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DC-GH5 Firmware Update					

> Consumer > LUMIX GLOBAL GATEWAY

# **DC-GH5 Firmware Update**

Panasonic offers firmware update program for DC-GH5 to enhance the performance and usability.

# **FIRMWARE VERSION 2.4**

# **Release Date 201**

#### 1.Improvement of AF performance

•There were cases where focus point was shifted to the background while tracking the subject in AFC mode. The new firmware minimizes this problem.



Tracking performance in continuous AF improved by optimizing the tracking algo The subject is tracked even if it moves a sports scenes where the focus previous background.

• There were cases where focus point was shifted to the background while tracking the subject in video recording. The new firmware minimizes this problem.

The accuracy of detecting the subject has been improved by optimizing the focus area settings and tracking speed. The point of focus remains on the subject instead of shifting to the background.

### 2.Improvement of video recording operation

·[One Push AE] failed to operate when [SS/Gain Operation] is set to [ANGLE/ISO] while shooting in Creative Video M mode. This bug has been fixed.

### 3.Fixed time code bug

•There were cases where the time code was reset when the battery was replaced. This bug has been fixed.

#### 4.Improvement of 6K PHOTO/4K PHOTO operation

There were cases where the intended frame was not cut out of the footage in 6K PHOTO/4K PHOTO. This bug has been fixed.

## FIRMWARE DOWNLOAD

### **HOW TO UPDATE**

Panasonic LUMIX | Quick Learning : How to Upda...

#### Firmware update can be done in 3 simple steps.

1.Find the firmware file you need on LUMIX Customer Suport Website 2.Download it and copy to the SD Memory Card 3.Insert the SD Memory Card in the camera and update the firmware

There are some precautions to complete updating successfully. <u>SEE THE COMPLETE PROCEDURE</u>

# **FIRMWARE VERSION 2.3**

## **Release Date 20**

### 1. Improvement of AF performance

- AF tracking performance in video recording has been improved.
- AF speed at 180d (180°) has been improved when displaying the shutter speed in degrees in [SS/Gain Operation]>[ANGLE/ISO].

#### 2. Improvement of Body I.S.(Image Stabilizer) performance

• There were cases where peripheral distortion occurred in video recording while walking when used with Panasonic wide zoom lenses (H-F007014, H-E08018). This fixed.

\* When [E-Stabilization (Video)] is set to [ON].

#### 3. Improvement of sound recording performance

· Sound quality has been improved by optimizing the noise reduction performance of internal noise cancelling microphone.

#### 4. New functions

- [L.Monochrome D] has been added to Photo Style.
- [Grain Effect] can be added and adjusted in Photo Style.
- ${\scriptstyle \bullet}$  [Live View Boost] has been added, which makes it easy to check the composition on the monitor in low-light environment.
- [Night Mode] has been added, which reduces glaring on the screens when recording in low-light environment.
- · Maximum 20x enlarged view is available in [MF Assist].
- [Focus Ring Lock] has been added to [Custom] menu, which disables focus ring operation to lock the focus.
- . • [WB/ISO/Expo. Button] has been added, which enables adjustment of WB/ISO/Exposure
- only while the exposure compensation button is pressed. This can be set [Custom]> [Operation].
- · [Dial] has been added to [Custom]>[Operation Lock Setting].
- · [Power/Wireless Indicator] has been added in [Setup] menu, which enables turning off
- the status indicator and wireless connection lamp.

#### 5. Other improvements

- [Like 709], [V-LogL\*] and [V-LogL View Assist\*] in Photo Style can be used in photo shooting.
- [LUT Monitor Display\*] and [LUT HDMI Display\*] can be used in playback mode.
- \* Upgrade Software Key DMW-SFU1(sold separately) is required.

• [Focus Ring Lock], [E-Stabilization(Video)], [Mic Rec Level Disp.], [Live View Boost], [Night Mode] and [L.Monochrome D] can be assigned to the Fn button that work mode.

