

## GY-HM890/GY-HM850 INSTRUCTIONS Notification of Changes

This is a notification on the addition of new features, feature modifications and onscreen display changes. Please read this together with the "INSTRUCTIONS".

\* ● denotes default value

### [Enhancement] added to menu item

[Enhancement] is added to [Camera Process] → [Detail]/[Adjust]. Set to "On" to enhance the reproducibility of details. [Setting Values: ● On, Off]

### Icon display added when zebra function is "On"

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

### "98%" added to setting value of zebra pattern

"98%" is added to the setting values for specifying the upper and lower limits of the luminance level in [LCD/VF] → [Shooting Assist] → [Zebra]/[Top] and [Bottom].

This convenient setting keeps the video level within 100% during the video production for playback, screening and broadcasting on nonlinear devices and PC.

[Top] [Setting Values: 5% to ● 80% to 95%, 98%, 100%, Over]  
[Bottom] [Setting Values: 0% to ● 70% to 95%, 98%, 100%]

### [LPCM(QuickTime)] added to menu item

[LPCM (QuickTime)] is added to [System] → [Record Set]. This allows you to set the audio recording format of QuickTime. [Setting Values: Dual Mono, ● Stereo]

#### Memo:

- If the definition of the recorded video is Web, recording is performed in "Stereo" regardless of the setting selected.
- During audio 4ch recording, recording is performed using "Dual Mono" regardless of the value selected.

### Ease function added to Preset Zoom

This allows you to set the rate of change for the start and stop motions during Preset Zoom operation.

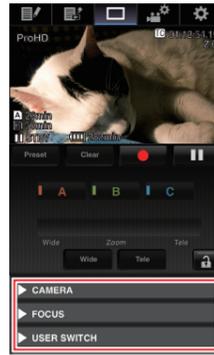
\* This setting smoothen the Preset Zoom operation.

[Camera Function] → [User Switch Set] → [Preset Zoom 1]/[Preset Zoom 2]/[Preset Zoom 3]  
Preset Zoom 1  
├ Speed  
├ Ease In  
├ Ease Out  
└ Duration

\* The same applies to [Preset Zoom 2]/[Preset Zoom 3].

- Speed ... Equivalent to the existing [Preset Zoom Speed]. [Setting Values: 1 to 127 (●64)]
- Ease In ... Sets the rate of change for the motion from the start of the zoom operation until the specified "Speed" is reached. The larger the setting value, the longer it takes to reach the specified "Speed". [Setting Values: 1 to 10, ● Off]
- Ease Out ... Sets the rate of change for the motion from the specified "Speed" until the zoom operation stops. The larger the setting value, the longer it takes before the operation stops. [Setting Values: 1 to 10, ● Off]
- Duration ... Displays the zoom operation time calculated from the "Speed" and "Ease In"/"Ease Out" settings. [Display Value: \*\*\*.\* sec]

### "Camera control" buttons added to the bottom of [View Remote] screen



This allows you to control the camera when the [View Remote] screen is displayed.

Camera Control Buttons

### Setting item changed in and setting values [Bit Rate] added to menu item [Live Streaming Set]

[Frame & Bit Rate] under [System] → [Network]/[Settings] → [Live Streaming Set] is changed to [Frame Rate] and [Bit Rate], and setting values for [Bit Rate] are added.

Frame Rate	Resolution	Setting Value (new values are in bold)
60i, 60p, 30p	1920×1080	<b>60i(12Mbps)</b> , ● 60i(8Mbps), 60i(5Mbps), 60i(3Mbps)
	1280×720	<b>60p(12Mbps)</b> , <b>60p(8Mbps)</b> , <b>60p(5Mbps)</b> , <b>60p(3Mbps)</b> , <b>30p(8Mbps)</b> , ● 30p(5Mbps), 30p(3Mbps), 30p(1.5Mbps)
	720×480	<b>60i(8Mbps)</b> , 60i(5Mbps), ● 60i(3Mbps), 60i(1.5Mbps), 60i(0.8Mbps), 60i(0.3Mbps)
50i, 50p, 25p	1920×1080	<b>50i(12Mbps)</b> , ● 50i(8Mbps), 50i(5Mbps), 50i(3Mbps)
	1280×720	<b>50p(12Mbps)</b> , <b>50p(8Mbps)</b> , <b>50p(5Mbps)</b> , <b>50p(3Mbps)</b> , <b>25p(8Mbps)</b> , ● 25p(5Mbps), 25p(3Mbps), 25p(1.5Mbps)
	720×576	<b>50i(8Mbps)</b> , 50i(5Mbps), ● 50i(3Mbps), 50i(1.5Mbps), 50i(0.8Mbps), 50i(0.3Mbps)
	<b>640×360</b>	<b>50p(3Mbps)</b> , <b>50p(1.5Mbps)</b> , <b>25p(3Mbps)</b> , ● <b>25p(1.5Mbps)</b> , <b>25p(0.8Mbps)</b> , <b>25p(0.3Mbps)</b>

