

# AJA HELO Plus Release Notes - v2.0

## Firmware for HELO Plus

### Introduction

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HELO Plus v2.0 is a major feature and maintenance release. It is highly recommended that you update firmware to avoid any potential issues.

Be sure to consult the Installation and Operation Guide (user manual) for detailed information about features and configuration guidelines. The most current documentation, along with editable sample graphics projects (in Adobe Photoshop format) can always be found on the [HELO Plus Support Page](#).

### New Features in v2.0

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- PlayToStream (Licensable option). This option allows users to replay a previously recorded HELO Plus or HELO classic program via either of the Stream Outputs. It is possible to perform a PlayToStream operation on one Stream Output while simultaneously streaming a second, live stream to the other Stream Output. Clips recorded via other means are not supported.
- 4 channel audio (Licensable option). This option allows users to stream or record productions with 2 stereo pairs of audio. The sources for those streams can independently come from the analog audio input, the SDI input or the HDMI input. If the SDI input is selected and the 4-channel option is in place, the user may choose audio from any of the 8 audio pairs embedded in the SDI stream (if those audio streams are present).
- If the 4ch audio option is installed, the user can select which audio pair should be displayed on the front panel VU meters
- Stereo VU meters have been added to the webUI for both audio sources. In addition to showing the level of the incoming audio, the UI will indicate if that audio source is being used for Stream Output 1, Stream Output 2, Recording or any combination of the three. If the system is not licensed for the 4ch audio option detailed above, the second stereo VU meter will be grayed out.  
**NOTE:** These VU meters are for guidance only. Third-party audio metering should be employed when performing critical audio editing and mixing.
- The HDMI & SDI outputs may now, independently, have information overlaid on screen. The opacity of the overlay is adjustable in the webUI. Information displayed on the screen is comprised of:
  - System name
  - Record and stream status indicators
  - Video input source

- Timecode value (source defined in the webUI).
- Storage remaining on the local SD and USB drives.
- Audio indicators (VU meters) for the stereo audio sources. If the system is licensed for the 4ch audio option, the overlay will contain 2x stereo VU meters. If the system is not licensed for the 4ch audio option, then only a single stereo VU meter will be shown.
- The Custom Test Pattern Generator image may now be imported as a .jpg image or as a .png image.
- The Video Test Pattern Generator format selection has a new choice: “Auto”. In auto mode, the test generator will automatically set itself to the format of the last valid input. The format will be maintained across a power cycle or reset, but will default to 1080i29.97 after a hard reset, until the first input arrives.
- The Encoder 1 and Encoder 2 Stream Type selection has been enhanced with an “RTMP / Facebook Live” selection. If the user chooses this selection, they will be guided through the steps to connect HELO Plus to a Facebook/Facebook Live page. HELO Plus is now a fully accredited and Facebook approved source device for such streams.
- Logging of RTMP streams has been extended to include status of several important parameters as an aid to issue resolution.
- The HELO Plus webUI may now be switched to a different language. English, Japanese, Korean and Chinese languages are supported.
- The Layout page and Shotbox page in the WebUI will now show the Layout that was last recalled. If the layout is modified in any way, the Layout name will be followed by an asterisk, to indicate that the current layout is based on the recalled layout, but has some modifications. If this new layout is then stored over the original layout, or if a different layout is recalled, the asterisk will disappear.

## Updates and Improvements in v2.0

- If a user navigated to the “Layout” page of the webUI when “Layout” was not selected as the video source, the system would warn the user that layout was not enabled and instruct them to go to the Configuration menu to correct that issue. An “Enable” button has been added to the warning to ease operation. The user can now enable Layout mode directly from this warning pop-up if it appears.
- In the webUI, the Primary and Secondary recording destinations have been relabeled as “Main” and “Backup” to match the front panel silk screening.
- In previous versions of firmware, the system failed to publicize that it was capable of accepting a 12-bit RGB signal on its HDMI input. This issue has been corrected.
- If the Video Test Pattern Generator was set to Custom or Bars, then under some specific conditions the signal produced by the generator would be replaced by black. This issue has been corrected.
- In previous versions of firmware, Custom Video Test Pattern images or full-frame Layout images could occasionally exhibit artifacts on the first and last pixels of each line. This issue has been corrected.
- If the RTMP output stream(s) from HELO Plus were being viewed on VLC via a Wowza server, VLC would not populate its “Title” field with any data. This has been corrected - VLC will now show the stream name in its “Title” field.
- In previous versions, attempts to download files via HTTPS would fail. This has been corrected.

- In previous versions, HELO Plus would occasionally be unable to delete recordings from an SMB share. This issue has been corrected.
- Ki Pro Rack systems would not show up in the HELO Plus Network pane. This issue has been corrected.
- HELO Plus could occasionally display a “Please reboot” dialog in the event of a serious issue, but pressing the reboot button would not, in fact, reboot the system. This issue has been corrected.
- In previous versions of software, if a system with a static IP address was switched over to DHCP, but the DHCP server failed to issue an IP lease, the system would fall back to a “link local” address, as specified in the DHCP specification. Based on feedback from users, the system’s behavior has been modified so that it will now revert to the previously used static address, rather than falling back to the link local address.
- In previous versions of software, uploading an invalid Custom Test Pattern Image would cause the previous, valid, image to be deleted. This issue has been corrected.
- In previous versions of software, SRT encryption could occasionally fail. This issue has been corrected.
- In previous versions of software, streaming to a Wowza server via RTMP, AV sync could be observed to be out of specification. This issue has been corrected.
- In previous versions of software, on rare occasions it was possible for the Streaming indicators in the WebUI and the Streaming indicators on the front panel to get out of sync. This issue has been corrected.
- Some Content Delivery Networks could cause an issue where shutting down the streaming connection at the server end could cause the HELO Plus to appear frozen for a period of time, due to the lack of feedback from the server. This issue has been corrected.
- Various system performance and stability improvements have been implemented.

