

ALEXA Mini SUP 5.4

Software Update Package SUP 5.4.13

RELEASE NOTES

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A. Introduction

We are proud to announce the release of Software Update Package 5.4 for the ALEXA Mini. This version expands functions for the ALEXA Mini as indicated below.

SUP 5.4 includes important bug fixes and major improvements and we strongly recommend installing this update at your earliest convenience.

We highly recommend that you take your time to go through these release notes and the known issues section of this document before you start using the camera.

If you have not done so already, please make sure you register your ALEXA Mini using our online customer registration. Your registration ensures that you receive information about future software updates as soon as they are available. You can find the registration [here](#).

For more information, please visit www.arri.com/alexamini.

For a listing of answers to frequently asked questions please visit the [ALEXA Mini FAQs](#) .

If you have questions or feedback regarding ALEXA Mini please feel free to [contact us](#) .

Overview of Features Introduced with SUP 5.4

- **Support of MVF-1 with new Viewfinder Panel**
Starting with serial no. 12000, the ALEXA Mini MVF-1 includes a new OLED viewfinder panel, offering new brightness settings 120, 200 and 300 Nits.
- **Master Grips Status Indication**
- **Improved Timecode Behaviour in Regen Mode**
- **Center Mark Option “Small Cross”**

Changes to Previous Versions

- *Menu > User buttons > Master Grips user buttons* has been renamed to *LBUS device user buttons*

Update Information

Cameras should always run the latest SUP so you can benefit from the latest improvements, features and bug fixes. However, we do not recommend installing a new SUP in the middle of a production.

Detailed instructions for the update process can be found at the end of this document.

SUP 5.4 contains updates for all components, including the viewfinder. The update may take significantly longer than previous updates. The viewfinder will switch off in the process and doesn't give a visual feedback of the update all the time. Make sure not to power off the camera during firmware update.

Downgrading

Downgrading to SUP 4 is only possible once in a row. SUP 5.4 includes hardware related updates that do not allow installing SUP 4 a second time. If you have downgraded to SUP 4 and for some reason the installation could not be completed, you need to install SUP 5 again before you can downgrade and install SUP 4 again.

For a downgrade to a previous SUP version, the license file of the installed and of the previous version (`mini_fw_update_aes_x.x.x.lic`) need to be available on the USB memory stick under `/ARRI/A-MINI/LICENSES/`.

Additional Software

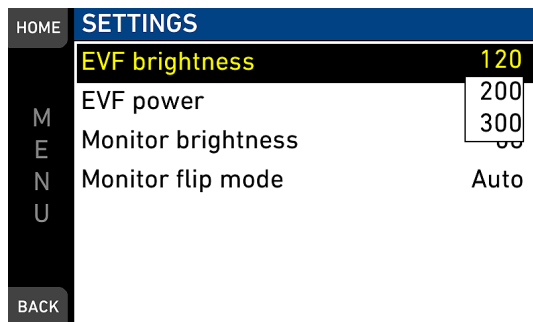
ARRI recommends updating ARRIRAW Converter (ARC) version 3.4.5 or lower to version 3.5 or higher when used with SUP 5.x files, especially when using user pixel maps and when HDR looks are used for the project color management. The new HDR color spaces, Rec-2100 PQ and Rec-2100 HLG, are incorrectly interpreted as REC 709 in previous ARC versions. This can lead to incorrect image color processing and color space metadata in the exported rendered files.

B. New Features in SUP 5.4

Support of MVF-1 with new Viewfinder Panel

All ALEXA Mini MVF-1 from serial no. 12000 onwards have a new OLED viewfinder panel built in, because the previously installed viewfinder OLED panel is no longer available. This new viewfinder panel will only display an image when used with SUP 5.4 and higher, and will not display an image with versions below SUP 5.4.