#### Memo:

- The settings cannot be changed during live streaming.
- An encoding bit rate exceeding 5.0 Mbps cannot be selected when [Type] is set to "RTSP/RTP".
- An encoding bit rate exceeding 5.0 Mbps cannot be selected when [Type] is set to "ZIXI" and [Latency] is set to a value other than "Low".
- An encoding bit rate exceeding 3.0 Mbps cannot be selected when [Type] is set to "ZIXI" and [Latency] is set to "Low", or when [Type] is set to "RTMP".

#### Caution:

- With the addition of these setting values, "480×270" is removed from the setting values of [Resolution].

### [APN] added to menu item

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

\* APN: Access Point Name

\* This item is grayed 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.

### SMPTTE 2022-1 FEC supported

MPEG2-TS/RTP is added to streaming type and SMPTTE2022-1 FEC is supported.

Also, MPEG2-TS/TCP is removed.

#### ■ "RTMP" and "MPEG2-TS/RTP" added to menu item [Type]

"RTMP" and "MPEG2-TS/RTP" are added to [System] → [Network]/[Settings] → [Live Streaming Set] → [Server]/[Live Streaming] → [Server1] to [Server4] → [Type].  
[Setting Values: ● MPEG2-TS/UDP, MPEG2-TS/RTP, RTSP/RTP, ZIXI, RTMP]

#### Caution:

- With the addition of this setting value, "MPEG2-TS/TCP" is removed from the setting values of [Type].

#### ■ [SMPTTE 2022-1 FEC] added to menu item

When "MPEG2-TS/RTP" is selected in [System] → [Network]/[Settings] → [Live Streaming Set] → [Server]/[Streaming Server] → [Server1] to [Server4] → [Type], [SMPTTE 2022-1 FEC] can be configured. Set to "On" to use FEC (Forward Error Correction). This is a transmission system that recovers the missing packets in the decoding process without having to retransmit the missing packets.  
[Setting Values: On, ● Off]

\* The decoder must be compatible with SMPTTE 2022-1.

#### ■ [FEC Matrix] added to menu item

For setting the amount of FEC (Forward Error Correction) overhead for configuring SMPTTE 2022-1.

#### Memo:

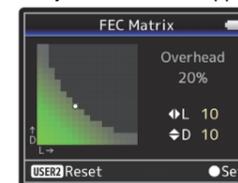
- This item is selectable only when [SMPTTE2022-1 FEC] is set to "On".
- When [Type] is set to "MPEG2-TS/RTP", only even numbers from 2 to 65530 can be specified as the port number for the transmission destination port.
- When [Type] is set to "MPEG2-TS/RTP" and [SMPTTE2022-1 FEC] is set to "On", N+2 and N+4 port numbers are also used in addition to the port number (N) specified for the transmission destination port.

#### ■ Setting the FEC Matrix

Set the amount of "FEC" (Forward Error Correction) overhead for configuring [SMPTTE 2022-1].

1 Select [System] → [Network]/[Settings] → [Live Streaming Set] → [Server]/[Streaming Server] → [Server1] to [Server4] → [Type] → [FEC Matrix], then press the Set button (●).

The FEC adjustment screen appears.



### 2 Adjust the L and D values.

Use the ◀/▶ buttons to adjust the L value, and the ▲/▼ buttons to adjust the D value.

The amount of FEC overhead changes when the L and D values are changed.

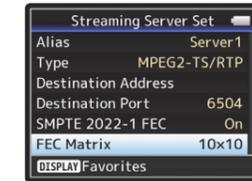
To restore the L and D values to their default values, press the [C.REVIEW/4] button.

#### Memo:

- Setting range
  - $4 \leq L \leq 20$  (Default value: L = 10)
  - $4 \leq D \leq 20$  (Default value: D = 10)
  - $L \times D \leq 100$  (Default value: LxD = 10x10)

### 3 Press the Set button (●).

The screen returns to the streaming server setting screen.



#### Memo:

- Increasing the amount of FEC overhead increases the packet loss resilience but more network bandwidth is used.
- Even with the same amount of overhead, increasing the L value will increase the packet loss (continuous packet loss) resilience.

### Items changed or added to menu item [Live Streaming Set]

"Server1/Server2/Server3/Server4" is added to [Streaming Server]. The four settings can be registered individually.

