind Cut	●	X	Off	77
Zoom MIC	●	X	Off	78
Voice Reduction	●	X	Off	79
MIC Level	●	X	Medium	79
Digital Zoom	●	X	Off	80
Self Timer	●	●	Off	80
Time Lapse REC	●	X	Off	81

using the menu items

Video/photo playback menu items

● : available, X : not available

Items \ Operation mode		Video		Photo		Default value	Page
		Thumbnail	Single	Thumbnail	Single		
Play Option		●	●	X	X	Play All	83
Background Music		●	●	X	X	Random	83
Highlight		●	●	X	X	-	84
Story-Board Print		●	●	X	X	-	86
Delete		●	●	●	●	-	110
Protect		●	●	●	●	Off (Single)	109
Copy *		●	●	●	●	-	111
Edit	Partial Delete	●	●	X	X	-	106
	Divide	●	●	X	X	-	107
	Combine **	●	X	X	X	-	108
Slide Show Start		X	X	●	●	-	86
Slide Show Music		X	X	●	●	Random	87
Slide Show Interval		X	X	●	●	1 Sec	87
Slide Show Effect		X	X	●	●	On	88
File Info **		●	●	●	●	-	88

- Items marked with * are available only with HMX-S15/S16 models.
- Items marked with ** are not displayed when the recording thumbnail display is set to the date ( ).

Display setting menu items

Items	Default value	Page
LCD Brightness	5	89
LCD Enhancer	Off	89
Guideline	Off	90
Date/Time Display	Off	90
TV Type	16:9	91
TV Display	On	91
HDMI TV Out	1080i	92
Auto LCD Off	On	92

Connectivity setting menu items

Items	Default value	Page
Remote	On	93
PC Software	On	93
USB Connect	Mass Storage	94
TV Connect Guide	-	94
Anynet+ (HDMI-CEC)	On	95

Other setting menu items

Items	Default value	Page
Storage Type *	Internal Memory	96
Storage Info	-	96
Format	-	97
File No.	Series	97
Time Zone	Home	98
Date/Time Set	01/JAN/2010 00:00 (Summer Time: Off)	99
Date Type	01/JAN/2010	99
Time Type	24 Hr	99
Beep Sound	On	100
Shutter Sound	On	100
Auto Power Off	5Min	101
Quick On STBY	5Min	102
Manual Dial	Focus	103
REC Lamp	On	103
Default Set	-	104
Language	English	104
Demo	On	105

- Menu options and default values may be changed without prior notice.
- Some grey coloured menu options cannot be selected. ➥page 145
- Items marked with * are available only with HMX-S15/S16 models.
- The date and time format may change depending on the selected language.

QUICK MENU ITEMS

- Quick menu is available only in the video and photo record mode.
- Available menu items may depend on the selected operation mode.
- For operation details, see the corresponding page.

Video/photo recording menu items

● : available, X : not available

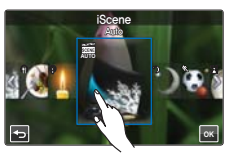
Items	Video	Photo	Default value	Page
iSCENE	●	●	Auto	61
Resolution	●	●	1080/50i (SF) [5M] 2960x1664 (16:9)	62
White Balance	●	●	Auto	64
Aperture	●	●	Auto	66
Shutter	●	●	Auto	67
EV	●	●	0	68
Focus	●	●	Auto	70
Digital Effect	●	●	Off	74

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 27



1. Touch the Menu (MENU) tab → "i**SCENE**" → touch the desired submenu item.
   - You can move to the desired item by touching the ⪡ / ⪢ tab.
2. Touch the (OK) tab or selected submenu item again to complete the setting.
3. To exit the menu, touch the Return (↩) tab.

Submenu items

- **Auto**: Under normal conditions, recording naturally.
- **Night (🌙)**: Recording in a dark place or at night.
- **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 such as a snowfield or beach.
- **Food (🍴)**: To make food more colourful.
- **Candle Light (🕯)**: Recording in the soft glow of candlelight.

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

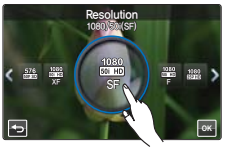
Resolution

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

PRECHECK!

Select the record (🎥 / 📷) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu (MENU) tab → "**Resolution**" → touch the desired submenu item.
   - You can move to the desired item by touching the ≪ / ≫ tab.
2. Touch the (OK) tab or selected submenu item again to complete the setting.
3. To exit the menu, touch the Return (↩) tab.



<Setting video resolution>

<Setting photo resolution>

Submenu items (Videos)

- **1080/50i (XF)** (1080 60i HD / XF): Records in the HD (1920x1080/50i) format and at the extreme fine image quality.
- **1080/50i(SF)** (1080 60i HD / SF): Records in the HD (1920x1080/50i) format and at the super fine image quality.
- **1080/50i(F)** (1080 60i HD / F): Records in the HD (1920x1080/50i) format and at the fine image quality.
- **1080/25p** (1080 25p HD / SF): Records in the HD (1920x1080/25p) format and at the super fine image quality.
- **720/50p** (720 50p HD / SF): Records in the HD (1280x720/50p) format and at the super fine image quality.
- **576/50p** (576 50p SD / SF): Records in the SD (720x576/50p) format and at the super fine image quality.

Submenu items (Photos)

- **[10M]4224x2376 (16:9)** (10M): Records in 16:9 aspect ratio and the 4224x2376 resolution. The camcorder takes photos at 5 mega pixels. When you set the resolution to 10M, the camcorder up-scales the photos you take to 10 mega pixels.
- **[5M]2960x1664 (16:9)** (5M): Records in 16:9 aspect ratio and the 2960x1664 resolution.
- **[3M]2224x1664 (4:3)** (3M): Records in 4:3 aspect ratio and the 2224x1664 resolution.
- **[2M]1920x1080 (16:9)** (2M): Records in 16:9 aspect ratio and the 1920x1080 resolution.
- **[VGA]640x480** (VGA): Records in the VGA 640x480 format.

- "50i" indicates the camcorder will record in interlaced scan mode at 50 fields per second.
- "25/50p" indicates the camcorder will record in progressive scan mode at 25/50 frames per second.
- The recordable time for video and the recordable number of photos depend on the selected resolution. ➥page 35
- Photos that are recorded on your camcorder may not playback properly on other digital devices that do not support these resolution.

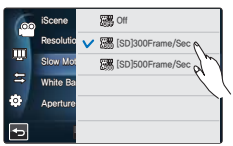
Slow Motion

You can record a video in slow motion. It is useful to record a fast moving subject such as a bird flying in the sky or golf swing and so on to analyze the detailed movement.

PRECHECK!

Select the Video record (🎥) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu (MENU) tab → "**Slow Motion**" → touch the desired submenu item.
2. To exit the menu, touch the Return (↩) tab.

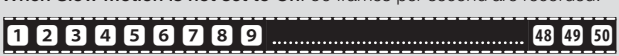


Submenu items

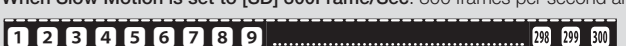
- **Off**: Disables the function.
- **[SD] 300Frames/Sec (SD)**: Records 300 frames per seconds in the 368x208 resolution.
- **[SD] 500Frames/Sec (SD)**: Records 500 frames per seconds in the 192x112 resolution.

Comparison of normal speed video and slow motion video

The number of frames needed to record video is as follows.
When Slow Motion is not set to On: 50 frames per second are recorded.



When Slow Motion is set to [SD] 300Frame/Sec: 300 frames per second are recorded.



Video recording time (Per second)

You can record video of maximum 500 frames per second.

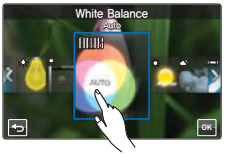
- You can record a video in slow motion for maximum one minute. When recording in slow motion, the recording stops after 1 minute but when you playback the same recording it play back for the following time.
  - 300 Frame/Sec: 5 minutes
  - 500 Frame/Sec: 10 minutes
- Sound cannot be recorded while recording in slow motion.
- The image quality of slow motion video may be lower than the normal speed video's.

White Balance

The colour of your image depends on the type and quality of the light source. If you want the colour of your image to be realistic, select an appropriate lighting condition to calibrate the white balance.

PRECHECK!

Select the record (🎥/📷) mode by pressing the **MODE** button. ➥page 27



1. Touch the Menu (MENU) tab ➙"**White Balance**" ➙ touch the desired submenu item.
   - You can move to the desired item by touching the ⪡ / ⪢ tab.
2. Touch the (OK) tab or selected submenu item again to complete the setting.
3. To exit the menu, touch the Return (⮌) tab.

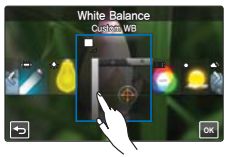
Submenu items

- **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 Return (↩) tab.
   - The stored white balance setting will be applied the next time you record.

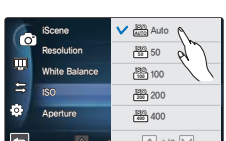
- When setting the white balance manually, the subject must be white, otherwise, your camcorder may not detect an appropriate setting value.
- The adjusted setting remains until you set the white balance again.
- During normal outdoor recording, setting to "**Auto**" may provide better results.
- Cancel the digital zoom function for clear and precise setting. ➥page 80
- Reset the white balance if light conditions change.

ISO

ISO sensitivity function sets the light sensitivity of the camcorder's image sensor. A higher ISO setting allows the camcorder to select a higher shutter speed, thus reducing the image-shaking when recording without flash under dimmer conditions since it increases the light sensitivity of the image sensor.

PRECHECK!

Select the Photo record (📷) mode by pressing the **MODE** button. ➥page 27



1. Touch the Menu (MENU) tab →"**ISO**" → touch the desired submenu item.
2. To exit the menu, touch the Return (↩) tab.

Submenu items

- **Auto**: Sets Aperture to Auto.
- **50**(ISO 50): Records in a bright place as a low sensitivity.
- **100**(ISO 100): Records in a normal situation as a normal sensitivity.
- **200**(ISO 200): Increases the shutter speed and minimise noises of the images to record in a dark place.
- **400**(ISO 400)/**800**(ISO 800)/**1600**(ISO 1600)/**2400**(ISO 2400): Records in a dark place as a high sensitivity. The recorded images may be with noise.

The high sensitivity of ISO values may give images with noise.

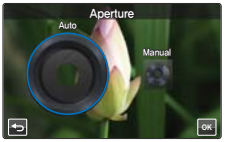
Aperture

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 (🎥/📷) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu (MENU) tab → "**Aperture**" → touch the desired submenu item.
2. Touch the (OK) tab to complete the setting.
3. To exit the menu, touch the Return (↩) tab.



Submenu items

- **Auto**: Sets the aperture value automatically.
- **Manual**: Drag the aperture dial toward the desired direction on the LCD screen to adjust the setting values.
  The setting values are as follows:
  F1.8, F2, F2.8, F3.3, F4, F5.6, F8, F11, F16, F22

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, "**Super C.Nite**" is set to "**Off**" automatically, and "**Shutter**" is set to "**Auto**" automatically. (Manual Aperture priority)
- Minimum aperture values depend on zoom magnifications. (wide: 1.8, tele: 3.3)

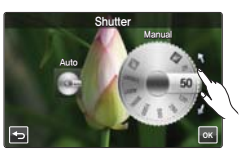
Shutter

The camcorder automatically sets the shutter speed depending on the scene's brightness. You can capture the moment of the fast moving objects or record dynamically the slow moving objects.

PRECHECK!

Select the record (🎥/📷) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu (MENU) tab → "**Shutter**" → touch the desired submenu item.
2. Touch the (OK) tab to complete the setting.
3. To exit the menu, touch the Return (↩) tab.



Submenu items

- **Auto**: The camcorder automatically sets the appropriate shutter speed value.
- **Manual**: Drag the shutter dial toward the desired direction on the LCD screen to adjust the setting values.
  The setting values are as follows:
  - Video: 1/25, 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1 /10000
  - Photo: 1/6, 1/13, 1/25, 1/50, 1/120, 1/250, 1/500, 1 /1000

- 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 iSCENE mode is cancelled, "**Super C.Nite**" is set to "**Off**" automatically, and "**Aperture**" is set to "**Auto**" automatically. (Manual Shutter priority)

EV

Depending on the intensity of the ambient light, your videos and photos may be too bright or dark. In these cases, you can adjust the exposure to get a better videos and photos.

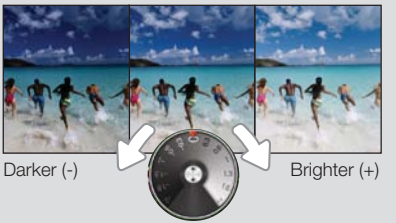
PRECHECK!

Select the record (/) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu (MENU) tab → "**EV.**"
2. Drag the exposure value dial toward the desired direction on the LCD screen to adjust the setting values.
   - The setting values are as follows: -2.0 ~ +2.0
3. Touch the (OK) tab to complete the setting.
4. To exit the menu, touch the 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.



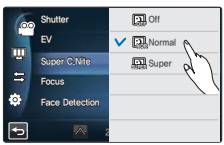
Super C.Nite

The camcorder adjusts the shutter speed to get bright images without losing colour when recording a slowly moving subject or in a dark place.

PRECHECK!

