ALEXA 35 SUP 1.2.0

Software Update Package (SUP) 1.2.0

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R E L E A S E   N O T E S

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August 9, 2023

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A. Introduction

With the introduction of the Camera Control Monitor CCM-1, ARRI provides full camera control and menu access for the ALEXA 35 and ALEXA Mini LF. The CCM-1 combines ARRI color accuracy and a bright display with customizable controls and rugged build quality. To communicate with the CCM-1, ALEXA 35 cameras require ALEXA 35 Software Update Package (SUP) 1.2.0. ALEXA Mini LF cameras require ALEXA Mini LF SUP 7.3.0 (scheduled for the end of Summer 2023). For more information about the CCM-1, please visit www.arri.com/ccm-1.

This document describes changes from ALEXA 35 SUP 1.1.0 to ALEXA 35 SUP 1.2.0. We highly recommend that you take your time to go through these release notes, the known issues section of this document and the user manual before operating the camera.

For more information on the camera, please visit www.arri.com/alexa-35

Update Recommendation

This release includes exciting and useful new features as well as important bugfixes and stability improvements to the camera. We unequivocally recommend updating to all customers.

A bug in the LPL lens mount software that was included in older ALEXA 35 SUPs can sometimes lead to the ALEXA 35 SUP 1.2 update failing the first time. In that case, repeat the ALEXA 35 SUP 1.2 update.

Overview of New Features

- **Support for the Camera Control Monitor CCM-1**
- **Multi Viewfinder MVF-2 touch functionality**
- **Extended Erase Media menu warnings**
- **Improved Audio Gain GUI**
- **Improved numerical entry screens**
- **Support for WPA-3 Client mode**
- **Transport Position for built-in FSND Filters**
- **Bugfixes and stability improvements**

Updating Camera, Viewfinder and Lens Mount

- This SUP can be installed on all previously shipped ALEXA 35 cameras.
- We do not recommend updating in the middle of a production.
- When connected to the camera, the MVF-2 viewfinder and the lens mount will also be updated automatically.
- The Camera Control Monitor CCM-1 will not be updated automatically when connected to the camera during a camera SUP update, since the CCM-1 has its own Software Update Package.
- When you encounter a camera in rental or on set where MVF-2 or lens mount have older software installed, the camera will make you aware of this. We recommend to then perform a component update of the MVF-2 or lens mount (MENU > System > Update). The first version number in brackets is the version of the component, the second the version of the component's software included in the camera's SUP. In the example below, the MVF-2 has an older software installed (2.24) than the MVF-2 software that is part of the camera's SUP (3.17). After the component update, both numbers should be the same, as is the case in the example below for the lens mount.
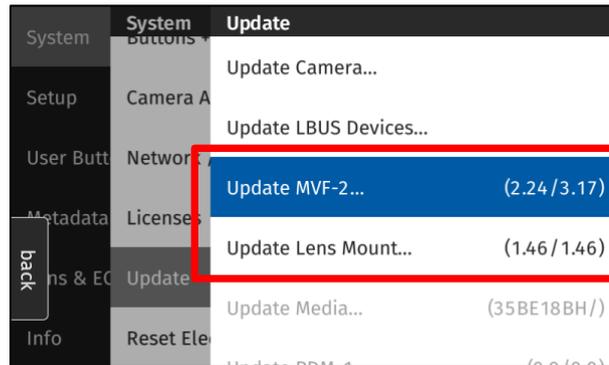
The following versions are included with ALEXA 35 SUP 1.2.0:

- MVF-2: 3.17
- LPL Mount: 1.48
- PL Mount (LBUS): 1.95
- PL Mount Hirose: 1.95
- EF Mount (LBUS): 1.14

- Please note that the viewfinder might switch off during the update process and does not give visual feedback of the update all the time. Refer to the side display in that case.
- Make sure not to power off the camera during an update. Make sure not to unplug the viewfinder during an update. Detailed instructions for the update process can be found at the end of this document.
- Always use a 'private' or 'incognito' browser window when using the Web Remote to perform a SUP update (or when remotely controlling the camera with the Web remote) . This prevents possible erroneous behavior.

