* When the [ISO LIMIT SET] of [REC] mode menu (P121) is set to anything except [OFF], it is set automatically within the value set in [ISO LIMIT SET].

It is set as following when the [ISO LIMIT SET] is set to [OFF].

- When [AUTO] is selected, ISO sensitivity is adjusted automatically depending on brightness within a maximum setting of [ISO400].
- When setting to [**B**_{ISO}], ISO sensitivity will adjust automatically depending on brightness within the maximum setting of [ISO800]. ([ISO400] when the flash is used)
- The ISO sensitivity will be set to [AUTO] when recording motion pictures. Also, the [ISO LIMIT SET] will not operate.

■ About [¶ISO] (Intelligent ISO sensitivity control)

The camera automatically sets the optimum ISO sensitivity and shutter speed to suit the movement of the subject and brightness of the scene to minimise the jitter of the subject.

• The shutter speed is not fixed when the shutter button is pressed halfway. It is continuously changing to match the movement of the subject until the shutter button is pressed fully. Confirm the actual shutter speed on the information display for the picture being played back.

Note

- The higher the value set for the ISO sensitivity, the more the jitter is reduced but the greater the amount of picture noise.
- Refer to P62 for the flash range.
- Depending on the brightness and how fast the subject is moving, jitter may not be avoided even if [also] is selected.
- Movements may not be detected when a moving subject is small, when a moving subject is at the edge of the screen or when a subject has moved at the very moment when the shutter button was pressed fully.
- The setting is fixed to [100] in the following cases.
- In [SPORTS], [BABY1]/[BABY2] and [PET] in Scene Mode
- Programme Shift cannot be activated when the ISO sensitivity is set to [Iso].
- You cannot select [30] in Shutter-Priority AE Mode and Manual Exposure Mode. Also, you cannot select [AUTO] in Manual Exposure Mode.
- To avoid picture noise, we recommend reducing the ISO sensitivity, setting [NOISE REDUCTION] in [FILM MODE] towards [+] or setting the items except [NOISE REDUCTION] towards [-] to take pictures. (P83)
- The camera will not be able to operate with ▲/▼/◄/▶ if the [DIRECT AF AREA] (P128) is set to [ON]. Set using the Quick Menu (P30).

[REC] mode: [A P A S M = P C1 C2 SCN

Change tone of the colour for the picture to be taken (Film Mode)

[You can only select [STANDARD] and [STANDARD] (B&W) in [A], [M] mode.] Just as each type of film for film cameras has its own colour tone and contrast characteristics, Film Mode allows you to select up to 9 different "digital films", colour tones, in the same way as you would select different films for film cameras. Select different settings in Film Mode to match the photo look you wish to achieve.



Select [FILM MODE] from the [REC] mode menu, and press ▶. (P28)



Press **◄/▶** to select an item.

- · You can also use the rear dial to select.
- When you press [DISPLAY] on the screen shown right, explanations about each Film Mode are displayed. (When you press [DISPLAY] again, the screen returns to the previous screen.)





Press [MENU/SET] to set.

You can also press the shutter button halfway to set.

Item	Effect	
[STANDARD] (COLOUR)	This is the standard setting.	
[DYNAMIC] (COLOUR)	The saturation and contrast of the stored colours are increased.	
[NATURE] (COLOUR)	Brighter red, green and blue. Enhanced beauty of nature.	
[SMOOTH] (COLOUR)	The contrast is lowered for smoother and clearer colour.	
[NOSTALGIC] (COLOUR)	Lower saturation and contrast. Reflecting passage of time.	
[VIBRANT] (COLOUR)	Higher saturation and contrast than dynamic.	
[STANDARD] (B&W)	This is the standard setting.	
[DYNAMIC] (B&W)	The contrast is increased.	
[SMOOTH] (B&W)	Smooths the picture without losing the skin texture.	
[MY FILM 1]/[MY FILM 2]	The saved setting is used.	
[MULTI FILM]	It will take pictures changing the type of film in accordance with the setting every time the shutter button is pressed. (Up to 3 pictures)	



- You can also set from the Quick Menu. (P30)
- Use the Quick Menu (P30) to set when in Intelligent Auto Mode.
- In Film Mode, the camera may do something equivalent to pull processing or push processing to create a picture with particular characteristics. The shutter speed may become very slow at this time

Adjusting each Film Mode to the desired setting

- Press
 √ to select a film.

Press ▲/▼ to select an item and ◀/▶ to adjust.

- You can also use the rear dial to adjust.
- Registered settings are memorised even if the camera is turned off.





Press ▲/▼ to select the [MEMORY] and then press [MENU/SET].

- You can register 2 settings. ([MY FILM 1] and [MY FILM 2]) (After registering, the Film Mode name that was registered previously is displayed.)
- [STANDARD] is registered in [MY FILM 1] and [MY FILM 2] at the time of purchase.

Item		Effect	
[CONTRAST]	[+]	Increases the difference between the brightness and the darkness in the picture.	
[CONTRACT]	[-]	Decreases the difference between the brightness and the darkness in the picture.	
[SHARPNESS]	[+]	The picture is sharply defined.	
[SHAKFNESS]	[-]	The picture is softly focused.	
[SATURATION]	[+]	The colours in the picture become vivid.	
SATURATION	[-]	The colours in the picture become natural.	
[NOISE REDUCTION]	[+]	The noise reduction effect is enhanced. Picture resolution may deteriorate slightly.	
	[-]	The noise reduction effect is reduced. You can obtain pictures with higher resolution.	



- Noise may become visible when you take pictures in dark places. To avoid picture noise, we recommend setting [NOISE REDUCTION] towards [+] or setting the items except [NOISE REDUCTION] towards [-] to take pictures.
- If you adjust a Film Mode, [+] is displayed beside the Film Mode icon on the LCD monitor/ optional external viewfinder.
- You cannot adjust [SATURATION] in the black and white settings in Film Mode.
- Film Mode cannot be adjusted in the Intelligent Auto Mode and Scene Mode.

Multi Film Bracket

It will take pictures changing the type of film in accordance with the setting every time the shutter button is pressed. (Up to 3 pictures)

You can also set from the Quick Menu. (P30)



Press **◄/▶** to select [MULTI FILM].



Select either [MULTI FILM 1], [MULTI FILM 2], or [MULTI FILM 3] with ▲/▼, and then select the film to be set for each with **◄/▶**.

- You can also use the rear dial to set.
- [OFF] can be selected only for [MULTI FILM 3].



Press [MENU/SET] to set.

You can also press the shutter button halfway to set.



Focus on the subject and take a picture.

- It will continuously take pictures by keeping the shutter button pressed when it is set to burst mode. (Up to 3 pictures)
- When using a self-timer, up to 3 pictures with set film will be taken if the shutter button is pressed. (It will operate same as [🖔] even if it is set to [🕍].)
- Multi film indication ([]) displayed on the LCD monitor/optional external viewfinder will flash until all pictures of preset amount are taken.



- [STANDARD] is registered in [MULTI FILM 1], [MULTI FILM 2] and [OFF] is registered in [MULTI FILM 3] at the time of purchase.
- White Balance Bracket will be disabled when the Multi Film Bracket is set.
- Motion pictures are recorded with the settings for the IMULTI FILM 11 setting.

[REC] mode: AS

Taking pictures by specifying the aperture/ shutter speed

[A] Aperture-priority AE

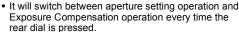
Set the aperture value to a higher number when you want a sharp focus background. Set the aperture value to a lower number when you want a soft focus background.

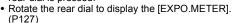


Set the mode dial to [A].



Rotate the rear dial to set the aperture value.









Take a picture.

[S] Shutter-priority AE

When you want to take a sharp picture of a fast moving subject, set with a faster shutter speed. When you want to create a trail effect, set to a slower shutter speed.



Set the mode dial to [S].



Rotate the rear dial to set the shutter speed.

- It will switch between shutter speed setting operation and Exposure Compensation operation every time the rear dial is pressed.
- Rotate the rear dial to display the [EXPO.METER]. (P127)





Take a picture.



- It will be a normal motion picture recording when recording a motion picture.
- The brightness of the LCD monitor/optional external viewfinder and the recorded pictures may differ. Check the pictures on the playback screen.
- Set the aperture value to a higher number when the subject is too bright in Aperture-Priority AE Mode. Set the aperture value to a lower number when the subject is too dim.
- When you use a lens with an aperture ring, the setting for the rear dial becomes effective if you rotate the aperture ring to the [A] position and the aperture ring setting takes priority if you rotate the aperture ring to a position other than [A] in Aperture-Priority AE Mode.
- The aperture value and the shutter speed displayed on the screen turn red and blink when the exposure is not adequate.
- We recommend using a tripod when the shutter speed is slow.
- When the flash is activated, the shutter speed cannot be set to faster than 1/160th of a second in Shutter-Priority AE Mode. (P62)
- . If you press the shutter button fully when the shutter speed is slow, the shutter speed on the screen counts down in Shutter-Priority AE Mode.
- [≰S] and [≰S⊚] cannot be set for Shutter-Priority AE Mode.
- The [SENSITIVITY] is automatically set to [AUTO] when you switch the recording mode to Shutter-Priority AE Mode while the [SENSITIVITY] is set to [150] (Intelligent).

[REC] mode: M

Taking picture by setting the exposure manually

Determine the exposure by manually setting the aperture value and the shutter speed. The Manual Exposure Assistance appears on the lower portion of the screen to indicate the exposure.



Set the mode dial to [M].



Rotate the rear dial to set the aperture and shutter speed.

- · It will switch between aperture setting operation and shutter speed setting operation every time the rear dial is pressed.
- Rotate the rear dial to display the [EXPO.METER]. (P127)
- You can also switch to manual focus by pressing [AF/MF] and selecting [MF]. (P74)





Press the shutter button halfway.

 Set the aperture value and the shutter speed again when the exposure is not adequate.



Take the picture.





Manual Exposure Assistance

-3 0 +3	The exposure is adequate.
-3 0 +3	Set to faster shutter speed or larger aperture value.
-3 0 +3	Set to slower shutter speed or smaller aperture value.

 The manual exposure assistance is an approximation. We recommend checking the pictures on the playback screen.

■ About [B] (Bulb)

If you set the shutter speed to [B], the shutter stays open while the shutter button is pressed fully (up to about 4 minutes).

The shutter closes if you release the shutter button.

Use this when you want to keep the shutter open for a long time to take pictures of fireworks, a night scene etc.

- If you set the shutter speed to [B], [B] is displayed on the screen.
- When you take pictures with the shutter speed set to [B], use a sufficiently charged battery.
- We recommend using a tripod or the remote shutter (DMW-RSL1: optional) when you take pictures with the shutter speed set to [B]. Refer to P166 for information about the remote shutter
- When you take pictures with the shutter speed set to [B], noise may become visible. To avoid picture noise, we recommend setting [LONG SHTR NR] in the [REC] mode menu to [ON] before taking pictures. (P121)
- The manual exposure assistance does not appear.

Note

- It will be a normal motion picture recording when recording a motion picture.
- The brightness of the LCD monitor/optional external viewfinder may differ from the brightness of the actual pictures. Check the pictures using the playback screen.
- If the exposure is not adequate, the aperture value and the shutter speed turn red and blink when the shutter button is pressed halfway.
- [≰A], [≰A⊚], [≰S] and [≰S⊚] for flash cannot be set.
- The [SENSITIVITY] is automatically set to [ISO100] when you switch the recording mode to Manual exposure while the [SENSITIVITY] is set to [AUTO] or [5][80] (Intelligent).
- If you press the shutter button fully when the shutter speed is slow, the shutter speed on the screen counts down.
- When you use a lens with an aperture ring, the aperture ring setting takes priority.

[REC] mode: PASMC1C25016

Confirm the effects of aperture and shutter speed

(Preview Mode)

Confirm the effects of aperture

You can check the depth of field (effective focus range) before taking a picture by closing the leaf shutter to the aperture value you set.

Press [(2)] (A) (preview button).

• Preview screen is displayed. It will return to previous screen when [20] is pressed.