Select the Video record (🎥) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu (MENU) tab → "**Super C.Nite**" → touch the desired submenu item.
2. To exit the menu, touch the Return (↩) tab.



Submenu items

- **Off**: Disables the function.
- **Normal (AUTO)**: The shutter opens for 1/50 of a second in the normal mode and automatically switches to open for 1/25 of a second in a dark place. Use this function to get bright images in a dark place.
- **Super (SUPER)**: The shutter opens for 1/13 of a second regardless of surrounding conditions, the normal mode. Use this function to get bright images in a darker place.

When the Super C.Nite is set to Super, the video resolution will be changed automatically as below.

- 1080/50i, 1080/25p → Automatically set to 1080/25p
- 720/50p → Automatically set to 720/25p
- 576/50p → Automatically set to 576/25p

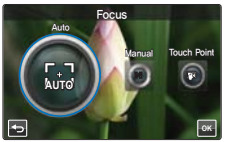
Focus

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 27

1. Touch the Menu (MENU) tab → "**Focus**" → touch the desired submenu item.
2. Touch the (OK) tab to complete the setting.
3. To exit the menu, touch the Return (↩) tab.



Submenu items

- **Auto**: Focus is set automatically.
- **Manual (✋)**: You can set focus manually when difficult to set focus with a function of auto focus. Drag the focus dial toward the desired direction on the LCD screen to adjust the setting values.
- **Touch Point (👆)**: You can set focus by touching the specific point of the subject on the LCD screen. (Available only in video record mode)

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

Drag toward 🌷.

Focusing on a further subject

Drag toward ∞.

Situations to set 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. The Touch Point function is available only in the video record mode. “Magic Touch” in the photo record mode is available as the same function. ➥page 72

To activate the touch point with a long touch

You can activate the touch point by pressing the particular point for about 2 seconds on the LCD screen.

- 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.
- When the Touch Point function is enabled, you can touch the AF( ) tab on the LCD screen to set the “Focus” to “Auto.”
- When you specify “**Focus: Manual** or **Touch Point**,” “**Face Detection**” is set to “**Off**” automatically.

Face Detection

Your camcorder detects a subject’s face and automatically adjusts the brightness and image quality to the optimised conditions. Record faces more vividly.

PRECHECK!

Select the record (/) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu ( ) tab → “**Face Detection**” → touch the desired submenu item.
2. To exit the menu, touch the Return ( ) tab.

Submenu items

- **Off**: Disables the function.
- **On( )**: Detects faces automatically for the optimal recording conditions.

Magic Touch

Simply touch the area on the LCD screen that you want to focus on when taking a photo. You can capture clearer photos as the magic touch function optimises the focus and white balance for the point you touch.

PRECHECK!

Select the Photo record ( ) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu ( ) tab → "**Magic Touch**" → touch the desired submenu item.
2. To exit the menu, touch the Return ( ) tab.

Submenu items

- **Off**: Disables the function.
- **On( )**: You can simply touch the subject shown on the LCD screen that you would like to focus on. The brightness will also be adjusted for the optimised value.

To activate the Magic Touch with a long touch

- You can activate the magic touch function by pressing and holding the particular point for about 2 seconds on the LCD screen in the record STBY mode.
- To capture the photo, press the **PHOTO** button after focusing or simply touch the point to focus and hold for 2 seconds with a finger.

- To disable the magic touch function, touch the AF ( ) tab on the LCD screen, then "**Focus**" is set to "**Auto**."
- When you specify "**Magic touch: On**," "**Face Detection**" is set to "**Off**" automatically and "**Metering**" is set to "**Multi**" automatically.

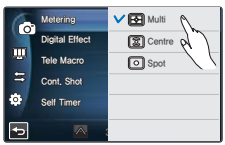
Metering

The metering mode refers to the way in which a camcorder measures the quantity of light. The brightness and lighting of your photos will vary depending on the metering mode you select.

PRECHECK!

Select the Photo record ( ) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu ( ) tab → "**Metering**" → touch the desired submenu item.
2. To exit the menu, touch the Return ( ) tab.



Submenu items

- **Multi ( )**: Meters the light by calculating the amount of light from different areas in the frame. Suitable for normal capturing.
- **Centre ( )**: The amount of light metered on the centre of the frame influences the whole screen. Suitable for capturing persons as the subject occupies a large portion of the frame.
- **Spot ( )**: Measures only the centre of the screen and determines aperture. Use this function when there is a severe brightness difference between background and objects.

xvYCC

Using the xvYCC function, you can record a video with the extended colours by expanding a colour space. A video of colourful flowers or deep blue sea can be recorded in virtual colours.

PRECHECK!

Select the Video record ( ) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu ( ) tab → "**xvYCC**" → touch the desired submenu item.
2. To exit the menu, touch the Return ( ) tab.

Submenu items

- **Off**: Disables the function.
- **On( )**: Records images with vivid and various colours.

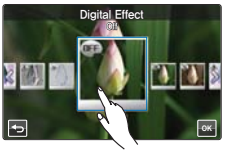
You can enjoy the recorded xvYCC video in the optimal condition when playing it back on the TV supporting xvYCC. Refer to the TV's manual for details.

Digital Effect

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

PRECHECK!

Select the record (🎥/📷) mode by pressing the **MODE** button. ➥page 27



1. Touch the Menu (MENU) tab → "**Digital Effect**" → touch the desired submenu item.
   - You can move to the desired item by touching the ≪ / ≫ tab.
2. Touch the (OK) tab or selected submenu item again to complete the setting.
3. To exit the menu, touch the Return (↩) tab.

Submenu items

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

Art (A)
This mode helps adjust for facial imperfections.

Sepia (S)
This mode gives the image a reddish brown look.

Negative (N)
This mode reverses the colours, creating a negative image.

Emboss (E)
This mode creates three-dimensional image.

Silhouette (SI)
This mode makes a object or scene with black outlines and featureless interior.

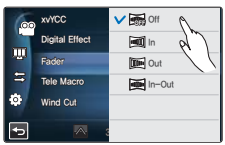
Fader

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 Video record ( ) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu ( ) tab → "**Fader**" → touch the desired submenu item.
2. To exit the menu, touch the Return ( ) tab.

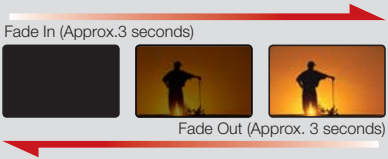


Submenu items

- **Off**: Disables the function
- **In ( )**: As soon as you start recording, it will fade in.
- **Out ( )**: When the recording is done, it will fade out.
- **In-Out ( )**: 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.

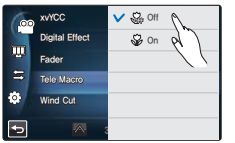
Tele Macro

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. It is useful to get close up images of flowers or insects etc.

PRECHECK!

Select the record (🎥/📷) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu (MENU) tab → "**Tele Macro**" → touch the desired submenu item.
2. To exit the menu, touch the Return (↩) tab.



Submenu items

- **Off:** Disables the function.
- **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, use the **Zoom** (W/T) button or **Zoom** (W/T) lever to adjust the focus.
- It is the most effective to use the Tele Macro function between 1cm and 50cm.

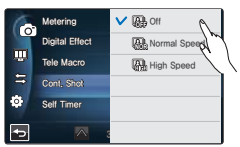
Cont. Shot

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

PRECHECK!

Select the Photo record (📷) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu (MENU) tab → "**Cont. Shot**" → touch the desired submenu item.
2. To exit the menu, touch the Return (↩) tab.



Submenu items

- **Off**: Records only one photo image.
- **Normal Speed** (🖼): You can take photos continuously while you press and hold the **PHOTO** button. The recordable number of the photos depends on the photo's resolution and the memory space.
- **High Speed** (🖼): Press the **PHOTO** button to continuously capture 18 photos for about 2 seconds.

- 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 "**High Speed**" the photo resolution is fixed to 1920x1080.
- When taking photos with the Magic Touch function, the continuous shot is not available even if "**Cont. Shot**" is set to On.

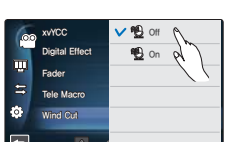
Wind Cut

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

PRECHECK!

Select the Video record (🎥) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu (MENU) tab →"**Wind Cut**" → touch the desired submenu item.
2. To exit the menu, touch the Return (↩) tab.



Submenu items

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

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

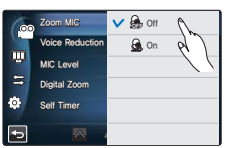
Zoom MIC

Zoom microphone adjusts the audio volume as the optical zoom setting so that it can focus on the audio of the front subject as zooming in. For example, when zooming in the bird on the tree branch, the internal zoom microphone automatically zooms in the sound so that you can record a bird's chirpings.

PRECHECK!

Select the Video record (🎥) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu (MENU) tab → "**Zoom MIC**" → touch the desired submenu item.
2. To exit the menu, touch the Return (↩) tab.



Submenu items

- **Off**: Disables the function.
- **On (🎤)**: The internal zoom microphone depends on the optical zoom setting.

Use of the built-in zoom microphone

Audio pitch can be adjusted according to the use of the optical zoom. You can record the vivid audio as coming closer because the zooming-in increases the audio recording level of the internal zoom microphone.

- Zoom microphone is not available when the external microphone is used.
- When using the Zoom microphone or Voice Reduction function, do not close the LCD screen or cover the internal zoom microphone on the left of the camcorder.
- When you specify "**Zoom MIC: On**", "**Voice Reduction**" is set to "**Off**" automatically.

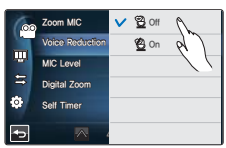
Voice Reduction

When you are recording a scene, you are usually close to the internal microphone so that the recorded video may have your voice captured loudly, which is inevitable and unnecessary. Unnecessary noise like your voice occurring around the internal microphone can be reduced by the Voice Reduction technology.

PRECHECK!

Select the Video record (🎥) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu (MENU) tab → "**Voice Reduction**" → touch the desired submenu item.
2. To exit the menu, touch the Return (↩) tab.



Submenu items

- **Off**: Disables the function.
- **On (🎤)**: Reduces your voice from recording

This function is available only when using the internal microphone. When you specify "**Voice Reduction: On**", "**Zoom MIC**" is set to "**Off**" automatically.

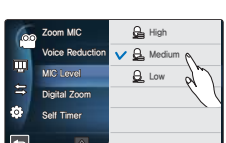
MIC Level

Using the MIC Level function, you can adjust the recorded audio volume.

PRECHECK!

Select the Video record (🎥) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu (MENU) tab → "**MIC Level**" → touch the desired submenu item.
2. To exit the menu, touch the Return (↩) tab.



Submenu items

- **High(🎤)**: Adjust the MIC volume at the highest level.
- **Medium(🎤)**: Adjust the MIC volume at the medium level.
- **Low(🎤)**: Adjust the MIC volume at the lowest level.

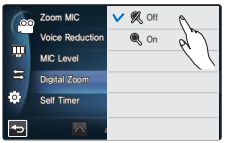
Digital Zoom

The optically magnified images by the lens can be electronically magnified up to maximum 180 times.

PRECHECK!

Select the Video record (🎥) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu (MENU) tab → "**Digital Zoom**" → touch the desired submenu item.
2. To exit the menu, touch the Return (↩) tab.



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

Submenu items

- **Off**: Disables the digital zoom function and only optical zoom (and intelli-zoom) is available.
- **On**: Enables higher digital zoom magnification.

- The resolution and quality of the image magnified by the digital zoom may deteriorate as the optically magnified image is electronically magnified.
- You cannot magnify the image with the digital zoom while taking the photos.
- When you specify "**Digital Zoom: On**," "**Face Detection**" is set to "**Off**" automatically.

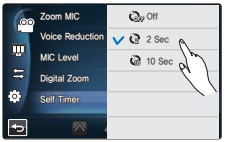
Self Timer

When the self-timer is enabled, there is a time delay for 2 or 10 seconds before recording starts. You can record or take photos of yourself.

PRECHECK!

Select the record (🎥/📷) mode by pressing the **MODE** button. ➥page 27

1. Touch the Menu (MENU) tab → "**Self Timer**" → touch the desired submenu item.
2. To exit the menu, touch the Return (↩) tab.



Submenu items

- **Off**: Disables the function
- **2 Sec (⏲)**: There is a time delay for 2 seconds when you press the **Recording Start/Stop** or **PHOTO** button.
- **10 Sec (⏲)**: There is a time delay for 10 seconds when you press the **Recording Start/Stop** or **PHOTO** button.

The self-timer is enabled only before recording starts. (This function is disabled after used for one time.)

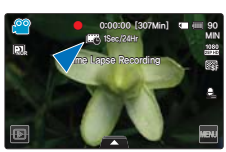
Time Lapse REC

Using the Time Lapse feature, you can programme your camcorder to create a time lapse video by recording a series of frames over a set period of time with a set time interval between each frame. The Time Lapse feature lets you create time lapse videos of blooming flowers and similar subjects.

PRECHECK!

