



GY-HM200/GY-HM170 INSTRUCTIONS

Notification of Changes

This is a notification on the changes or additions to the features and changes in the onscreen display. Please read this together with the "INSTRUCTIONS".

200, **170**: Feature available on the model or series name only.

Bit Rate added to System "4K"

"70M" is added to [System]→[Record Set]→[Record Format]→[Bit Rate].

System	Format	Resolution	Frame Rate	Bit Rate (new values are in bold)
4K	Quick Time	3840x2160	30p	150 M
			25p	70 M
		24p		

Memo:

- When 4K is set, the network function cannot be used.

Usable Cards

Format Setting and Usable SD Card Combinations

System	Format	Bit Rate	Usable SD Card
4K	Quick Time	150 M	UHS-I U3 or higher
		70 M	Class 10 or higher
HD		50 M (YUV422), 50 M (XHQ)	Class 6 or higher
		35 M (UHQ)	
		AVCHD	Class 4 or higher
SD	-	-	
Web	-	-	

Estimated Recordable Time of SD Cards

- When [System]→[Record Set]→[Record Format]→[Format] is set to "QuickTime".

System	4K		HD		SD	Web	
Resolution	2160p		1080i/1080p		480i/ 576i	960p	480p
Bit Rate	150 M	70 M	XHQ	UHQ	-	HQ	LP
4GB	3	6	9	12	47	130	285
8GB	6	13	18	25	95	270	580
16GB	12	26	36	50	190	540	1160
32GB	25	52	72	100	380	1080	2320
64GB (SDXC)	50	105	145	200	760	2160	4720
128GB (SDXC)	100	210	290	400	1520	4320	9440

(Unit: minute)

Histogram feature added

The histogram shows the brightness distribution, and is employed mainly for checking the exposure of the image.

- Set the histogram feature to ON.
 - Set [Main Menu]→[LCD / VF]→[Display Settings]→[Histogram] to ON.
 - You can also press the user button that is assigned with "Histogram".
- Set the upper and lower limits of the histogram display. After setting, the brightness level is displayed in red color.

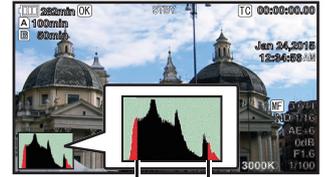
Item	Settings	Options
Top	Sets the maximum brightness limit for changing the histogram display color	5% to 110% (in 5 % increments) Default value: 80%
Bottom	Sets the minimum brightness limit for changing the histogram display color	0 % to 105 % (in 5 % increments) Default value: 20%

Example 1) Top 110 %, Bottom 0 %

Example 2) Top 90 %, Bottom 10 %



* The area in red is not displayed.



Bottom Top

How to read the histogram

- The vertical axis denotes the number of pixels.
- The horizontal axis denotes the pixel brightness.

Icon display added when zebra function is "On"

During zebra pattern display,  (zebra icon) is displayed on the display screen in Camera mode.

Setting items changed or added to menu item [Rec Trigger]

Setting items in [A/V Set]→[Video Set]→[HDMI/SDI Out]→[Rec Trigger] are changed. **(200)**

Setting items are added to [A/V Set]→[Video Set]→[HDMI Out]→[Rec Trigger]. **(170)**

- HDMI (200)**: Superimposes the trigger signals in tandem with the [HDMI] terminal as well as the [REC] button on the camera body and outputs the recording/stop control signals to the compatible device.
- On (170)**: Superimposes the trigger signals in tandem with the [HDMI] terminal as well as the [REC] button on the camera body and outputs the recording/stop control signals to the compatible device.
- SDI (200)**: Superimposes the trigger signals in tandem with the [SDI OUT] terminal as well as the [REC] button on the camera body and outputs the recording/stop control signals to the compatible device.
- HDMI+SDI (200)**: Superimposes the trigger signals in tandem with the [HDMI/SDI Out] terminal as well as the [REC] button on the camera body and outputs the recording/stop control signals to the compatible device.