■ Depth of field properties

	Aperture value	Small	Large
*1 Focus length of the lens		Tele	Wide
	Distance to the subject	Near	Distant
	Depth of field (effective focus range)	Shallow (Narrow)*2	Deep (Wide)*3

- *1 Recording conditions
- *2 Example: When you want to take a picture with a blurred background etc.
- *3 Example: When you want to take a picture with everything in focus including the background

Confirm the effects of shutter speed

Movement can be confirmed by displaying the actual picture that will be taken with that shutter speed.

When the shutter speed is set for high speed, display in the shutter speed preview will be displayed like a time-release film. It is used in cases such as stopping the movement of running water.

Press [DISPLAY] while displaying the preview screen.

 Shutter speed preview screen is displayed. It will return to previous screen by pressing [DISPLAY] again.









- Operation method of () can be changed with [PREVIEW HOLD] of [CUSTOM MENU] menu (P128).
- It is possible to record while in Preview Mode.
- Range for shutter speed effect check is 8 seconds to 1/1000th of a second.

[REC] mode: SCN

Taking pictures that match the scene being recorded (SIN: Scene mode)

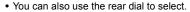
When you select a scene mode to match the subject and recording situation, the camera sets the optimal exposure and hue to obtain the desired picture.



Set the mode dial to [SCN].



Press $\blacktriangle/\blacktriangledown/\blacktriangleleft/\blacktriangleright$ to select the scene mode.





Press [MENU/SET] to set.

• The menu screen is switched to the recording screen in the selected scene mode



SCENE MODE

■ About the information R

 If you press [DISPLAY] when selecting a scene mode in step 2, explanations about each scene mode are displayed. (If you press IDISPLAYI again, the screen returns to the scene mode menu.)





- To change the scene mode, press [MENU/SET], and return to above step 2 by pressing >. while selecting the scene mode menu [SCN] by pressing $\triangle/\nabla/\blacktriangleleft/\triangleright$.
- The scene mode flash setting is reset to the initial setting when the scene mode is changed and then used.
- When you take a picture with a scene mode that is not adequate for the purpose, the hue of the picture may differ from the actual scene.
- The following items cannot be set in scene mode because the camera automatically adjusts them to the optimal setting.
 - [SENSITIVITY]/Items other than [STANDARD] and [STANDARD] (| RAW) in Film Mode/ [FLASH SYNCHRO]/[METERING MODE]/[I.EXPOSURE]/[ISO LIMIT SET]/[DIGITAL ZOOM]

PORTRAIT

When taking pictures of people outdoors during the day, this mode allows you to improve the appearance of the persons concerned and make their skin tones look healthier.

■ Technique for Portrait Mode

To make this mode more effective:

- Rotate the zoom ring as far as possible to Tele. (when a lens with a zoom function is used)
- 2 Move close to the subject to make this mode more effective.



The initial setting for [AF MODE] is [♣].

[SOFT SKIN]

When taking pictures of people outdoors during the daytime, this mode enables the texture of their skin to appear even softer than with [PORTRAIT]. (It is effective when taking pictures of people from the chest up.)

■ Technique for Soft Skin Mode

To make this mode more effective:

- Rotate the zoom ring as far as possible to Tele. (when a lens with a zoom function is used)
- 2 Move close to the subject to make this mode more effective.

Note

- If a part of the background etc. is a colour close to skin colour, this part is also smoothed.
- This mode may not be effective when there is insufficient brightness.
- The initial setting for [AF MODE] is [♣].

[SCENERY]

This allows you to take pictures of a wide landscape.



The flash setting is fixed to [⑤].

[ARCHITECTURE]

This setting takes sharp photographs of architecture. The guide lines are displayed. (P58)

Note

The flash setting is fixed to [⑤].

S [SPORTS]

Set here when you want to take pictures of sports scenes or other fast-moving events.

Note

• [INTELLIGENT ISO] is activated, and maximum ISO sensitivity level becomes [ISO800].

[PERIPHERAL DEFOCUS]

This mode makes it easy to pick out the subject on which to focus and blurs the background to make the subject stand out.

■ Setting the AF area

- 1 Move the AF area using **△**/**▼**/**⋖**/**▶**.
 - You can position the AF area anywhere on the screen (except at the edges).
 - Press [iii] to return the AF area to the centre of the screen.
- 2 Take the picture.
- Note
- It will be a normal motion picture recording during the motion picture recording.
- Quick AF is performed automatically.
- Set the [WHITE BALANCE] (P77) using the Quick Menu (P30).
- AF area setting screen is displayed by pressing ▲/▼/◄/▶.
- The obtained effects will differ depending on factors such as the distance to the subject and background, and the type of lens used. For best results, we recommend getting as close as possible to the subject when taking pictures. (P75)

₩ [FLOWER]

Flowers outdoors are recorded with natural colours in macro settings. The guide lines are displayed. (P58)

■ Technique for Flower Mode

- We recommend using a tripod and the self-timer.
- We recommend setting the flash to [3] when you take pictures at close range.



- The focus range is different depending on lens used. Refer to "About the focus distance reference mark" on P75 for the focus range.

 • When a subject is close to the camera, the effective focus range is significantly narrowed.
- Therefore, if the distance between the camera and the subject is changed after focusing on the subject, it may become difficult to focus on it again.
- Close-up regions are prioritised when taking pictures, and so time is required to focus if you take a picture of a distant subject.
- When you take pictures at close range, the resolution of the periphery of the picture may decrease slightly. This is not a malfunction.
- If the lens becomes dirty with fingerprints or dust, the lens may not be able to focus on the subject correctly.

[O] [FOOD]

You can take pictures of food with a natural hue without being affected by the ambient light in restaurants etc.

■ Technique for Food Mode

- We recommend using a tripod and the self-timer.
- We recommend setting the flash to [3] when you take pictures at close range.



• Refer to [FLOWER] for other information about this mode.

[OBJECTS]

You can take clear and vivid pictures of accessories or small objects in a collection.

■ Technique for Object Mode

- We recommend using a tripod and the self-timer.
- We recommend setting the flash to [3] when you take pictures at close range.



Refer to [FLOWER] for other information about this mode.

[NIGHT PORTRAIT]

This allows you to take pictures of a person and the background with near real-life brightness.

■ Technique for Night Portrait Mode

- We recommend using a tripod and the self-timer.
- Ask the subject not to move for a period of about one second after the picture is taken.



Note

- During Motion Picture Recording, low light settings are used, which will provide better pictures in dimly lit rooms or at nightfall.
- Open the flash. (You can set to [\$\$∅].)
- The shutter may remain closed after taking the picture. This is due to signal processing and is not a malfunction.
- Noise may become visible when you take pictures in dark places.
- The initial setting for [AF MODE] is [♣].

[NIGHT SCENERY]

This allows you to take vivid pictures of the nightscape.

■ Technique for NIGHT SCENERY Mode

We recommend using a tripod and the self-timer.



- During Motion Picture Recording, low light settings are used, which will provide better pictures in dimly lit rooms or at nightfall.
- The flash setting is fixed to [⑤].
- The shutter may remain closed after taking the picture. This is due to signal processing and is not a malfunction.
- Noise may become visible when you take pictures in dark places.

[ILLUMINATIONS]

Illuminations are photographed beautifully.

■ Technique for ILLUMINATIONS Mode

We recommend using a tripod and the self-timer.



- During Motion Picture Recording, low light settings are used, which will provide better pictures in dimly lit rooms or at nightfall.
- The flash setting is fixed to [⑤].
- The shutter may remain closed after taking the picture. This is due to signal processing and is not a malfunction.
- Noise may become visible when you take pictures in dark places.

This takes pictures of a baby with a healthy complexion. When you use the flash, the light from it is weaker than usual.

It is possible to set different birthdays and names for [BABY1] and [BABY2]. You can select to have these appear at the time of playback, or have them stamped on the recorded image using [TEXT STAMP] (P139).

■ Birthday/Name setting

- 1 Press ▲/▼ to select [AGE] or [NAME] and then press ▶.
- 2 Press ▲/▼ to select [SET] and then press [MENU/SET].
- 3 Enter the birthday or name.

◄/►: Select the items (year/month/day). Birthday:

> ▲/▼: Setting. [MENU/SET]: Exit.

For details on how to enter characters, read the Name:

ITITLE EDITI section on P138.

- When the birthday or name is set, [AGE] or [NAME] is automatically set to [ON].
- If [ON] is selected when the birthday or name has not been registered, the setting screen appears automatically.

4 Press [MENU/SET] to finish.

You can also use the rear dial to set.

■ To cancel [AGE] and [NAME]

Select the [OFF] setting in step **2** of the "Birthday/Name setting" procedure.



- During Motion Picture Recording, settings for [PORTRAIT] are used.
- The age and name can be printed out using the "PHOTOfunSTUDIO 4.0 HD Edition" bundled software on the CD-ROM (supplied).
- If [AGE] or [NAME] is set to [OFF] even when the birthday or name has been set, the age or name will not be displayed. Before taking pictures, set [AGE] or [NAME] to [ON].
- Intelligent ISO sensitivity control is activated, and maximum ISO sensitivity level becomes [ISO400].
- If the camera is turned on with [BABY1]/[BABY2] set, the age and name are displayed at the lower left of the screen for about 5 seconds, along with the current date and time.
- If the age is not properly displayed, check the clock and birthday settings.
- The Birthday Setting and Name Setting can be reset with [RESET].
- The initial setting for [AF MODE] is [2].

R [PET]

Select this when you want to take pictures of a pet such as a dog or a cat.

You can set your pet's birthday and name. You can select to have these appear at the time of playback, or have them stamped on the recorded image using [TEXT STAMP] (P139).

For information about [AGE] or [NAME], refer to [BABY1]/[BABY2] on P92.

Note

- It will be a normal motion picture recording during the motion picture recording.
- The initial setting for the AF assist lamp is IOFFI.
- Intelligent ISO sensitivity control is activated, and maximum ISO sensitivity level becomes [ISO800].
- The initial setting for [AF MODE] is [[[]]].
- Refer to IBABY11/IBABY21 for other information about this mode.

I [PARTY]

Select this when you want to take pictures at a wedding reception, an indoor party etc. This allows you to take pictures of people and the background with near real-life brightness.



■ Technique for Party mode

- Open the flash. (You can set to [\$S®] or [\$ ®].)
- We recommend using a tripod and the self-timer for taking pictures.



The initial setting for [AF MODE] is [♣].

S [SUNSET]

Select this when you want to take pictures of a sunset view. This allows you to take vivid pictures of the red colour of the sun.

Note

The flash setting is fixed to [⑤].

[REC] mode: 🕏

Taking pictures while adjusting colour

(A: My Colour Mode)

You can take pictures with a desired effect by previewing the subject on the LCD monitor or optional external viewfinder (Live View) (P162) and setting the desired effect.

Set the mode dial to [3].



Press **◄/▶** to select an item.

You can also use the rear dial to set.



Item	Effect
[EXPRESSIVE]	This is a pop art style image effect that emphasises the colour.
[RETRO]	This is a soft image effect that gives the appearance of a tarnished photograph.
[PURE]	This is an image effect that uses a cool, bright light to give a feeling of freshness. (The image will come out bright and slightly bluish)
[ELEGANT]	This is an image effect that creates a tranquil atmosphere and projects a feeling of stateliness. (The image will come out slightly dark and amberish)
[MONOCHROME]	This is an image effect that captures the subject using tones characteristic of black and white photography, and with a whisper of colour.
[DYNAMIC ART]	This is an impressive image effect that pictures dark areas to bright areas with appropriate brightness, together with enhancements on colours.
[SILHOUETTE]	This is an image effect that enhances the subject in the shade as a black silhouette by utilising the background colours of the sky or sunset etc.
[CUSTOM]*	The colour effects can be set according to your preferences.

^{*}For [CUSTOM] settings, refer to page 95.



Press [MENU/SET] to set.

- You can also press the shutter button halfway to set.
- · Recording screen is displayed.

■ Readjust the My Colour settings

Return to above step 2 by pressing rear dial or one of $\triangle/\nabla/\blacktriangleleft/\triangleright$.

• [Fn BUTTON SET] (P31) or [AF MODE] (P71) cannot be set with ▼/◄. Make the setting with the Quick Menu (P30).