Select the Video record (🎥) mode by pressing the **MODE** button. ➥page 27

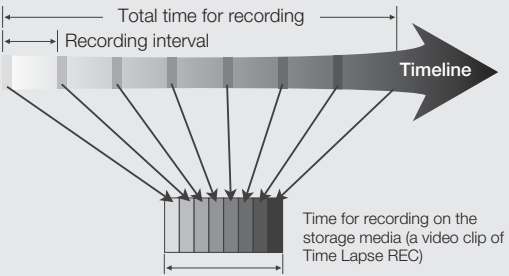
1. Touch the Menu (MENU) tab → "**Time Lapse REC**."
2. Touch the "**Interval**" or "**Duration**" and drag up or down to set the value.
3. Touch the (OK) tab to complete the setting.
4. To exit the menu, touch the Return (↩) tab.
5. After setting the Time Lapse REC mode, press the **Recording start/stop** button.
   - Then the Time Lapse recording starts.
   - Time Lapse REC only supports the 1080/25p resolution and Super Fine quality.



Submenu items

- **Off:** Disables the function.
- **On** (📷): Enables the interval recording function.
  Images are automatically captured one by one frame at the specified interval or the duration, and stored in the storage media.
  - Interval: One by one image is captured at the set interval.
    01 Sec → 03 Sec → 05 Sec → 10 Sec → 30 Sec
  - Duration: Total time from start to end of the recording.
    24 Hr → 48 Hr → 72 Hr → ∞ (Unlimited)

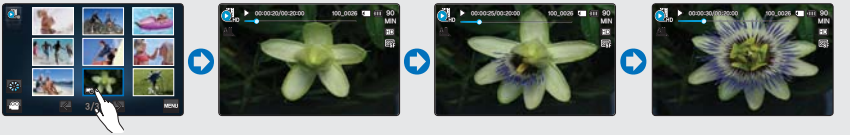
Example of Time Lapse Recording



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



(The time lapse video file appears with the Time Lapse REC ( ) icon.)

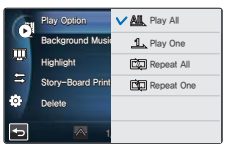
- Time lapse recording mode is released once recording has been finished. To start another Time Lapse Recording, repeat steps 1-5.
- 25 captured images compose a video of 1 second length. Since the minimum length of a video to be saved by your camcorder is one second, the interval defines how long the 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 30 minutes to record a minimum video length of 2 seconds (50 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.
- We recommend using the AC power adaptor for a time lapse recording.

Play Option

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

PRECHECK!

Select the Play ( ) tab on the LCD screen to select the Video play (/) mode. ➥page 49



1. Touch the Menu ( ) tab → "**Play Option**" → touch the desired submenu item.
2. To exit the menu, touch the ( ) tab.

Submenu items

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

Background Music

You can enjoy video with background music stored in the internal memory or in the memory card. Set your background music at your preference.

PRECHECK!

Select the Play ( ) tab on the LCD screen to select the Video play (/) mode. ➥page 49

1. Touch the Menu ( ) tab → "**Background Music.**"
2. Drag up/down or touch the items for genre and instrument to set the background music.
3. To exit the menu, touch the ( ) tab.

Submenu items

- **Genre:** You can select the genre of the background music. (Random, Ballad, Jazz, Dance & Disco, Pop, Rock, R&B, Latin, Electronic, Instrumental)
- **Instrument:** You can select the instrument of the background music. (Random, Piano, Synthesizer, Guitar, Violin, Bell & Harp, Flute, Trumpet, Drum)

- While setting the background music, when the memory card has no sound sources, the genre supports Random, Ballad, Jazz, and Dance & Disco only, and the instrument is set to Random.
- If you change the genre, the Instrument is set to "**Random**" automatically.
- Depending on music source stored in the memory card, supported genre and instruments vary.
- For use of external sound sources, see page 147

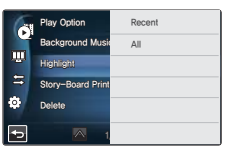
Highlight

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

PRECHECK!

Select the Play ( ) tab on the LCD screen to select the Video play (/) mode. ➥page 49

1. Touch the Menu ( ) tab → "**Highlight**" → touch the desired submenu item.
2. To exit the menu, touch the ( ) tab.



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.

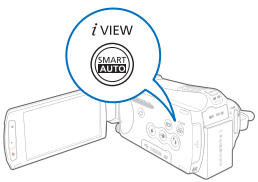
Highlight playback time to the recording time for a video

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

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

*i*VIEW

This function provides a preview of a storyboard to be printed, giving you a digest of a recorded video so you don't need to review the entire video.



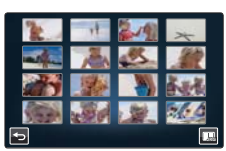
PRECHECK!

Select the Play ( ) tab on the LCD screen to select the Video play (/) mode. ➥page 49

1. Press the ***i*VIEW** button.

2. Touch the desired video.
- 16 i-Frame images appear on the LCD screen.
- The images from the video are selected in a regular interval, and comprise the preview of the 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 ( ) tab → "**Yes**."
- You can find the saved storyboard image in the photo thumbnail view. ➥page 53



- **The iVIEW function may not show all 16 i-Frame thumbnails in the following case:**
  - The recorded video is too short. To extract 16 i-Frame thumbnails from a video, its recorded time should be longer than 16 seconds.
- The *i*VIEW function is not available in the following case.
  - The thumbnail is displayed in the date ( ) 3x1. ➥page 49

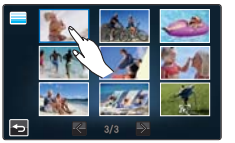
Story-Board Print

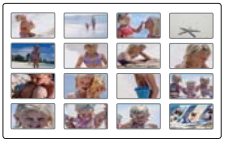
Using Storyboard Printing, you can make a digest image of a video that summarizes its story. This function captures 16 still images in a regular interval from the video and makes one still image of 16 splits so that you can save it into the storage media. It presents a quick overview of your video, helping you to understand the whole narrative of the video.

PRECHECK!

Select the Play ( ) tab on the LCD screen to select the Video play (/) mode. ➥page 49

1. Touch the Menu ( ) tab → "**Story-Board Print**."
2. Touch the desired video → "**Yes**."
   - The printed storyboard images files appears on the LCD screen for a period of time.
   - The images are selected in a regular interval, and comprise a storyboard of one still image with 16-split still frames.
   - You can also find the saved storyboard image in the photo thumbnail view. ➥page 53





- **The Story-Board Print function is not available in the following conditions:**
  - If free space available on the storage is insufficient.
  - When the number of files reaches 9999.
- **The storyboard printing may not show all 16 i-Frame thumbnails in the following case:**
  - The recorded video is too short. To extract 16 i-Frame thumbnails from a video, its recorded time should be longer than 16 seconds.

Slide Show Start

You can view a photo slide show with a background music.

PRECHECK!

Select the Play ( ) tab on the LCD screen to select the photo ( ) mode. ➥page 49

1. Touch the Menu ( ) tab → "**Slide Show Start.**"
   - The ( ) indicator is displayed. The slide show starts from the current selected photo.
2. Touch the Return ( ) to stop the slide show.

Slide Show Music

You can enjoy slideshow with background music stored in the internal memory or in the memory card. Set your background music at your preference.

PRECHECK!

Select the Play ( ) tab on the LCD screen to select the Photo play ( ) mode. ➥page 49

1. Touch the Menu ( ) tab → "**Slide Show Music**" → touch the desired submenu item.
   - Touch the ≪ / ≫ tab or drag the LCD screen left or right to select the desired item.
2. Touch the ( ) tab or selected submenu item again to complete the setting.
3. To exit the menu, touch the ( ) tab.

Submenu items

- **Off**: Turns off slide show background music.
- **Random**: Repeats 7 background music in random order.
- **Music Shake**: You can select the genre or instrument of the background music. Drag up/down or touch the items for genre and instrument to set the background music.
  - **Genre**: You can select the genre of the background music. (Random, Ballad, Jazz, Dance & Disco, Pop, Rock, R&B, Latin, Electronic, Instrumental)
  - **Instrument**: You can select the instrument of the background music. (Random, Piano, Synthesizer, Guitar, Violin, Bell & Harp, Flute, Trumpet, Drum)
- **Mist, Muse, Fall, Dawn, Party, Drops, Trip**: 7 default background music files are stored in the internal memory. You can select one from them.

- While setting the music shake, when the memory card has no sound sources, the genre supports Random, Ballad, Jazz, and Dance & Disco only, and the instrument is set to Random.
- If you change the genre, the Instrument is set to "**Random**" automatically.
- Depending on music source stored in the memory card, supported genre and instruments vary.
- For use of external sound sources, see page 147

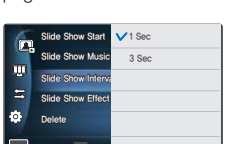
Slide Show Interval

Set the interval between slide show transitions.

PRECHECK!

Select the Play ( ) tab on the LCD screen to select the Photo play ( ) mode. ➥page 49

1. Touch the Menu ( ) tab → "**Slide Show Interval**" → touch the desired submenu item.
2. To exit the menu, touch the ( ) tab.



Submenu items

- **1 Sec**: the next slide appears at 1 second interval.
- **3 Sec**: the next slide appears at 3 seconds interval.

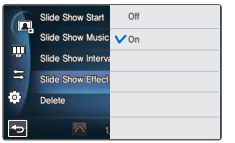
Slide Show Effect

You can enjoy your slide show with various transition effects.

PRECHECK!

Select the Play ( ) tab on the LCD screen to select the Photo play ( ) mode. ➥page 49

1. Touch the Menu ( ) tab → "**Slide Show Effect**" → touch the desired submenu item.
2. To exit the menu, touch the ( ) tab.



Submenu items

- **Off:** Disables the function.
- **On:** Enables slide show's transition effect.

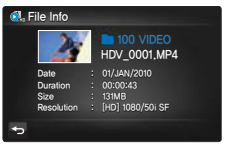
File Info

You can see the image information for all images.

PRECHECK!

Select the Play ( ) tab on the LCD screen to select the Video play (/) or Photo play ( ) mode. ➥page 49

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



- You can also operate this function in the full and single image display mode.
- When the thumbnail is displayed in the data ( ) 1x1, touch the information ( ) tab to display the file information.

LCD Brightness

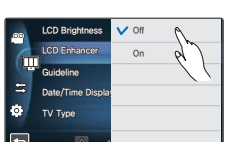
This camcorder's LCD brightness is optimised at the delivery from the factory, however, you can adjust the LCD brightness according to the ambient environment.

1. Touch the Menu (MENU) tab → Display setting (LCD) → "**LCD Brightness**."
2. Drag the control bar to left or right to adjust the setting values.
   - You can set values for LCD brightness between 0 and 10.
3. Touch the (OK) tab to complete the setting.
4. To exit the menu, touch the 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.

LCD Enhancer

You can view the clear and detailed images on the LCD screen in the bright outside.



1. Touch the Menu (MENU) tab → Display setting (LCD) → "**LCD Enhancer**."
2. Touch the desired submenu item.
3. To exit the menu, touch the Return (↩) tab.

Submenu items

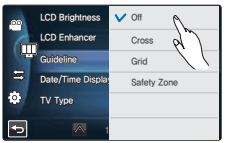
- **Off:** Disables the function.
- **On**: Enables the LCD enhancer.

The recorded video is not influenced by the use of LCD enhancer while recording.

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.

1. Touch the Menu (MENU) tab → Display setting (LCD) → "**Guideline**."
2. Touch the desired submenu item.
3. To exit the menu, touch the Return (↩) tab.



Submenu items

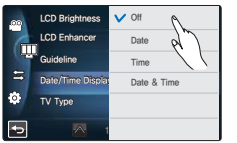
- **Off**: Disables the function.
- **Cross (▦)**: Placing the subject at the centre cross point puts the subject in the middle of the frame.
- **Grid (▦)**: For recording multiple subjects. Putting subjects at or near the grid cross points creates a balanced composition.
- **Safety Zone (▣)**: Positioning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

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

Date/Time Display

You can set the date and time to appear on the LCD screen.

1. Touch the Menu (MENU) tab → Display setting (LCD) → "**Date/Time Display**."
2. Touch the desired submenu item.
3. To exit the menu, touch the Return (↩) tab.



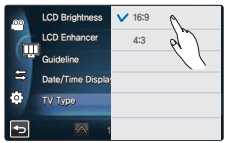
Submenu items

- **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. ➥page 99

TV Type

You can set the screen ratio of the TV to connect with the camcorder.



1. Touch the Menu (MENU) tab → Display setting (▥) → "**TV Type**."
2. Touch the desired submenu item.
3. To exit the menu, touch the Return (↩) tab.

Submenu items

- **16:9**: Select when connecting to the wide TV (16:9).
- **4:3**: Select when connecting to the normal TV (4:3).

When the camcorder is connected to TV with an HDMI cable, this function is disabled because TV output type is automatically set.

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) tab → Display setting (▥) → "**TV Display**."
2. Touch the desired submenu item.
3. To exit the menu, touch the Return (↩) tab.

Submenu items

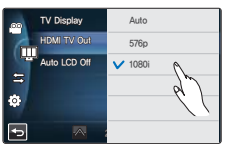
- **Off :** The OSD (On Screen Display) menus are only shown on the LCD screen.
- **On :** The OSD menus are shown on the LCD screen and the TV screen as well.

The menu screen, thumbnail display and demo screens are shown on the TV even if you set "**TV Display**" to "**Off.**"

HDMI TV Out

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

1. Touch the Menu (MENU) tab → Display setting (DISP) → "**HDMI TV Out**."
2. Touch the desired submenu item.
3. To exit the menu, touch the Return (RETURN) tab.



