Production Technology Support

CAMERA PRODUCTION GUIDE | **Panasonic S1H**

Settings and best-practices for capture with the S1H on Netflix 4k Originals.

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

Current Panasonic S1H Ops Manual: HERE

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

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

NOTE: S1H mode dial needs to be in the Movie Camera Setting (Creative Movie 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-Body Stabilization on or off	(on) or Off
E-Stabilization (Video)	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
Anamorphic (Video)	Optimizes the In-Body Stabilization for different squeeze values of Anamorphic lenses. Supports Squeeze values of: 2x, 1.8x, 1.5x, 1.33x and 1.30x	A2.0 A1.8 A1.5 A1.33 A1.30 OFF
Lens Information	For lenses that cannot communicate their data, the stabilization needs to be optimized manually. 12 lenses can be preset in this menu	-Image Circle: full or S35mm -Focal Length: value input in mm -I.S. Area: Corrects for Vignetting of the lens -Lens Name: Alphanumeric entry

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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 Quality →	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 S1H 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
Image Stabilizer * Anamorphic lenses can exaggerate movements Please Test before using	[📹] Video Tab→ [🎦] Image Stabilizer →	A2.0 A1.8 A1.5 A1.33 A1.30 OFF
Video Frame marker	⚙ Video 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 -1. (Requires Firmware 2.0)
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. 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 1 →	Panasonic recommends yearly Pixel Refresh of the S1H. Can be done sooner if needed.
Sensor Cleaning	🔧 Setup Tab → 🔧 Others 1 →	Camera will periodically Shake particles off of the sensor. You can do this yourself in this menu.
Firmware Version	🔧 Setup Tab → 🔧 Others 1 →	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 | **using Supplied Time Code Cable**

Step 1: Rotate the **Flash Synchro Socket Cap** counterclockwise and remove.

* Be sure to not lose this cap, it is vital for weather sealing when timecode cable is not in use.
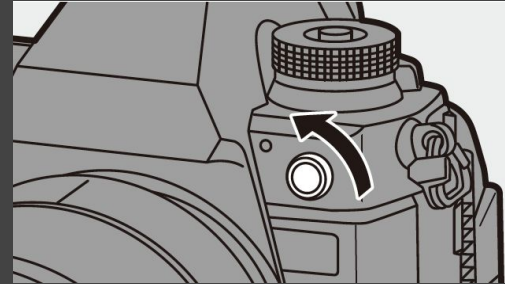
Step 2: Insert **BNC Conversion Cable**. Rotate locking screw clockwise to attach cable. Connect BNC cable to camera and time code generator.

* Only use genuine Panasonic BNC Conversion Cable (included with camera)
* BNC cable must not exceed 9.2ft (2.8M)
* 5C-FB double Shielded BNC Cable recommended
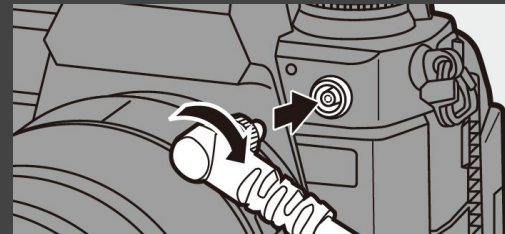
Step 3: Set TC options in Menu

[🎥] Video Tab →
[🎞️] Time Code →

External TC Settings
TC Synchronization - TC IN or TC OUT