- During Motion Picture Recording, settings for My Colour Mode are used.
- My Colour settings are memorised even if the camera is turned off.
- Auto Bracket cannot be used in My Colour Mode.
- ISO sensitivity will be fixed to [AUTO].
- [I.EXPOSURE], [COLOR SPACE] can be set only when the My Colour Mode is set to [CUSTOM].
- The following items cannot be set in My Colour Mode because the camera automatically adjusts them to the optimal setting.
 - [FILM MODE]/[FLASH]/[FLASH SYNCHRO]/[ISO LIMIT SET]

Adjusting the custom settings to achieve desired effects

By selecting [CUSTOM], you can take pictures with colour, brightness and saturation adjusted to desired levels.



In step 2 on page 94, select [CUSTOM] and press [MENU/SET]



Press ▲/▼ to select an item and ◄/▶ to adjust.

· You can also use the rear dial to set.



Item	Adjustment contents
[COLOR]	This will adjust the colour of the image from red light to blue light. (11 steps in ± 5)
[BRIGHTNESS]	This will adjust the brightness of the image. (11 steps in ± 5)
[SATURATION]	This will adjust the colour intensity of the image from black and white to vivid colour. (11 steps in ± 5)
[RESET]	Return all settings to default

 Description of adjustment is displayed by pressing [DISPLAY]. (It will return to selection. screen when it is pressed again.)



Press [MENU/SET] to set.

- You can also press the shutter button halfway to set.
- Recording screen is displayed.



■ Return [CUSTOM] settings to default

- Select [RESET] in above step 2.
- - Adjusted value for each item returns to standard (centre point).



- Adjustments made with [CUSTOM] are not in effect in other recording modes.
- Icons for the adjusted items are displayed in the LCD monitor/optional external viewfinder when the [CUSTOM] are adjusted. Displayed icon is the one for direction of adjustment.
- AF tracking may not function if you adjust [SATURATION] to make the colour lighter.

[REC] mode: [APASM=PC1C250]

Registering Personal Menu Settings

(Registering custom settings)

It is possible to register up to 4 sets of current camera settings as custom sets.

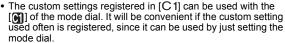
• Set to the mode dial to the desired mode and select the desired menu settings in advance.



Select [CUST. SET MEM.] in the [CUSTOM MENU] menu. (P28)



Press ▲/▼ to select the custom set to register and then press [MENU/SET].





• The custom settings registered in [C 2-1], [C 2-2], or [C 2-3] can be selected in the [M] of the mode dial. Up to 3 custom settings can be registered, so select the one matching the needs.



Press ▲ to select [YES] and then press [MENU/SET].

- When [YES] is selected, the settings that were previously stored are overwritten.
- You cannot save the following menu items because they affect other recording modes.
 - [CLOCK SEŤ], [TRAVEL DATE], [NO.RESET], [RESET], [LANGUAGE] and [SCENE MENU]
- -[BABY1]/[BABY2] or [PET] birthday and name settings in Scene Mode
- Data registered with [FACE RECOG.]



Press [MENU/SET] to close the menu.

You can also press the shutter button halfway to close the menu.



[REC] mode: C1 C2

Taking pictures in Custom mode

You can select one of your own custom settings saved with [CUST. SET MEM.] to suit the picture-taking conditions.

Initial setting of the Programme AE mode is registered as the custom settings initially.



Set the mode dial to [1] or [1].

- A Display custom settings.
- When set to [6].
 - →You can take pictures with the custom settings registered in the [C1]. ([C1] is displayed on the screen)
- When set to [].
 - \rightarrow To steps **2**. **3** and **4**.



Press [MENU/SET] to display the menu.



Press $\blacktriangle/\blacktriangledown$ to select the custom settings you want to use.

- In [M], press
 to display the settings for each menu item. (Press
 to return to the selection screen.)
- Only the main menu items are displayed.



Press [MENU/SET] to enter the settings.

(A) Saving of the selected custom settings is displayed on the screen.



C2-1 CUSTOM SET 1 AFL AEL AFLAEL HOLD AE OFF 3 SEC./OFF ON ON CANCEL O SET

■ When changing the menu settings

Even if the menu settings are changed temporarily with [C1], [C2-1], [C2-2] or [C2-3] selected, what has been registered will remain unchanged.

To change what has been registered, overwrite the registered data using [CUST. SET MEM.] (P96) on the [CUSTOM MENU] menu.



- You cannot register the settings of the following menu items as a custom mode. If they are changed, other recording modes will also be affected.
 - [CLOCK SET], [TRAVEL DATE], [NO.RESET], [RESET], [LANGUAGE] and [SCENE MENU]
 - [BABY1]/[BABY2] or [PET] birthday and name settings in Scene Mode
- Data registered with [FACE RECOG.]

[REC] mode: (A) PASM=PC1C2 SCN &

Recording Motion Picture

You can record motion pictures in high-definition format compliant with the AVCHD standard or in Motion JPEG format. Sound is recorded in mono.

The functions available when recording motion pictures differ according to the lens you are using, and the operational sound of the zoom may be recorded Refer to page 15 for details.



Select the mode.

- Mode dial
- Motion picture button



■ Modes that can be recorded for motion picture

Item	Settings/Note
Intelligent Auto mode	The camera will set the most appropriate settings to match the subject and the recording conditions, so you can leave the settings to the camera and take motion pictures easily.
P/A/S/M mode	Record motion pictures by automatically setting aperture and shutter speed.
Motion Picture P mode (P104)	You can record motion pictures with changed Exposure Compensation and aperture settings.
(i), (ii) Custom mode	Record motion pictures with selected custom mode settings.
SCN Scene mode	Record motion pictures that match the scene being recorded. (P89 to 94)
My Colour mode	Record motion pictures in My Colour Mode setting.



Set the focus mode.

Focusing changes depending on the focus mode setting and the [CONTINUOUS AF] setting (P103) in the [MOTION PICTURE] mode menu.

Focus mode	[CONTINUOUS AF]	Settings	
AFS/AFC	ON	You can have the camera focus continuously. Alternatively, you can have the camera focus when you press the shutter button halfway.	
	OFF	You can have the camera focus when the shutter button is pressed halfway.	
MF	ON You can focus manual		
IVII	OFF	Tou can locus manually.	

- The 20 mm/F1.7 interchangeable lens included in the DMC-GF1C utilises a lens drive system to realise a compact and bright F1.7 lens. As a result, sound and vibration may occur during focus operation, but this is not a malfunction.
- Operating sounds will be recorded when Auto Focus is performed during Motion Picture Recording. It is recommended to record with [CONTINUOUS AF] (P103) set to [OFF], if the sound of operation bothers you to avoid recording the lens noise.
- The 20 mm/F1.7 interchangeable lens included in the DMC-GF1C cannot be set to [AFC].



Start recording by pressing the motion picture button.

- (A) Elapsed recording time
- (B) Available recording time
- The audio is also recorded simultaneously from the built-in microphone on this unit. (Motion pictures cannot be recorded without audio.)





- The recording state indicator (red) © will flash while recording motion pictures.
- Press the shutter button halfway when it is difficult to focus on the subject.
- You can also switch to Manual Focus by pressing [AF/MF] and selecting [MF] (P74).



Stop the recording by pressing the motion picture button again.

- Sound will go off when pressing the motion picture button indicating start/stop of motion picture recording. Sound volume can be set in [BEEP] (P33).
- If the card becomes full in the middle of recording, the camera stops recording automatically.



- The flash setting is fixed to [\$\sqrt{2}\$].
- Available recording time is displayed when the [REMAINING DISP.] (P130) in the [CUSTOM MENUI menu is set to [REMAINING TIME].
- Refer to P191 for information about the available recording time.
- The available recording time displayed on the screen may not decrease regularly.
- Depending on the type of the card, the card access indication may appear for a while after recording motion pictures. This is not a malfunction.
- The operational sound of the zoom or button operation may be recorded when it is operated during the recording of a motion picture.
- Audio will not be recorded for 0.5 seconds after it starts recording if it is kept pressed. Release the motion picture button right after you press it.
- The screen may be blacked out momentarily, or the unit may record noise due to static electricity or electromagnetic waves etc. depending on the environment of the motion picture recording.
- When operating the zoom when recording motion pictures, it may take time to come into focus.
- If The Extra Optical Zoom was used before pressing the motion picture button, those settings will be cleared, so the focus range will change dramatically.
- When the aspect ratio setting is different in still and motion pictures, the angle of view changes at the start of motion picture recording. When [% REC AREA] (P130) is set to [44], angle of view during motion picture recording is displayed.
- The ISO sensitivity will be set to [AUTO] when recording motion pictures.
- When recording motion pictures, [STABILIZER] (Only available when a lens that supports the Stabilizer function is attached) is fixed to [MODE1].
- When recording motion pictures, the following functions cannot be used.
 - [[:::] and [:::]] in [AF MODE]
 - Direction Detection Function

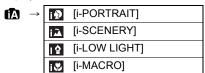
- IFACE RECOG.1/IEX. OPT. ZOOM1/IISO LIMIT SET1/IDIRECT AF AREA1
- It is recommended to use a fully charged battery or AC adaptor (P167) when recording motion
- If while recording motion pictures using the AC adaptor (P167) the power supply is cut off due to a power cut or if the AC adaptor is disconnected etc., the motion picture being recorded will not be recorded.
- Colour or brightness of the screen may change or horizontal streaks may appear on the screen when the picture is taken under extremely bright light, or under fluorescent lamps, mercury lamps, or sodium lamps etc.

When set to Intelligent Auto Mode

• When Intelligent Auto Mode is selected in step 1, motion picture recording matching to the subject or recording situation can be performed.

■ Scene detection

When the camera identifies the optimum scene, the icon of the scene concerned is displayed in blue for 2 seconds, after which its colour changes to the usual red.



- [f] is set if none of the scenes are applicable, and the standard settings are set.
- When [] is selected, the camera automatically detects a person's face, and it will adjust the focus and exposure. (Face Detection) (P72)

- Refer to P43 for settings in Intelligent Auto Mode.
- Due to conditions such as the ones below, a different scene may be identified for the same subject.
- Subject conditions: When the face is bright or dark, The size of the subject, The distance to the subject. The contrast of the subject. When the subject is moving
- Recording conditions: Sunset, Sunrise, Under low brightness conditions, When the camera is shaken. When zoom is used
- To take pictures in an intended scene, it is recommended that you take pictures in the appropriate recording mode.
- Functions enabled for motion picture recording are different to those enabled for still picture recording.

Changing [REC MODE] and [REC QUALITY]

Select [REC MODE] from the [MOTION PICTURE] mode menu, and press ▶. (P28)





Press $\blacktriangle/\blacktriangledown$ to select the item and then press [MENU/SET].



Recording format	Effect
[AVCHD Lite]	Select this format to record HD (high definition) video for playback on your HDTV using an HDMI connection.
I [MOTION JPEG]	Select this format to record standard definition video for playback on your PC. It can be recorded using less storage when there is not much space left on the memory card or when you want to attach the motion picture to an e-mail.



Press $\blacktriangle/\blacktriangledown$ to select [REC QUALITY] and then press \blacktriangleright .





Press ▲/▼ to select the item and then press [MENU/SET].

When [AVCHD Lite] is selected in step 2

	Item	Quality (bit rate)*1	fps	Aspect ratio
High	紹 ([SH])	1280×720 pixels 17 Mbps*2		
quality	船 ([H])	1280×720 pixels 13 Mbps*2		
Longer time	縕 ([L])	1280×720 pixels 9 Mbps*2	50p (Sensor output is 25 fps)	16:9

*1 What is bit rate

This is the volume of data for definite period of time, and the quality becomes higher when the number gets bigger. This unit is using the "VBR" recording method. "VBR" is an abbreviation of "Variable Bit Rate", and the bit rate (volume of data for definite period of time) is changed automatically depending on the subject to record.

Therefore, the recording time is shortened when a subject with fast movement is recorded

*2 What is Mbps

This is an abbreviation of "Megabit Per Second", and it represents the speed of transmission.

