ALEXA Mini SUP 5.3

Software Update Package SUP 5.3.23

Date: June 19th, 2018

Table of Contents

ALEXA Mini SUP 5.3
Release Notes

Page 2 of 8
All data subject to change without further notice.

A. Introduction

We are proud to announce the release of the Software Update Package 5.3 for the ALEXA Mini. This version expands functions for the ALEXA Mini as indicated below.

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 5.3

- **EVF Power Option "ON"**
  Option to override the proximity sensor of the MVF-1 and constantly enable the viewfinder display.

- **WCU-4 User Buttons 5 and 6**
  Camera menu offers assignment of WCU-4 user buttons 5 and 6.

- **Camera Access Protocol (CAP) Enhancements**
  CAP support for full control of in-camera playback and access to clip metadata.

Changes to Previous Versions

- *MENU > System > Sensor > Image denoising* has been renamed to *Noise reduction*.
- *MENU > System > Power > BAT in warning* default value has been changed to 13.5V.

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 5.3 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 5.3 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 3.5.3 or higher when used with SUP 5.x files, especially when using user pixel masks 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 5.3

EVF Power Option 'ON'

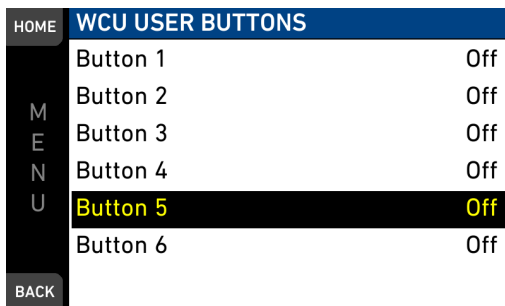Use this setting to override the MVF-1 proximity sensor and to constantly enable the viewfinder display. This setting should be regarded as an emergency setting, to be used, for example, when the proximity sensor is faulty and no longer activates the viewfinder display. Please be aware that when enabled, and used for prolonged periods, this configuration may cause irreversible burn-ins on the viewfinder display. When it is enabled, the camera will issue a corresponding warning after each boot-up and sensor mode switch.

HOME	SETTINGS	
	EVF brightness	06
M	EVF gamma	Lifted
E	EVF power	Auto
N		Off
U	Monitor brightness	On
	Monitor flip mode	Auto
BACK		
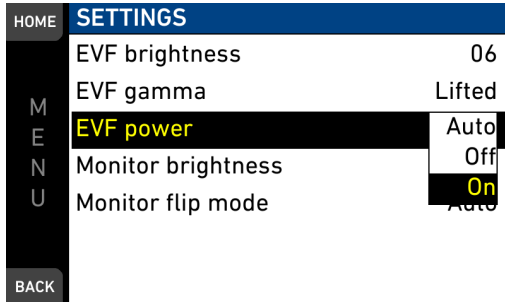
MENU > Monitoring > EVF/Monitor > Settings > EVF power

WCU-4 User Buttons 5 and 6

The ALEXA Mini now supports assignment of WCU-4 user buttons 5 and 6.

HOME	WCU USER BUTTONS	
	Button 1	Off
M	Button 2	Off
E	Button 3	Off
N	Button 4	Off
U	Button 5	Off
	Button 6	Off
BACK		

MENU > User buttons > WCU user buttons > Button 5/6

Camera Access Protocol (CAP) Enhancements

Much functionality has been added to the Camera Access Protocol such as full playback control, control of timecode options and access to clip metadata. If you're interested in the Camera Access Protocol, please contact the ARRI Partner Program.

ALEXA Mini SUP 5.3
Release Notes

Page 4 of 8
All data subject to change without further notice.

C. Known Issues

Known Issues Fixed in SUP 5.3

-

Known Issues in SUP 5.3

This is a list of known issues for the SUP 5.3 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.

Frame grab

• 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

• Monitoring in 3.2K with 1.3x anamorphic de-squeeze

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

• 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 de-squeeze is not available for EVF zoom

1.3x anamorphic de-squeeze 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.

ALEXA Mini SUP 5.3
Release Notes

Page 5 of 8
All data subject to change without further notice.

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.

• In Pause mode, interlaced clips only show half vertical resolution

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

• Non-linear audio on SDI outputs and headphone out with project rate 59.94

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

• 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

• 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 to test 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.

SUP update

• Using recording media with different SUPs can result in error message

If a CFast 2.0 card contains clips from older SUPs, the camera may show the error message "Binary clip table is corrupt. Please backup and erase card". This message does not indicate a card error. Please make sure all data from that card is backed up. Erasing the card will reset the binary clip table and make the error message disappear. Please consider updating all cameras to the same SUP.

• 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.

ALEXA Mini SUP 5.3
Release Notes

Page 6 of 8
All data subject to change without further notice.

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

• 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.

• 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 it's internal oscillator to match the source clock. Hence using a combination of timecode mode jam sync and genlock is not supported.

• Anamorphic de-squeeze cannot be deactivated for monitoring with some formats

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

• 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

• 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).

ALEXA Mini SUP 5.3
Release Notes

Page 7 of 8
All data subject to change without further notice.

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 EVF and lens mount. 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/.

ALEXA Mini SUP 5.3
Release Notes

Page 8 of 8
All data subject to change without further notice.