

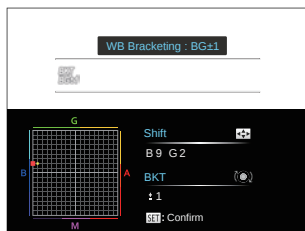
WB Bracketing:

Press the **SET** button to enter options and then press the [**▲ AF**]/[**▼**]/[**◀**]/[**▶**] button to adjust the shift and turn the jog dial to adjust the BKT value (0, 1 and 2).

Rotate clockwise to adjust X axis (B-A). BKT value

Rotate counterclockwise to adjust Y axis (G-M). BKT value

Press the **SET** button to confirm your settings.



WB bracketing is for setting the bracketing range. Shift to both sides for 3 spaces at most. If at the page border, shift only to the other side and 2 photos can be taken. If no shift, only one photo can be taken.

Continuous Shot Mode

Functions that can be enabled under each mode may be different.

Mode :  **PSAM** +  **SCNCS**

For setting the single, continuous shot, Time-Lapse, HDR, WDR or AE bracketing functions.

Please follow the following steps to set:

1. Press the  button to enter the continuous shot menu.



2. Press the [ ]/[ ] button to select the following 8 modes:

-  Single
Capture a single shot only.

-  Continuous Shot
For taking more than one picture continuously.
-  Cont. Shot-Fast (2M)
For continuous shot with 2M pixels.
-  Cont. Shot-High Speed (VGA)
For continuous shot with VGA pixel.
-  Time-Lapse
Take pictures based on the preset interval (30sec/ 1min/ 5min/ 10min). Press the  button to select the interval time.
-  HDR (-1EV, 0EV, +1EV)
This setting is to control the high dynamic image range in taking still pictures, with vivid effect in highlight and that the effect in dark parts can identify the outline and depth of the object. (Use of tripod is recommended)



- HDR effect may be affected by handshaking, light, subject movement or shooting environment.
- The flash is not available in HDR mode.
- It may take longer to save a photo in HDR.



- **WDR** (Wide Dynamic Range)
When the camera detects that there is a big contrast in brightness between scenes and such scenes are against the light, it will automatically adjust the brightness and saturation to capture an image that better represents the scene.



- WDR is not available in  mode.
- For WDR in the **SCN** mode:
 : adjustable;
 /  : unadjustable and on by default;
Other modes: not available.



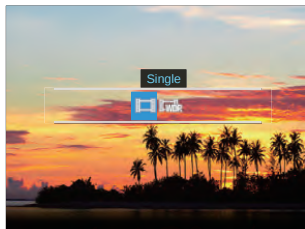
Please refer to page 135–136 for a detailed explanation of HDR and WDR effects.



- **Bracketing** (0.3EV, 0.7EV, 1.0EV, 1.3EV, 1.7EV, 2.0EV)
The camera will automatically and continuously take three pictures separately with a brightness of original, darker and brighter as long as you press the shutter once. Press the  button to select the range of exposure.

- Press the  button to confirm the settings and then enter shooting screen.

Mode: 



Single



WDR

Exposure Compensation Functions Setting

The EV Function Menu of the camera includes functions, such as EV (Exposure Value) Adjustment, ISO, Shutter Adjustment, Aperture Adjustment, etc. Using the appropriate Function Settings can improve your pictures.

Please follow the steps below to set:

1. Press the  button to display the Settings screen.
4 options in [Exposure Compensation Functions Setting]:
 - EV Adjustment
 - ISO Adjustment
 - Shutter Speed Adjustment
 - Aperture Adjustment
2. Press the [ ]/[ ] button to select the Setting options.
3. Press the [ **AF**]/[  ] button to adjust the option values.
4. Press the  button to complete the setting and enter shooting screen.

EV Adjustment

Set up Exposure Compensation to adjust the picture brightness. If there is very high contrast between the photographed object and the background, the brightness of the picture can be adjusted as necessary. (This can be adjusted in **PSA**  Mode)

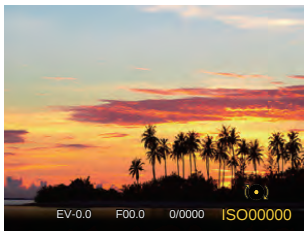


The adjustable range of exposure value is from EV -3.0 to EV +3.0.

ISO Adjustment

ISO allows you to set the sensitivity of the camera sensor. Please use a higher ISO value in darker places and a lower value in brighter conditions.