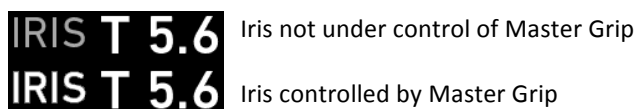
The panel comes with a new calibration and new brightness setting, with options 120, 200 and 300 Nits. EVF gamma is fixed and equivalent to the *Lifted* setting of the preceding viewfinder panel. The factory default brightness setting is 120 Nits. All existing MVF-1 will not be affected by this change, and will continue to function as before.



MENU > Monitoring > EVF/Monitor > Settings > EVF brightness

Master Grips Status Indication

The status info lens data overlays for iris, focus and focal length now indicate whether or not an ARRI Master Grip controls a lens axis. As soon as a Master Grip gains control over an axis, the name of the corresponding overlay is highlighted white (example below: Iris axis):



This indication is especially useful when using one Master Grip to control focus and iris, switching between both axes.

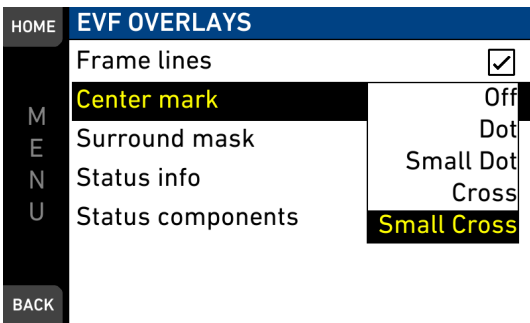
Improved Timecode Behaviour in Regen Mode

Compatibility with SMPTE compliant generators that have caused intermittent warnings in the past has been improved for Regen mode. Starting with SUP 5.0 the camera applied a strict quality control on the timecode signal to ensure that the source would work with JAM Sync mode and tuning. This check has partly been removed in REGEN mode to support generators that comply with SMPTE specifications, but do not match the requirements for tuning the camera. As a consequence some timecode related warnings will not show any more so that operators will have to take greater care that the timecode signal applied to the camera will match the project setup. The warnings that won't show in Regen mode any more are:

- *LTC In frame rate is incompatible with project frame rate* (mixing integer and non-integer frame rates)
 - *LTC In drop frame configuration mismatch* (camera uses drop frame, source does not or vice versa)
- In both cases the camera will now show the warning *Timecode synchronization is required*.
- *LTC In frame rate differs from project rate* (mixing integer or mixing non-integer frame rates)

Center Mark Option “Small Cross”

The center mark setting for EVF and SDI has been extended with the option *Small Cross*.



MENU > Monitoring > EVF/Monitor > EVF Overlays > Center mark
MENU > Monitoring > SDI > SDI processing > Overlays > Center mark

C. Known Issues

Known Issues Fixed in SUP 5.4

Following known issues have been resolved in the SUP 5.4 release:

- Audio playback on SDI outputs and headphone out may be nonlinear when playing back ProRes clips with project rate 59.94p.

Known Issues in SUP 5.4

This is a list of known issues for the SUP 5.4 software package.

Accessories

• Record Start/Stop on Canon HJ18 B4 lens

In case the start/stop function on the Canon HJ18 B4 lens is not working with the ARRI B4 Mount and connected Hirose cable, please execute a "Reset all" on the lens.

EXT Sync

• Changing SDI settings while running off sync speed

The SDI outs might not be in sync to each other anymore when SDI settings (SDI frame rate, SDI format and/or SDI image) are changed while the cameras are running off speed (sensor fps != project fps) in EXT sync mode. In this case change the sensor fps setting back and forth on the master camera to re-establish SDI out sync.

• False alerts with slave cameras connected but not yet configured

False alert states are issued when slave cameras are connected to a master camera but are not yet configured as slave camera. When setting up an EXT sync cluster, first enable all slave cameras and master last.

Frame Grab

• Frame grabs do not work during playback of interlaced S16 or HD clips when playback is paused.

In order to perform a frame grab rewind, hit play and do the frame grab at the appropriate position.

