

Getting 4K Output from a Panasonic® GH4 MFT Camera

This document describes what is required to get 4K out of the Panasonic GH4 MFT through HDMI on the PIX-E monitors. Several things are necessary and should be completed in the following order:

- The camera must be in Creative Video mode.
- The recording format must be set to a 4K-capable format.
- The recording quality must be set to 4K mode.
- The HDMI Output must be set appropriately.

Setting Camera to Creative Video Mode

To set the GH4 to Creative Video mode:

- ▶ Turn the top dial to the Creative Video icon. (This icon looks like a movie camera.)

Note: Once in Creative Video mode, all menu options are set in the main menu's Movie tab. Press the MENU/SET button on the back of the camera; the Movie tab is at the top.

Setting the Recording Format

To set the GH4's recording format:

1. Turn the camera on.
2. Press the MENU/SET button on the camera.
3. Select the Movie tab.
4. Select 1.
5. Select Rec Format
6. Set value to MOV, MP4, or MP4 (LPCM).

Note: Rec Format must not be set to AVCHD.

Setting the Recording Quality

To set the GH4's recording quality:

1. Press the MENU/SET button on the camera.
2. Select the Movie tab.
3. Select 1.
4. Select Rec Quality.
5. Set the quality settings to the 4K setting and frame rate you want.

Note: The choice of frame rates will depend on the camera's System Frequency. Set System Frequency via MENU > Settings tab (Wrench icon) > 5 > System Frequency. Options include: 59.94 Hz, 50.00 Hz, 24.00 Hz. 4096x2160, which Panasonic calls C4K or Cinema 4K, is only available when System Frequency is 24 Hz. All other 4K settings output 3840x2160 images.

Setting up HDMI Recording Output

Properly setting up HDMI recording output requires adjustments to multiple video settings.

To set up HDMI recording output:

1. Press the MENU/SET button on the camera.
2. Select Movie > 4 > HDMI Rec Output
3. Set Bit Mode:
 - 4:2:2 8-bit allows internal recording
 - 4:2:2 10-bit does not allow internal recording, but gives greater bit depth for external recording
4. Set Info Display to OFF for clean feed or ON to show status and menu information on the HDMI output.
5. Set 4K Down Convert to OFF to force HDMI to output 4K or AUTO to output 4K if the receiving device signals that it can accept 4K. Otherwise, it outputs 1080p, which forces down-conversion to 1080p.