Submenu items

- **Auto** : The TV displays at a maximum resolution. (up to 1920x1080p)
- **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.
- **1080i** : The recorded file is output in the 1920x1080i format.

Auto LCD Off

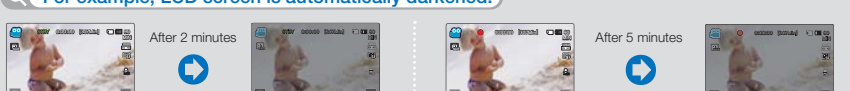
You can set the LCD screen to be darkened automatically when there is no user interaction for a period of time to prevent power consumption.

1. Touch the Menu (MENU) tab → Display setting (DISP) → "**Auto LCD Off**."
2. Touch the desired submenu item.
3. To exit the menu, touch the Return (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.

For example, LCD screen is automatically darkened.



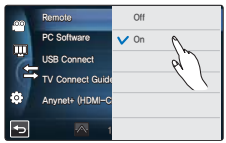
< In the STBY mode> <LCD screen is darkened> <During recording> <LCD screen is darkened>

- 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:**
  - When the camcorder has a cable connection. (USB cable, AC power adaptor, etc.)
  - While the Demo function is in operation.

Remote

You can set to operate the camcorder with the supplied remote control.

1. Touch the Menu (MENU) tab → Connectivity setting ( ) → "**Remote**."
2. Touch the desired submenu item.
3. To exit the menu, touch the Return ( ) tab.



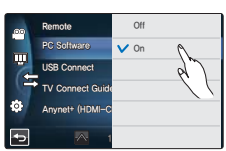
Submenu items

- **Off**: The remote control can not operate the camcorder.
- **On**: The remote control can operate 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) tab → Connectivity setting ( ) → "**PC Software**."
2. Touch the desired submenu item.
3. To exit the menu, touch the Return ( ) tab.



Submenu items

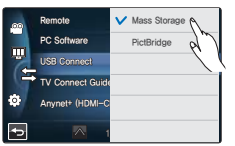
- **Off :** Disables the function.
- **On :** The built-in editing software launches when the camcorder is connected to the PC.

- **The PC Software function is not available in the following condition:**
  - 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. ➥page 94
- The PC Software is compatible with the Windows OS only.

USB Connect

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

1. Touch the Menu (MENU) tab → Connectivity setting ( ) → "**USB Connect**."
2. Touch the desired submenu item.
3. To exit the menu, touch the Return ( ) tab.



Submenu items

- **Mass Storage :** Connect to a PC to transfer videos or photos. ➥page 131
- **PictBridge :** Connect to a PictBridge printer to print photos directly (when using the PictBridge function). ➥page 124

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

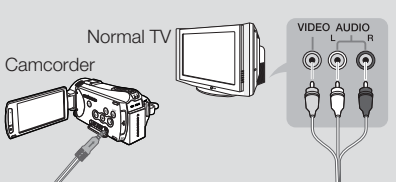
TV Connect Guide

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

1. Touch the Menu (MENU) tab → Connectivity setting ( ) → "**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 connecting your camcorder with other external devices.
3. To exit the menu, touch the Return ( ) tab.

<When connecting the Audio/Video cable>

When connecting to the normal TV with the supplied Audio/Video cable.



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) tab → Connectivity setting ( ) → "**Anynet+ (HDMI-CEC)**."
2. Touch the desired submenu item.
3. To exit the menu, touch the 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**: Disables 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.

Storage Type (HMX-S15/S16 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 31

Storage Info

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) tab → Other setting (⚙) → "**Storage Info**."
2. Touch the desired submenu item. (HMX-S15/S16 only)
   - 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 (HMX-S15/S16 only)

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

When you format the internal memory or memory card, a minimum of 40 MB is assigned for system storage, which cannot store any video or photo data.

Format

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

1. Touch the Menu (MENU) tab → Other setting (⚙) → "**Format**."
2. Touch the desired submenu item. (HMX-S15/S16 only)
   - A message appears asking for your confirmation.
3. Touch the "**Yes**" → "**Yes**."
   - The format is executed with a message.
4. To exit the menu, touch the Return (↩) tab.

Submenu item (HMX-S15/S16 only)

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

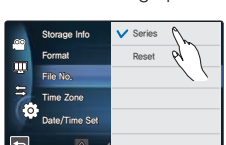
- Do not remove the storage media or perform any other operation (such as turning off the power) during formatting. Also, be sure to use the provided AC power adapter, as the storage media may be corrupted if the battery becomes exhausted during formatting.
- If the storage media becomes corrupted, format 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 33
- If there is no storage media inserted, it can not be selected. Then it will be dimmed on the menu.

File No.

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

1. Touch the Menu (MENU) tab → Other setting (⚙) → "**File No.**"
2. Touch the desired submenu item.
3. To exit the menu, touch the Return (↩) tab.



Submenu items

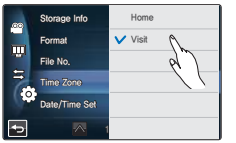
- **Series :** Assigns file numbers in sequence even after you replace or format the storage media or delete all files. Each file is given with a unique file number that allows convenient image management on a PC.
- **Reset :** Resets the file number to 0001 after formatting or deleting all files or 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 → Other setting (⚙) → "**Time Zone**" → "**Visit**"
2. Select the time zone by touching the (∧)/(∨)/(<)/(>) tab on the LCD screen, then touch the (OK) tab.
3. To exit the menu, touch the Return (↩) 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.

Date/Time Set

By setting the date and time, you can display the date and time of the recording during playback. ➥page 29

Date Type

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

1. Touch the Menu (MENU) tab → Other setting (⚙) → "**Date Type**."
2. Touch the desired submenu item.
3. To exit the menu, touch the Return (↩) tab.

Submenu items

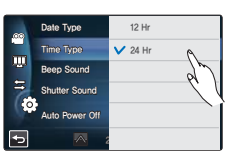
- **2010/01/01 :** The date is displayed in the order of year/month (two-digit)/date.
- **JAN/01/2010 :** The date is displayed in the order of month/date/year.
- **01/JAN/2010 :** The date is displayed in the order of date/month/year.
- **01/01/2010 :** The date is displayed in the order of date/month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

This function depends on "**Date/Time Display**" setting. ➥page 90

Time Type

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

1. Touch the Menu (MENU) tab → Other setting (⚙) → "**Time Type**."
2. Touch the desired submenu item.
3. To exit the menu, touch the Return (↩) tab.



Submenu items

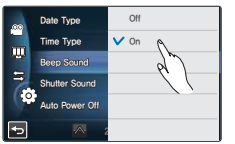
- **12Hr :** Displays the time information in 12 hour units.
- **24Hr :** Displays the time information in 24 hour units.

This function depends on "**Date/Time Display**" setting.

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) tab → Other setting (⚙) → "**Beep Sound**"
2. Touch the desired submenu item.
3. To exit the menu, touch the Return (↩) tab.



Submenu items

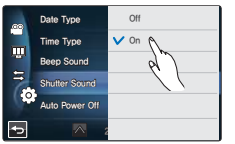
- **Off :** Disables the function.
- **On :** You will hear a beep sound when operating buttons or tabs such as the **Power** (⏻) button or **recording start/stop** button.

The Beep Sound is cancelled in the following cases:
- During recording, playing
- When the camcorder has a cable connection. (Audio/Video cable, Mini HDMI cable, etc.)

Shutter Sound

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

1. Touch the Menu (MENU) tab → Other setting (⚙) → "**Shutter Sound**"
2. Touch the desired submenu item.
3. To exit the menu, touch the Return (↩) tab.



Submenu items

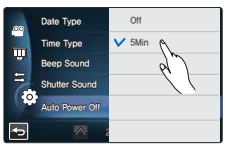
- **Off :** Disables the function.
- **On :** You will hear the shutter sound when operating the **PHOTO** button.

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. (Audio/Video cable, Mini 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) tab → Other setting (⚙) → "**Auto Power Off**"
2. Touch the desired submenu item.
3. To exit the menu, touch the Return (↩) tab.



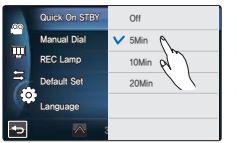
Submenu items

- **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. (USB cable, AC power adaptor, 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.

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) tab → Other setting (⚙) → "**Quick On STBY**"
2. Touch the desired submenu item.
3. To exit the menu, touch the 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.

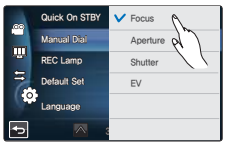
Submenu items

- **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 operating the buttons on the camcorder.

Manual Dial

You can simply set the Manual Dial as one of the frequently used functions (Focus, Aperture, Shutter, Exposure Value) during recording. Only one function can be assigned to the Manual Dial.



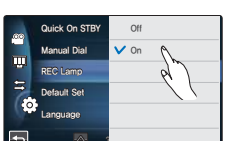
1. Touch the Menu (MENU) tab → Other setting (⚙) → "**Manual Dial**"
2. Touch the desired submenu item.
3. To exit the menu, touch the Return (↩) tab.

Submenu items

- **Focus**: Focus is assigned to the Manual Dial.
- **Aperture**: Aperture is assigned to the Manual Dial.
- **Shutter**: Shutter is assigned to the Manual Dial.
- **EV**: Exposure value is assigned to the Manual Dial.

REC Lamp

You can check the recording lamp status while recording videos or photos.



1. Touch the Menu (MENU) tab → Other setting (⚙) → "**REC Lamp**"
2. Touch the desired submenu item.
3. To exit the menu, touch the Return (↩) tab.

Submenu items

- **Off**: Turns off the recording lamp.
- **On**: Turns on the recording lamp on the front of the camcorder while recording. You can recognise if the recording is in progress with recording lamp.

Default Set

You can restore all menu settings to the default conditions.

1. Touch the Menu (MENU) tab → Other setting (⚙) → "**Default Set**"
   - A message appears asking for your confirmation.
2. Touch "**Yes**" if you want all the settings returned to the default.
   - The Time Zone screen appears after all settings return to the default.
3. Set the date and time again. ➥page 29

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

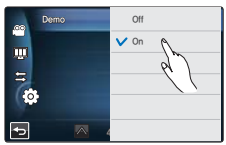
Language

You can select a desired language to display the menu and messages. ➥page 30

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) tab → Other setting (⚙) → "**Demo**"
2. Touch the desired submenu item.
3. To exit the menu, touch the Return (↩) tab.



Submenu items

- **Off:** Disables 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**, **Display** (), **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 case:

- 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. ➥page 101

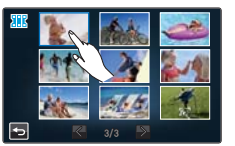
DELETING A SECTION OF A VIDEO (PARTIAL DELETE)

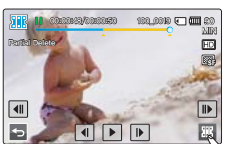
You can delete a section of a video. As the partial delete function is to edit the original video file, store the original video file separately before starting this function.

PRECHECK!

- Insert a memory card. ➥page 32
- Set the appropriate storage media. (HMX-S15/S16 only) ➥page 31
- Select the Play ( ) tab on the LCD screen to select the Video play (/) mode. ➥page 49

1. Touch the Menu ( ) tab ➜ **“Edit”** ➜ “**Partial Delete.**”
2. Touch the desired video to edit.
   - The selected video is displayed as paused.
3. Select the start point to delete using the playback related tabs, then touch the ( ) indicator at the start point.
   - Playback related tabs: / / / / / / /
   - Drag the playback progress bar to left or right on the LCD screen to directly move to the desired point.
   - The (▲) indicator appears at the start point.
4. Select the end point to delete using the playback related tabs, then touch the ( ) indicator at the end point.
   - Drag the playback progress bar to left or right on the LCD screen to directly move to the desired point.
   - The (▲) indicator appears at the end point.
5. Touch the Cut ( ) tab.
   - The message to confirm is displayed.
6. Touch “**Yes**.”
   - The selected section will be deleted.





- The deleted section of the original video can not be recovered.
- 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 also operate this function in the full and single image display mode.
- You can not edit files that the protected ( ) indicator is written on. Cancel the protect function first. ➥page 109
- Touch the Return ( ) tab to cancel the partial deletion or restart this function.
- The Partial Delete function is not available in the following conditions.
  - If the recorded time of a section to delete is less than 3 seconds.
  - If the total recorded time of a video after partial deletion is less than 3 seconds.
  - If the remaining section of the memory space is less than 15MB.
- If the start point is placed behind the end point, the start/end points will be changed automatically.

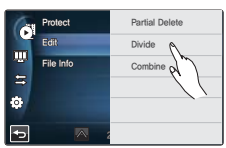
DIVIDING A VIDEO

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. ➥page 32
- Set the appropriate storage media. (HMX-S15/S16 only) ➥page 31
- Select the Play ( ) tab on the LCD screen to select the Video play (/) mode. ➥page 49

1. Touch the Menu ( ) tab ➜ **“Edit”** ➜ “**Divide.**”

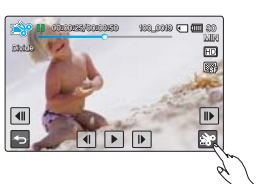


2. Touch the desired video to edit.
- The selected video is displayed as paused.

3. Search the point of division by touching playback control tabs.
- Playback control tabs: ▶/❚❚/◀◀/▶▶/◀❚/❚▶/◀❚❚/❚▶❚
- Drag the playback progress bar to left or right on the LCD screen to directly move to the desired point.