[Setting Values: ●Off, HDMI, SDI, HDMI+SDI] **(200)**

[Setting Values: ●Off, On] **(170)**

Memo:

- When [A/V Set]→[Video Set]→[HDMI/SDI Out] **(200)** or [HDMI Out] **(170)** is set to "Off", [Rec Trigger] is fixed at "Off" and selection is disabled.
- When [System]→[Record Set]→[Rec Mode] is set to "Interval Rec" or "Frame Rec", [Rec Trigger] is fixed at "Off" and selection is disabled.
- Set to "Off" when connecting to a device that does not support record trigger.

Bit Rate added to live streaming **(200)**

Setting values are added to [System]→[Network] / [Settings]→[Live Streaming Set]→[Frame & Bit Rate]

No. of Frames for Frame & Bit Rate	Resolution	New values are in bold
60i, 60p, 30p	1920x1080	60i (12 Mbps), ● 60i (8 Mbps), 60i (5 Mbps), 60i (3 Mbps)
	1280x720	30p (8 Mbps), ● 30p (5 Mbps), 30p (3 Mbps), 30p (1.5 Mbps)
	720x480	60i (8 Mbps), 60i (5 Mbps), ● 60i (3 Mbps), 60i (1.5 Mbps), 60i (0.8 Mbps), 60i (0.3 Mbps)
	640x360	30p (3 Mbps), ● 30p (1.5 Mbps), 30p (0.8 Mbps), 30p (0.3 Mbps)
50i, 50p, 25p	1920x1080	50i (12 Mbps), ● 50i (8 Mbps), 50i (5 Mbps), 50i (3 Mbps)
	1280x720	25p (8 Mbps), ● 25p (5 Mbps), 25p (3 Mbps), 25p (1.5 Mbps)
	720x576	50i (8 Mbps), 50i (5 Mbps), ● 50i (3 Mbps), 50i (1.5 Mbps), 50i (0.8 Mbps), 50i (0.3 Mbps)
	640x360	25p (3 Mbps), ● 25p (1.5 Mbps), 25p (0.8 Mbps), 25p (0.3 Mbps)

[Adaptive Bit Rate] and [PCR Jitter] added to menu item (200)

The following items are added to [System]→[Network]/[Settings]→[Live Streaming Set]→[Streaming Server]→[Server1] / [Server2] / [Server3] / [Server4].

- Adaptive Bit Rate:
If "On" is selected, the bit rate setting value of live streaming is set to maximum limit, and the bit rate is changed automatically according to changes in the network bandwidth. [Setting Values: On, ●Off]

Memo:

- Adaptive bit rate setting is possible only when [Type] is set to "ZIXI" and [Latency] is set to either "Medium" or "Low".
* The bit rate is displayed on the status screen only when "On" is set.

- PCR Jitter:
Setting to "Low" reduces to PCR jitter of live streaming.
[Setting Values: ●Normal, Low]

Memo:

- This item is selectable only when [Type] is set to "MPEG2-TS/UDP".

[APN] added to menu item (200)

[APN] is added to [System]→[Network] / [Settings]→[Connection Setup].

* APN: Access Point Name

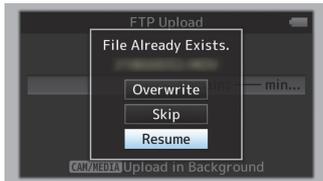
- * This item is gray out and cannot be selected if APN cannot be set for the adapter attached.

Caution:

- The APN setting is written into the cellular adapter, not this camera recorder. Setting a wrong APN may result in communication failure or expensive bills from the telecommunications company. Set the APN correctly.

FTP resume feature added (200)

When FTP transfer starts and there is a file of the same name on the server with a file size smaller than the file to be transferred, the file on the server will be regarded as an interrupted file during a FTP transfer. A confirmation screen to resume transfer (append writing) appears.



If "Resume" is selected, FTP transfer is carried out such that it appends from the position where it was interrupted. When FTP transfer ends normally, "Successfully Completed." appears on the screen.

Memo:

- FTP server equipped with resume function is required.
- If [System]→[Network] / [Settings]→[Clip Server]→[Clip-FTP1/2/3/4]→[Protocol] is set to "SFTP", the "Resume" function is disabled.
- If "HTTP" is selected in the [Select FTP Proxy] screen of the network connection setting, the resume function is disabled.

