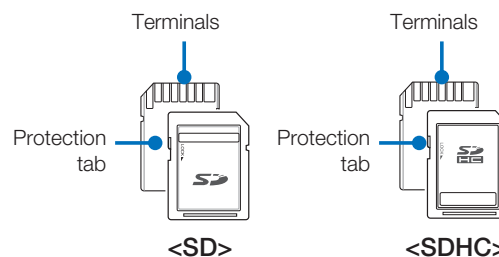


SELECTING A SUITABLE MEMORY CARD (NOT SUPPLIED)

Compatible memory cards

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

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 recognize the modified file.

getting ready to start recording

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 recognize 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.
- Be careful to keep the memory card out of the reach of children, who might swallow it.

Notes on use

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

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

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

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

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

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

You may even lose your video data during the recording.

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

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

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

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

RECORDABLE TIME AND CAPACITY

Recordable time available for video

Resolution	Memory card / Internal memory*						Internal memory*
	1GB	2GB	4GB	8GB	16GB	32GB	64GB
1080/60i (XF)	5 min	10 min	21 min	42 min	84 min	167 min	337 min
1080/60i(SF)	7 min	14 min	29 min	60 min	121 min	236 min	474 min
1080/60i(F)	11 min	22 min	45 min	92 min	185 min	364 min	731 min
1080/30p	7 min	14 min	29 min	60 min	121 min	236 min	474 min
720/60p	11 min	22 min	45 min	92 min	185 min	364 min	731 min
480/60p	23 min	47 min	99 min	200 min	404 min	790 min	1587 min

(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)	459	917	1914	3866	7778	9999	9999
[5M] 2960x1664 (16:9)	612	1223	2552	5154	9999	9999	9999
[3M] 2224x1664 (4:3)	918	1835	3828	7732	9999	9999	9999
[2M] 1920x1080 (16:9)	1147	2294	4785	9665	9999	9999	9999
[VGA] 640x480	3060	6118	9999	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.

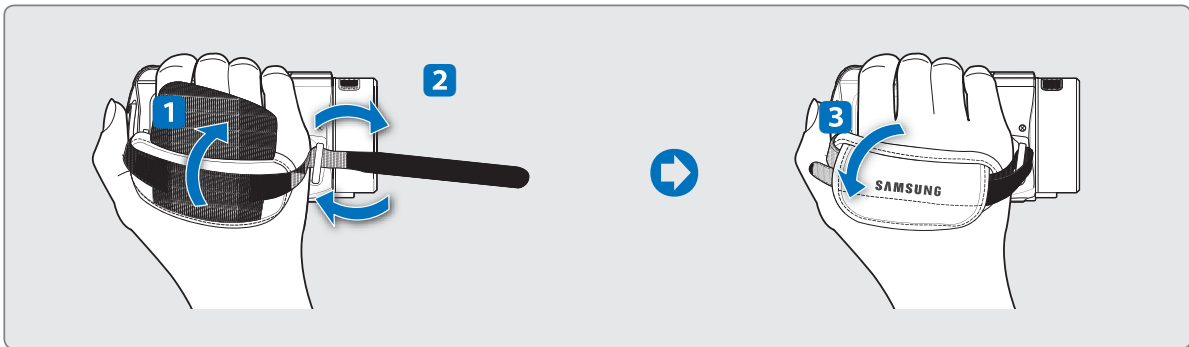


- The figures in the table may differ depending on the actual recording conditions and subject.
- The higher the quality and resolution, the more memory is used.
- Lower resolution and quality increases the recording time, but the image quality may suffer.
- The bit rate automatically adjusts to the recording image. Accordingly, the recording time may vary.
- Memory cards bigger than 1.8GB may not operate normally.
- When a video file exceeds 1.8GB, the next video file is created automatically.
- The maximum number of recordable photo and video files is 9999, respectively.
- The recording length of a Time Lapse REC may vary depending on settings.
- Items marked with * are available only with HMX-S15/S16 models.

getting ready to start recording

ATTACHING THE GRIP BELT

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

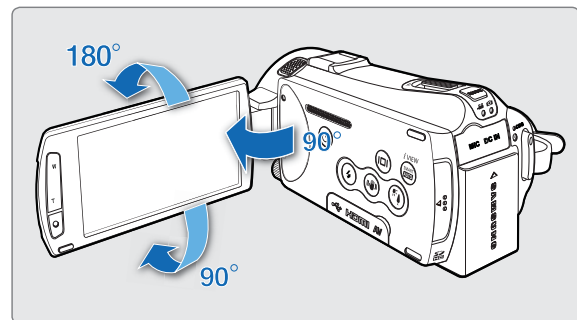


Please note if the grip belt is adjusted too tight and you use excessive force to insert your hand, the grip belt hook of the camcorder may be damaged.