When [MOTION JPEG] is selected in step 2

	Item	Picture size	fps	Aspect ratio
High	[HD])	1280×720 pixels		16:9
quality	*3([WVGA])	848×480 pixels		10.9
↑	([VGA])	640×480 pixels	30	
Longer time	([QVGA])	320×240 pixels	30	4:3

- *3 This item cannot be set in the Intelligent Auto Mode.
- With the [AVCHD Lite] or [imi] for [MOTION JPEG], high quality motion picture can be
 enjoyed on the TV by using the HDMI mini cable (optional). For details, see "Playing
 back on the TV with HDMI socket" on P150.



Press [MENU/SET] to close the menu.

You can also press the shutter button halfway to close the menu.



- It is recommended to use a card with SD Speed Class*1 with "Class 6" or higher when recording motion pictures.
- *1 The SD Speed Class Rating is the speed standard for successive writes.
- When you set the picture quality to [], [], we recommend using a high-speed card with "10MB/s" or greater displayed on the package.
- The motion picture recording may stop in the middle when any of the following cards are used.
 - Cards on which recording and deleting have been repeated many times
 - Cards which have been formatted using a PC or other equipment

Before taking pictures, format (P36) the card in the unit. Because formatting will delete all data recorded on the card, save important data beforehand on the computer.

Motion pictures recorded in [AVCHD Lite] or [MOTION JPEG] may be played back with
poor picture or sound quality or playback may not be possible even when played back
with equipment compatible with these formats. Also, the recording information may not
be displayed properly. In this case, use this unit.

For details on AVCHD compatible devices, refer to the support sites below.

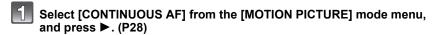
http://panasonic.jp/support/global/cs/dsc/

(This Site is English only.)

- Motion picture recorded in [AVCHD Lite] cannot be played back on the equipment that is not compatible to the AVCHD (conventional DVD recorder, etc.), so read the instruction manual for the equipment in use for the action.
- Motion picture recorded in [AVCHD Lite] does not comply with the "DCF/Exif", so some information will not display while playback.
- Sound from motion pictures (When [REC MODE] is set to [MOTION JPEG]) or pictures
 with audio recorded by this camera cannot be played back by older models of
 Panasonic digital cameras (LUMIX) launched before July 2008.

≝AF [CONTINUOUS AF]

You can set the camera to always maintain the focus or fix the focus.



Press ▲/▼ to select the item and then press [MENU/SET].



- Press [MENU/SET] to close the menu.
 - You can also press the shutter button halfway to close the menu.
 - Set to [OFF] when you would like to fix the focus.
- Note
- It is recommended to set the Auto Focus to [OFF] if the sound of operation bothers you.

≋ [WIND CUT]

Wind noise can be reduced efficiently. Use this when the wind noise is bothersome.

- Select [WIND CUT] from the [MOTION PICTURE] mode menu, and press ▶. (P28)
- Press ▲/▼ to select the item and then press [MENU/SET].
- 3 Press [MENU/SET] to close the menu.
 - You can also press the shutter button halfway to close the menu



- Note
- Sound quality will be different than usual when [WIND CUT] is set.
- [WIND CUT] does not function with still pictures with audio or when audio dubbing.

[REC] mode: 🕮

Recording motion pictures with the desired settings (En: Motion Picture P mode)

You can set the degree of peripheral defocus created by the exposure compensation or the aperture setting and record motion pictures.

- Set the mode dial to [🖦].
- 2 Set the Focus Mode (P98)
- 3 Press the rear dial to change the settings screen.



- A the exposure compensation
- B the degree of peripheral defocus
- With each press of the rear dial, the camera switches between Exposure Compensation and the degree of peripheral defocus setting operations.
- The degree of peripheral defocus guide disappears after approximately 4 seconds if no operation is performed.
- 4 Rotate the rear dial to change the settings.
- Press the motion picture button to start the recording.





- Stop the recording by pressing the motion picture button again.
- If the card becomes full in the middle of recording, the camera stops recording automatically.
- You can also start/stop motion picture recording by pressing the shutter button.
- Sound will go off when pressing the motion picture button or shutter button indicating motion picture recording start/stop.
 Sound volume can be set in [BEEP] (P33).

■ About the flicker reduction function

The flicker reduction function can be switched [ON]/[OFF] by pressing the [面].

 If there is marked flicker or striping when recording motion pictures under fluorescent lighting in regions with a 60 Hz mains supply, set the Flicker Reduction Function to [ON]. The Flicker Reduction Function will activate, automatically adjusting the shutter speed to 1/120. Note that you cannot use PERIPHERAL DEFOCUS with the Flicker Reduction Function.



- The [AF MODE] is automatically set to [] when you switch the recording mode to Motion Picture P Mode while the [AF MODE] is set to [[]].
- ISO sensitivity will be fixed to [AUTO].
- [REMAINING DISP.] (P130) is fixed to [REMAINING TIME].
- As the aperture is controlled within a certain range to get an adequate exposure in this mode, for some cases depending on the brightness of the subject, an actual aperture setting would not be changed in response to the movement of selection cursor, so that no change on the degree of peripheral defocus could be recognised. (For example, in dark places including in a room, the aperture would stay at the maximum aperture value, even for both ends of the selection cursor, so that no change on the degree of peripheral defocus could be recognised.)
- Refer to "Recording Motion Picture" on P98 for other settings, operations and information for recording motion pictures.

[REC] mode: PASMC1C2SN &

Taking a picture with Face Recognition function

Face Recognition is a function which finds a face resembling a registered face and prioritises focus and exposure automatically. Even if the person is located towards the back or on the end of a line in a group photo, the camera can still take a clear picture.

To use the Face Recognition function, set the [FACE RECOG.] in the [REC] Mode menu to [ON], and register the face images of the people to recognise. (initially set to [OFF])

The Face Recognition function includes the following. In Recording Mode

- Display of corresponding name when camera detects a registered face* (if name has been set for the registered face)
- The camera will remember a face that has been photograhed many times and display the registration screen automatically (if [AUTO REGISTRATION] is set to [ON])



In Playback Mode

- Display of name and age (if information has been registered)
- Selective playback of pictures chosen from pictures registered with Face Recognition ([CATEGORY PLAY] (P135))
- * Names of up to 3 people are displayed. Precedence for the names displayed when taking pictures is determined according to the order of registration.

Note

- [FACE RECOG.] only works when [AF MODE] is set to [♥].
- During the burst mode, [FACE RECOG.] picture information can be attached to only the first picture.
- After pressing the shutter halfway down, a different person's picture information may be added when the camera is turned to a different subject to photograph.
- You cannot use [FACE RECOG.] in the following scene modes.
- [PERIPHERAL DEFOCUS]/[FOOD]/[NIGHT SCENERY]/[ILLUMINATIONS]
- When the focus mode is set to [MF], automatic registration is not available.
- The data registered with [FACE RECOG.] will be reset when the [REC] menu settings are reset with [RESET].
- [FACE RECOG.] will find a face similar to the registered face, and does not guarantee secure recognition of a person.
- Face Recognition may take more time to select and recognise distinctive facial features than regular face detection.
- Even when face recognition information has been registered, pictures taken with [NAME] set to [OFF] will not be categorized by face recognition in [CATEGORY PLAY].
- Even when face recognition information is changed (P109), face recognition information for the
 pictures already taken will not be changed.
 For instance, if the name is changed, pictures recorded before the change will not be
 categorized by face recognition in ICATEGORY PLAYI.
- To change the name information of the pictures taken, perform the [REPLACE] in [FACE REC EDIT] (P148).

Face Settings

You can register information such as names and birthdays for face images of up to 6 people. Registration can be facilitated by taking multiple face images of each person. (up to 3 pictures/registration)

■ Point of recording when registering the face images

- Face front with eyes open and mouth closed, making sure the outline of the face, the eyes, or the eyebrows are not covered with the hair when registering.
- Make sure there is no extreme shading on the face when registering. (Flash will not flash during registration.)

[Good example for registering]



■ When it is not recognising during recording

- Register the face of same person indoors and outdoors, or with different expressions or angles. (P109)
- Additionally register at the location of recording.
- Changing the [SENSITIVITY] setting (P111)
- When a person who is registered is not recognised, correct by re-registering.

Example of faces that are hard to recognise

Face Recognition may not be possible or may not recognise faces correctly even for registered faces in the following instances, depending on the facial expression and environment.

- Hair is covering the eyes or the eyebrows ((A))
- The face is dark/the light is at an angle (B)
- The face is facing in angle or sideways
- The face is facing upward/downward
- The eves are closed
- When the face is extremely bright or dark
- · Hidden by sunglasses, glasses reflecting light, hair, hat, etc.
- When the face appears small on the screen
- The entire face is not in the screen
- When distinctive facial features have changed with age
- When parents and children or siblings closely resemble one another
- Facial expression is very different
- When there is little contrast on the faces
- When there is rapid movement
- · When the camera is shaking
- When digital zoom is used







Registering face image of new person

Select [FACE RECOG.] on the [REC] Mode menu and then press ▶. (P28)

Press ▲/▼ to select [MEMORY] and then press [MENU/SET].

 If 6 people have already been registered, the list of registered people will appear. Press ▲/▼/◄/► to select the person to be replaced and press [MENU/SET]. Information of the person that was replaced will be deleted.



3 Take the picture adjusting the face with the guide.

- The faces of subjects other than people (pets, etc.) cannot be registered.
- When recognition fails, a message will appear and the display will return to the recording screen. In this case, try taking the picture again.



Press ▲ to select [YES] and then press [MENU/SET].

Select item to edit with ▲/▼, and then press ▶.

You can register up to 3 face images.
 To register further pictures, press ◀ to select the face image and press [MENU/SET]. Then press ▲/▼ to select [ADDITIONAL IMAGE], press [MENU/SET] and return to step 3.



Item	Description of settings	
[NAME]	It is possible to register names. 1 Press ▼ to select [SET] and then press [MENU/SET]. 2 Enter the name. • For details on how to enter characters, read the [TITLE EDIT] section on P138.	
[PRIORITY]	The focus and exposure are preferentially adjusted for higher-priority faces. Press ▲/▼/◄/▶ to select the priority and then press [MENU/SET].	
[AGE]	It is possible to register the birthday. 1 Press ▼ to select [SET] and then press [MENU/SET]. 2 Press ◄/▶ to select the items (Year/Month/Day), and then press ▲/▼ to set and then press [MENU/SET].	

6 Press [MENU/SET] to close the menu.

■ About the information R

 When [DISPLAY] is pressed on the recording screen described in step 3, an explanation appears for taking face images. (Press again to return to the recording screen.)

Change the information for a registered person

You can add a picture to the information of the registered people, replace or delete the pictures which have already been registered, and information such as names and register priority.

- 1 Select [FACE RECOG.] from the [REC] Mode menu, and then press ►. (P28)
- Press ▼ to select [SET] and press [MENU/SET].
- 3 Press ▲ to select [EDIT] and then press [MENU/SET].
- Press $\triangle/\nabla/\blacktriangleleft/\triangleright$ to select the person to edit and then press [MENU/SET].
 - To change [NAME], [PRIORITY] or [AGE] information, go to step 5 of "Registering face image of new person".
- 5

■ To add or replace a face image

- 6 Press A to select [ADDITIONAL IMAGE], and then press [MENU/SET].
 - To add a face image, go to step 9.
- Press
 √> to select the face image to replace, and then press [MENU/SET].
- 8 Press ▲ to select [YES] and then press [MENU/SET].
- Perform the operation in step 3 and following in "Registering face image of new person".

■ To delete a face image

- 6 Press ▼ to select [DELETE], and then press [MENU/SET].
 - When only one picture has been registered, you cannot select IDELETEÍ.
- 7 Press **◄/▶** to select the face image to delete, and then press [MENU/SET].
- 8 Press ▲ to select [YES] and then press [MENU/SET].
- Perform the operation in step 5 and following in "Registering face image of new person".

Deleting the information for a registered person

Deleting information of a registered person.