- [LUT Monitor Display\*], [LUT HDMI Display\*] and [Night Mode] can be assigned to the Fn button that works in playback mode.
- \* Upgrade Software Key DMW-SFU1(sold separately) is required.
- · Vector Scope can be displayed on the screen while adjusting white balance.
- It is possible to choose images from group display such as burst shots in [RAW Processing] mode.
- Restarting time from sleep mode has been shortened while using Image App and Bluetooth connection.
- You can choose to shorten the time of remote operation and image transfer or remote shutter control in [Setup]>[Bluetooth]>[Returning from Sleep Mode].
- · Remaining battery status is indicated by 1/4-gauge, indicating approximately 25% per gauge
- There were cases where folder name was garbled when connecting wirelessly with Windows10-based PC. This bug has been fixed.



# **FIRMWARE VERSION 2.1**

## **Release Date 20**

\*Firmware Ver.2.0 has been updated to Ver.2.1 fixing minor bugs of Ver.2.0.

#### 1. Compatibility with "LUMIX Tether" PC software

This new firmware enables GH5 tethered shooting via USB, using "LUMIX Tether" PC software. Users can control the camera by connecting it to a PC via USB. It lett image on a large PC screen while shooting, which is helpful in commercial photoshoots of portraits, products and so on, where continuous confirmation is required. Y PHOTO] [4K PHOTO] and start and stop video recording with the tethered shooting. It is also possible to choose the folder to save the image files in the PC.

#### 2.Improved auto focus performance

-Auto focus performance for subjects with low contrast in photo shooting is improved.

-Tracking auto focus performance in video recording is improved.

-The customized AF area can be continuously displayed in [Multi AF] and [Custom Multi AF] during live-view.

-The AF area in [Multi AF] can be moved to the other edge (side, top or bottom) when it reaches one edge.

-The start point of AF lock can be set on the live view screen in advance in [AF Tracking].

-The AF area can be moved while the shutter button is half-pressed or while recording in [Burst Mode], [6K PHOTO] and [4K PHOTO].

## 3. Improved performance in [6K PHOTO] and [4K PHOTO]

-The waiting time to start the next burst shooting sequence after [6K Burst] and [4K Burst] is shortened to less than half the time.

-[Loop Rec] is available in [6K PHOTO] •Use of Panasonic SD Memory Card with Video Speed Class 90 is recommended for [Loop Rec] of [6K PHOTO].

#### 4. An additional ALL-Intra Video Recording mode

-4:2:2,10-bit ALL-Intra video recording mode is added to 4K/FHD video recording.

•Use of SD Memory Card with Video Speed Class 60 or higher is recommended for 4K ALL-Intra video recording. Operation is confirmed with Panasonic SD Memory Speed Class 90.

#### New 4:2:2,10-bit ALL-Intra Recording Mode

Item	System Frequency	Size	Frame Rate	Bit Rate	YUV/bit	Image Compressi
[C4K/ALL-I/400M/24p]	59.94Hz (NTSC)	4096 x 2160	23.98p	400 Mbps	4:2:2/10 bit	ALL-Intra
[4K/ALL-I/400M/30p]		3840 x 2160	29.97p	400 Mbps	4:2:2/10 bit	ALL-Intra
[4K/ALL-I/400M/24p]		3840 x 2160	23.98p	400 Mbps	4:2:2/10 bit	ALL-Intra
[FHD/ALL-I/200M/60p]		1920 x 1080	59.94p	200 Mbps	4:2:2/10 bit	ALL-Intra
[FHD/ALL-I/200M/30p]		1920 x 1080	29.97p	200 Mbps	4:2:2/10 bit	ALL-Intra
[FHD/ALL-I/200M/24p]		1920 x 1080	23.98p	200 Mbps	4:2:2/10 bit	ALL-Intra
[4K/ALL-I/400M/25p]	50.00Hz (PAL)	3840 x 2160	25.00p	400 Mbps	4:2:2/10 bit	ALL-Intra
[FHD/ALL-I/200M/50p]		1920 x 1080	50.00p	200 Mbps	4:2:2/10 bit	ALL-Intra
[FHD/ALL-I/200M/25p]		1920 x 1080	25.00p	200 Mbps	4:2:2/10 bit	ALL-Intra
[C4K/ALL-I/400M/24p]	24.00Hz (CINEMA)	4096 x 2160	24.00p	400 Mbps	4:2:2/10 bit	ALL-Intra
[4K/ALL-I/400M/24p]		3840 x 2160	24.00p	400 Mbps	4:2:2/10 bit	ALL-Intra
[FHD/ALL-I/200M/24p]		1920 x 1080	24.00p	200 Mbps	4:2:2/10 bit	ALL-Intra