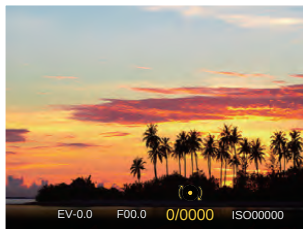
(This can be adjusted in **P S A M** +  Mode)



Options of ISO value: Auto, 100, 200, 400, 800, 1600 and 3200.

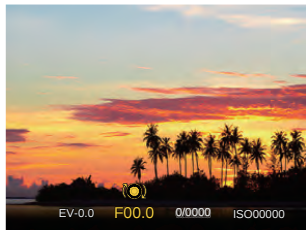
Shutter Speed Adjustment

For shutter speed, the camera may automatically set the aperture value corresponding to the manually set shutter speed so as to obtain a most suitable exposure value. The movement of object may be shown by adjusting the shutter speed. High shutter value can help you more clearly capture fast moving objects, while low shutter value can better show the movement of objects. (This can be adjusted in **S M** Mode)



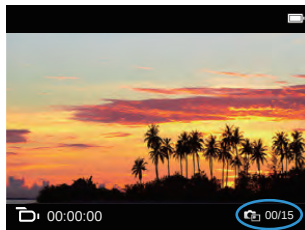
Aperture Adjustment

You can adjust the aperture size value. Selecting a large aperture opening will emphasize the point of focus and show a blurry background and foreground. A small aperture opening will keep both the background and main object in clear focus. (This can be adjusted in **AM** Mode)



Using Quick Recording

In Photo Shooting Mode, press the  button to begin recording video.



15 pictures at most can be taken by pressing the shutter when recording.

The sizes of images taken are as below when playing them back:

FHD -> 2M **2m**

HD -> 1M **1m**

DVD -> VGA **VGA**

Once you are finished, press the  button again to stop recording. The camera will save the video and return to the shooting screen.

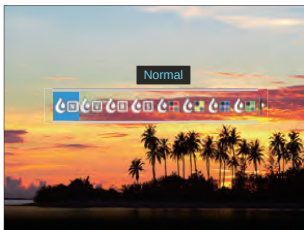
"i" Button Function Menu

Functions that can be enabled are different under each mode.

Mode: **PSAM**

The image color setting allows you to select different effects.

1. Press the (i) button to select the Image color setting menu.



2. Press the [◀🌿]/[▶⚡] button to select the image color setting options.

- Normal
- Vivid
- Black and White
- Sepia

- Partial Color-Red
- Partial Color-Yellow
- Partial Color-Blue
- Partial Color-Green
- Dreamy
- Vignetting
- Salon
- Punk
- Negative
- Reflection
- Sketch
- Fish Eye
- 4 Grids - Stylish(2M)



Fish Eye effect is not available when shot size is 20M.

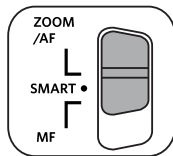
Using the Lens Function Ring

There is a lens function ring lever in one side of the lens. Moving it up and down can switch among ZOOM/AF, SMART and MF mode.

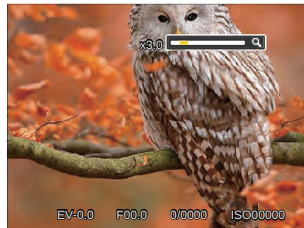
Zoom/AF Mode

Rotate the lens function ring for optical zoom.

1. Switch the lens function ring lever to position **ZOOM /AF**.



2. Rotate the lens function ring to optically zoom the object.

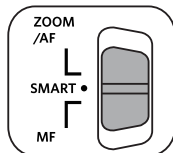


Rotating the lens function ring in Zoom/AF mode is only for optical zoom.

Function Ring (Smart) Mode

Rotate the lens function ring to set parameters of aperture, shutter, ISO, EV, etc.

1. Switch the lens function ring lever to position **SMART**.



2. Rotate the lens function ring or turn the  jog dial to select options needed.



3. Press the  button to complete the setting and enter shooting screen.



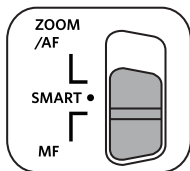
The selection of functions of Function Ring (Smart) in the menu is needed before using Function Ring (Smart) mode. The default setting is Normal. (See P91 for details)

Options	Referred Pages
Normal	P64
Aperture Priority	P66
Shutter Priority	P65
EV	P64
ISO	P65
Continuous Shot	P62
Color	P67
White Balance	P60
Image Size	P82
Expo Metering	P79
Flash	P58
AF Area	P55

MF(Manual Focus) Mode

Rotate the lens function ring for manual focus.