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 also operate this function in the full and single image display mode.
- You can not divide files that are protected ( ) indicator is written on. Cancel the protect function first. ➥page 109
- 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 remaining section of the memory space is less than 15MB.
  - Photos cannot be divided.
  - When the number of files reaches 9999.
  - The division function does not work if available space on the storage is insufficient. Delete unnecessary videos.

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. ➥page 32
- Set the appropriate storage media. (HMX-S15/S16 only) ➥page 31
- Select the Play ( ) tab on the LCD screen to select the Video play (/) mode. ➥page 49

1. Touch the Menu ( ) tab ➞ **“Edit”** ➞ “**Combine.**”

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

3. Touch the ( ) 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.

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 109
- The original video will not be preserved.
- **The combine function is not available in the following conditions:**
  - Videos in different resolution formats (For example, Videos recorded at “**Resolution: 1080/50i(XF)**” and “**Resolution: 720/50p**” cannot be combined.
  - If the file size of the combined videos exceeds 1.8 GB.
  - If a video’s file format is not supported by the camcorder.
  - When playing a video file.

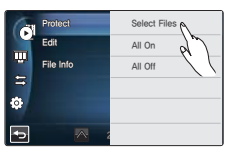
PROTECTION FROM ACCIDENTAL ERASURE

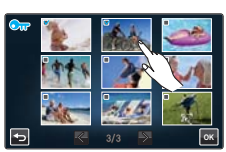
You can protect important recordings from accidental erasure. The protected videos and photos are not deleted unless they are formatted or the protection is cancelled.

PRECHECK!

- Insert a memory card. ➥page 32
- Set the appropriate storage media. (HMX-S15/S16 only) ➥page 31
- Select the Play ( ) tab on the LCD screen to select the Video play (/) or Photo play ( ) mode. ➥page 49

1. Touch the Menu ( ) tab ➝ "**Protect**" ➝ touch the desired submenu item.
   - The corresponding message to the selected option appears.
   - When "**Select Files**" is selected, see the submenu items.
2. 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 ( ) 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 33

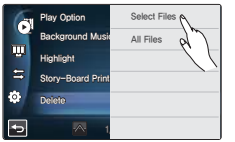
DELETING FILES

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

PRECHECK!

- Insert a memory card. ➥page 32
- Set the appropriate storage media. (HMX-S15/S16 only) ➥page 31
- Select the Play ( ) tab on the LCD screen to select the Video play (/) or Photo play ( ) mode. ➥page 49

1. Touch the Menu ( ) tab ➞ "**Delete**" ➞ touch the desired submenu item.
   - The corresponding message to the selected option appears.
   - When "**Select Files**" is selected, see the submenu items.
2. 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.

- You can also operate this function in the full and single image display mode.
- To protect important images from accidental erasure, activate the image protection function in advance. ➥page 109
- You can not delete protected files. Cancel the protect function first. ➥page 109
- If the write protection tab on the memory card is set to lock, you cannot delete the images. ➥page 33
- 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.

COPYING FILES (HMX-S15/S16 ONLY)

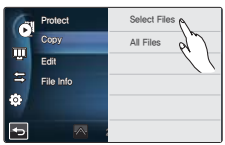
Videos and photos stored in the internal memory can be copied to the external flash memory card. Copying to the memory card does not delete originals in the internal memory.

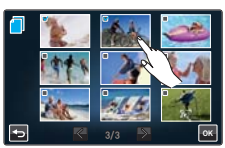
PRECHECK!

- Insert the memory card in your camcorder. ➥page 32
- Select the Play ( ) tab on the LCD screen to select the Video play (/) or Photo play ( ) mode. ➥page 49

1. Touch the Menu ( ) tab ➝ "**Copy**" ➝ touch the desired submenu item.
  - The corresponding message to the selected option appears.
  - When "**Select Files**" is selected, see the submenu items.

2. Touch "**Yes**."
  - The selected images are copied.





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 ( ) tab.
- **All Files**: Copy all images.

Do not eject a memory card or power off while copying files stored on the storage media. Doing so may damage the storage media or data.

- 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 33
- You can not copy a file if the memory card has insufficient free space. Remove unnecessary files before proceeding. ➥page 110
- 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.
- Copying cannot be possible when the number of video and photo files on the storage media to copy is 9999 respectively.

wireless network connection and configuration (HMX-S15/S16 only)

AUTO CONNECTING TO A NETWORK

You can connect to the network using an AP (access point) in the wireless network service area.

PRECHECK!

Select the record (🎥/📷) mode by pressing the **MODE** button. ➥page 27

1. Touch the Network (📶) tab → "**Settings**" → "**Access Point Setting**."
   - The camcorder will automatically scan for APs available in the network.
   - To reload the AP device list, touch the Refresh (🔄) tab.
2. Touch the desired AP.
   - The camcorder will be connected to the network if using an unsecured AP.
   - If you select a WPS AP, touch the WPS PBC tab on the bottom of the LCD screen, and then press the WPS button on the AP device or router within 2 minutes, which will be activated on the screen.
   - If selecting a secure AP, touch the (🌐) tab and proceed to the next step.

3. Configure the network settings.

Submenu items

- **Authentication**: Select an authentication type according to your AP setting. (**Open**, **Shared**, **WPA-PSK**, **WPA2-PSK**, **WPA-PSK/WPA2-PSK**) when Open or Shared is selected, WPA is automatically set.
- **Data Encryption**: Select an encryption type according to your AP setting. (**Disabled**, **WEP**, **TKIP**, **AES**, **TKIP/AES Mixed**)
- **Network Key**: Enter the password and touch the (OK) tab. For typing in characters, refer to page 115.
- **IP Setting**: The default is Auto. For manual setting of the IP, refer to page 114.

4. Touch the (OK) tab.
   - The camcorder will connect to the network via the selected AP.
   - You can check the signal strength in the top right corner of the screen.

AP Information

WPS	**WPS(WiFi Protected Setup) AP** The camcorder will automatically connect to the wireless network with safety and ease.
🔒	**Secured AP** It will connect to the wireless network using the assigned password and IP setting.
📱	**Ad-hoc AP** It will connect to the network using a mobile terminal that supports wireless communication.
📶	**Signal strength** Displays the strength of the wireless signal from the AP device.

Signal Strength

OFF	Not connected
📶	Very weak
📶	Weak
📶	Normal
📶	Very strong

- Even though the AP authentication and Data Encryption have been detected, set the authentication mode to Open or Shared.
- When automatic AP detection is not made, directly set the network properties. ➥page 112
- According to the authentication type, the settings for data encryption are as follows:
  - Open → Disabled or WEP
  - Shared → WEP
  - WPA-PSK → TKIP or AES
  - WPA2-PSK → TKIP or AES
- The compatibility to the AP that has not been formally Wi-Fi certified, cannot be guaranteed.
- The wireless network connection may not be stable depending on the connected AP.
- When the distance of AP getting farer away, network connection takes longer or video stuttering may happen.
- If there is an electric device using the same frequency range near the camcorder, you may experience wireless interference.
- If an AP device is named in other than English, it will not be displayed in the AP list or you may see a corrupt font of the name.
- For the network settings and the password, contact the network administrator or the service provider.
- If you are prompted to get authenticated in a separate process, you may experience a disconnected network. If this is the case, please contact the service provider.
- The number of the passwords available may differ, depending on the encryption type.
- You may not be able to connect to the wireless network, depending on the ambient circumstances.
- The AP search may find a printer that supports wireless network, but you can not use the found printer for connecting to the network.
- The wireless connection may cost you a fee under the contract made between you and the service provider.
- Channels available for the networking differ according to the region (country).
- Some countries may restrict wireless networking under the local radio regulation laws. You are recommended to use your camcorder inside the country where you purchased it.
- When the Data Encryption is set to WEP or TKIP for 802.11n AP connection, you can access in the 802.11g mode. In the 802.11g mode, the network connection and speed are not guaranteed.

wireless network connection and configuration (HMX-S15/S16 only)

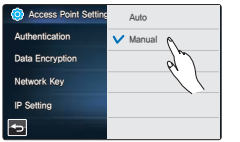
MANUAL NETWORK CONNECTION

By typing in the IP address, you can connect to the network via an AP (access point) in the wireless network service area.

PRECHECK!

Select the record (🎥/📷) mode by pressing the **MODE** button. ➥page 27

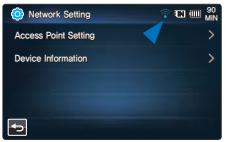
1. Touch the Network (📶) → "**Settings**" → "**Access Point Setting**" → the desired AP's icon (🌐) → "**IP Setting**" → "**Manual**."
   - The IP setup screen appears.
   - If you select a WPS AP, touch the WPS PIN tab on the bottom of the LCD screen, and then enter the generated PIN number in the AP device within 2 minutes.
2. Touch each item and enter the desired value.



Submenu items

- **IP**: Provide the IP address.
- **Subnet Mask**: Provide the subnet mask.
- **Gateway**: Provide the gateway.
- **DNS Server**: Provide the DNS address.

3. When completed, touch the (OK) tab.
   - The camcorder will connect to the network via the selected AP.



- For more information about the network settings, contact the network administrator or the service provider.
- The network settings may differ according to the network condition.
- Do not try to connect to a network that you have no permission to access.
- Use a fully charged battery while you are using the network service.

DEVICE INFORMATION

Register your information in advance so that your camcorder can be found by other device with ease.

PRECHECK!

Select the record (🎥/📷) mode by pressing the **MODE** button. ➥page 27

1. Touch the Network (📶) → "**Settings**" → "**Device Information**" → Touch the device name field.
   - The virtual keyboard appears.
2. Touch the input bar and enter your name.
3. When completed, touch the (OK) tab.

Using the virtual keyboard

You can use the virtual keyboard to enter your information and settings.
Touch the desired character and numeric. When completed, touch the (OK) tab.

◀ / ▶	Move the cursor
↑	Case-sensitive & change the symbol
123	Numerics and symbols
Space	Space
←	Clear the last character
OK	Complete your input

You can enter the information in English alone regardless of the language settings.

PLAYING VIDEOS/PHOTOS ON THE TV SCREEN

You can play the videos and photos in the camcorder on the TV screen via the network. This is possible only by using a Samsung TV that features DMR(Digital Media Renderer) based on DLNA. We recommend using it with the TV supporting the AllShare function.

PRECHECK!

- Connect the AP device and TV to the wired LAN. For more information, refer to the TV's instruction manual.
- Select the record (🎥/📷) mode by pressing the **MODE** button. ➥page 27

1. Touch the Network (🌐) → "**Play to TV**."
   - The camcorder will be connected to the network via the last connected AP.
   - If no AP is ever connected, the camcorder will scan for APs available. ➥page 112
2. Touch the desired device.
   - To reload the device list, touch the Refresh (🔄) tab.
3. Touch the HD (HD), SD (SD) or Photo (🖼) tab.
   - The thumbnail of videos or photos will appear.
   - The videos and photos in the thumbnail will be displayed only in 4x3.
   - Use ◀ / ▶ to move to the previous or next page.
4. Touch the desired video or photo.
   - The selected videos or photos will be played on the TV screen but they are just displayed in the corresponding image on the LCD.
   - Play the selected video and move to the video thumbnail.
   - As the slide show of the photos will be repeated permanently, tap Return (↩) to stop the show.
5. To end "**Play to TV**," touch the Exit tab.

- Connect between camcorder and AP wirelessly while connect TV and AP in cables.
- You can play on the TV screen only those videos and photos that were recorded by the camcorder.
- The network connection range between the camcorder and the TV may differ depending on the AP.
- If the camcorder is turned off abnormally (ex: network disconnection) while you are playing a video or photo on the TV, the TV considers that it is still connected to the camcorder.
- Depending on the size of the video or photo to share, it may take longer to connect to the TV and display the file on the TV.
- This function is not enabled if no video or photo is recorded by the camcorder.
- When playing HD quality videos on TV, use 802.11n AP and set the AP to 802.11n. When the Data Encryption is set to WEP or TKIP, 802.11g is the default setting so you cannot play HD quality videos on TV.
- You can watch photos and videos up to 1000 files through TV. The more files you watch, the slower the camcorder operates. We recommend storing the files below 1000.
- This function is applied only to DLNA-certified DMR (Digital Media Renderer).
- This function may not operate properly on a Samsung HDTV that has no AllShare™ mark on it.
- Video stuttering may occur, depending on the TV type and network status.
- When a video stuttering occurs, change to a low video quality (SF, F or SD quality) for recording.
- In case of a video stuttering while playing a video file through wireless connection, use HDMI or AV cable. ➥pages 119, 121
- While playing videos on a Samsung HDTV supporting AllShare™, if the screen stuttering repeatedly happens for over 3 seconds, consult with the call centre.

SHARING THE VIDEOS/PHOTOS

You can play the videos and photos in the camcorder on the TV screen via the network.
This is possible only by using a TV that features DMP (Digital Media Player) based on DLNA.

PRECHECK!