#### 5. 4K HDR video recording

-[HLG] (Hybrid Log Gamma) is added to [Photo Style]. HDR (High Dynamic Range) is a mode to reproduce both bright part and dark part in an image, making it look just as human eyes see. The camera records video with a designated gamma curve compatible with ITU-R BT.2100, and you can now choose Hybrid Log Gamma (HLG) in [Photo Style].

-A low-bit-rate recording mode 4K HEVC for HLG was added. This enables playback on AV equipment compatible with the HEVC compression format, such as Panasonic 4K HDR TVs.

[NEW] Panasonic LUMIX GH5 4K HDR Video "Isobel"



"Isobel" - 4K HDR Video in HLG (Hybrid Log Gamma)

### 6. Enhancement of the Anamorphic video recording mode

-High-Resolution Anamorphic mode, which enables video recording in 18-mega effective pixels, is added. \*Recorded in HEVC

### New High-Resolution Anamorphic Mode

\*1 "High Resolution Anamorphic Mode" records motion picture with an aspect ratio suited for an anamorphic lens,4:3. The effective picture size for this mode is equivalent to the number of pixels produced by 6K (approx. 6,000 (horizontal)k3,000 (vertical)) images (approx. 18 megapixels).

Item	System Frequency	Size	Frame Rate	Bit Rate	YUV/bit	Image Compressi
[6K/A/200M/30p]*2	59.94Hz (NTSC)	4992 x 3744	29.97p	200 Mbps	4:2:0/10 bit	Long GOP
[6K/A/200M/24p]* <sup>2</sup>		4992 x 3744	23.98p	200 Mbps	4:2:0/10 bit	Long GOP
[4K/A/400M/30p]		3328 x 2496	23.98p	400 Mbps	4:2:2/10 bit	ALL-Intra
[4K/A/400M/24p]		3328 x 2496	23.98p	400 Mbps	4:2:2/10 bit	ALL-Intra
[6K/A/200M/25p]*2	50.00Hz (PAL)	4992 x 3744	25.00p	200 Mbps	4:2:0/10 bit	Long GOP
[4K/A/400M/25p]		3328 x 2496	25.00p	400 Mbps	4:2:2/10 bit	ALL-Intra
[6K/A/200M/24p]* <sup>2</sup>	24.00Hz (CINEMA)	4992 x 3744	24.00p	200 Mbps	4:2:0/10 bit	Long GOP
[4K/A/400M/24p]		3328 x 2496	24.00p	400 Mbps	4:2:2/10 bit	ALL-Intra

\*2 High resolution Anamorphic mode

[NEW] Heirloom : LUMIX GH5 High Resolution Anamorphic HDR (HDR

"Heirloom" - Captured in High Resolution Anamorphic Mode

-[Anamorphic Desqueeze Display] was added, which lets you view an enlarged image in Cinescope size while recording with 2.0x and 1.33x Anamorphic lens. -[Video Guide Line] is added to display the image in a variety of aspects, such as Cinescope, 16:9 and 1:1 while recording video. This can be used not only in Anamo also in other video recording mode.

#### 7. Enhancement of Body I.S. (Image Stabilizer)

-[I.S. Lock(video)] is added. This powerfully compensates for handshake when the viewing angle is fixed. -A new handshake correction mode is added, which provides optimum correction when using 2.0x and 1.33x Anamorphic lens.