## Known Issues and Limitations

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- 4-channel audio is not available on RTMP streams. This is not a limitation of HELO Plus, it is a limitation of the RTMP protocol. The system will automatically disable “Audio Source 1&2” for any output that is streaming via RTMP.
- USB storage devices should be connected to HELO Plus directly and not through a USB hub. AJA cannot guarantee system performance if a hub is placed between the HELO Plus and the USB storage device.
- Occasionally, known good USB drives may show up as “unformatted” after a reboot. This issue can usually be resolved by simply removing and re-inserting the USB drives.
- When authentication is enabled and a user is logged into HELO Plus in a browser session, they must quit the browser application in order to log out. Please note that merely closing the browser tab or window will not log the user out.
- Scrolling a drive’s clip list while recording to that drive is not recommended. Current behavior is that the system will jump back to the top of the list every time the information about the active recording is updated.
- If a USB drive is physically plugged into the unit when a factory reset is initiated, that drive must be removed and reinserted for the system to recognize the files on the drive.

- An invalid or unavailable record destination will prevent recording from starting. This is true even if 2 recording destinations are configured, and the second destination is valid.
- When recording using the “Long Single Segment” mode, if the recording duration reaches 12 hours (the maximum value for this mode), the recording will terminate with a “Recording Failed” alarm. This does not mean that the recording is unplayable - it simply means that, since the recording was still in process when the maximum duration was reached, the users intention to record longer than 12 hours has resulted in an internally terminated recording - so the system alarms that fact. The segment, in its entirety, is fully playable. Subject to available storage capacity, longer recordings can be made using the segmented recording feature.
- Write-protected SD cards should not be used as either primary or secondary storage destination. Inserting a write-protected SD card will cause the system to raise a “Backup and Reformat” alarm. This alarm will clear once the write protection is switched off.
- Formatting of USB or SD media can be carried out directly on the HELO Plus – and indeed, that is the preferred option. However, it is also possible to format these devices on an external computer. If formatting in an external computer, it is important to ensure that the drive is formatted with a single exFAT partition which uses up the entire storage device. Having multiple partitions can cause unintended consequences and is strongly discouraged.
- HELO Plus supports recording to external SMB mounts, which can be dedicated servers, or computers running standard desktop operating systems. HELO Plus can automatically negotiate the SMB dialog to be used for communications, but users can elect to manually force SMB 1.0, 2.0, 2.1 or 3.0. Customers using Macintosh computers should only use High Sierra or newer as SMB targets. Customers should avoid using SMB 1.0 (also known as CIFS) if at all possible as it is not secure and may expose sensitive user credentials to anyone listening on your network. Note that auto mode will only negotiate up to SMB 3.0.2. If a customer wants to use SMB 3.1.1, they must manually select that option.
- When using SMB, the HELO Plus can only write to the top level share folder (i.e.\\<server name>\top level folder) - and only if that top level share gives the HELO Plus read/write permissions. The system is unable to write to subdirectories of that top level folder, regardless of permissions set on that subdirectory.
- If a Windows 10 computer is configured as an SMB network share, and that computer is rebooted during an active recording session, the recording will fail and HELO Plus will need to be restarted for further recordings to take place. The file which was being recorded on the SMB share at the time of reboot will not be usable.
- Depending on the SMB system being used, physically disconnecting an SMB share that is currently selected as the primary record destination can cause system issues which, on occasion, may require system reboot.
- Entering file names for recordings that include multiple non-text characters in a row can result in recordings that cannot be downloaded over the network. In extreme cases, the file may not be recorded at all. The workaround is to avoid file names which have large numbers of non-text characters in a row.
- Customers using VLC version 3.0.17 on Windows or macOS may occasionally see repeated or missing CC letters when viewing an RTSP stream. Prior versions of VLC on either platform do not exhibit this issue. The workaround is to use a prior version of VLC, or to use another vendor’s stream viewer.

- Customers who view HLS streams via Safari's native HLS support will only be able to listen to one audio source at a time.
- If the chosen NTP server should fail, or somehow become unresponsive, HELO Plus will not automatically reconnect to it when it becomes available again. Customers can manually reconnect to the ntp server by highlighting its name on the System page and pressing <Enter>.
- When using PlayToStream in the absence of a locked video signal, the VSG format must be compatible with the PlayToStream clip format. If this is not done (or if the VSG format is set to Auto and an incompatible signal was most recently applied) PlayToStream will fail.
- It is possible to configure an RTMP stream to use an encoder which is set for ¼ frame rate with B frames turned on, which will result in a non-decodable stream. This issue will be addressed in a future release of software.
- When sending RTMP streams to FaceBook, the FaceBook Live dashboard may indicate that the audio bit rate being sent is ~560Kb/s, regardless of the setting on the HELO Plus. This is an erroneous report - the HELO Plus is sending audio at the chosen bit rate. The issue will be investigated further.
- If HELO Plus is being used in a Group operation, and is set as the Group Leader, setting another device in the group to be leader (in that device's own webUI) may sometimes fail to clear the Leader button on the HELO Plus. Refreshing the browser for the HELO Plus will correct the issue.

## Technical Support

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AJA Technical Support is free and available to help you answer questions or resolve issues with any of your AJA products.

### **To contact AJA Technical Support:**

Email: [support@aja.com](mailto:support@aja.com)

Phone: +1-530-271-3190

Fax: +1-530-274-9442

Web: <https://www.aja.com/support/contact>

Shipping: 180 Litton Dr. Grass Valley, CA 95945 USA