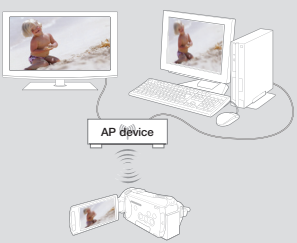
- Connect the AP device and TV to the wired LAN. For more information, refer to the TV's instruction manual.
- Select the record (/) mode by pressing the **MODE** button. ➥page 27

1. Touch the Network () → "**Share**."
- The camcorder will be connected to the network via the last connected AP.
- If no AP is ever connected, the camcorder will scan for APs available. ➥page 112

2. Enjoy the videos and photos in the camcorder on the TV screen via the network.
- To exit the sharing, touch the Return () tab.

What is DLNA (Digital Living Network Alliance)?

DLNA enables you to share multimedia contents by connecting all home appliances in a network. With DLNA, you can transfer and play videos and photos under wireless connection between home networking devices such as TV or PC and your camcorder.



- Connect between camcorder and AP wirelessly while connect TV and AP in cables.
- You can play on the connected device only those videos and photos that were recorded by the camcorder.
- The network connection range between the camcorder and the selected device may differ depending on the AP.
- If the camcorder is turned off abnormally (ex: removing the battery) while you are playing a video or photo on the select device, the device considers that it is still connected to the camcorder.
- It may take a longer time to transfer videos or photos to the device, depending on the network connection and the file size.
- The sharing function is not enabled if no video or photo is recorded by the camcorder.
- You can share photos and videos up to 1000 files. The more files you share, the slower the camcorder operates. We recommend storing the files below 1000.
- When playing HD quality videos on TV, use 802.11n AP and set the AP to 802.11n. When the Data Encryption is set to WEP or TKIP, 802.11g is the default setting so you cannot play HD quality videos on TV.
- This function is applied only to DLNA-certified DMP (Digital Media Player).
- This function may not operate properly on a Samsung HDTV that has no AllShare™ mark on it.
- Video stuttering may occur, depending on the TV type and network status.
- When a video stuttering occurs, change to a low video quality (SF, F or SD quality) for recording.
- In case of a video stuttering while playing a video file through wireless connection, use HDMI or AV cable. ➥pages 119, 121
- While playing videos on a Samsung HDTV supporting AllShare™, if the screen stuttering repeatedly happens for over 3 seconds, consult with the call centre.

SAVING THE VIDEOS/PHOTOS TO THE PC

You can save the videos and photos in the camcorder to the PC via the network.

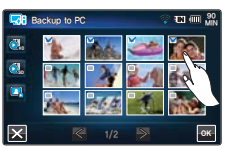
PRECHECK!

Select the record (🎥/📷) mode by pressing the **MODE** button. ➥page 27

1. Touch the Network (📶) → "**Backup to PC**."
   - The camcorder will be connected to the network via the last connected AP.
   - If no AP is ever connected, the camcorder will scan for APs available. ➥page 112

2. Touch the desired device.
   - To reload the device list, tap Refresh (🔄) tab.

3. Touch the HD (HD), SD (SD) or Photo (🖼) tab.
   - The thumbnail of videos or photos will appear.
   - The videos and photos in the thumbnail will be displayed only in 4x3.
   - Use ◀ / ▶ to move to the previous or next page.



4. Touch the video or photo to save to the PC.
   - The selected video or photo will be marked with (✔) on the screen. Each time you touch the file, it will be selected and deselected alternatively.
5. Touch the (OK) tab.
   - To cancel saving the files, touch the Cancel.
6. To end "**Backup to PC**," touch the Exit (✖) tab.

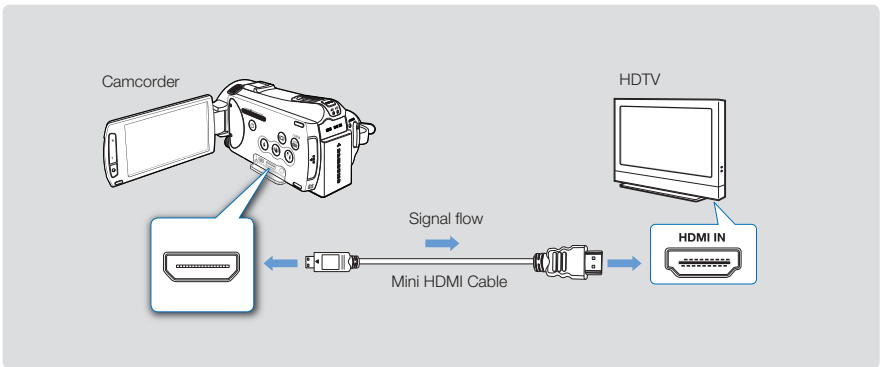
- You can play only those videos and photos that were recorded by the camcorder.
- The network connection range between the camcorder and the selected device may differ depending on the AP.
- This function is available only when Samsung Kies is executed. Samsung Kies is an applicable programme to be used when the camcorder is connected to the computer. For more details, visit the website www.samsung.com.
- The following folders and files are created in the internal memory and memory card for supporting Kies. Those are necessary for your computer to detect this camcorder through Kies. If the names for folders and files are modified or deleted, the camcorder is not detected.
  - system/Contents.xml, system/Device.xml
- For the Kies environment configuration, see page 146.
- If the camcorder is turned off abnormally (ex: removing the battery) while you are playing a video or photo on the select device, the device considers that it is still connected to the camcorder.
- It may take a longer time to transfer videos or photos to the device, depending on the network connection and the file size.
- This function is not enabled if no video or photo is recorded by the camcorder.

CONNECTING TO A HIGH DEFINITION TV

You can enjoy High Definition (HD) quality videos recorded in HD resolution using an HDTV. This camcorder supports HDMI output to deliver high-definition video transfer.

PRECHECK!

- Check if there is a HDMI input jack on your TV.
- Use the AC power adaptor to connect the camcorder with the TV.
- Select "**HDMI TV Out**" according to the type of TV connected with the camcorder. ➥page 92



Using a mini HDMI cable

1. Connect the camcorder to a TV with a Mini HDMI cable.
   - Turn on the camcorder, then connect a Mini HDMI cable. If not, the camcorder may fail to recognise the connected TV.
2. Set the TV's input selector to enable the TV to recognise the connected camcorder.
   - Refer to the TV's instruction manual to see how to select the TV input.
3. Select the playback mode on your camcorder and start to play back videos. ➥page 50

connecting to a TV

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.

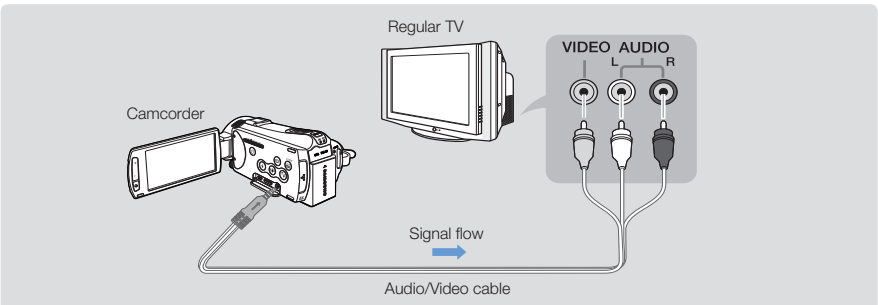
- When "**HDMI TV Out**" is set to "**Auto**," you can play an SD video file in HD format.
- This camcorder is provided with the "**TV Connect Guide**" menu function. If you try to connect the camcorder to a TV (without using the user manual), use the "**TV Connect Guide**" menu function. ➥page 94
- 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 power on. (Anynet+ function) If you don't want this function, set "**Anynet+ (HDMI-CEC)**" to "**Off**." ➥page 95
- 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 REGULAR TV

You can enjoy images recorded with your camcorder on a regular TV that supports standard definition. This camcorder supports the composite output for standard definition video transfer.

PRECHECK!

Use the AC power adaptor to connect the camcorder with the TV.



Connecting an Audio/Video cable for the composite output

1. Connect the camcorder to a TV with an Audio/Video cable.
   - Turn on the camcorder, then connect a Audio/Video cable. If not, the camcorder may fail to recognise the connected TV.
2. Set the TV's input selector to enable the TV to recognise the connected camcorder.
   - Refer to the TV's instruction manual to see how to select the TV input.
3. Select the playback mode on your camcorder and start to play back videos. ➥page 50

- Check the connection status between the camcorder and TV, TV screen may not deliver the right video information if connected incorrectly.
- When connecting to TV using the Audio/Video cable, match the colours between the cables and the corresponding jacks.
- Video input may be green depending on a TV. In this case, connect the yellow plug of the Audio/Video cable to the green jack of the TV.
- When the camcorder is connected a TV with more than one cables, the output signal is followed in the order of priority.
  - HDMI → Audio/Video (composite) output
- 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 94
- If the TV has one audio jack (mono input), connect the yellow plug of the Audio/Video cable to the video jack, white plug to the audio jack and leave the red plug alone.
- Do not use excessive force when connecting the cable.
- Images recorded with high-definition image quality (1080/50i, 1080/25p or 720/50p) are played back with standard definition image quality.

VIEWING ON A TV SCREEN

Image appearance depends on TV screen ratio

Set "**TV Type**" according to the screen ratio of a TV connected with the camcorder. ➥page 91

Recording ratio	Wide (16:9) TV	4:3 TV
Images recorded in a 16:9 ratio • Video images • Photo images • Photo capture images		

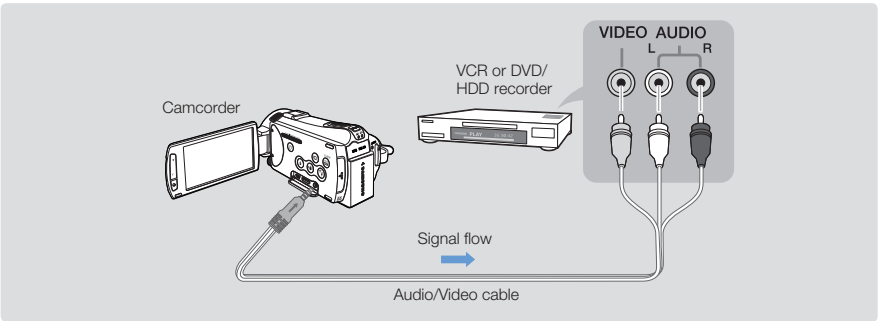
- Adjust the volume to a moderate level. If the volume is too high, the video information may include noise.
- If the "**TV Display**" is set "**Off**," the TV screen does not include the OSD (On Screen Display) menus. ➥page 91

DUBBING TO A VCR OR DVD/HDD RECORDER

Videos recorded in this camcorder can be dubbed to a VCR or DVD/HDD recorders.

PRECHECK!

- Videos are dubbed to the other recording device via analogue data transfer. (composite connection) Use the supplied Audio/Video cable.
- Use the AC power adaptor to connect the camcorder with the TV.



1. Connect your camcorder to the recording device (VCR or DVD/HDD recorder) with the Audio/Video cable.
   - Connect your camcorder to the input jacks of the recording device.
   - If your recording device has an input selector, set it to the input mode.
2. Insert the storage device in the recording device.
3. 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.
4. When dubbing is finished, stop the recording device, and the your camcorder.

- Videos recorded on this camcorder can be dubbed by connecting with the Audio/Video 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 an video recorded with HD (high definition) image quality, use the built-in software of your camcorder, and copy the images to your computer. ➥page 127
- 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 91
- To record the date/time, display it on the screen. ➥page 90

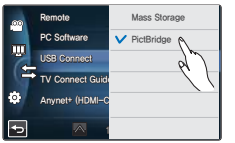
DIRECT PRINTING WITH A PICTBRIDGE PRINTER

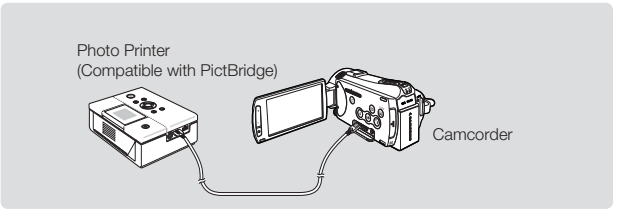
You can print photos directly by connecting this camcorder to a PictBridge printer (Sold Separately) and a USB cable.

PRECHECK!

- Insert the memory card. ➥page 32
- Select the desired storage media. (HMX-S15/S16 only) ➥page 31
- Select the Play ( ) tab on the LCD screen to select the Photo play ( ) mode. ➥page 49

1. Touch the Menu ( ) tab → Connectivity 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 print, then touch the Print ( ) tab.
   - The corresponding message appears.
5. Touch "**Yes**."
   - 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.

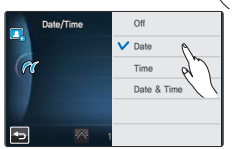
To stop printing after printing starts

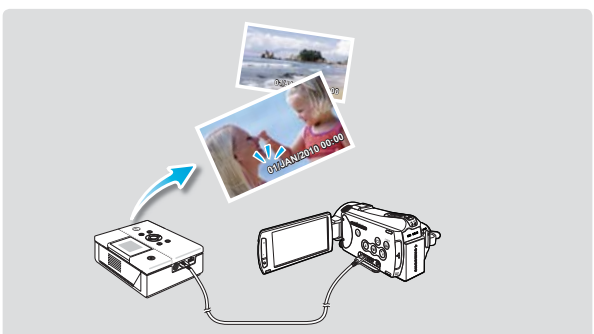
Touch "**Cancel**" on the screen.