Setting value "ZIXI" added to menu item [Protocol] (200)

"ZIXI" is added to [System]→[Network] / [Settings]→[Clip Server]→[Clip-FTP1/2/3/4]→[Protocol].

If "ZIXI" is selected, [Username] in [System]→[Network] / [Settings]→[Clip Server]→[Clip-FTP1/2/3/4] changes to [Stream ID].

[Setting Values: ●FTP, SFTP, FTPS, FTPES, ZIXI]

Memo:

- To use the "ZIXI" setting, a dedicated server is needed separately.
- If "ZIXI" is set, the "Resume" function is enabled.

Items added to thumbnail screen

The following items are added to the metadata display on the detailed screen of the thumbnail screen.

- Clip Size
- Gamma

Clip Continuous added to recording mode for AVCHD

"Clip Continuous" is added to the setting value for "AVCHD" format in [System]→[Record Set]→[Rec Mode].

Clip Continuous Rec can also be operated in "AVCHD" mode.

Setting value "Side Cut" added to menu item [SD Aspect]

"Side Cut" is added to the setting value for [A/V Set]→[Video Set]→[SD Aspect].

- Letter:
Displays as a wide image with the top and bottom blackened.
- Squeeze:
Displays image that is squeezed horizontally.
- Side Cut:
Displays wide screen with the left and right sides cut off.

[Setting Values: ●Squeeze, Letter, Side Cut]

Memo:

- When "SD" is selected in [System]→[Record Set]→[Record Format]→[System], "Squeeze" and "Letter" can be selected.

2.5x display mode added to Expanded Focus function in 4K mode

An approximately 2.5x display mode is added to the Expanded Focus function when "4K" is selected in [System]→[Record Set]→[Record Format]→[System]. You can use the Set button (●) to switch between the conventional dot by dot equivalent (approximately 5x) display and the 2.5x display.

Memo:

- Upon power on, the display of the initial Expanded Focus is dot by dot equivalent (approximately 5x).

[Camera Data] added to menu item

[Camera Data] is added to [LCD / VF]→[Display Settings].

- Always:
The Iris F-number, Gain, Shutter and White Balance values are always displayed. The [A] icon appears on the left of the value when in the Auto mode.
- Manual Only:
The Iris F-number, Gain, Shutter and White Balance values are displayed only in Manual mode.

[Setting Values: Always, ●Manual Only]

Setting for operating Iris/Shutter/AE Level using iris dial added

Setting value "Iris/Shutter/AE Level" are added to [Camera Function]→[Iris Dial].

If "Iris/Shutter/AE Level" is selected, the iris dial that is normally used to operate the iris will operate the shutter when the [SHUTTER] button is pressed and will operate the AE level when the [AE LEVEL] button is pressed. After which, the iris dial resumes its iris operation.

[Setting Values: ●Iris, Shutter, AE Level, Iris/Shutter/AE Level]

[HDMI TC] added to menu item

[HDMI TC] is added to [A/V Set]→[Video Set].

For setting whether to superimpose the time code to the HDMI output terminal.

[Setting Values: ●Off, On]

Memo:

- When [A/V Set]→[Video Set]→[HDMI/SDI Out] is set to "SDI" or "Off", [HDMI TC] is fixed at "Off" and selection is disabled. (200)
- When [A/V Set]→[Video Set]→[HDMI Out] is set to "Off", [HDMI TC] is fixed at "Off" and selection is disabled. (170)
- Set to "Off" when connecting to a device that does not support HDMI TC.

Setting value changed in [Resolution] under [HDMI/SDI Out] (200) and [HDMI Out] (170)

The video output is changed to native frame rate and setting values are added. For selecting the resolution of video output from the [HDMI] terminal or [SDI OUT] terminal according to the monitor to be connected. [Setting Values: 576i, 576p, 480i, 480p, 720p, 1080i, 1080p, 1080/30p, 1080/25p, 1080/24p, 2160/24p, 2160/25p, 2160/30p]

Other notes

- The "MPEG LA MPEG-2 Patent" described in the "INSTRUCTIONS" of this book is not applicable to this product.

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