• Frame grabs from ARRIRAW playback

Frame grabs taken from ARRIRAW playback may exhibit differences in pixel brightness on the edges of the frame.

Inputs/Outputs

• SDI outputs when using timecode sync

When using a timecode signal as sync source, the SDI outputs may not be precisely in sync to the sync source. For precise SDI out sync to sync source please use a tri-level genlock signal.

• Monitoring in 3.2K with 1.3x anamorphic desqueeze

EVF/Monitor and SDI outputs may show scaling artifacts in 3.2K recording mode with 1.3x anamorphic desqueeze enabled. The artifacts are limited to the monitoring outputs, they do not affect the recordings.

• 1.3x anamorphic desqueeze is not available for UHD SDI output

1.3x anamorphic desqueeze is not applied to UHD SDI output 422 6G, DL 422 6G and 422 3G DL.

• Momentary image loss on SDI outputs when connecting a sync source

The SDI outputs re-synchronize when connecting a genlock or timecode source. While re-synchronizing a short image loss may occur.

- **1.3x anamorphic desqueeze is not available for EVF zoom**

1.3x anamorphic desqueeze is not applied to the EVF zoom image.

- **Temporary image loss on SDI outputs when configuring 6G**

When changing the SDI output to 6G, or when changing the SDI output from 6G to another format, both SDI outputs may exhibit a short image loss.

Media

- **Protection against cross platform CFast 2.0 formatting issues**

Only CFast 2.0 cards that have been erased on ALEXA Mini or AMIRA running SUP 4.0 (or higher) can be used for recording. This is for protection against issues caused by different CFast 2.0 formatting schemes used by other cameras manufacturers.

Metadata

- **Tilt and roll metadata not accurate**

Tilt and roll values in metadata may not be accurate enough to be used for VFX applications.

Playback

- **Clips with HDR looks burned-in will not be correctly displayed on MVF and EVF**

When playing back a clip that has a HDR look burned-in, it will not be correctly displayed on MVF and EVF, since both are not HDR capable and no tone-mapping is applied. This is a monitoring problem only and does not affect the recorded footage. However, we generally do not recommend burning in looks when shooting HDR content.

- **Internal camera playback of ProRes 4444 XQ clips**

In camera playback of ProRes 4444 XQ clips may show jitter or a horizontally divided frame. The recorded clip is fine.

- **In Pause mode, interlaced clips only show half vertical resolution**

This behavior can only be observed when playback is monitored on the SDI outputs.

- **Browsing clip list with camera buttons may not update clip selection in monitor**

Using the buttons on the camera body for browsing the playback clip list, may not update the selection of the clip in the clip list displayed in the viewfinder monitor.

- **Interlaced clips jitter vertically when played back with SDI output not set to interlaced.**

This only affects the playback in SDI, the recording is correct. Make sure to always match SDI the output configuration to the project configuration (e.g.: 60i clips to be played back with 60i SDI output).

- **Activating Playback does not disable peaking**

Please disable peaking manually in case you do not want peaking during playback.

Recording

- **Camera sometimes does not prompt to format a non ARRI_UDF CFast card**

While the MVF Display is set to live view mode, the camera will not prompt to format a CFast card, even the file system on the card is not the ARRI_UDF file system, but FAT32, ExFAT or other.

- **Start recording from playback in MPEG or ARRIRAW mode**

Starting a MPEG or ARRIRAW recording directly from playback can fail with error message: "Recording stopped due to FPGA failure. Please reboot camera." Please exit playback before starting to record.

- **Start recording from playback**

Starting a recording directly from playback may not work. In this case a second press of the record button is necessary.

- **Incorrect remaining time displayed in interval recording**

Using higher capacity CFast 2.0 cards for interval recording may cause wrong remaining time display.

- **Noise Reduction in "Strong" mode**

The "Strong" mode in Noise Reduction (available in S16 HD, 3.2K, 4:3 2.8K and 4K UHD) may result in image artifacts with fast moving objects. We recommend testing this accordingly before using "Strong" mode.