- 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 → "**Date/Time**."
2. Touch the desired submenu item.
   - The selected date and time display option is set.
3. To exit the menu, touch the 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 imprint option 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.

using with a Windows computer

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 129
  - Editing recorded videos or photos. ➥page 129
  - Uploading the recorded videos and photos to YouTube, Flickr, Facebook, etc. ➥page 130
- You can transfer or copy the files (videos and photos) saved on the storage media into your computer. (the mass storage function) ➥page 131

System requirements

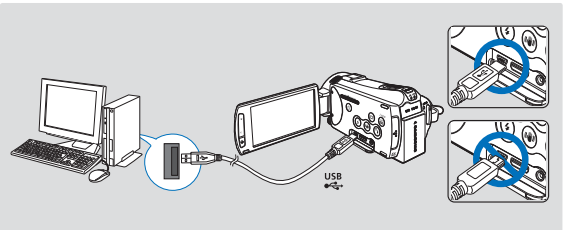
The following requirements must be satisfied to use built-in editing software (Intelli-studio):

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 is recommended)
RAM	1GB or higher is 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

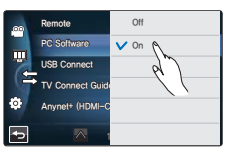
- System requirements mentioned above are recommendations. Even on a system that satisfies the requirements, operations may not be ensured depending on the system.
- On a slower computer than recommended, video playback may skip frames or operate unexpectedly.
- When the version of DirectX on your computer 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.
- The built-in software on your camcorder, 'Intelli-studio' is not Macintosh compliant.

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:

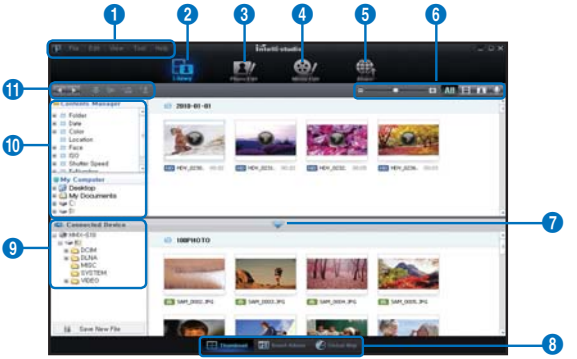
1. Click the "**Safely Remove Hardware icon**" icon on the taskbar.
2. Select "**USB Mass Storage Device,**" and then click "**Stop.**"
3. If the "**Stop a Hardware device**" window appears, click "**OK.**"
4. Disconnect the USB cable from the camcorder and PC.

- Use the provided USB cable. (Supplied by Samsung)
- 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.
- While Kies is executing, the Intelli-studio does not run automatically.

using with a Windows computer

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. Switches to Library of the computer and connected camcorder.
3. Switches to Photo Edit mode.
4. Switches to Movie Edit mode.
5. Switches to Share mode.
6. : Changes the size of thumbnails.
   All : Displays all files (videos and photos).
   : Displays video files only.
   : Displays photo files only.
   : Displays voice files only.
7. Minimises the connected device screen.
8. Displays videos and photos in various ways.
   Thumbnails: Displays video and photo thumbnails.
   Smart Album: Arrange multiple videos and photos by various classifications.
   Global Map: Displays the location of shooting place with a map.
9. Select the connected device.
10. Show 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.
11. Shortcut icons
    : Navigates files (previous and next).
    : Prints selected photo(s).
    : View location of selected photo(s) with GPS information.
    : Registers to Contents Manager.
    : Manages the registry of faces in the selected photo.

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

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 127
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)

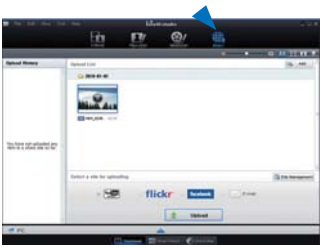
With Intelli-studio, you can edit the videos or photos in various ways. (Change Size, Fine-Tuning, Image Effect, Insert Frame, etc.)

- 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," "Fickr," "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.**"
- When the Intelli-studio application is installed on a Windows computer, it will run faster after connecting the camcorder to your computer. Click the "**Tool**" → "**Install Intelli-studio on PC**" on the Intelli-studio screen.

flickr

- Flickr is an image hosting website, web services suite, and online community platform. In addition to being a popular website for users to share personal photographs, theservice is widely used by bloggers as a photo repository.
- **http://www.flickr.com/**

facebook

- 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 READY

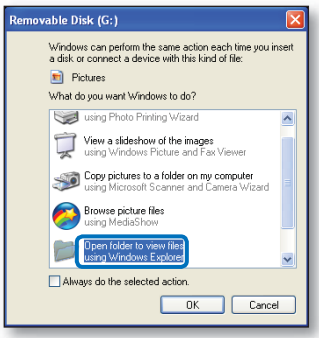
- YouTube is a video sharing website. Users can upload, view, and share personalized video clips. The San Bruno-based service uses Adobe Flash technology to display a wide variety of users-generated contents including video clips, TV clips and music videos, as well as amateur contents such as video blogging and short original videos.
- **http://www.youtube.com/**

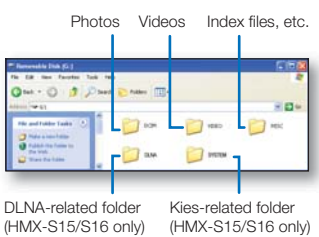
USING AS A REMOVABLE STORAGE DEVICE

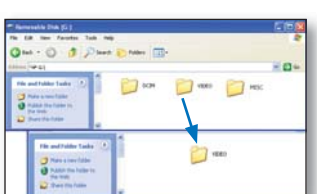
You can copy video or photo files recorded by the camcorder to a Windows computer by connecting the USB cable to the camcorder.

Viewing the contents of storage media

1. Check out the "**USB Connect: Mass Storage**" setting. ➥page 94
2. Check out the "**PC Software: Off**" setting. ➥ page 93
3. Check out the storage media.
4. Connect the camcorder to the PC with the USB cable. ➥page 127
   - The "Removable Disk" or "Samsung" window appears on the PC's screen after a moment.
   - 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.







- If the "Removable Disk" window does not appear, confirm the connection (➥page 127 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.

Structure of folders and files on the storage media

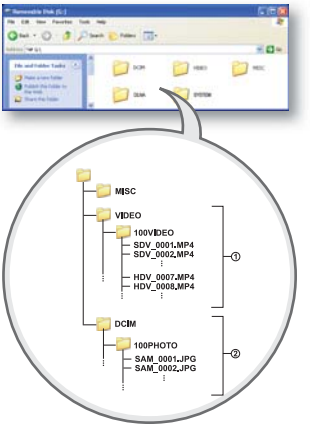
- The folder and file structure for storage media is as follows:
- The file naming follows DCF (Design rule for Camera File System).

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 file number is reached to 9,999.
- 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.
- The folder names are given in order of 100PHOTO, 101PHOTO.



File format

Video files

- Video files are compressed in H.264 format. The file extension is ".MP4."
- Refer to page 62 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 62 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.

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.	• Replace with a charged battery or connect the AC power adaptor.
Check authenticity of the battery.	-	The battery can not pass authenticity check.	• Check whether the battery is authentic and change to new one.

Storage media

Message	Icon	Informs that ...	Action
Internal Memory Full		There is not enough space to record on the internal memory.	• 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.	• Insert a memory card.
Card Full		There is not enough space to record on memory card.	• 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.	• Release write protection tab.
Card Error		The memory card has some problem and can not be recognised.	• Change memory card with another one.

Message	Icon	Informs that ...	Action
Not Formatted		The memory card is not formatted in this camcorder.	• Format the memory card using this camcorder.
Not Supported Format		The memory card may have been formatted by another device and may still have existing images on it.	• Files cannot be played as the memory card format is not supported by the camcorder. Use the memory card after formatting or the new one for recording with a camcorder.
Not Supported Card		The memory card is not supported in this camcorder.	• 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.	• Record video at a lower resolution and quality. • Change memory card with a one.

Recording

Message	Icon	Informs that ...	Action
Write Error	-	Some problem occurred while writing data to storage media.	• 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.	• Release Smart Auto function.
Recovering Data… Don't power off and keep card inside.	-	The file was not created normally.	• Wait until data recovery is finished. • Never turn off the power or eject memory card during recording.

Recording

Message	Icon	Informs that ...	Action
The number of video files is full. Cannot record video.	-	The number of video files that can be stored is 9,999.	• 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. • Set "**File No.**" to "**Reset**." • Format the storage media.
The number of photo files is full. Cannot take a photo.	-	The number of photo files that can be stored is 9,999.	• 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. • Set "**File No.**" to "**Reset**." • Format the storage media.
File number is full. Cannot record video.	-	Folder and file number have reached maximum number and you can not record.	• 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.	• Set "**File No.**" to "**Reset**" and format the storage media.
Activate remote control.		Remote function was set to off.	• Set "**Remote**" function to "**On**."

Playback

Message	Icon	Informs that ...	Action
Read Error	-	Some problems occurred when reading data from the storage media.	• 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.	• Format the storage media using menus after back up important files to a PC or another storage device.

Editing videos

Message	Icon	Informs that ...	Action
Cannot select different resolution	-	The files you want to combine have different resolutions.	• It is not possible to combine the files that have different resolutions.
Not enough free space in Internal Memory.	-	You cannot edit due to insufficient internal memory.	• Perform the editing function after deleting unnecessary files.
Not enough free space in Card.	-	You cannot edit due to insufficient space on memory card.	• Perform the editing function after deleting unnecessary files.
Select 2 files for combine.	-	Only two files can be combined.	• Combine two files first then combine the other. But, files cannot be combined when the total capacity of files exceed 1.8GB.
Total file size is over than 1.8GB.	-	The files whose total capacity is likely to exceed 1.8GB cannot be combined.	• Perform the divide or partial delete function first to delete unnecessary parts then perform the combine function.
Cannot edit less than 6sec file.	-	File whose total playback time is under 6 seconds cannot be partially deleted or divided.	• Edit the file whose recording time is over 6 seconds.

USB

Message	Icon	Informs that...	Action
Fail Printer Connecting Change 'USB Connect'	-	A problem occurred when connecting the camcorder via USB to a printer.	• 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.	• 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.	• Check the ink cartridge. • Put a new ink cartridge in the printer.
Paper Error	-	There is a problem with the paper.	• Check the paper in the printer. If there is no paper, insert the paper.
File Error	-	There is a problem with the file.	• Your camcorder does not support this file format. • Try another file recorded on your camcorder.
Printer Error	-	There is a problem with the printer.	• Turn the printer's power off and on. • Contact the printer manufacturer's service centre.
Print Error	-	A problem occurred during printing.	• Do not remove power source or eject memory card during printing.

Wireless Network

Message	Icon	Informs that...	Action
Connection failed. Time expire.	-	WPS PBC button is not pressed within 2 minutes, or WPS PIN is not entered to AP.	• Try again and make it within 2 minutes.
Connection failed.	-	Camcorder's WLAN configuration does not match to that of AP.	• Configure the IP settings (auto or manual) of your camcorder to match to the AP's.
Initialising failed.	-	Failed to initialise DLNA devices.	• Reset DLNA devices and try again.
No devices found.	-	No renderer that can be connected to the camcorder is found from the connected network.	• Use Refresh button to search the renderer. • Check your network connection.
No Wi-Fi AP found.	-	No available AP is found around you or the camcorder's WLAN does not function properly.	• Check whether an AP is available near you. • In case there exist available AP and the problem persists, contact Samsung Service Centre.

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.	• 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.	• 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 101 • The battery is almost exhausted. Charge the battery or replace it with a charged one.
Power cannot be turned off.	• 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.	• 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.	• 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 91
Unknown image appears on the LCD screen.	• The camcorder is in Demo mode. If you do not want to see Demo image, change the setting **"Demo"** to **"Off."** ↪page 105
Unknown indicator appears on the screen.	• A warning indicator or message appears on the screen. ↪pages 133~138
The afterimage remains on the LCD screen.	• 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.	• Ambient light too bright. Adjust the brightness and angle of LCD. • Use LCD enhancer function.

Recording

Symptom	Explanation/Solution
Pressing the **Recording start/stop** button does not start recording.	• Press the **MODE** button to set the Video record mode. ➥page 27 • 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.	• 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.	• 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.	• This is not a malfunction.
When the screen is exposed to direct sunlight during recording, the screen becomes red or black for an instant.	• This is not a malfunction.
During recording, the date/time does not display.	• **"Date/Time Display"** is set to **"Off."** Set the **"Date/Time Display"** to On. ➥page 90
You cannot record a photo image.	• Set your camcorder to the Photo record mode. ➥page 27 • 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 97 Or remove unnecessary images. ➥page 110
The shutter sound is not heard when you record a photo image.	• Set **"Shutter Sound"** to **"On."** • During dual recording, the Shutter Sound is not heard. • When the Mini HDMI cable or Audio/Video cable is connected to the camcorder, the Shutter Sound is not available.

Recording

Symptom	Explanation/Solution
The beep sound is not heard.	• Set "**Beep Sound**" to "**On.**" • Beep sound is temporally off while recording videos.
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.	• 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.	• 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.	• Insert a memory card into your camcorder properly. ➥page 32 • If you use a memory card formatted on a computer, format it again directly on your camcorder. ➥page 97
Image cannot be deleted.	• Release the lock on the write-protect tab of the memory card (SDHC/SD memory card), if any. ➥page 33 • You cannot delete the protected images. Release the protection of the image on the storage media. ➥page 109
You cannot format the memory card.	• Release the lock on the write-protect tab of the memory card (SDHC/SD memory card), if any. ➥page 33 • The memory card is not supported on your camcorder or card has some problems.
The data file name is not indicated correctly.	• 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.