Updating LBUS Accessories

- The camera SUP does not contain any LBUS accessory software. LBUS accessories (like ZMU-4, cforce mini motors, cforce Plus motors, ARRI Master Grips, ARRI Operator Control Unit OCU-1 or ARRI LCUBE) connected to the camera during a camera SUP update will therefore not be updated.
- To update LBUS accessories, download the LBUS device update file from the ARRI website, copy it onto a camera USB stick in the folder ARRI/ECS/, place the USB stick into the camera, connect the LBUS device to the LBUS connector on the camera and then initiate the update from MENU > System > Update > Update LBUS Devices... .

Downdating the Camera

It is possible to downdate from this SUP to an older SUP.

- However, MVF-2 viewfinders with serial numbers above 6849 and Compact Drive 2TB units with serial numbers starting with '273xxxxx' require ALEXA 35 SUP 1.0.4 or newer.
- Since ALEXA 35 SUP 1.x requires a different sensor calibration from any of the field test SUPs (0.8.x), please do not downdate the camera from SUP 1.x to any of the field test SUPs.

Codex Compact Drive 1TB Update

All existing Codex Compact Drive 1TB must be updated to continue to function with ALEXA 35. New drives are shipped with updated firmware. If a drive that needs a firmware update is inserted into the camera, an update prompt will be displayed. After the drive has finished updating, the camera will remain in update mode so that multiple drives can be updated. To restore normal operation, reboot the camera.

Caution: All data on the drive will be irreversibly erased when updating the drive firmware. Please back up your data before the update!

Note: Updated Compact Drive 1TB and the new Compact Drive 2TB will also be supported by ALEXA Mini LF starting with ALEXA Mini LF SUP 7.1.1.

Software Compatibility Notes and Sample Footage

- A listing of third-party software and their compatibility to ALEXA 35 can be found on the ALEXA 35 Workflow webpage. Please make sure to always use the latest version of any third-party software.

- To process files recorded with ALEXA 35 or create look files for ALEXA 35, please use the latest version of the ARRI Reference Tool (ART). ALEXA 35 SUP 1.2 has been tested with and works well with ARRI Reference Tool 1.1.0 and later. The ARRIRAW Converter will not be able to process ALEXA 35 files.

- ALEXA 35 SUP 1.1.0 or newer is not compatible with Hi-5 SUP 1.3 or earlier and RIA-1 SUP 1.2.1 or earlier. Both Hi-5 and RIA-1 must be updated to SUP 2.0 or higher to work with ALEXA 35 SUP 1.2.0.

- ALEXA 35 SUP 1.2. supports Camera Access Protocol (CAP) 1.10

- Please note that macOS X version 10.15.7 or later is required to successfully transfer data from a Codex Compact Drive with the Codex USB-C Compact Drive Reader, or the SXR Capture Drive Dock with the Compact Drive Adapter. Using older versions of macOS will result in a copy error for files larger than 9.66 GB.

- Please note that macOS X version 10.15 with the Apple MXF plug-in installed (part of "Pro Video Formats 2.2.4") or a later version of the macOS is required to play back downloaded MXF/Apple ProRes footage in Apple QuickTime Player.

- Sample footage shot with the ALEXA 35 camera can be downloaded on the ALEXA 35 sample footage webpage.

Registration

If you have not done so already, please make sure to register your camera using our online customer registration. Your registration ensures that you receive information about future software updates as soon as they are available. If you register your new camera within 1 month of purchase, you will get a one-year extended warranty for free. You can find the registration at www.arri.com/productregistration.

B. New Features

Support for CCM-1

The CCM-1 is a 7" onboard monitor that provides full camera control and menu access for the ALEXA 35 and ALEXA Mini LF. It displays a bright, high-contrast HD image on its 7" IPS LCD screen that is easily viewable in daylight from a range of viewing angles. Like the MVF-2, it connects via the camera's VF connector and provides an image that faithfully conveys the accuracy and subtlety of ARRI color management. The CCM-1 provides an alternative control, menu, and image interface to the MVF-2 viewfinder, which it can either replace entirely (ALEXA 35 SUP 1.2) or work alongside (ALEXA 35 SUP 1.2.1, planned for Q4 2023). All functions are adjustable via the touchscreen or via buttons and a joystick and can be operated with one hand, leaving the other hand free.