- 1 Select [FACE RECOG.] from the [REC] Mode menu, and then press ►. (P28)
- 2 Press ▼ to select [SET] and press [MENU/SET].
- Press ▲/▼ to select [DELETE] and press [MENU/SET].
- Press $\blacktriangle/\blacktriangledown/\blacktriangleleft/\blacktriangleright$ to select the image of the person to delete and then press [MENU/SET].
- Press ▲ to select [YES] and then press [MENU/SET].
- Press [m] to return to the menu screen.
 - Press [MENU/SET] to close the menu.
 - You can also press the shutter button halfway to close the menu.





FACE RECOG ADDITIONAL IMAGE

FACE RECOG. ADDITIONAL IMAGE

CANCEL 位 SELECT 0

SET

DELETE

DELETE



Auto Registration

When [AUTO REGISTRATION] is set to [ON] in step **3** of "Change the information for a registered person" (P109) while [FACE RECOG.] in the [REC] Mode menu is set to [ON], the registration screen will display automatically after taking a picture of a face that has a high number of appearances.

- Registration screen is displayed after approximately 3 pictures. (It is not counted when Burst Mode, Auto Bracket, White Balance Bracket, Multi Film Bracket or [AUDIO REC.] is set.)
- It may be extremely hard to recognise only with [AUTO REGISTRATION], so register the face images with [FACE RECOG.] in the [REC] Mode menu beforehand.

■ Registering from the automatic registration screen

- Press ▲ to select [YES] and then press [MENU/SET].
 - If there are no registered persons, proceed to step 3.
 - Selection screen is displayed again when [NO] is selected, and when [YES] is selected with ▲, [AUTO REGISTRATION] will be set to [OFF].
- 2 Press À/▼ to select [NEW PERSON] or [ADDITIONAL IMAGE] and then press [MENU/SET].



Item	Description of settings
[NEW PERSON]	A list of registered people is displayed when there are 6 people already registered. Select the person to be replaced.
[ADDITIONAL IMAGE]	To additionally register a face image for a registered person. Press ▲/▼/◄/▶ to select the person to whom you wish add the picture, and then press [MENU/SET]. • If 3 images have already been registered, the picture replacement screen will appear. In this case, select the picture you wish to replace.

- After additionally registering or changing a face image, the screen returns automatically to the recording screen.
- 3 Perform the operation in Step 5 and following in "Registering face image of new person".

Note

- If the registration screen will not display, it may display easier by recording in the same conditions or with the same expressions.
- If a face is not recognised even though it is registered, it will make the recognition easier by registering the person again using the [FACE RECOG.] in the [REC] Mode menu in that environment.
- If the registration screen is displayed for the person that is already registered, it will make the recognition easier by additionally registering.
- It may make recognition harder when a picture recorded with flash is registered.

Sensitivity

Changing the sensitivity of Face Recognition.

- 1 Select [FACE RECOG.] from the [REC] Mode menu, and then press ▶. (P28)
- 2 Press ▼ to select [SET] and then press [MENU/SET].
- 3 Press ▼ to select [SENSITIVITY] and then press [MENU/SET].
- 4 Press ▲/▼ to select [HIGH] or [LOW] and then press [MENU/SET].

Item	Description of settings
[нідн]	Set when recognition is difficult. The likelihood of recognition increases, but so does the likelihood of mistaken recognition.
[LOW]	Set when the frequency of mistaken recognition is high.

- To return to the original settings, select [NORMAL].
- Press [in] to close the menu.

5

- Press [MENU/SET] to close the menu.
- You can also press the shutter button halfway to close the menu.

[REC] mode: (A) PASM #PC1 C2 SCN &

Useful Functions at Travel Destinations

Recording which Day of the Vacation You Take the Picture

For details on the [SETUP] menu settings, refer to P28.

If you set the departure date or the travel destination of the vacation in advance, the number of days that have passed since the departure date (which day of the vacation it is) is recorded when you take the picture. You can display the number of days that have passed when playing back the pictures and stamp it on the recorded pictures with [TEXT STAMP] (P139).

- The number of days that have passed since the departure date can be printed out using the "PHOTOfunSTUDIO 4.0 HD Edition" bundled software on the CD-ROM (supplied).
- Select [CLOCK SET] to set the current date and time in advance. (P26)
- Select [TRAVEL DATE] from the [SETUP] menu, and then press ▶.



Press ▲ to select [TRAVEL SETUP] and then press ►.



Press ▼ to select [SET] and then press [MENU/SET].



Press ▲/▼/◀/▶ to set the departure date (year/month/day), and then press [MENU/SET].



Press ▲/▼/◀/▶ to set the return date (year/month/day), and then press [MENU/SET].

 If you do not want to set the return date, press [MENU/SET] while the date bar is displayed.





Press ▼ to select [LOCATION] and then press ▶.





Press ▼ to select [SET] and then press [MENU/SET].





Enter the location.

• For details on how to enter characters, read the [TITLE EDIT] section on P138.



Press [MENU/SET] twice to close the menu.



Take a picture.

- The number of days that have passed since the departure date is displayed for about 5 seconds if this unit is turned on etc. after setting the travel date or when the travel date is set.
- When the travel date is set, [appears on the lower right of the screen.

■ Cancelling the travel date

The travel date is automatically cancelled if the current date is after the return date. If you want to cancel the travel date before the end of the vacation, select [OFF] on the screen shown in step **3** or **7** and then press [MENU/SET] twice. If the [TRAVEL SETUP] is set to [OFF] in step **3**. [LOCATION] will be also set to [OFF].

Note

- The travel date is calculated using the date in the clock setting and the departure date you set. If you set [WORLD TIME] (P114) to the travel destination, the travel date is calculated using the date in the clock setting and the travel destination setting.
- The travel date setting is memorised even if the camera is turned off.
- If [TRAVEL DATE] is set to [OFF], the number of days that have passed since the departure date will not be recorded. Even if [TRAVEL DATE] is set to [SET] after taking the pictures, which day of the vacation you took them is not displayed.
- If you set a departure date and then take a picture on a date before this departure date, [-]
 (minus) is displayed in orange and the day of the vacation that you took the picture is not
 recorded.
- If the travel date is displayed as [-] (minus) in white, there is a time difference that involves date change between the [HOME] and [DESTINATION]. (It will be recorded)
- The text set as [LOCATION] can be edited later with [TITLE EDIT].
- The name for [BABY1]/[BABY2] and [PET] in Scene Mode will not be recorded when [LOCATION] is set.
- [TRAVEL DATE] cannot be set for motion pictures recorded with [AVCHD Lite].
- [LOCATION] cannot be recorded when taking motion pictures.
- [TRAVEL DATE] cannot be set in the Intelligent Auto Mode. Setting of other recording mode will be reflected.

Recording Dates/Times at Overseas Travel Destinations (World Time)

For details on the [SETUP] menu settings, refer to P28.

You can display the local times at the travel destinations and record them on the pictures you take.

Select [CLOCK SET] to set the current date and time in advance. (P26)



Select [WORLD TIME] from the [SETUP] menu, and then press ▶.

- When first using the camera after purchasing it, the [PLEASE SET THE HOME AREA] message appears. Press [MENU/SET], and set the home area on the screen in step 3.
- Press ▼ to select [HOME], and then press [MENU/SET].





3

Press **◄/▶** to select the home area, and then press [MENU/SET].

- A Current time
- B Time difference from GMT (Greenwich Mean Time)
- If daylight saving time [※②] is used at the home area, press ▲. Press ▲ again to return to the original time.
- The daylight saving time setting for the home area does not advance the current time. Advance the clock setting by one hour.





Press ▲ to select [DESTINATION] and then press [MENU/SET] to set.

© Depending on the setting, the time at the travel destination area or the home area is displayed.





Press ◀/▶ to select the area the travel destination is in and then press [MENU/SET] to set.

- © Current time of the destination area
- E Time difference
- If daylight saving time [※②] is used at the travel destination, press ▲. (The time advances by one hour.)
 Press ▲ again to return to the original time.







- Return the setting to [HOME] when the vacation is finished by performing steps 1, 2 and 3.
- If [HOME] is already set, change only the travel destination, and use.
- If you cannot find the travel destination in the areas displayed on the screen, set by the time difference from the home area.

Using the [REC] Mode Menu

• [METERING MODE], [I.EXPOSURE], and [DIGITAL ZOOM] are common to both the [REC] mode menu and [MOTION PICTURE] mode menu. Changing these settings in one of these menus is reflected in other menu.

[FILM MODE]

For details on [REC] mode menu settings, refer to P28.

You can select colour characteristics for your pictures from among 9 sets, much as you would select a film for a film camera.

Select the Film Mode setting according to the conditions and the nature of the recording.

Applicable modes: Applicable m

[You can only select [STANDARD] and [STANDARD] (B&W) in [A], [M] mode.]

Item	Effect
[STANDARD] (COLOUR)	This is the standard setting.
[DYNAMIC] (COLOUR)	The saturation and contrast of the stored colours are increased.
[NATURE] (COLOUR)	Brighter red, green and blue. Enhanced beauty of nature.
[SMOOTH] (COLOUR)	The contrast is lowered for smoother and clearer colour.
[NOSTALGIC] (COLOUR)	Lower saturation and contrast. Reflecting passage of time.
[VIBRANT] (COLOUR)	Higher saturation and contrast than dynamic.
[STANDARD] (B&W)	This is the standard setting.
[DYNAMIC] (B&W)	The contrast is increased.
[SMOOTH] (B&W)	Smooths the picture without losing the skin texture.
[MY FILM 1]/[MY FILM 2]	The saved setting is used.
[MULTI FILM]	It will take pictures changing the type of film in accordance with the setting every time the shutter button is pressed. (Up to 3 pictures)



· Refer to P82 for details.

(ASPECT RATIO)

For details on [REC] mode menu settings, refer to P28.

This allows you to select the aspect ratio of the pictures to suit printing or the playback method.

Applicable modes: APASMC1025M&

[4:3]: [ASPECT RATIO] of a 4:3 TV

[332]: [ASPECT RATIO] of a 35 mm film camera
[339]: [ASPECT RATIO] of a high-definition TV, etc.

[11]: Square aspect ratio





• The ends of the recorded pictures may be cut at printing so check before printing. (P185)

[PICTURE SIZE]

For details on [REC] mode menu settings, refer to P28.

Set the number of pixels. The higher the numbers of pixels, the finer the detail of the pictures will appear even when they are printed onto large sheets.

Applicable modes: (APASMCIC2SM &

■ When the aspect ratio is [4:3].

L 4000×3000 pixels (12 million pixels)				
M 2816×2112 pixels (5.9 million pixels)		2816×2112 pixels (5.9 million pixels)		
S 2048×1536 pixels (3.1 million pixels)		2048×1536 pixels (3.1 million pixels)		

■ When the aspect ratio is [332].

L 4000×2672 pixels (10.7 million pixels)			
М	2816×1880 pixels (5.3 million pixels)		
S	2048×1360 pixels (2.8 million pixels)		

■ When the aspect ratio is [16:9].

4000×2248 pixels (9.0 million pixels)			
М	2816×1584 pixels (4.5 million pixels)		
S	1920×1080 pixels (2.1 million pixels)		

■ When the aspect ratio is [[]].

L 2992×2992 pixels (9.0 million pixels)				
ĺ	М	2112×2112 pixels (4.5 million pixels)		
ĺ	S	1504×1504 pixels (2.3 million pixels)		

Note

- If you set [EX. OPT. ZOOM] (P122) to [ON], [1] is displayed on the screen when the picture size is set to a size other than the maximum picture size for each aspect ratio. "EZ" is an abbreviation of "Extra optical Zoom".
- A digital picture is made of numerous dots called pixels. The higher the numbers of pixels, the finer the picture will be when it is printed on a large piece of paper or displayed on a PC monitor.
 - (A) Many pixels (Fine)
 - B Few pixels (Rough)
 - * These pictures are examples to show the effect.
- If you change the aspect ratio, set the picture size again.
- Refer to P187 for information about the number of recordable pictures.



!! [QUALITY]

For details on [REC] mode menu settings, refer to P28.

Set the compression rate at which the pictures are to be stored.