Adjusting the image during recording

Symptom	Explanation/Solution
Focus does not adjust automatically.	• Set **"Focus"** to **"Auto."** ➥page 70 • The recording conditions are not suitable for auto focus. Adjust the focus manually. ➥page 70 • 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.	• This may occur when you make a recording under a fluorescent sodium or or mercury lamp. Cancel **"iSCENE"** to avoid or minimise this phenomenon. ➥page 61
Image's colour balance is not natural.	• White balance adjustment is required. Adjust to the proper **"White Balance."** ➥page 64
The subject passing by the frame appears very quickly.	• 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.	• Image files recorded using another device may not be played on your camcorder. • Check out the memory card compatibility. ➥page 33
Photo images stored on a storage media are not displayed in the actual size.	• Photo images recorded on other device may not appear in the actual size. This is not an error.
Playback is interrupted unexpectedly.	• 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.	• Make sure that the connection cable is connected to the proper jack.
The image appears distorted on a TV.	• 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.	• 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.	• You cannot dub images using the HDMI cable.
You cannot dub correctly using the Audio/Video cable.	• The Audio/Video cable is not connected properly. Make sure that the Audio/Video cable is connected to the proper jack, i.e. to the input jack of the device used for dubbing images from your camcorder. ➥page 123
The PictBridge printer cannot be made using a PictBridge printer.	• Your printer may not print images edited on a computer or recorded using other device. This is not an error.

Connecting to a computer

Symptom	Explanation/Solution
The computer does not recognise your camcorder.	• 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.	• A video codec is needed to play the file recorded on your camcorder. Install the software provided with your camcorder. ➥page 130 • 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 126
Intelli-studio does not function properly.	• Exit the Intelli-studio application, and restart the Windows computer.
Intelli-studio is not performed.	• Set PC Software to On in the Settings menu or install Intelli-studio in the computer. ➥pages 93, 130
The image or sound on your camcorder is not played on your computer properly.	• 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.	• 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.	• Has the camcorder been left unused for a long period of time? The backup built-in rechargeable battery may be discharged. ➥page 29

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,” “Fader”	**“Time Lapse REC”**
	“Photo Resolution”	**“Cont. Shot : High Speed”**

- 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:
- Only quick menu is available during video recording.
- 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.
- The following functions are automatically set to Off or Auto mode in the Slow Motion mode:
  - **iSCENE**, **Resolution**, **White Balance**, **Shutter**, **Super C.Nite**, **Face Detection**, **Fader**, **Digital Zoom**, **Time Lapse REC**, etc.
- In Slow Motion mode, menu cannot be accessed, however, some of Quick menu such as Aperture, EV, Focus, Digital Effect etc. are available.

Using Kies (HMX-S15/S16 only)

Environment configuration for use of Kies

1. When setting Kies' Allshare for the first time, you should set a name which other devices can recognise Kies. Enter the name you want to use when identifying the share lists.
2. You should set the access authority to let other devices access to Kies. Set the device to "Allow" or "Allow all" to use it with Kies.
3. When sending files from the other device to Kies, you need a folder to save them. Set the folder to download files.

- When enabling the "**Backup to PC**" function in HMX-S15/S16, operate the 'Setting' menu in Kies' Allshare, and then set S15/16 to 'Allow' from the 'Device Settings.'

- If you can't find the name S15 or S16 in 'Device Settings' of the Kies' Allshare 'Settings' menu, set the Windows firewall to 'Off' and try again.

Music Shake

What is a Music Shake?

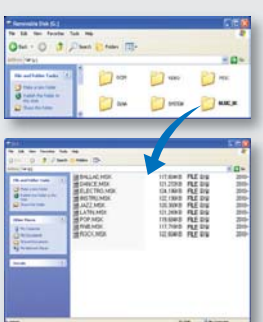
Music Shake uses the basic sound sources (internal/external) to automatically compose and generate a variety of background music titles. With simple steps, you can easily sound background music titles for videos or slideshows.
This camcorder has sound sources for genres such as ballad, jazz, and dance & disco.
After downloading external sound sources, you can enjoy various background music titles.

External sound sources have 9 separate genres:

	Genre	External file name
1	Ballad	BALLAD.MSK
2	Jazz	JAZZ.MSK
3	Dance & Disco	DANCE.MSK
4	Pop	POP.MSK
5	Rock	ROCK.MSK
6	R&B	RNB.MSK
7	Latin	LATIN.MSK
8	Electric	ELECTRO.MSK
9	Instrumental	INSTRU.MSK

Using external sound sources

1. In the website (www.samsung.com), use “support” and “download” to select the desired sound source and download it.
2. On the SD card, create the folder MUSIC_SK.
3. Copy the downloaded file into the folder.
4. Insert the SD card that has external sound sources in your camcorder.
5. In the slideshow or background music, you can select an external sound source to listen to. ➥pages 83/87



- If you change the names for folder and sound source, your camcorder cannot identify the sound source.
- Using the provided sound sources, you cannot repurpose, delegate, rent, release for music albums, and sell them.

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.

Cautions when storing

- For safekeeping of the camcorder, turn off the camcorder.
  - Remove the battery and AC power adaptor. ➥pages 20, 21
  - Remove the memory card. ➥page 32

LCD screen

- Do not push it too hard or knock it on anything.
- When using the camcorder in cold conditions, afterimage may appear on the LCD screen. This is not a malfunction.
- If you leave power on for a long time, the surface around the LCD screen becomes hot.
- A LCD screen is manufactured by the advanced precise technology and has more than 99.99% of valid pixels. Despite the fact, black or bright spots (red, blue, white) may rarely appear in the centre for one spot and in the surround for up to two spots. These spots that can be normally occurred during manufacturing process do not affect the recorded images.

Lens

- Use an optional air blower to blow out dirt and other small objects. Do not wipe the lens with cloth or your fingers.
- When the lens gets frosty, turn the power off and leave it off for approximately an hour. When the temperature of the lens is similar to the ambient temperature, the frost will disappear.

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.

- Use the camcorder after dew condensation is completely disappeared.
- Be sure to use the recommended accessories supplied with the camcorder. For service, contact your nearest Samsung authorised service centre.

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 Audio/Video 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 jacks, and an Audio/Video 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-S10BP/HMX-S15BP/HMX-S16BP

System	Video signal	PAL
	Picture compression format	H.264 (MPEG-4.AVC)
	Audio compression format	AAC (Advanced Audio Coding)
	Image device	1/2.3”, 10M Pixel CMOS
	Lens	F1.8 ~ F3.3, 15x Optical Zoom (18x Intelli Zoom), 10x Digital Zoom (video recording only)
	Focal length	4.8mm ~ 72mm
	Filter diameter	Ø46
	Wireless networking protocol	WiFi (802.11b/g/n)
LCD screen	Size/dot number	3.5” Wide Touch LCD / 115M Pixel
	LCD screen method	TFT LCD
	Touch panel type	Capacitive
Connectors	Composite output	1Vp-p (75 Ω terminated)
	HDMI output	C type connector
	Audio output	-7.5 dBs (600 Ω terminated)
	USB output	USB 2.0
	External microphone	Ø 3.5 stereo mini-jack
General	Power source	DC 5 V, Lithium Ion battery 3.7 V
	Power source type	Lithium Ion battery, Power supply (100 V ~ 240 V) 50/60 Hz
	Power consumption (Recording)	3.5W (LCD on)
	Operating temperature	0 ℃ ~ 40 ℃ (32 ℉~104 ℉)
	Storage temperature	-20 ℃ ~ 60 ℃ (-4 ℉ ~ 140 ℉)
	Storage media	Internal memory (SSD) (HMX-S15/S16 only), Memory card (SD/SDHC) (optional)
	External dimensions (WxHxD)	Approx. 66.3 mm (2.61 inches) x 69.5 mm (2.74 inches) x 130.0 (5.12 inches)
	Weight	Approx. 415g (0.91lb, 14.64oz) (Except for Lithium Ion battery)
	Internal MIC	2-channel stereo, Zoom microphone

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

SAMSUNG ELECTRONICS

Declaration of Conformity

Product details

For the following

Product : DIGITAL CAMCORDER (W-LAN)

Model(s) : HMX-S16BP and HMX-S15BP

Manufactured at:

Manufacturer: SAMSUNG ELECTRONICS CO., LTD.
416, Maetan-3dong, Yeongtong-gu, Suwon-City, Gyeonggi-do, 443-742, Korea

Factory: TianJin Samsung Opto-Electronics Co., Ltd.
No.9 ZhangHeng Street, Micro-Electronic Industrial Park, JinGang Road,
Tianjin, China. 300385

(Factories name and address)

Declaration & Applicable standards

We hereby declare, that the product above is in compliance with the essential requirements of the R&TTE Directive (1999/5/EC), the EMC Directive (2004/108/EC) and the LVD Directive (2006/95/EC) by application of:

EN 60065:2002+ A1:2006

EN 55020:2007
EN 55022:2006
EN 55024 :1998+A1 :2001+A2 :2003
EN 55013 :2001+A1 :2003+A2 :2006

EN 300 328 v1.7.1
EN 301 489-1 v1.8.1 :2008
EN 301 489-17 v2.1.1 :2009

and the Eco-Design Directive (2009/125/EC) implemented by Regulation (EC) No 278/2009 for external power supplies

Representative in the EU

Samsung Electronics Euro QA Lab.
Blackbushe Business Park
Saxony Way, Yateley, Hampshire
GU46 6GG, UK

14 December 2009
(Place and date of issue)

Kim, Hyungdal / Senior Engineer
(Name and signature of authorized person)

Contact SAMSUNG WORLD WIDE

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
Latin America	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
	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	1-800-682-3180	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	01-8000112112	www.samsung.com
Europe	AUSTRIA	0810 - SAMSUNG (7267864, € 0.07/min)	www.samsung.com
	BELGIUM	02-201-24-18	www.samsung.com/be (Dutch) www.samsung.com/be_fr (French)
	CZECH	800 - SAMSUNG(800-726786)	www.samsung.com
	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
	HUNGARY	06-80-SAMSUNG(726-7864)	www.samsung.com
	ITALIA	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 1SAMSUNG(172678), 022-607-93-33	www.samsung.com
	PORTUGAL	80820-SAMSUNG(726-7864)	www.samsung.com
	SLOVAKIA	0800-SAMSUNG(726-7864)	www.samsung.com
	SPAIN	902-1-SAMSUNG (902 172 678)	www.samsung.com
	SWEDEN	0771 726 7864 (SAMSUNG)	www.samsung.com
	U.K	0845 SAMSUNG (7267864)	www.samsung.com
	IRELAND	0818 717100	www.samsung.com
	Switzerland	0848 - SAMSUNG(7267864, CHF 0.08/min)	www.samsung.com/ch www.samsung.com/ch_fr/(French)
	LITHUANIA	8-800-77777	www.samsung.com
	LATVIA	8000-7267	www.samsung.com
	ESTONIA	800-7267	www.samsung.com
CIS	RUSSIA	8-800-555-55-55	www.samsung.com
	Georgia	8-800-555-555	
	Armenia	0-800-05-555	
	Azerbaijan	088-55-55-555	
	KAZAKHSTAN	8-10-800-500-55-500	
	UZBEKISTAN	8-10-800-500-55-500	www.samsung.com
	KYRGYZSTAN	00-800-500-55-500	www.samsung.com
	TADJIKISTAN	8-10-800-500-55-500	www.samsung.com
	UKRAINE	0-800-502-000	www.samsung.ua www.samsung.com/ua_ru
	Belarus	810-800-500-55-500	
	Mouldova	00-800-500-55-500	
Asia Pacific	AUSTRALIA	1300 362 603	www.samsung.com
	New zealand	0800 SAMSUNG (0800 726 786)	www.samsung.com
	CHINA	400-810-5858, 010-6475 1880	www.samsung.com
	HONG KONG	(852) 3698-4698	www.samsung.com/hk www.samsung.com/hk_en/
	INDIA	3030 8282, 1800 110011, 1800 3000 8282, 1800 266 8282	www.samsung.com
	INDONESIA	0800-112-8888, 021-5699-7777	www.samsung.com
	JAPAN	0120-327-527	www.samsung.com
	MALAYSIA	1800-88-9999	www.samsung.com
	PHILIPPINES	1-800-10-SAMSUNG(726-7864), 1-800-3-SAMSUNG(726-7864), 1-800-8-SAMSUNG(726-7864), 02-5805777	www.samsung.com
	SINGAPORE	1800-SAMSUNG(726-7864)	www.samsung.com
	THAILAND	1800-29-3232, 02-689-3232	www.samsung.com
	TAIWAN	0800-329-999	www.samsung.com
	VIETNAM	1 800 588 889	www.samsung.com
Middle East & Africa	Turkey	444 77 11	www.samsung.com
	SOUTH AFRICA	0860-SAMSUNG(726-7864)	www.samsung.com
	U.A.E	800-SAMSUNG (726-7864)	www.samsung.com
	Bahrain	8000-4726	
	Jordan	800-22273	
	Egypt	0800-726786	
	KSA	9200-21230	www.samsung.com
	Qatar	800-2255	
	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.

CE 0678 ⓘ

Complies with IDA Standards DA100790