#### 8. Correction of white balance setting

-When the K (Kelvin) value was changed after adjusting the color temperature with 2-axis white balance compensation, the setting was reset. This bug has been fixed

#### 9. Improved usability of Time Lapse Shot

-The time to finish shooting and the number of recordable pictures are displayed on the stand-by screen.

#### 10. Improved usability of Power Save LVF

-Power Save LVF can now be used during all stand-by display options.

#### 11. Wireless functions

-The Bluetooth Remote Control function can be used with Image App, which will also be updated at the same timing with the GH5 firmware release. -If the camera has not completed image transmission when it is turned off, it restarts transmission when it is turned on with the [Auto Transfer] function.

#### 12. Other improvements

-A rating function using an Fn button is available in Playback Zoom and Multi Playback.

-The following functions can be assigned to Fn buttons - [Constant Preview] [6K/4K PHOTO Bulk Saving] [Min. Shtr Speed] [RAW Processing] [Rec/Playback Switch] and [Mic Level Adj.].

-The DISP.Button can be locked.

-In Relay Rec, there were cases where the video file number was not able to be reset. This bug has been fixed.

-In Relay Rec, there were cases where the video file number was reset after formatting the SD Memory Card. This bug has been fixed.

-In Backup Rec, there were cases where the file number was not reset even after applying resetting. This bug has been fixed.

-The image quality when applying the following settings is improved: Extended low ISO, [i.Dynamic] (Intelligent D-range Control) and Highlight Shadow.

# **FIRMWARE VERSION 1.1**

## Release Date 201

#### FHD 4:2:2 10-bit Video Recording

FHD 4:2:2 10-bit video recording has been added.

It can be selected in either FHD [MP4 (LPCM)] or [MOV] recording format.

Item	System Frequency	Size	Frame Rate	Bit Rate	YUV/bit	Image Compressi
[FHD/10bit/100M/60p]	59.94Hz (NTSC)	1920 x 1080	59.94p	100 Mbps	4:2:2/10 bit	Long GOP
[FHD/10bit/100M/30p]		1920 x 1080	29.97p	100 Mbps	4:2:2/10 bit	Long GOP
[FHD/10bit/100M/24p]		1920 x 1080	23.98p	100 Mbps	4:2:2/10 bit	Long GOP
[FHD/10bit/100M/50p]	50.00Hz (PAL)	1920 x 1080	50.00p	100 Mbps	4:2:2/10 bit	Long GOP
[FHD/10bit/100M/25p]		1920 x 1080	25.00p	100 Mbps	4:2:2/10 bit	Long GOP
[FHD/10bit/100M/24p]	24.00Hz (CINEMA)	1920 x 1080	24.00p	100 Mbps	4:2:2/10 bit	Long GOP

• When [Miniature Effect] is selected for Creative Control Mode, you cannot select the items used for 4:2:2/10 bit motion pictures.

#### Anarmorphic (4:3) Mode 4:2:2 10-bit Video Recording

4:2:2 10-bit video recording has been added to Anamorphic (4:3) mode.

Item	System Frequency	Size	Frame Rate	Bit Rate	YUV/bit	Image Compressi
[4K/A/150M/30p]	59.94Hz (NTSC)	3328 x 2496	29.97p	150 Mbps	4:2:2/10 bit	Long GOP
[4K/A/150M/24p]		3328 x 2496	23.98p	150 Mbps	4:2:2/10 bit	Long GOP
[4K/A/150M/25p]	50.00Hz (PAL)	3328 x 2496	25.00p	150 Mbps	4:2:2/10 bit	Long GOP
[4K/A/150M/24p]	24.00Hz (CINEMA)	3328 x 2496	24.00p	150 Mbps	4:2:2/10 bit	Long GOP

• [Anamorphic(4:3)] is available only when the camera is set to Creative Video Mode.

### **Performance Improvement**

-There was a problem in which the exposure adjustment did not operate properly during live view standby when the [SS/Gain Operation] display was set to [ANGLE / [Variable Frame Rate] was selected for Creative Video mode. This has been fixed.

-A problem in [V-LogL] of Photo Style mode where afterimages appeared when recording video under high ISO sensitivity settings has been fixed.