Before Change	After Change (new items are in bold)
Live Streaming Set <ul style="list-style-type: none"> <li>├ Live streaming</li> <li>├ Resolution</li> <li>├ Frame &amp; Bit Rate</li> <li>├ Type</li> <li>├ UPD/TCP Settings</li> <li>├ RTSP/RTP Settings</li> <li>└ ZIXI Settings</li> </ul>	Live Streaming Set <ul style="list-style-type: none"> <li>├ Live streaming</li> <li>├ <b>Auto Restart</b></li> <li>├ <b>Server</b> <ul style="list-style-type: none"> <li>├ <b>Streaming Server</b> <ul style="list-style-type: none"> <li>├ <b>Server1 (*)</b> <ul style="list-style-type: none"> <li>■ Alias</li> <li>■ Type</li> <li>■ Destination Address</li> <li>■ Destination URL</li> <li>■ Destination Port</li> <li>■ Stream ID</li> <li>■ Stream Key</li> <li>■ Password</li> <li>■ Latency</li> <li>■ Adaptive Bit Rate</li> <li>■ PCR Jitter</li> <li>■ SMPTTE 2022-1 FEC</li> <li>■ FEC Matrix</li> </ul> </li> <li>├ <b>Server2 (*)</b></li> <li>├ <b>Server3 (*)</b></li> <li>├ <b>Server4 (*)</b></li> </ul> </li> <li>├ Resolution</li> <li>├ Frame Rate</li> <li>└ Bit Rate</li> </ul> </li> </ul>

\* Each item can be set for Server2/Server3/Server4 as with Server1.

#### Memo:

- Depending on the Type (MPEG2-TS/UDP, MPEG2-TS/RTP, RTSP/RTP, ZIXI, RTMP) selected, some of the items cannot be set. And the selectable contents may be different.

### [Auto Restart] function added to Live Streaming

[Auto Restart] is added to [System] → [Network] / [Settings] → [Live Streaming Set].

Previously, if the network is disconnected while "Live Streaming" is set to "On", "Live Streaming" will be set to "Off" automatically. When the network is reconnected, it is necessary to set "Live Streaming" to "On" again manually.

By setting the new [Auto Restart] function to "On", live streaming is automatically restarted when the network is reconnected.

- On  
Live streaming is automatically restarted after the network is reconnected.
- Off  
Live streaming does not automatically restart even after the network is reconnected.

[Setting Values: On, ● Off]

#### Memo:

- If the camera recorder is turned off and then turned on again, live streaming does not start automatically (regardless of the [Auto Restart] setting) even after the network connection has been established.

## Items added to menu item [Live Streaming Set]

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

- Destination URL  
For entering the URL of the live distribution destination beginning with “rtmp://” in the destination URL.  
There is no default value (blank).

\* You can enter up to 191 characters and ASCII characters.

- Stream Key  
Enter the stream key specified at the live transmission destination.  
There is no default value (blank).

\* Enter not more than 63 characters.

- Adaptive Bit Rate  
If “On” is selected, the bit rate is changed automatically according to changes in the network bandwidth.  
This bit rate is limited by the value set for the bit rate setting item during live streaming.  
[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”.

- PCR Jitter  
Setting to “Low” reduces the PCR jitter of live streaming. [Setting Values: ● Normal, Low]
- SMPTE 2022-1 FEC  
Set to “On” to use FEC (Forward Error Correction). This is a transmission system that recovers the missing packets in the decoding process without having to retransmit the missing packets. [Setting Values: On, ● Off]
- FEC matrix  
Set the amount of “FEC” (Forward Error Correction) overhead for configuring [SMPTE 2022-1].

### Memo:

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

## Setting value added to menu item [Latency]

“High” is added to [System] → [Network]/[Settings] → [Live Streaming Set] → [Server]/[Streaming Server] → [Server1] to [Server4] → [Latency].

Also, “Minimum (ZIXI Off)” is added to [Latency] when [System] → [Network]/[Settings] → [Live Streaming Set] → [Server]/[Streaming Server] → [Server1]/[Server2]/[Server3]/[Server4] is set to “ZIXI”.

[Setting Values: High, Medium, ● Low, Minimum (ZIXI Off)]

## Zixi information added and operation change in the Status (Network) screen

The following items are added to the Status (Network) screen when [Live Streaming Set] is set to “ZIXI”.