- **Power loss during record with CFast 2.0 cards**

A CFast 2.0 card may need to be reformatted when it is removed during recording or in the event of a sudden power loss occurs while the camera is writing to the card. The camera will indicate the error with a warning message. Please follow the instructions in the warning to avoid damage to the card or further recordings. No action is required if no warning is displayed. Please contact ARRI service for more information or if you encounter any further issues.

- **Limited scaling quality in HD-SDI outputs when recording in 2K**

The resulting image quality is considered as sufficient for monitoring but may be limited for recording the signal as the master record. This is due to the downscaling of the 2K resolution to HD. Please set the recording format to HD when recording HD on the HD-SDI output as master record.

- **Error message for maximum clip size.**

On very rare occasions, the camera may stop recording and report "Recording stopped - maximum clip size reached". This can only occur with image content that has very little detail and using a codec with low data rate like ProRes LT.

- **Changing Exposure Index or White Balance during record**

When changing Exposure Index or White Balance during record it is possible that a single frame contains two different image characteristics.

- **Limited amount of reels on CFast 2.0 cards**

Recording on CFast 2.0 cards is limited to 15 reels per card in ProRes and ARRIRAW MXF. If the maximum number of reels is reached, recording is still possible if no further reel needs to be created.

SUP Update

- **Time zone and daylight saving time are set to default with the SUP update.**

Please make sure to set time zone and daylight saving time after the SUP update.

Timecode

- **Syncing multiple cameras using timecode**

When syncing multiple cameras using timecode sync and timecode mode regen, some of the recorded clips may exhibit a timecode offset of one frame with project rates above 30fps.

- **Syncing the sensor via LTC timecode requires a precision timecode generator**

A precision generator with low jitter is required when using an LTC timecode signal to genlock the camera. Devices that work without a problem as standard LTC timecode source may not work as LTC genlock source.

Usability

- **Motor calibration request when lens file is edited on WCU-4**

When editing an active LDA lens file on WCU-4 and a LDS lens is attached, the camera issues a lens motor calibration request. In this case you have to calibrate the motors once again before editing the lens file.

- **The Waveform exposure tool is silently disabled when output processing is set to ALEXA Classic 709**

ALEXA Classic 709 output processing while shooting HDR content does not work with the waveform exposure tool and is silently disabled. User buttons and the EXP button on the MVF-1 viewfinder will have no effect.

- **CAP server frame grab while camera is in playback**

A frame grab triggered through CAP server during internal camera playback grabs a live image from the sensor instead of a playback image.

- **Tilt and roll readings in status overlays**

Electronic horizon overlay and tilt and roll overlay may show false readings if the camera orientation does not allow for adequate calculation of either roll or tilt value.

- **Updated EF mounts not compatible with SUP 4 release**

Reverting the camera software to SUP 4 does not downgrade the EF mount software. An EF mount that has been updated with SUP 5.x will not work in that case.

- **Simultaneous use of timecode mode jam sync and genlock sync is not supported**

When using timecode mode jam sync or when using genlock sync, the camera adjusts its internal oscillator to match the source clock. Hence using a combination of timecode mode jam sync and genlock is not supported.

- **Mirror image vertical flip is not applied to frame grab**

When using the mirror image setting, only the horizontal flip is applied to the frame grab.

- **Anamorphic desqueeze cannot be deactivated for monitoring with some formats**

Anamorphic desqueeze cannot be deactivated for monitoring with the ProRes HD Ana. and 2:39:1 2K Ana. recording formats.

- **User setups created with earlier SUPs are not compatible with SUP 5.x**

User setups created with SUP 4 or earlier SUPs cannot be loaded with SUP 5.x

- **Starlite-HD5ARRI can change settings or trigger a recording even if UI is not displayed on screen.**

If the Starlite-HD5ARRI is connected to a SDI output showing "CLEAN" output, settings may be changed without notice when touching the respective areas on the screen. Please make sure the Starlite-HD5ARRI is connected to an SDI output that is set to "PROCESSED" to see the touch interface.