ADJUSTING THE LCD SCREEN

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

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



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



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

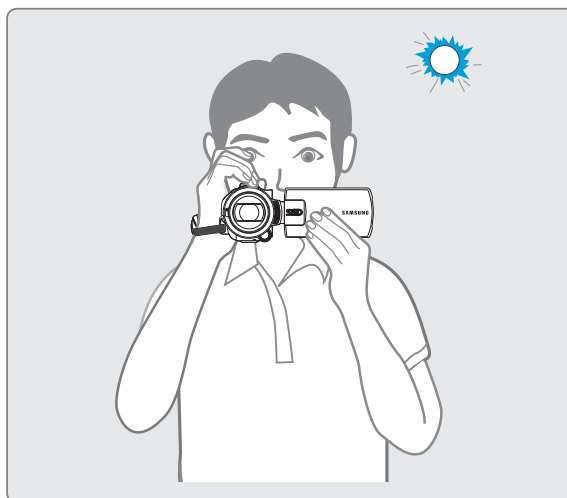
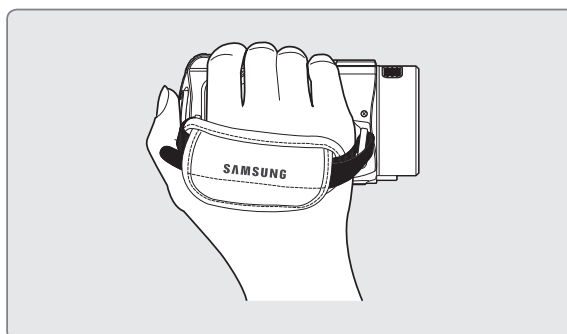
BASIC CAMCORDER POSITIONING

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

Adjusting the shooting angle

Aim the camcorder as shown in the illustration.

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



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

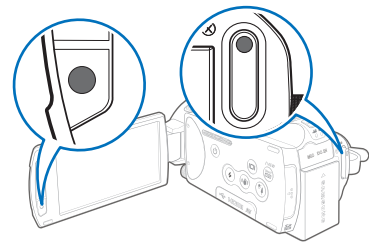
basic recording

RECORDING VIDEOS

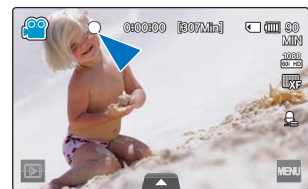
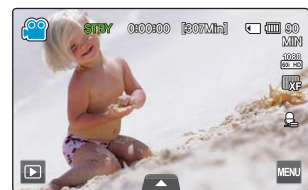
This camcorder supports both High Definition(HD) and Standard Definition(SD) image resolutions. Set your desired resolution before recording. ↪page ??

PRECHECK!

- Insert a memory card. ↪page ??
- Set the appropriate storage media. (HMX-S15/S16 only) ↪page ??
- Select the Video record (📹) mode by pressing the **MODE** button. ↪page ??



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 ??
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.



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




- Videos are compressed in the H.264 (MPEG-4.AVC) format.
- Eject the battery when you have finished recording to prevent unnecessary battery power consumption.
- For the on-screen information display, see page ??.
- For approximate recording time, see page ??.
- Sound is recorded from the internal stereo microphone at the top of the lens. Make sure that the microphone is not blocked.
- Before recording an important video, make sure to test the recording function by checking if there is any problem with the audio and video recording.
- The brightness of the LCD screen can be adjusted in the menu options. Adjusting the LCD screen does not affect the image being recorded. →page ??
- For various functions available during recording, see “Video/photo record menu items.”
→pages ??~??
- Do not turn off the camcorder or remove the memory card while accessing the storage media. Doing so may damage the storage media or the data in the storage media.
- If the power cable/battery is disconnected or recording is disabled during recording, the system is switched to the data recovery mode. While data is being recovered, no other function is enabled.
- The menu setting tabs shown on the LCD screen do not affect the image being recorded.

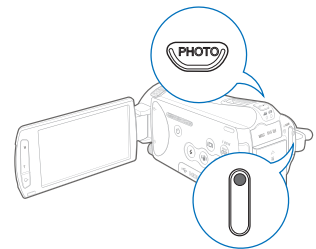
basic recording

CAPTURING PHOTOS DURING VIDEO RECORDING (DUAL 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.

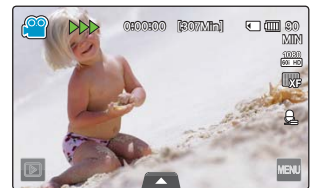
PRECHECK!

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




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.



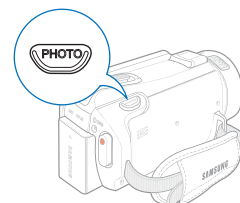
- **You cannot capture photos in the following conditions:**
 - When recording video in slow motion
 - When time lapse recording is performed.
- Flash is not available while capturing photos in video record mode.
- Photo is captured in 1920x1080 resolution regardless to the resolution of the video recording.