1. Switch the lens function ring lever to position **MF**.



2. If the lens function ring is operated or the  jog dial is turned the focus enlargement frame will appear on the LCD. After clear focus is achieved through manual adjustment, press the (SET) button to close the focus enlargement frame. The camera will return to the normal shooting screen. Semi-pressing the shutter button will have no effect; you need to fully press the shutter button to take a normal photo.



-  Manual focus works only under the **PSAM** mode.
-  The MF assist needs to be enabled in the menu before it will function. (See P85 for details)

PLAYBACK

Viewing Photos and Videos

For viewing taken photos and videos on the LCD:

1. After pressing the , the last photo or video clip taken will be displayed on the LCD.
2. Press the []/[] button to scroll through the photos or video clips stored in the built-in memory or on the Memory Card.
3. To play a selected video clip, press the  button to enter the movie playback mode.

An operation guide appears on the screen when playing back a video. Press the appropriate buttons to enable the corresponding functions.

Under Playback



Paused



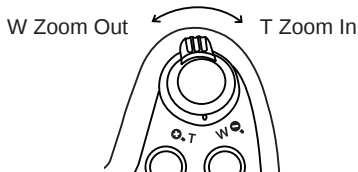
 	Pause
 	Rewind
 	Fast Forward

	Clockwise Volume Up
	Counterclockwise Volume Down
	Volume
	Mute

 	Play
 	Frame Backward
 	Frame Forward
 	Cancel Playback

Thumbnail View

When in Playback Mode, rotate the Zoom Lever counter to the **W** position to display thumbnail images of the photos and videos on the screen.



1. Slide the Zoom lever to switch between 3 x 3 and 4 x 4 thumbnails.



2. Press the [**▲ AF**] / [**▼**] / [**⏏**] / [**⏏**] / [**⏏**] / [**⏏**] button to select a picture or video clip to view and press the **(SET)** button to restore it to the original size.
3. As shown in the picture, press the **(⏏)** button to select index mode.
4 options in [Index Mode] :
 - Single Index
 - Date Folder
 - Cont. Group
 - Slide Show



When the icon  appears, it means this is a video file.

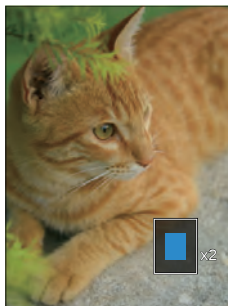


When the icon  appears, it means this is a continuous group file.

Using Zoom Playback (for still pictures only)

When playing back photos, you can also use the Zoom Lever to zoom in on the photos 2 to 8 times their original magnification.

1. Press the  button to switch to Playback Mode.
2. Press the []/[] button to select a picture to be zoomed in on.
3. Rotate the Zoom lever to  position to zoom in.
4. Roll the  jog dial clockwise to zoom in and counterclockwise to zoom out.
5. The bottom right corner of the LCD will display the number of times the image is magnified and area of the photo shown.



6. Press the [ **AF**]/[  ]/[]/[] button to navigate and select a portion of the photo to be zoomed in on.
7. Press the  button to return the image to its original scale.



Movie images cannot be magnified.

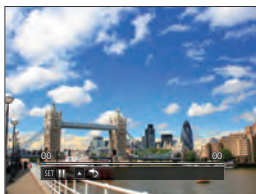
Continuous Shot Group Playback

High speed (VGA) and fast (2M) Continuous Shot images can be played back as a group.

1. Press the  button to enter Playback Screen.
2. Press the /[] button to select Continuous Group.
3. Press the  button to start playback.



Cont. Group



Playing



Pause

 	Pause
 	Cancel Play (back to 1:1 playback for Continuous Group)

Playing

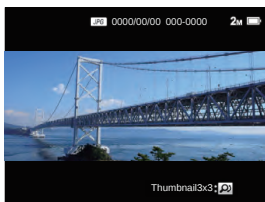
 	Play
 	Previous Photo (loop available only in Continuous Group)
 	Next Photo (loop available only in Continuous Group)
 	Cancel Play (back to 1:1 playback for Continuous Group)

Pause

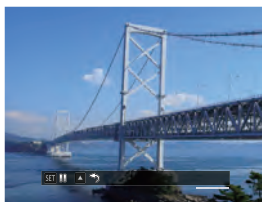
Animation Panorama Play

Panoramic Animation Playing is to play full size image in accordance with the shooting direction. After playing, it will automatically return to the static screen of panoramic image.