Applicable modes: APASMCIC2 SM &

[::]: Fine (when giving priority to the picture quality)

[_*_]: Standard (when using the standard picture quality and increasing the number of pictures to be recorded without changing the number of pixels)

[RAW+Fine (In addition to the [RAW] settings, a fine-equivalent JPEG image is simultaneously created.)*1

[RAW==: RAW+Standard (In addition to the [RAW] settings, a standard-equivalent JPEG image is simultaneously created.)*1

[RAW]: RAW file (When the image is to be edited with a PC in high quality)*2

- *1 If you delete a RAW file from the camera, the corresponding JPEG image will also be deleted.
- *2 It is fixed to maximum recordable pixels ([L]) for each image aspect ratio.
- Note
- Refer to P187 for information about the number of recordable pictures.
- You can enjoy more advanced picture editing if you use RAW files. You can save RAW files in a
 file format (JPEG, TIFF etc.) that can be displayed on your PC etc., develop them and edit them
 using the software "SILKYPIX Developer Studio" by Ichikawa Soft Laboratory on the CD-ROM
 (supplied).
- [RAW] images are recorded with a smaller data volume than [RAW***] or [RAW***].
- [PRINT SET] and [FAVORITE] cannot be set to a picture taken by [RAW].

[FACE RECOG.]

For details on [REC] mode menu settings, refer to P28.

Specify a person's face and use the face recognition functions.

Applicable modes: 🔼 PASMC1C2🖼 🕏

[OFF]/[ON]/[MEMORY]/[SET]

Note

Refer to P106 for details.

((STABILIZER]

For details on [REC] mode menu settings, refer to P28.

Using one of these modes, jitter during picture taking is detected, and the camera automatically compensates the jitter, enabling jitter-free images to be taken.

Check that the [O.I.S.] switch on the lens is set to [ON]*.

Applicable modes: APASM=PC1C2SM &

[MODE1]: Jitter is always compensated during [REC] mode.

IMODE21: The jitter is compensated for when the shutter button is pressed.

[MODE3]: Camera shake is corrected for up/down movements. This mode is ideal for

panning (a method of taking pictures which involves turning the camera to track the movements of a subject which continues to move in a fixed

direction).



*A lens which supports the Stabilizer function is required.

- The 20 mm/F1.7 interchangeable lens supplied with the DMC-GF1C does not support the stabilizer function.
- The 14-45 mm/F3.5-5.6 interchangeable lens supplied with the DMC-GF1K supports the stabilizer function.
- [STABILIZER] cannot be selected when a lens without Stabilizer function is used.
- The stabilizer function may not be effective in the following cases.
 - When there is a lot of jitter.
 - When the zoom magnification is high.
 - When using the digital zoom.
 - When taking pictures while following a moving subject.
 - When the shutter speed becomes slower to take pictures indoors or in dark places.
- Be careful of camera jitter when you press the shutter button.
- The panning effect in [MODE3] is more difficult to achieve in the following cases.
- In brightly lit places such as in broad daylight on a summer's day
- When the shutter speed is faster than 1/100th of a second.
- When you move the camera too slowly because the subject is moving slowly. (The background will not become a blur.)
- When the camera does not keep up with the subject satisfactorily
- We recommend taking pictures with the Optional External Viewfinder (P162) when panning in [MODE3].
- The setting is fixed to [MODE1] in recording motion pictures.

[FLASH]

For details on [REC] mode menu settings, refer to P28.

You can switch the flash setting.

Applicable modes: PASMC1C2SM

[\$A]/[\$A@]/[\$]/[\$@]/[\$S]/[\$S@]



Refer to P60 for details.

[RED-EYE REMOVAL]

For details on [REC] mode menu settings, refer to P28.

When the flash is used with the Red-Eye Reduction ([\$A\$\omega_], [\$3\omega_], [\$3\omega_]) selected, it will automatically detect and correct the red-eye in the image data.

Applicable modes: PASMC1C28016

[OFF]/[ON]



- It may not be able to correct the red-eye depending on the recording conditions.
- When the Digital Red-Eye correction is set to [ON], [] appears on the flash icon.
- Refer to P61 for details.

[FLASH SYNCHRO]

For details on [REC] mode menu settings, refer to P28.

You can set to the 2nd curtain synchro.

Applicable modes: PASMER

[1ST]/[2ND]

Note
 Refer to P64 for details

(注 [FLASH ADJUST.]

For details on [REC] mode menu settings, refer to P28.

You can adjust the flash output.

Applicable modes: PASMC1C2SM &

[-2 EV]/[-1 2/3 EV]/[-1 1/3 EV]/[-1 EV]/[-2/3 EV]/[-1/3 EV]/[0 EV]/[+1/3 EV]/ [+2/3 EV]/[+1 EV]/[+1 1/3 EV]/[+1 2/3 EV]/[+2 EV]

Note

• Refer to P63 for details.

[METERING MODE]

For details on [REC] mode menu settings, refer to P28.

Type of optical measurement to measure brightness can be changed.

Applicable modes: PASM = C1C2 &

[[...]: Multiple

This is the method in which the camera measures the most suitable exposure by judging the allocation of brightness on the whole screen automatically. Usually, we recommend using this method.

[]: Centre weighted

This is the method used to focus on the subject on the centre of the screen and measure the whole screen evenly.

[•]: Spot

This is the method to measure the subject in the spot metering target (A).



Note

When the AF mode is set to [♣] while [□] is selected, exposure is adjusted to the face of a
person, and when it is set to [□□], exposure is adjusted to the locked subject.

i [I.EXPOSURE] (Intelligent exposure adjustment)

For details on [REC] mode menu settings, refer to P28.

Contrast and exposure will be adjusted automatically when there is a big difference in brightness between the background and subject, to bring the image close to how you see.

Applicable modes: PASM=C102

[OFF]/[LOW]/[STANDARD]/[HIGH]

Note

- Even when the [SENSITIVITY] is set to [ISO100]/[ISO125], [SENSITIVITY] may be set higher than [ISO100]/[ISO125] if the picture is taken with [I.EXPOSURE] set to valid.
- Compensation effect may not be achieved depending on the conditions.
- [i(1)] in the screen turns to yellow when [I.EXPOSURE] is in effect.
- [LOW], [STANDARD], or [HIGH] represents the maximum range of effect.

NR [LONG SHTR NR]

For details on [REC] mode menu settings, refer to P28.

The camera automatically removes noise that appears when the shutter speed becomes slower to take pictures of night scenery etc. so you can take beautiful pictures.

Applicable modes: PASMCCSM &



- If you set [ON], the countdown screen is displayed when the shutter button is pressed. Do not move the camera at this time. After the countdown is finished, [PLEASE WAIT...] is displayed for the same time as the selected shutter speed for signal processing.
- We recommend using a tripod when the shutter speed is slowed to take pictures.
- This does not operate during motion picture recording.

XISO [ISO LIMIT SET]

For details on [REC] mode menu settings, refer to P28.

It will select optimal ISO sensitivity with set value as limit depending on the brightness of the subject.

Applicable modes: PASCI (2)
[OFF]/[200]/[400]/[800]/[1600]



• The upper limit of the ISO sensitivity can be set.

- The higher the value set for the ISO sensitivity, the more the jitter is reduced but the greater the amount of picture noise.
- It will work when the [SENSITIVITY] is set to [AUTO] or [10].

ISO INCREMENTS]

For details on [REC] mode menu settings, refer to P28.

ISO sensitivity settings between [ISO100] and [ISO3200] are changed for every 1/3 EV.

Applicable modes: PASMCIC25016

[1/3 EV]: [100]/[125]/[160]/[200]/[250]/[320]/[400]/[500]/[640]/[800]/[1000]/[1250]/

[1600]/[2000]/[2500]/[3200]

[1 EV]: [100]/[200]/[400]/[800]/[1600]/[3200]

Note

• When the setting is changed from [1/3 EV] to [1 EV], ISO sensitivity will be set to value closest to the value set during the [1/3 EV]. (Set value will not restore when the setting is changed back to [1/3 EV]. It will stay as the setting selected for [1 EV].)

[EX. OPT. ZOOM]

For details on [REC] mode menu settings, refer to P28.

Enlarging a picture with no picture quality deterioration

Applicable modes: PASMC1C28M

[OFF]/[ON]

Note

· Refer to P49 for details.

[DIGITAL ZOOM]

For details on [REC] mode menu settings, refer to P28.

This can enlarge subjects even more than the Optical Zoom or Extra Optical Zoom.

Applicable modes: PASM = C1 C2 &

[OFF]/[2×]/[4×]

Note

• Refer to P49 for details.

 If camera shake (jitter) is a problem during zooming, it is recommended that [STABILIZER] (Only available when a lens that supports the Stabilizer function is attached) be set to [MODE1].

[BURST RATE]

For details on [REC] mode menu settings, refer to P28.

You can set the burst speed.

Applicable modes: PASMC1C2SM

[H]/[L]

Note

Refer to P66 for details.

[AUTO BRACKET]

For details on [REC] mode menu settings, refer to P28.

You can set the compensation range of the exposure and the bracket order.

Applicable modes: PASMC1025006

[STEP]: [3•1/3]/[3•2/3]/[5•1/3]/[5•2/3]/[7•1/3]/[7•2/3]

[SEQUENCE]: [0/-/+]/[-/0/+]

Note

· Refer to P68 for details.

ప [SELF-TIMER]

For details on [REC] mode menu settings, refer to P28.

You can set the time for the self-timer.

Applicable modes: PASMC1C2SCN

Note

Refer to P70 for details.

▶ [COLOR SPACE]

For details on [REC] mode menu settings, refer to P28.

Set this when you want to correct the colour reproduction of the recorded pictures on a PC, printer etc.

Applicable modes: PASMC1C2SN

[sRGB]: Colour space is set to sRGB colour space.

This is widely used in computer related equipment.

[AdobeRGB]: Colour space is set to AdobeRGB colour space.

AdobeRGB is mainly used for business purposes such as professional printing because it has a greater range of reproducible colours than

sRGB.

Note

 Depending on the colour space setting, the file name of the recorded picture changes as shown.

P1000001.JPG P: sRGB : AdobeRGB

- Set to sRGB if you are not very familiar with AdobeRGB.
- The setting is fixed to [sRGB] when recording motion pictures.

₽ [AUDIO REC.]

For details on [REC] mode menu settings, refer to P28.

Audio can be recorded simultaneously with the image. You can record the conversation during the shooting or the situation as a memo.

Applicable modes: PASMC1C2SM &

[OFF]: Audio will not be recorded.

[ON]: [**凰**] is displayed on the screen.

Audio will be recorded as soon as the image is recorded.

(It will stop in 5 seconds)

• If you press [MENU/SET] during audio recording, the audio recording is cancelled.



- · Audio is recorded from the built-in microphone on the camera.
- Audio recorded with this unit may not playback on other equipment.
- Sound from motion pictures (When [REC MODE] is set to [MOTION JPEG]) or pictures
 with audio recorded by this camera cannot be played back by older models of
 Panasonic digital camera (LUMIX) launched before July 2008.
- [AUDIO REC.] cannot be set in the following cases.
 - When recording with Auto Bracket
 - During burst shooting
 - When [SELF-TIMER] is set to [(((()#]
 - When recording with White Balance Bracket
 - When recording with Multi Film Bracket
- When [QUALITY] is set to [RAW], [RAW] or [RAW]

Using the [MOTION PICTURE] Mode Menu

- [METERING MODE], [I.EXPOSURE], and [DIGITAL ZOOM] are common to both the [REC] mode menu and [MOTION PICTURE] mode menu. Changing these settings in one of these menus is reflected in other menu.
 - For details, refer to the explanation for the corresponding setting in [REC] mode menu.

□.. [REC MODE]

For details on [MOTION PICTURE] mode menu settings, refer to P28.

This sets up the data format of motion pictures.

Applicable modes: TAPASM = C1 C2 SM 6

[AVCHD Lite]]/[| [MOTION JPEG]]

Note

• Refer to P100 for details.

[REC QUALITY]

For details on [MOTION PICTURE] mode menu settings, refer to P28.

This sets up the picture quality of motion pictures.