RECORDING PHOTOS

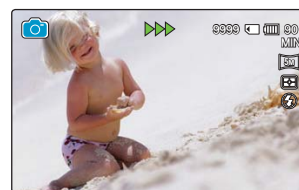
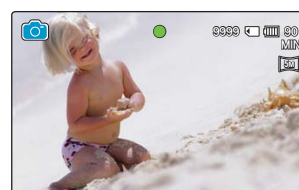
You can take photos and store them in the storage media. Set the desired resolution before recording. ↪page ??

PRECHECK!

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



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 ??
2. Adjust the subject at the center 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 ??, ??).
 - 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.
 - To continue recording, wait until the current photo is completely saved on the storage media.



- Recordable number of photos varies depending on the photo resolution. ↪page ??
- Audio is not recorded when taking photos.
- If focusing is difficult, use the manual focus function. ↪page ??
- 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 ??
- For the on-screen display information, see page ??.
- For the advanced recording, see pages ??
- Photo files conform to the DCF (Design rule for Camera File system) standard, established by JEITA (Japan Electronics and Information Technology Industries Association.)

basic recording

RECORDING WITH EASE FOR BEGINNERS (SMART AUTO)

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

PRECHECK!












- Insert a memory card. ↪page ??
- Set the appropriate storage media. (HMX-S15/S16 only) ↪page ??
- Select the record (📹/📷) mode by pressing the **MODE** button. ↪page ??

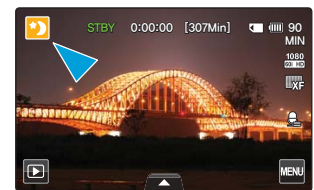
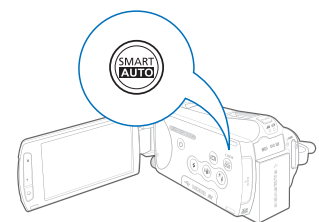
1. Press the **SMART AUTO** button.

- Smart Auto (📷/📹) and Anti-shake (📷) indicators are displayed on the LCD screen.

2. Align your subject in the frame.

- The camcorder automatically detects the scene when aligning focus with the camcorder.
- The appropriate scene icon is displayed on the LCD screen.

	Appears when recording at night. (Night)		Appears when recording very bright scene. (White) 📷
	Appears when recording persons outdoors at night. (Night Portrait) 📷		Appears when recording outdoor scene. (Landscape)
	Appears when recording images of landscapes with backlighting. (Backlight)		Appears when taking photos with close-up. (Macro) 📷
	Appears when recording persons under backlight condition. (Backlight Portrait) 📷		Appears when taking photos of clear skies. (Blue sky) 📷
	Appears when recording persons. (Portrait)		Appears when taking photos of forested areas. (Natural green) 📷
			Appears when taking photos of sunsets. (Sunset) 📷



<Appears when recording at night>

3. Press the **Recording start/stop** button or **PHOTO** button. ↪pages ??, ??

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



• **Unavailable buttons during Smart Auto operation:**

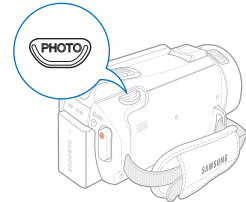
- Menu (MENU) tab, Quick menu (📷) tab, etc. Most settings are automatically adjusted in Smart Auto mode. To set or adjust functions on your own, release the Smart Auto mode first.
- Smart Auto function is not available while recording. Set this function before recording.
- When the camcorder is failed to recognize 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 recognizes a night scene only when taking photos with the flash off.
- 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

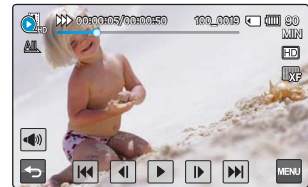
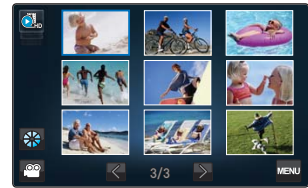
You can capture photos during video playback.

PRECHECK!

Touch the Play (▶) tab on the LCD screen to select the Video play (▶/▶) mode. ↪page ??



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 ??



- **You cannot capture photos in the following conditions**
 - The time lapse videos cannot be captured as a still image.
- The resolution of the captured photos depends on the resolution of the video as follows.

Video resolution	Resolution of captured photo
1080/60i(XF), 1080/60i(SF), 1080/60i(F), 1080/30p	1920x1080
720/60p	1280x720
480/60p	720x480
Slow Motion: [SD]300Frame/Sec, [SD]600Frame/Sec	368x208, 192x112