1. Press the  button to enter Playback Screen.
2. Press the []/[] button to select animated panoramic photos.
3. Press the  button to play in selected shooting direction.



Video Panorama



Playing



Pause

 	Pause
 	Cancel Play



In the process of panoramic animation playback, press the [ **AF**] button to stop playing and return to the playback screen.



Picture will not be rotated during panorama play or pause.

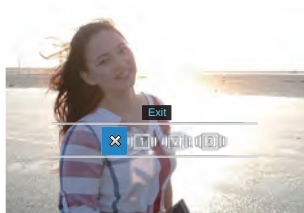
Slideshow

This setting allows you to view all the stored images as a slideshow.

1. Press the  button to enter playback screen.
2. Rotate the Zoom lever counter to the **w**  position to display thumbnails 3 x 3 and then press the  button to select the index mode.



3. Press the    button to select Slideshow Playing and then press the  button to enter slide option.
4. Press the    button to select play effect and then press the  button to confirm.



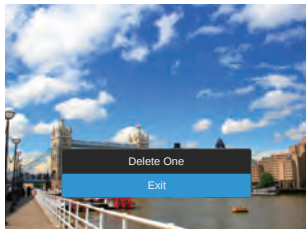
-  Exit
-  Type 1: Slow-in and slow-out
-  Type 2: Separate in middle and move off to the left and right
-  Type 3: Separate into blocks and spin in

Deleting Photos and Videos

In Playback Mode, press the [▼ 🗑️ ⌂] button to delete your photos and videos.

To delete photos or videos:

1. Press the [⏮] button to switch to playback mode.
2. Press the [⏮ ⏪]/[⏩ ⏭] button to select the photos or videos to be deleted.
3. Press the [▼ 🗑️ ⌂] button and the deletion screen is displayed.



4. Press the [▲ AF]/[▼ 🗑️ ⌂] button to select [Delete One] or [Exit] and press the [SET] button to confirm.



Erased photos/video clips cannot be recovered.



Please refer to page 98 for instructions on deleting more than one image at a time.

USING THE MENUS

Shooting Menu

Mode: **P** **S** **A** **M** **S** **C** **N** **C** **S**

1. In Shooting Mode, press the button to enter the Shooting Menu.

12 options in [Shooting Menu]:

- Continuous Shot Mode (refer to P62)
- Expo Metering
- AF (Auto Focus) Area (refer to P55)
- WB (White Balance) Mode (refer to P60)
- Macro Mode (refer to P56)
- Color (refer to P67)
- Flash mode (refer to P58)
- OIS (Optical Image Stabilization)
- Self-Timer Mode (refer to P57)
- Beautifier (Adjustable only in Mode)
- Select Scene
(Adjustable only in **SCN** Mode)
- Menu

2. Press the [**AF**]/[] button to select the shooting menu to be set.
3. Press the []/[] button or turn the jog dial to select options of the shooting menu to be set and then press the button to confirm.

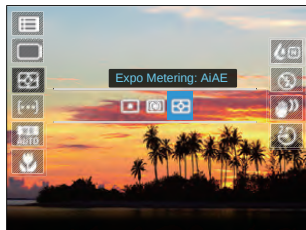
Refer to the following pages for more details about each setting.



Functions that can be enabled are different under each mode.

Expo Metering

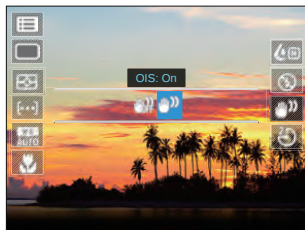
Use this setting to select the “target” size of the camera’s field of view to be metered.



-  Spot
For metering the block displayed in the center of the screen.
-  Center
For metering the object in the center of the screen.
-  AiAE (Artificial Intelligence AE)
Evaluates the light intensity at multiple points in the frame and automatically determines the best value for the light meter.

OIS (Optical Image Stabilization)

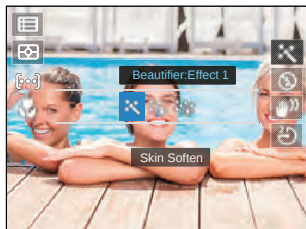
This mode can help reduce photo blur caused by unintentional shaking, or low light.