Applicable modes: APASM=PC1C2SM &

- When [REC MODE] is [AM [AVCHD Lite]]. [SH]/[H]/[L]
- When [REC MODE] is [☐ [MOTION JPEG]]. IHD]/[WVGA]/[VGA]/[QVGA]
- Note
- Refer to P100 for details.

≅AF [CONTINUOUS AF]

For details on [MOTION PICTURE] mode menu settings, refer to P28.

You can set the camera to always maintain the focus or fix the focus.

Applicable modes: APASM=PC1C2SM &

[OFF]/[ON]

Note

Refer to P103 for details.

≋ [WIND CUT]

For details on [MOTION PICTURE] mode menu settings, refer to P28.

This reduces the wind noise in the audio recording.

Applicable modes: fAPASM=PC1C25M6

[OFF]/[LOW]/[STANDARD]/[HIGH]

Note

• Refer to P103 for details.

Perform these settings if you need to.

Using the [CUSTOM MENU]

• In the Intelligent auto mode, only [CUST. SET MEM.], [GUIDE LINE] and [REMAINING DISP.] can be set.

For details on how to select the [CUSTOM MENU] menu settings, refer to P28.

	Up to 4 current camera settings can be registered as custom settings.
[CUST. SET MEM.]	[C1] [C2-1] [C2-2] [C2-3]

· Refer to P96 for details.

	This will se	et the display style of the LCD monitor.
[LCD DISP.STYLE]	[🔲]:	Viewfinder style
	[[]]:	LCD monitor style

[·] Refer to P56 for details.

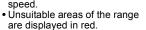
	This allows you to set either to display or not display the histogram. (P59)	
[HISTOGRAM]	[OFF]	
	[ON]:	Position of the histogram can be set. Refer to P59 on how to set.

	This will set the pattern of guide lines displayed when taking a picture. (P58)	
[GUIDE LINE]	[OFF]/[⊞]/[涨]	
	Position of the guide line can be set. Refer to P58 for how to set.	

			ether or not to display the exposure me to P/A/S/M etc.	ter when the mode dial is
		[OFF]		
		[ON]:	Set to [ON] to display the [EXPO.METER] when correcting exposure performing.	

[EXPO.METER]

 Set to [ON] to display the [EXPO.METER] when correcting exposure, performing programme shift, setting aperture, and setting shutter speed.



 The exposure meter will only be displayed when the camera is set to display information on the LCD monitor or optional external viewfinder (P56)

• The [EXPO.METER] disappears after approximately 4 seconds if no operation is performed.

	This will set what will be fixed by the [AF/AE LOCK] button when taking a picture with fixed focus or exposure.		
[AF/AE LOCK]	[AE]:	Only the exposure is locked.	
	[AF]:	Only the focus is locked.	
	[AF/AE]:	Both focus and exposure are locked.	

Refer to P75 for details.

	This will set the operation of [AF/AE LOCK] button when taking a picture with fixed focus or exposure.		
[AF/AE LOCK HOLD]	[OFF]:	The focus and the exposure are fixed only while you are pressing [AF/AE LOCK]. (P75) If you release [AF/AE LOCK], AF/AE Lock is cancelled.	
	[ON]:	The focus and the exposure remain fixed even if you release [AF/AE LOCK] after pressing it. If you press [AF/AE LOCK] again, AF/AE Lock is cancelled.	

	This will set the operation of the [@] button when displaying the preview screen.		
[PREVIEW HOLD]	[OFF]:	Preview screen is displayed only when the [@] is pressed. It will return to previous screen when [@] is released.	
	[ON]:	Preview screen is displayed even after the [@] is released after pressing. (P88) It will return to previous screen when [@] is pressed again.	

	Depending on the setting, camera will adjust the focus automatically before pressing the shutter button halfway.
[PRE AF]	[OFF]
	[QAF]: Quick AF
	[CAF]: Continuous AF

About [QAF] and [CAF]

 $[Q_{MF}]$ will adjust the focus automatically when the jitter of the camera gets small. $[C_{MF}]$ will adjust the focus at all times (continuous AF operation).

The camera will adjust the focus automatically, and the focus adjustment when the shutter button is pressed becomes faster. It is effective when you do not want to a photo opportunity.

Note

- The battery will be consumed faster than usual.
- Press the shutter button halfway again when it is difficult to focus on the subject.
- When [PRE AF] is set to [CAF], it may take time to focus on the subject if you rotate the zoom ring from Wide to Tele or suddenly change the subject from a distant one to a nearby one.
- [PRE AF] does not work during the Preview Mode.
- [PRE AF] does not work with lenses that do not allow auto focus. [CAF] does not work with lenses for which the focus mode cannot be set to [AFC]. (P15)

	Position and size of the AF area can be modified easily during recording.	
[DIRECT AF AREA]	[OFF]	
	[ON]:	AF area can be moved freely with ▲/▼/◄/▶ when [■] is selected.

Refer to P73 for details.

[FOCUS PRIORITY]	It will set	so no picture can be taken when it is out of focus.
	[OFF]:	This gives priority to the best time to take a picture so you can take a picture when the shutter button is pressed fully.
	[ON]:	You cannot take a picture until the subject is brought into focus.

- If you set [OFF], be careful as the picture may not be properly focused even if [AFS] or [AFC] in Focus Mode is set.
- [AFS] or [AFC] will not operate with certain lenses. For details, refer to page 15.
- This does not operate during motion picture recording.

[AF ASSIST LAMP]	Illuminating the subject makes it easier for the camera to focus when recording in low light conditions that make focusing difficult.		
	[OFF]:	The AF assist lamp does not turn on.	
	[ON]:	When taking pictures in dark places, the AF assist lamp lights while the shutter button is pressed halfway. (Larger AF areas are now displayed.)	

- The effective range of the AF assist lamp is different depending on used lens.
 - When 20 mm/F1.7 lens included in DMC-GF1C is attached: Approx. 1.0 m to 3.5 m
 - When 14-45 mm/F3.5-5.6 lens included in DMC-GF1K is attached and at Wide: Approx. 10 m to 30 m
- · When you do not want to use the AF assist lamp (e.g. when taking pictures of animals in dark places), set the [AF ASSIST LAMP] to [OFF]. In this case, it will become more difficult to focus on the subject.
- Remove the lens hood.
- When you use a lens with a large filter diameter that obscures the AF assist lamp, shadows may appear on the picture and the performance of the camera may deteriorate.
- The setting for the [AF ASSIST LAMP] is fixed to [OFF] in [SCENERY], [ARCHITECTURE]. INIGHT SCENERY and ISUNSETI in Scene Mode.

It is po automa		sible to adjust focus manually after it was adjusted ically.
	[OFF]	
[AF+MF]	[ON]:	It is possible to finely adjust the focus manually by rotating the focus ring while AF lock (Focus Mode is set to [AFS] and shutter button is half-way pressed, or AF lock with [AF/AE LOCK]).
	In Manua	al Focus, the assistance screen appears on the screen to

	In Manual Focus, the assistance screen appears on the screen to facilitate focusing on the subject.		
[MF ASSIST]	[OFF]		
	[ON]:	Centre of the screen will be enlarged automatically when the focus ring is rotated.	

Refer to P74 for details.

This changes the angle of view during motion picture recording and still picture recording.
[[Picture)/[22] (Motion picture)

• The recording area indicated is a guide line.

	This will switch display between the number of recordable pictures and available recording time.
[REMAINING DISP.]	o:回 [REMAINING SHOTS]: This will display the number of recordable pictures for still pictures.
	#: ① [REMAINING TIME]: This will display the available recording time for motion pictures.

[BUTTON]	Enables/disables the motion picture button.
[BOTTON]	[OFF]/[ON]

[DIAL GUIDE]	Sets if the operation switch guide when the mode dial is switched to \cite{R} , \cite{A} , \cite{S} and \cite{M} is to be displayed or not.
	[OFF]/[ON]

 It will display dial operation guide to the screen that is possible to perform Exposure Compensation, Programme Shift, aperture setting, or shutter speed setting when set to [ON].

A Dial operation guide



The last operated menu position is saved even if the camera is turned off.
[OFF]/[ON]

[PIXEL REFRESH]	It will perform optimization of imaging device and image processing.
-----------------	--

- Imaging device and image processing is optimised when the camera is purchased. Use this function when bright spots not in subject get recorded, and it is bothering you.
- Turn the camera off and on after the pixels are corrected.

SENSOR	CLEANING]
LOTINGOIN	0,0]

Dust reduction to blow off the debris and dust that have affixed to the rear of the imaging device is performed.

• Dust reduction function will operate automatically when the camera is turned on, but you can use this function when you see dust. (P172)

	It is possible to setup so the shutter will not operate when there is no lens on the unit.	
[SHOOT W/O LENS]	[OFF]:	You cannot press the shutter button when a lens is not attached to the camera body or is not attached correctly.
	[ON]:	Shutter will operate regardless of the lens on the unit.

	This will set the display style of the optional external viewfinder (P162)	
[LVF DISP.STYLE]	[🔲]:	Viewfinder style
	[[]]:	LCD monitor style

[•] You can only select this function when the Optional External Viewfinder (P162) is attached.

Refer to P56 for details

Playing Back Motion Pictures/Pictures with Audio

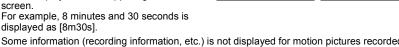
- This unit was designed to play motion pictures and still pictures with audio using the QuickTime Motion JPEG and AVCHD Lite formats that were taken with this model (only).
- Only [AVCHD Lite] motion pictures recorded with this unit and Panasonic digital cameras (LUMIX) can be played back with this unit as AVCHD Lite format.

Press [].

Motion pictures

Press **◄/▶** to select a picture with a motion picture icon (such as [22]), and then press ▲ to play back.

- (A) Motion picture icon
- (B) The motion picture recording time
- After playback starts, the elapsed playback time is displayed on the upper right of the

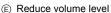


• Some information (recording information, etc.) is not displayed for motion pictures recorded in [AVCHD Lite].

■ Operations performed during motion picture playback

The cursor displayed during playback is the same as $\triangle / \nabla / \blacktriangleleft / \triangleright$.

- A Play/Pause
- B Stop
- Fast rewind, Frame-by-frame rewind*
- Fast forward, Frame-by-frame forward*
- These operations can be performed only in the Pause Mode.



(F) Increase volume level







- Please note that the bundled software includes QuickTime or "PHOTOfunSTUDIO 4.0 HD Edition" to play back motion picture files created with the camera on the PC.
- QuickTime Motion JPEG motion pictures that were recorded with a PC or other equipment may have lower image quality or may not be able to play back with this unit.



Pictures with audio

Press ◄/► to select a picture with the audio icon [☑] and then press ▲ to play back.

- (A) Audio icon
- Refer to [AUDIO REC.] (P124) and [AUDIO DUB.] (P147) for information about how to create still pictures with audio.



Note

- Sound can be heard through the speaker. Refer to [VOLUME] (P33) for information about how to adjust the volume in the [SETUP] menu.
- Pictures with audio recorded with other equipment may not playback on this unit.
- When using a high capacity card, it is possible that fast rewinding may be slower than usual.

Using the [PLAYBACK] mode menu

You can use various functions in playback mode to rotate pictures, set protection for them etc.

• With [TEXT STAMP], [RESIZE], [TRIMMING] or [ASPECT CONV.], a new edited picture is created. A new picture cannot be created if there is no free space on the card so we recommend checking that there is free space and then editing the picture.

□ [SLIDE SHOW]

You can create a slide show and add music to enhance the presentation. In addition the pictures will play with a fixed interval between each of the picture that you select. You can select to play, only still pictures, only motion pictures, designated "favourite" pictures, or pictures registered with face recognition as a slide show. To best enjoy this feature it's recommended that you connect your digital camera to your TV set.

- Select [SLIDE SHOW] on the [PLAYBACK] mode menu. (P28)
- [MENU/SET].

 [FAVORITE] can be selected only when [FAVORITE] on the

 [PLAYBACKI many (P137) is at [ON] and there are nictures.

Press ▲/▼ to select the item and then press

 [FAVORITE] can be selected only when [FAVORITE] on the [PLAYBACK] menu (P137) is at [ON] and there are pictures already set as favourites.



When [ALL], [PICTURE ONLY], [MOTION PIC. ONLY] or [FAVORITE] has been selected in step 2

Press ▲ to select [START] and then press [MENU/SET].



