CAMERA PRODUCTION GUIDE | **Panasonic BS1H**

Settings and best-practices for capture with the BS1H on Netflix 4k Originals.

If you have any questions or comments please contact: prodtech.support@netflix.com

Current Panasonic BS1H Ops Manual: HERE

CAPTURE SETTINGS | **MOV 4:2:2/10-Bit/ALL-I**

SETTING	MENU	SELECTION
SYSTEM MODE	[📹] Video Tab→ [🎞] Rec FIle Format →	**.MOV 4096 x 2160 or 3840x2160**
LOG ENCODING/ COLOR SPACE	[📹] Video Tab → [◀] Photo Style →	**V-LOG**
CODEC	[📹] Video Tab→ [🎞] Rec FIle Format →	**422/10bit/ALL-I 400 Mbps**
Crop Options	[📹] Video Tab→ [🎞] Image Area of Video →	**Full, S35mm, Pixel/Pixel**

NOTE: BS1H "Rec Mode" needs to be in "Creative Video Mode"

NOTE: To access All-I CODECs, use REC. File Format MOV. Access via the Movie Camera Tab, Rec. File Format Menu

Recommended Exposure Values for V-LOG

Input Reflection	0% Black	18% Grey	90% White
V-LOG	7.3 IRE	42 IRE	61 IRE

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STABILIZATION SETTINGS | 🎥**Video Tab/**📼**Others (Video) Menu**

SETTING	SETTING MEANING	Options
Operation Mode	Turning In-Lens Stabilization on or off (select lenses)	🖐 (on) or Off
E-Stabilization (Video) Not available when the following functions are in use: - 6K/5.9K/5.4K video - Variable Frame Rate (VFR) mode - HDMI RAW Output - Live Cropping	Crops the image slightly and uses the available sensor area for further electronic stabilization.	ON or OFF
Boost I.S. (Video)	For added stabilization power with hand-held shots to simulate a tripod look. Not for Panning.	ON or OFF

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Anamorphic Production

SETTING	Menu	Selection
Large Format 3:2 Capture	[📹] Video Tab→	Large Format 3:2→**6K/24p/420/10-L**
Academy 4:3 Capture	[🎞] Rec FIle Format →	Academy 4:3→ **4K-A/48p/420/10-L** **4K-A/30p/422/10-I** **4K-A/24p/422/10-I**
Anamorphic Desqueeze Monitoring * This is for onboard preview only Will not output over HDMI Will not desqueeze the final file	⚙ Custom Tab→ 📷 Anamorphic DeSqueeze →	2.0x 1.8x 1.5x 1.33x 1.30x OFF
Video Frame marker	⚙ Custom Tab→ 📷 Video Frame marker →	2.39:1 2.35:1 2.00:1 1.85:1 16:9

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Image Filtration and Compensation

SETTING	Menu	Selection
Diffraction Compensation * Only Available with Native L mount active lenses. * Netflix advises this should be turned off.	[📹] Video Tab→ [▦◀] Diffraction Compensation →	ON or OFF
Noise Reduction * Adjusted from within the V-LOG Photo Style Menu .	[📹] Video Tab → [◀▦] Photo Style →	From the **V-LOG option,** press the down arrow on the D-Pad to access NR. Set to 0
Sharpening * Adjusted from within the V-LOG Photo Style Menu .	[📹] Video Tab→ [◀▦] Photo Style →	From the **V-LOG option,** press the down arrow on the D-Pad to access S. Set to 0.
Vignetting Compensation * Only Available with Native L mount active lenses. * Netflix advises this should be turned off.	[📹] Video Tab→ [▦◀] Vignetting Comp →	ON or OFF

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HIGH SPEED | **4:2:2/10-Bit UNCOMPRESSED HDMI OUTPUT**

CODEC	MAX FPS	MAX RESOLUTION
With an external recorder	60fps	4096 x 2160 or 3840x2160 422/ 10BIT

NOTE: Only available in Super 35mm
NOTE: in the Movie camera Tab, Image Format menu. Select 4K or C4K 59.94p 420/10bit/long GOP
NOTE: HDMI Rec Output settings can be accessed from the Gear (Cog) Tab, In/Out menu.
NOTE: Press Fn1 to turn Info Display off.
Once these have been changed, you will have 4:2:2 10 bit output over HDMI

OPTIMIZING PERFORMANCE | **MAINTENANCE PROCEDURES**

SETTING	MENU	STANDARD OPERATING PROCEDURE
Pixel Refresh	🔧 Setup Tab→ 🔧 Others →	Panasonic recommends yearly Pixel Refresh of the BS1H. Can be done sooner if needed.
Firmware Version	🔧 Setup Tab→ 🔧 Others →	Compare FW version to latest version. Can be updated from this menu. https://av.jpn.support.panasonic.com/support/global/cs/dsc/download/index4.html

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Time Code/Genlock

SETTING	MENU	STANDARD OPERATING PROCEDURE
Step 3: Set TC options in Menu	[📹] Video Tab→ [🎞️] Time Code →	**External TC Settings** TC Synchronization: TC IN or TC OUT
Step 3: Set Genlock options in Menu NOTE: A "GL" will be displayed on the left side of the monitor when a Genlock device is properly synced.	[📹] Video Tab→ [🎞️] Genlock →	**External Genlock Settings** Genlock Input: On or Off Horizontal Phase Adjustment: -206 to +49