-  OIS: Off
 -  OIS: On
-  Use this image stabilization mode in dark environments.
 -  Shooting in a windy or unstable environment (such as a moving vehicle) may cause blurry images.
 -  You may not need OIS when using a tripod.

Beautifier

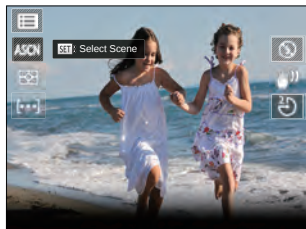
Select the effect for Face Beautifier Mode.



- Effect 1: Skin Soften
- Effect 2: Skin Soften
+ Eye Brightening
- Effect 3: Skin Soften
+ Eye Brightening
+ Eye Enlargement

Select Scene

Select a scene mode under SCN Mode.



Shoot Setting1

Mode:  **PSAM**  **SCNCS**  

1. Press the  button, press the [ **AF**]/[  ] button to select .
 2. Press the  button to enter the menu.
 3. Press the [ ]/[ ] button to select **1**.
- 6 options in [Shoot Settings 1]:
- Image Size
 - Movie Size
 - Quality
 - MF Assist
 - AF Assist Beam
 - Digital Zoom



Functions that can be enabled are different under each mode.

4. Press the [ **AF**]/[  ] button to select the item to be set and press the  button to enter the menu.
5. Press the [ **AF**]/[  ] button to select an option and press the  button to confirm.

Image Size

The Size setting refers to the image resolution in pixels. A higher image resolution allows you to print that image in larger sizes without degrading the photo image quality.



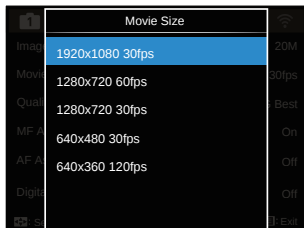
- 20M: High quality printing
- 18M-3:2: full size printing
- 15M-16:9: 16:9 display
- 10M: poster printing
- 5M: A3 printing
- 3M: A4 printing
- 2M-16:9: 4"x 6" printing
- VGA: E-Mail



The larger the number of recorded pixels, the larger the file size and the fewer files that can be saved on your memory card.

Movie Size

Set the image resolution used during video recording.



Total time of video recorded for each setting:

No.	Image Pixels	Frames (fps)	Recommendation	Recording Time (approximate) (4GB)
1	1920 x 1080 *	30	Class 6	30 Minutes
2	1280 x 720 *	60	Class 6	33 Minutes
3	1280 x 720 *	30	Class 4	59 Minutes
4	640 x 480	30	Class 4	105 Minutes
5	640 x 360	120	Class 6	54 Minutes



* The longest recording time is 29 minutes at one time.



When recording in higher pixel resolutions for extended periods of time, this can cause the camera to generate heat. This is not a camera malfunction.



When the video format is set as 640 x 360 (120fps), shooting time is 30 seconds, playback time is 2 minutes.



Sound recording is disabled when 640 x 360 120fps is chosen.

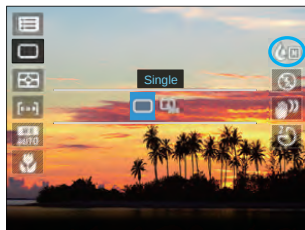
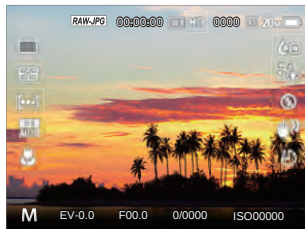
Quality

The Quality setting can be used to adjust the image compression ratio.



- RAW+JPG (Available in **PSAM** mode)
Creates two images: one in RAW and the other in JPG best.
- RAW (Available in **PSAM** mode)
The image file will contain more data that can be used for the purpose of editing on a computer.
- JPG Fine
- JPG Best

If RAW or RAW+JPG is selected, the settings of Colour Effect, Continuous Shot, Cont.Shot-Fast (2M), Cont.Shot-High Speed (VGA), HDR and AE Bracketing cannot be adjusted.

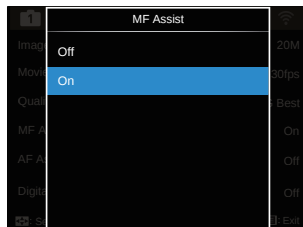


The RAW file format provides lossless compression of the image data, which is not processed by the camera. The RAW file may be opened and modified using the image processing software, PhotoStudio Darkroom, that is located on the CD-ROM included with this camera. PhotoStudio Darkroom supports Windows 7/8/10 and Mac OS X (V10.8~V10.11).