- Uptime
- Total
- Recovered
- Not Recovered
- Bit Rate

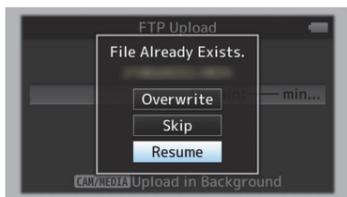
In addition, pressing the “Menu” button while the Status (Network) screen is displayed will display the “Network Settings” screen.

### Memo:

- “Bit Rate” is displayed only when [System] → [Network]/[Settings] → [Live Streaming Set] → [Server]/[Streaming Server] → [Server1]/[Server2]/[Server3]/[Server4] B [Type] is set to “ZIXI” and [Adaptive Bit Rate] is set to “On”.

## FTP resume feature added

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]/[Clip-FTP2]/[Clip-FTP3]/[Clip-FTP4] → [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]

“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.

## Web access port number setting function added

[Port] is added to [System] → [Network]/[Settings] → [Web].  
It is for setting the port number when accessing the camera recorder Web page from outside the network.

### Memo:

- The number can be entered using the software keyboard.
- An integer from 1 to 65535 can be entered. (Default value: 80)
- When setting a number other than the default value, use an unused port number.

## File format setting value added to MXF(MPEG2) definition

If “MXF(MPEG2)” is selected in [System] → [Record Set] → [Record Format] → [A Format], “1280x720” can be selected from the [A Resolution] setting values. You can also select 60p (HQ) or 50p (HQ) for [A Frame Rate / Bit Rate].

### Memo:

- For GY-HM850 series, the option is fixed under the following conditions.  
When 60/30/24 is selected in [System] → [System Frequency], [A Frame Rate / Bit Rate] is fixed at 60p (HQ).  
When 50/25 is selected in [System] → [System Frequency], [A Frame Rate / Bit Rate] is fixed at 50p (HQ).

## Language (Turkish) support added \* E model only

“Türkçe” is added to [System] → [Language].

## [IFB Set] added to menu item

IFB (Interruptible feedback) is a function to receive audio through the network.

It allows you to hear verbal instructions through the headphone even from a remote location.

[IFB Set] is added to [System] → [Network]/[Settings].

### IFB Set

- └ IFB Function
- └ IFB Streaming
- └ Server Address
- └ Server Port
- └ Mountpoint

- IFB Function ... To “Enable” or “Disable” the IFB function. [Setting Values: Enable, ● Disable]
- IFB Streaming ... Setting to “Start” starts IFB streaming, and  (IFB streaming icon) appears on the display screen. [Setting Values: Start, ● Stop]
- Server Address ... For specifying the address for the audio streaming server.  
\* Enter not more than 127 characters using single-byte alphanumeric characters (a to z, 0 to 9), single-byte hyphen [-], or dot [.]
- Server Port ... For specifying the port for the audio streaming server. [Setting Values: 5000]
- Mountpoint ... For entering the mount point (character string for identifying the streaming) when the audio streaming server supports multiple audio streams. There is no default value (blank).  
\* Enter not more than 63 characters.

### Memo:

- The [IFB Function] setting cannot be changed during live streaming.
- [IFB Streaming] can be assigned to each user button.
- If [IFB Function] is set to “Enable”, the value that can be set for [System] → [Network]/[Settings] → [Live Streaming Set] → [Bit Rate] is limited as follows.
  - An encoding bit rate exceeding 8.0 Mbps cannot be selected when [Type] is set to “MPEG2-TS/UDP” and [PCR Jitter] is set to “Low”.
  - An encoding bit rate exceeding 3.0 Mbps cannot be selected when [Type] is set to “MPEG2-TS/UDP” and [PCR Jitter] is set to “Normal”.
  - An encoding bit rate exceeding 3.0 Mbps cannot be selected when [Type] is set to “RTSP/RTP” or “ZIXI”.
  - An encoding bit rate exceeding 1.5 Mbps cannot be selected when [Type] is set to “RTMP”.

## [IFB Monitor] added to menu item

[IFB Monitor] is added to [A/V Set] → [Audio Set].  
For setting the output to the headphone jack during IFB streaming.

### IFB Monitor

- └ CH1
- └ CH2

- Auto ... Mixes the IFB audio and the audio from the microphone, and outputs to the headphone jack when an IFB audio input is detected.  
Only audio from the microphone is output when an IFB audio input is not detected.
- IFB Only ... Only IFB audio is always output.
- Off ... Does not output IFB audio. Only audio from the microphone is output.

[Setting Values: ● Auto, IFB Only, Off]

### Memo:

- IFB output is available only for monitor outputs CH1 and CH2.
- To enable different settings for CH1 and CH2 of [IFB Monitor], set [A/V Set] → [Audio Set] → [Monitor] to “Stereo”.

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