- Press ▼ to finish the slide show.
 - · Normal playback resumes after the slide show finishes.

When [CATEGORY SELECTION] has been selected in step 2

Press ▲/▼/◀/▶ to select the category to play back and then press [MENU/SET] to set.

For details on categories, refer to P136.



Press **A** to select [START] and then press [MENU/ SET].





Press ▼ to finish the slide show.

Normal playback resumes after the slide show finishes.

■ Operations performed during slide show

The cursor displayed during playback is the same as ▲/▼/◄/▶.

- The menu screen is restored when [前] is pressed.
- A Play/Pause
- Stop
- Back to previous picture*
- Ahead to next picture
- * These operations can be performed only in the Pause Mode or during motion picture playback.
- Reduce volume level
- (F) Increase volume level





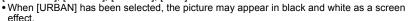
■ Changing the slide show settings

You can change the settings for slide show playback by selecting [EFFECT] or [SETUP] on the slide show menu screen.

[EFFECT]

This allows you to select the screen effects when switching from one picture to the next.

[NATURAL], [SWING], [URBAN], [OFF]



• [EFFECT] is set to [OFF] when playing a slide show with motion pictures only.

[SETUP]

[DURATION] or [REPEAT] can be set.

Item	Settings
[DURATION]	1SEC./2SEC./3SEC./5SEC.
[REPEAT]	ON/OFF
[MUSIC]	ON/OFF
[AUDIO]	ON/OFF

- [DURATION] can be set only when [OFF] has been selected as the [EFFECT] setting.
- [AUDIO] can be set only when [OFF] has been selected as the [MUSIC] setting. Audio will be played along with the still picture with audio or audio of the motion picture by setting the [AUDIO] to [ON].



- Music effects cannot be played back simultaneously with motion pictures or still pictures with audio.
- It is not possible to add new music effects.

Os [PLAYBACK MODE]

Playback in [NORMAL PLAY], [PICTURE PLAY], [AVCHD Lite PLAY], [MOTION JPEG PLAY], [CATEGORY PLAY] or [FAVORITE PLAY] can be selected.





Select [PLAYBACK MODE] on the [PLAYBACK] mode menu. (P28)



Press ▲/▼ to select the item and then press IMENU/SET1.

- [FAVORITE PLAY] can be selected only when [FAVORITE] on the [PLAYBACK] menu (P137) is at [ON] and there are pictures already set as favourites.
- Refer to P50 for information about how to play back pictures in [NORMAL PLAY], [PICTURE PLAY], [AVCHD Lite PLAY], [MOTION JPEG PLAY] or [FAVORITE PLAY] can be selected.

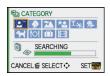
PLAYBACK MODE INORMAL PLAY PICTURE PLAY AVCHO Lite PLAY MAYOTION JPEG PLAY CANCEL SELECT SET

When [CATEGORY PLAY] is selected in step 2



Press $\blacktriangle/\blacktriangledown/\blacktriangleleft/\blacktriangleright$ to select the category and then press [MENU/SET] to set.

- If a picture is found in a category, the category icon turns blue.
- It may take time to search the picture files if there are a lot on the card
- If you press [iii] while searching, the searching will stop halfway.
- Pictures are sorted into the categories shown below.



[CATEGORY]	Recording information e.g. Scene Modes
₽≣	[FACE RECOG.]*
Đ	[PORTRAIT], [i-PORTRAIT], [SOFT SKIN], [NIGHT PORTRAIT], [i-NIGHT PORTRAIT], [BABY1]/[BABY2], [i-BABY]
2	[SCENERY], [i-SCENERY], [ARCHITECTURE], [SUNSET]
* <u>•</u>	[NIGHT PORTRAIT], [i-NIGHT PORTRAIT], [NIGHT SCENERY], [i-NIGHT SCENERY], [ILLUMINATIONS]
T _{3g}	[SPORTS], [PARTY]

[CATEGORY]	Recording information e.g. Scene Modes
9.	[BABY1]/[BABY2], [i-BABY]
**	[PET]
io	[FOOD]
Ō	[TRAVEL DATE]
	[AVCHD Lite], [MOTION JPEG]

* Press ▲/▼/◄/▶ to select the person to playback and then press [MENU/SET]. Face Recognition may not be possible or may not recognise faces correctly even for registered faces, depending on the facial expression and environment. Also, if there are multiple faces that are already registered in the picture, it will be categorized only once to the person found first in the registration.

★ [FAVORITE]

You can do the following if a mark has been added to pictures and they have been set as favourites.

- Play back the pictures set as favourites only as a slide show.
- Play back only the pictures set as favourites. ([FAVORITE PLAY])
- Delete all the pictures not set as favourites. ([ALL DELETE EXCEPT★])



Select [FAVORITE] on the [PLAYBACK] mode menu. (P28)



Press ▼ to select [ON] and then press [MENU/SET].

 You cannot set pictures as favourites if [FAVORITE] is set to [OFF]. Also [★] will not appear when [FAVORITE] is set to [OFF] even if it was previously set to [ON].





Press [MENU/SET] to close the menu.



Press ◀/▶ to select the picture and then press ▼ to set it during playback.

- Repeat the above procedure.
- If ▼ is pressed again, the favourite setting is cancelled.



■ Cancelling all the [FAVORITE] settings

- 1 Select [CANCEL] on the screen shown in step 2 and then press [MENU/SET].
- 2 Press ▲ to select [YES] and then press [MENU/SET].
- 3 Press [MENU/SET] to close the menu.
- You cannot select [CANCEL] if not even one picture has been set as a favourite.
- [CANCEL] cannot be selected when in [PLAYBACK MODE].



- You can set up to 999 pictures as favourites.
- When printing pictures at a photo printing store, [ALL DELETE EXCEPT★] (P54) is useful so
 only the pictures you want to be printed remain on the card.
- You may not be able to set pictures taken with other equipment as favourites.
- The motion pictures recorded in [AVCHD Lite] and pictures that were taken with the [QUALITY] set to [RAW] cannot be set to [FAVORITE].

[[TITLE EDIT]

You can add text (comments) to pictures. After text has been registered, it can be included in prints using [TEXT STAMP] (P139). (Only alphabetic characters and symbols can be entered.)

Names set in [BABY1]/[BABY2] and [PET] in Scene Mode or [LOCATION] in Travel Date are also recorded as the titles.



Select [TITLE EDIT] on the [PLAYBACK] mode menu. (P28)



Press ▲/▼ to select [SINGLE] or [MULTI] and then press [MENU/SET].



3

Select the picture, and then press [MENU/SET] to set.

 [] is displayed for pictures with titles already registered.

[MULTI] setting Press [DISPLAY] to set (repeat), and then press [MENU/SET] to set. [SINGLE]



[MULTI]



ABCDEFGHIJKLMNOP

QRSTUVWXYZÀÂÄÇÈÉ ÊËÎÏÑÔÖ ÙÛÜŒ

8 SPACE DELETE EXIT

CANCEL 位 SELECT ◆

CAN DISPLAY

INPUT

Press $\blacktriangleleft/\blacktriangleright$ to select Press $\blacktriangle/\blacktriangledown/\blacktriangleleft/\blacktriangleright$ to the picture.

• The setting is cancelled when [DISPLAY] is pressed again.



Press $\blacktriangle/\blacktriangledown/\blacktriangleleft/\blacktriangleright$ to select text and then press [MENU/SET] to register.

- Press [DISPLAY] to switch text between [A] (capitals), [a] (small case) and [&/1] (special characters and numbers).
- The entry position cursor can be moved left and right with the rear dial.
- rear dial.
 To enter a blank, move the cursor to [SPACE] or to delete an entered character, move
 the cursor to [DELETE], and press [MENU/SET].
- To stop editing at any time during text entry, press [前].
- A maximum of 30 characters can be entered. (Maximum of 9 characters when setting names in [FACE RECOG.])



Press $\triangle/\nabla/\blacktriangleleft/\triangleright$ to move the cursor to [EXIT] and then press [MENU/SET] to end text input.



Press [m] to return to the menu screen.*

- *The menu screen is automatically restored when [MULTI] is selected.
- Press [MENU/SET] to close the menu.

■ Delete the title

[SINGLE] setting

- In step 4, delete all the texts, select [EXIT], and press [MENU/SET].
- 2 Press [前].
- 3 Press [MENU/SET] to close the menu.

[MULTI] setting

- Select [EXIT] without entering text in step 4, and then press [MENU/SET].
- 2 Press [MENU/SET] to close the menu.
- Note
- Text can be scrolled if all of the registered text does not fit on the screen.
- The name setting of [FACE RECOG.] or [BABY1]/[BABY2] and [PET] in Scene Mode or [LOCATION] in Travel Date can also be registered by using the operation in steps 4 and following.
- The name setting of [BABY1]/[BABY2] or [PET] in Scene Mode, [LOCATION] in Travel Date and ITITLE EDITI cannot be registered at the same time.
- You can print out texts (comments) using the "PHOTOfunSTUDIO 4.0 HD Edition" bundled software on the CD-ROM (supplied).
- You can set up to 50 pictures at one time with [MULTI].
- You cannot use title edit for the following pictures.
 - Motion pictures
 - Protected pictures
 - Pictures taken with [RAWata], [RAWata] or [RAW]
 - Pictures recorded with other equipment

☐ [TEXT STAMP]

You can stamp the recording date/time, age, travel date or title onto the recorded pictures. It is suitable for regular size printing. (Pictures with a picture size larger than [S] will be resized when stamping the date etc. on them.)



Select [TEXT STAMP] on the [PLAYBACK] mode menu. (P28)



Press ▲/▼ to select [SINGLE] or [MULTI] and then press [MENU/SET].





Select the picture, and then press [MENU/SET] to set.

• [M] appears on screen if the picture is stamped with text.

[MULTI] setting Press [DISPLAY] to set (repeat), and then press [MENU/SET] to set.

. The setting is cancelled when [DISPLAY] is pressed again.

[SINGLE]



Press $\blacktriangleleft/\triangleright$ to select Press $\blacktriangle/\blacktriangledown/\blacktriangleleft/\triangleright$ to the picture.

[MULTI]

select the pictures.



Press ▲/▼/◄/► to select [SHOOTING DATE], [AGE], [TRAVEL DATE] or [TITLE] and then press [MENU/SET] to set each item.

[SHOOTING DATE]

[W/OTIME]: Stamp the year, month and date.

[WITHTIME]: Stamp the year, month, day, hour and minutes.

[AGE] (P92)

If this is set to [ON], [AGE] is stamped on the pictures.

[TRAVEL DATE]

If this is set to [ON], [TRAVEL DATE] is stamped on the pictures.

[TITLE]

Text is printed together with the image for pictures that have already been recorded with text in [FACE RECOG.] or [BABY1]/[BABY2] and [PET] name settings in Scene Mode. [LOCATION] in Travel Date or ITITLE EDITI.

5

Press [MENU/SET].

If you set [TEXT STAMP] for a picture with a picture size larger than [S], the picture size
will become smaller as shown below.

Aspect ratio setting	Picture size
4:3	$L/M \rightarrow S$
3:2	L / M \rightarrow S
16:9	$L/M \rightarrow S$
1:1	L/M → S

· The picture becomes slightly rougher.



Press ▲ to select [YES] and then press [MENU/SET].

 The message [SAVE NEW PICTURES?] appears if the picture was recorded with a picture size [S].





Press [m] to return to the menu screen.*

- *The menu screen is automatically restored when [MULTI] is selected.
- Press [MENU/SET] to close the menu.



- When you print pictures stamped with text, the date will be printed over the stamped text if you specify printing of the date at the photo shop or on the printer.
- You can set up to 50 pictures at one time in [MULTI].
- Depending on the printer being used, some characters may be cut at printing. Check before printing.
- Text and dates cannot be stamped on the pictures in the following cases.
- Motion pictures
- Pictures with audio
- Pictures recorded without setting the clock and title
- Pictures that were previously stamped with [TEXT STAMP]
- Pictures taken with [RAW===], [RAW===] or [RAW]
- Pictures recorded with other equipment