Viewfinder

- **Calibration applied ten seconds after initial connection**

When connecting a MVF-1 with the new OLED viewfinder panel built in for the first time, it might take up to ten seconds before the new viewfinder calibration is loaded and applied.

- **Viewfinder may show scaling artifacts in 4:3 2.8K mode with anamorphic desqueeze**

The artifacts are limited to the viewfinder monitoring, they do not affect the recordings.

- **For MVF-1 up to serial number 2150 which are not upgraded to the new eyepiece**

The viewfinder sometimes may not switch on as it uses a proximity sensor to activate the OLED display only while the eyepiece is in use. Approaching the MVF at an unfavorable angle may cause it not to trigger properly.

- **ZOOM or SURROUND VIEW at very low frame rates**

The MVF-1/MONITOR's image momentarily fades when either zoom or surround view get activated or de-activated at very low frame rates (below 5 fps).

D. Update Procedure

Download and Registration Process

You can find the Software Update Package (SUP) in the ALEXA Mini [download section](#). You need to register your ALEXA Mini camera, along with your camera serial number, to access the Software Update Package (SUP) download. Existing ALEXA customers with an active account for the download section can use this account, unless otherwise requested. A SUP can be installed on the camera by using a USB stick as described in detail below.

How to download a Software Update Package

- If you have not registered yet, please go to the ALEXA Mini [download section](#) and scroll to the 'ALEXA Mini Software Update Package x.x' section (where 'x.x' is the version number of the desired Software Update Package). Click 'Please -> register to get an account.' The ALEXA Mini customer registration page will then be opened.
- Fill in the requested data and make sure to put in the serial number(s) of your camera(s) in the format of K1.0003873-xxxxx. Don't forget to agree to the registration terms at the end of the page.
- When you hit the 'Create Account' button, the system will send you a confirmation email with a link to activate your account. After following the link, a welcome email is sent containing the login credentials. Please [login](#) and navigate to the download section again.
- When accessing the software package download, you will be asked to agree to the terms and conditions of this download. As soon as you agree to these terms the download link is released.

Camera Update Procedure

The ALEXA Mini software is updated with a USB memory stick. The SUP will update the ALEXA Mini camera along with the Viewfinder (MVF-1), CCP-1 and the lens mount – provided they are connected to the camera.

- After the download, please double click the downloaded file (*.zip) to unpack it or unpack it manually. This will place two update files (*.SUP and *.lic) and the SUP release notes onto your computer.
- If not done beforehand, prepare the USB memory stick for use with ALEXA Mini by connecting it to the camera: please navigate to *MENU > Media > Prepare USB medium* 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/A-MINI/SUP on the USB stick.
Then place the downloaded *.lic file in the folder ARRI/A-MINI/LICENSES on the USB stick.
- Make sure the camera is connected to a cable power source, or is powered with a full battery to avoid power loss during the update process.
- Perform a factory reset.
- Remove CFast card from camera.
- Connect the USB stick to the camera and navigate to *MENU > System > Update*.
- Select the SUP file from the list.
- In the following message, press CONFIRM to start the installation.
- After the update process has finished, a success message is displayed.
- If you have been installing the update using the web remote make sure you clean your browser's cache, otherwise the browser may not show the web remote of the new software correctly.
- Make sure you set the correct time zone in the System Time configuration.
- The MVF-1 and the lens mount(s) need to be attached to the camera. SUPs not only contain updates for the camera body but also for MVF-1 and lens mounts. To ensure flawless performance, please make sure your MVF-1, CCP-1 and lens mount(s) are updated as well.

For a downgrade to a previous SUP version, the license file of the installed and of the previous version (amira_fw_update_aes_x.x.x.lic) need to be available on the USB memory stick under /ARRI/A-MINI/LICENSES/.