The CCM-1 User Buttons can be assigned either from the camera or the CCM-1 itself.

MVF-2 MENU > User Buttons > Monitor User Buttons

The CCM-1 communicates with the camera using the CAP protocol. As soon as it is attached CAP Server will be switched to 'ON' automatically. For security reason we recommend modifying the CAP Server password when using the CCM-1. You are not required to enter the password on the CCM-1 as long as the connection is using the VF-Cable.

Multi Viewfinder MVF-2 touch functionality

It is now possible to operate the flip-out monitor of the Multi Viewfinder MVF-2 by touch. The setting is activated by default and can be changed in MENU > System > Buttons + Display

Together with this change we have introduced numerous adjustments to the menu, some of which are listed in the later sections.

Switch between the live screen and the menu screen by sliding either screen sideways with your finger.

The Lock switch on the MVF-2 now also disables touch in addition to locking the buttons.

Extended Erase Media menu warnings

MVF-2 MENU > Media > Erase Media
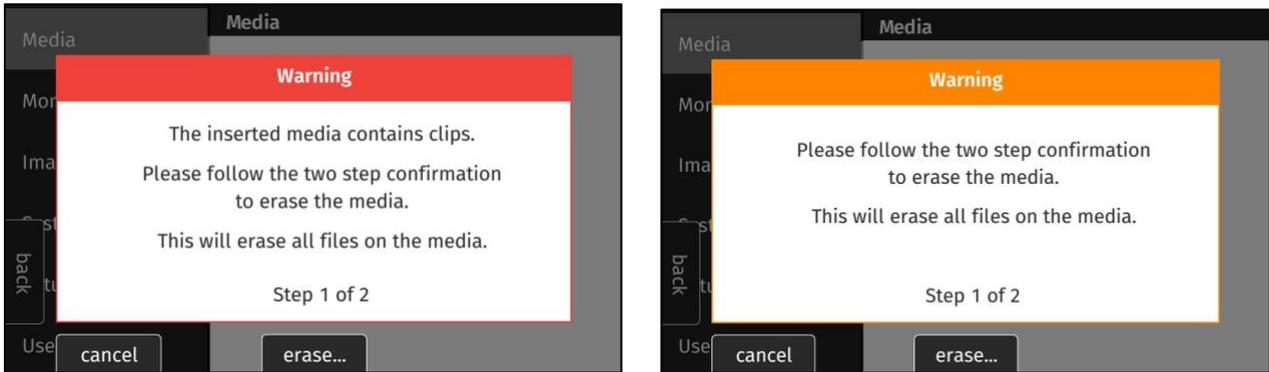
The erase media warnings on the MVF-2 flip-out monitor have been modified to offer more information about the media erase process. The color of the title background of the warning messages clearly communicates if there are camera clips on the card that is about to be erased (red title background) or not (orange title background).

In addition to that there is a clear second step to initiate the erase process to avoid accidental operation.
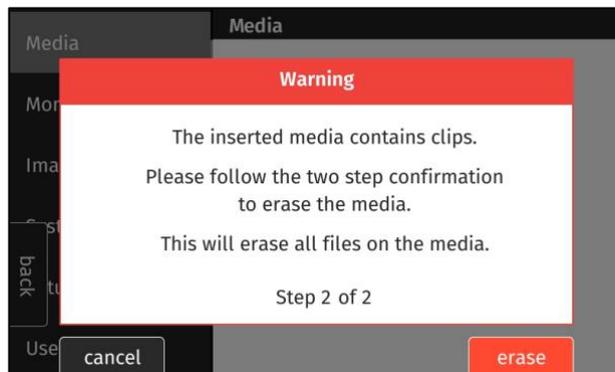
Improved Audio Gain GUI