MF (Manual Focus) Assist

Enables an enlarged focus window during the use of manual focus to provide the user better visibility for focus control.

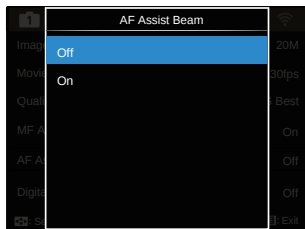
(Adjustable in **PSAM** mode)



- Off
- On

AF Assist Beam

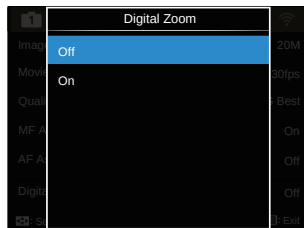
In a darker environment, the AF assist beam setting can be turned on for better focus.



- Off
- On

Digital Zoom

This setting is for adjusting digital zoom. If this function is disabled, only optical zoom can be used.



- Off
- On

Shoot Setting 2

Mode:  **PSAM** +  **SCNCS**  

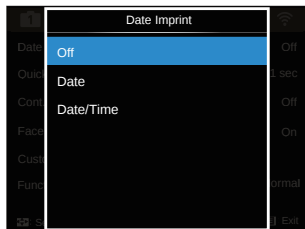
1. Press the  button, press the [ **AF**] / [  ] button to select .
2. Press the  button to enter the menu.
3. Press the [ ] / [ ] button to select .
6 options in [Shoot Settings 2]:
 - Date Imprint
 - Quick Review
 - Continuous AF
 - Face Detection
 - Custom Settings
 - Function Ring (Smart)
4. Press the [ **AF**] / [  ] button to select the item to be set and press the  button to enter the menu.
5. Press the [ **AF**] / [  ] button to select an option and press the  button to confirm.



Functions that can be enabled are different under each mode.

Date Imprint

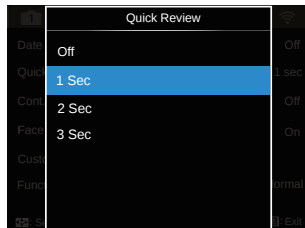
Include a Date/Time stamp on the photo image.



- Off
- Date
- Date / Time

Quick Review

This option enables a quick review of images immediately after capture. Each picture will be displayed on the LCD screen per the selections below.



- Off
- 1 sec
- 2 sec
- 3 sec

Continuous AF

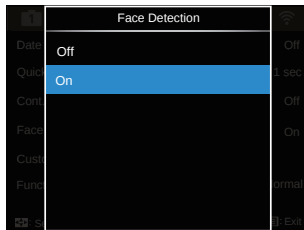
Use the Continuous AF setting to be able to continuously focus automatically when taking pictures.



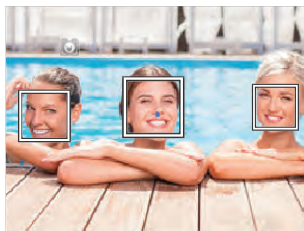
- Off
- On

Face Detection

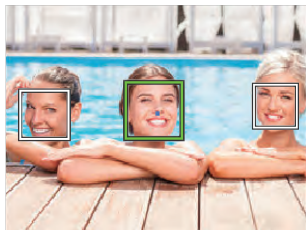
Detects and focuses on faces to make all faces as clear as possible in Photo Mode.



1. Hold the camera steadily and then focus on the object to detect its face. A focus frame will appear at the face on the screen when a face is detected.



2. Press the shutter button half-way down to focus. The LCD will show a green focus frame when the subject is in focus.



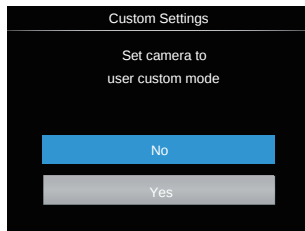
3. Press the shutter button all the way down to take pictures.



The closed eyes detection is usually on. If the camera detects in the course of quick review there is a face with eyes closed, a prompt of closed eyes will appear .

Custom Settings

Custom settings stores the current movie shooting mode and its parameters. The stored mode and parameters are automatically used in Custom Settings mode.



- No
- Yes