MVF-2 MENU > Recording > Audio Recording > Gain Levels

The new Audio Gain screen gives a quick overview of current gain setting, the channel assignments and monitoring settings. Gain levels can be adjusted by turning the MVF-2 click wheel or dragging on the scroll bar with your finger.
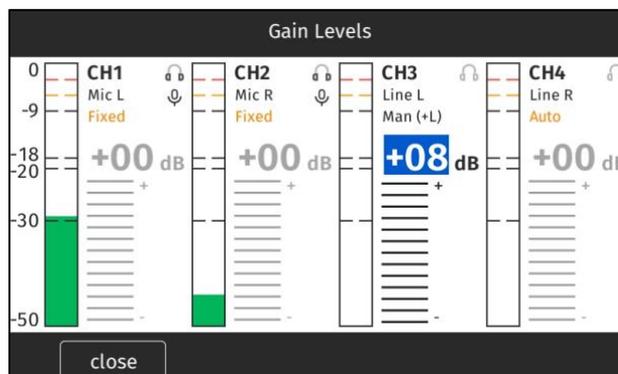
Improved numerical entry screens

To improve numerical entries like White Balance or FPS the screen design has been adapted to support touch functionality. The scroll bar increases and decreases the currently selected digit, tapping on the value or pressing the confirm button on the MVF-2 click wheel selects the next digit.
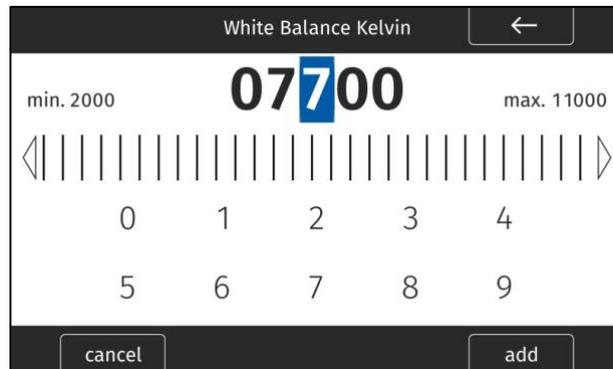
Support for WPA-3 client mode

The camera can now connect to WiFi networks that are secured with the WPA-3 security standard. As defined in the standard there is also no warning message if the connection is refused due to an incorrect password.

Transport position for ND Filters

When the camera is powered off by pressing the power button, the internal ND Filters will enter a safe transport position (no glass filter visible in the gate). This position provides better protection against strong impacts to the camera. Because of this, power-down takes 1 second longer now. When powering the camera back on, the previously set ND Filter is restored. The power-up duration remains the same as before.

Lens Motor Calibration can be skipped while recording

When the camera is being rebooted, and the same lens remains on the camera with lens motors that had already been calibrated and that have not been detached from the lens, it is possible to skip calibrating the motors again. This can now also be done while the camera is recording.

When the lens has been removed from the camera (which the camera can detect), the lens motors MUST be recalibrated. This step cannot be skipped and can also not be performed while recording.

C. Bugfixes and stability improvements

This release contains many bugfixes and stability improvements, including the following:

- ECS Folder is created when creating USB folder structure
- The Focus distance overlay is hidden when no data is available
- Unplugging ZMU-4 no longer causes a reboot
- Electronic horizons on some cameras could not be reset – now fixed
- Which frame lines were active (A, B, C) is now stored in setup file
- Software Update Packages (SUPs) are now ~ 200 MB smaller
- Display of anamorphic frame lines with scaling works now as expected when the frame lines are created with the current version of the online ARRI Frame Line and Lens Illumination Tool.

D. Known Issues – Software

Accessories

FPS Preset cannot be used by Camera Control App
Currently, the Camera Control App cannot set frame rates for the "FPS Preset" user button.

Not possible to set Enhanced Sensitivity (ES) via Hi-5
Currently it is not possible to select Enhanced Sensitivity exposure indexes via the Hi-5. Those EI values must be selected via user button, Viewfinder or Web Remote.

Boot loop on WCU-4 with certain /i Lenses
Attaching certain Lenses that use the Cooke /i Protocol may send the WCU-4 into a boot loop. Please deactivate the Lens Mount and use LDA Tables in that case. The issue will be fixed in WCU-4 SUP 3.3.26.

RIA-1 Update via CAM Fails
Updating RIA-1 by connecting the RIA-1 CAM port to the ALEXA 35 and then running the update from the camera sometimes fails.

Lenses

Some /i lenses show missing or incorrect lens scales
For a few lenses using the Cooke /i protocol lens scales are either missing or not displayed correctly. Use LDA tables for these lenses instead.

Monitoring

MVF-2 shows only ARRI logo and color bars after reboot of the camera
In rare instances the MVF-2 flip-out monitor will continue to show the ARRI logo after the camera has finished booting. In this case the OLED in the eyepiece will show color bars. In some instances, the image may stay black.

Reboot the camera to resolve the issue.

First lines of MVF-2 eyepiece flicker for 2 seconds after hot plugging
After hot plugging the MVF-2 the first lines of the OLED display flicker for a short time. This behavior vanishes quickly and has no impact on recorded footage.

Frame lines may be displayed in the surround view when using master magnification
When using surround view in conjunction with master magnification the frame line may be displayed in the surround area for certain magnifications while it should not be visible.

Overlays in 6G disappear
When status info is set to OFF and SDI format is switched from 1.5G to 6G the SDI Overlays disappear. Switch SDI Image to clean and then back to processed to display them again.

User button function SDI/VF De-squeeze not available
There are currently no user buttons with any de-squeeze options. Those will be added in a later update.

Anamorphic frameline issues with old version of Frame Line and Lens Illumination Tool
Framelines created with an old version of FLT exhibit the following error: While project settings are set to an anamorphic factor and a frame line with scaling is activated the scaling is not applied and shading is therefore not possible. Recreate the framelines with a current version of the FLT.

External LUTs desaturate camera overlays
A LUT applied to an external monitoring device may desaturate the camera overlays in a way that makes STBY and REC indications hard to distinguish. Reducing the SDI overlay brightness mitigates this issue. The setting is found in: MENU > MONITORING > SDI > SDI 1 PROCESSING > OVERLAYS > OVERLAY BRIGHTNESS

MVF-2 OLED may show magenta tint
In rare circumstances the MVF-2 OLED can show a magenta tint that is not observable on SDI. The recorded images are not affected.

Playback

Small playback image
When using Magnification and Surround view the playback image may show less than monitored during recording and standby.

No recording possible if HI-5 or ZMU-4 are connected and playback is exited by recording start
When a Hi-5 or ZMU-4 are connected (with any Hi-5 SUP) to the camera and playback mode is exited by starting a recording (regardless of the device used to start recording), the camera can enter a state where recording is not possible. Reboot the camera in this case.

The error does not occur if playback is exited by either long pressing the Playback button on the MVF-2 or by pressing 'back' on the Hi-5. This is a bug that will be fixed in the next ALEXA 35 SUP.

Lower Audio levels in Playback
When playing back a clip with Audio the headphone output on MVF-2 is 3dB less than in Live/Recording.

Limited clips available via CAP
When Playback is controlled via CAP only the first 270 clips on the card are available. To access later clips use the side display.

After leaving playback or check last clip, camera momentarily doesn't respond to inputs
After leaving any playback mode, whether started via 'Check last clip' or 'Plackback' User Button the camera may occasionally not react to inputs for a few moments. The camera will return to normal state after a maximum of four seconds.

Remote Control

Sync slips by one frame if recording is started while in playback
MENU > System > Sensor > Genlock Sync > SYNC IN
MENU > System > Sensor > Genlock Sync > TC IN

When several cameras are synchronized via TC IN or SYNC IN, and recording is started while one camera is in playback, that camera will be out of sync by one frame. There is an obvious, easy workaround: make sure all cameras are in standby, before starting to record.

OCU-1 wired to camera via ZMU-4 cannot exit override
Override is not always possible if an OCU-1 or Master Grip are used in combination with a ZMU-4:
- Override is not supported for wireless control units. It is therefore not possible to use the override function of an OCU-1 or Master Grip if they are connected to a ZMU-4 in client mode.
- It is currently not possible to use the override function when the ZMU-4 is connected remotely to an ALEXA Mini or ALEXA Mini LF camera and a cabled MG-1 or OCU-1 at the camera.
Workaround: Connect the ZMU-4 to the camera only via CAM to EXT or set up the system that the corresponding axis is only controlled via the OCU-1 (disable that lens axis in the Hi-5 Menu > Control Setup).

Usability

Side Display backlight stays on after display has been deactivated
When sending the side display to sleep by pushing the jog wheel for a long time or by setting the display mode to 'sleep', the backlight stays on for some time.

E. Known Issues – Hardware

BNC connectors breaking

Some BNC connectors on the ALEXA 35 can break off when then the cable is pulled out at too much of an angle. Please make sure to pull out cables straight to avoid this. Please note: Only cameras with serial numbers between 62000 and 62400 are affected by this issue.

Broken connectors can be replaced by the customer/rental/dealer or by ARRI service. To be prepared, replacement connectors can be ordered from ARRI service free of charge. This video shows how to replace connectors:

https://arri.academy/SE-replacing-bnc-connectors-alexa35

F. Update Procedure

Where to download the new Software Update Package (SUP)

You can find the Software Update Package in the [Software Update Packages download section](#). A SUP can be installed on the camera by using a USB stick as described in detail below.

Install SUP 1.2 Twice

A bug in the LPL lens mount software that was included in older ALEXA 35 SUPs can sometimes lead to the ALEXA 35 SUP 1.2 update failing the first time. In that case, repeat the ALEXA 35 SUP 1.2 update.

Camera Update Procedure

The ALEXA 35 software is updated from a USB memory stick. The Software Update package (SUP) will update the ALEXA 35 camera along with the Viewfinder (MVF-2) and the lens mount – provided they are connected to the camera.

The update can be started through the menu of the MVF-2 viewfinder or through the Web Remote. The Web Remote requires a connection to the camera via WiFi or Ethernet (with ALEXA Ethernet/RJ-45 Cable KC-153-S, K2.72021.0). Open a web browser and enter the URL: http://alexa35-xxxxx.local (replace xxxxx with your camera's 5-digit serial number). For further information on the Web Remote, please refer to the User Manual.

- After the download, please double click the downloaded file (*.zip) to unpack it or unpack it manually. This will place two update files (*.SWU and *.lic) onto your computer.
- Format your USB Stick using the exFAT file system.
- If not done beforehand, prepare the USB memory stick for use with ALEXA 35 by connecting it to the camera. Then choose *MENU > Media > Prepare USB Medium...* in the camera's menu on the MVF-2 flip-out monitor and press CONFIRM. This will create the required folder structure on the USB stick.
- Connect the USB stick to your computer and place the downloaded *.SUP file in the folder ARRI/ALEXA35/SUP on the USB stick. Then place the downloaded *.lic file in the folder ARRI/ALEXA35/LICENSES on the USB stick.
- SUPs contain not only updates for the camera body but also for the MVF-2 viewfinder and the lens mounts. Therefore, the MVF-2 viewfinder and the lens mount should be attached to the camera when performing an update.
- Make sure the camera is connected to a power supply (best) or is powered with a full battery to avoid power loss during the update process.
- Perform a factory reset on the camera with the menu item *Menu > Setup > Factory Reset...*
- Connect the USB stick to the camera and navigate to the menu item Menu > System > Update > Update Camera...
- Select the SUP file from the list and click the item.
- In the following message, press INSTALL to start the installation.
- Press CONFIRM to start the installation.
- The camera will present a screen presenting the update progress. Please do not shutdown the camera or unplug power until the camera reboots.
- After the update process has finished, a success message is displayed. Please note, that the update can take up to 20 minutes.
- Make sure you set the correct time zone in *Menu > System > System Time & Date*.
- If the MVF-2 viewfinder or LPL lens mount were not connected to the camera during the update process, the camera will still store the new software for those devices. The next time those devices are connected and have an older software than the one stored in the camera, the camera will offer to update those devices.