

ALEXA Mini LF SUP 7.3

Software Update Package (SUP) Mini LF 7.3

RELEASE NOTES

November 3, 2023



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A. Introduction

This document describes changes for ALEXA Mini LF cameras with the Software Update Package (SUP) Mini LF 7.3 in contrast to ALEXA Mini LF SUP 7.2. We 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/alexaminilf.

For frequently asked questions and their answers please visit the [ALEXA Mini LF FAQs](#).

ALEXA Mini LF SUP 7.3 Changes Overview

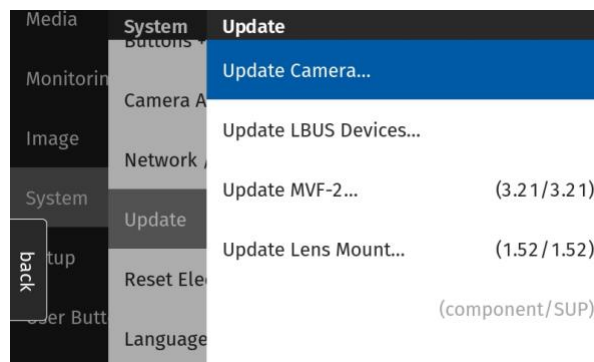
- **Camera Control Monitor CCM-1 Support**
- **Touch on Multi Viewfinder MVF-2**
- **Extended Erase Media menu warnings**
- **Improved Audio Gain GUI**
- **CAP additions and bugfixes**
- **WPA-3 Support**
- **LAN Gateway Setting**
- **ECS Improvements**
- **Others**

We recommend updating to all customers.

Updating Camera, Viewfinder and Lens Mount

- This SUP can be installed on all previously shipped ALEXA Mini LF cameras. However, we recommend updating from SUP 7.2 to SUP 7.3 (note: this can take up to 20 Minutes). If your camera is not running Mini LF SUP 7.2, please update it to 7.2 before updating to SUP 7.3. ALEXA Mini LF SUP 7.2 is still available on the ARRI website.
- We do not recommend updating in the middle of a production.
- When connected to the camera, the MVF-2 viewfinder and lens mount will also be updated automatically.

In case of using an MVF-2 or lens mount with older software with a camera with newer software, please make sure to perform a component update of the MVF-2 or lens mount. The version numbers in brackets should be equal (MENU > System > Update).



- Please note that the viewfinder might switch off during the update process and does not give visual feedback of the update all the time. The SDI outputs, however, will stay active, which they did not in previous SUPs.
- Make sure not to power off the camera during an SUP update. Make sure not to unplug the viewfinder during an SUP 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 operate the camera and to perform a SUP update. This prevents possible erroneous behavior.
- Please note that due to the introduction of touch functionality setup files created prior to SUP 7.3 are not compatible with SUP 7.3.

Updating LBUS Accessories

- The camera SUP does not contain any LBUS accessory software. LBUS accessories (like cforce mini motors, cforce Plus motors, ARRI Master Grips, ARRI Operator Control 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 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

It is possible to downgrade from this ALEXA Mini LF SUP 7.3 version to an older SUP.

- For a downgrade to a previous SUP version, both the license file of the installed and of the previous version (always included in the SUP zip file and named: 'mini_lf_fw_update_aes_X.X.X.lic') need to be available on the USB memory stick under /ARRI/A-MINI-LF/LICENSES.
- ALEXA Mini LF SUP 7.2 is available for download on the ARRI website.
- However, MVF-2 viewfinders with serial numbers above 6849 and Compact Drive 2TB units with serial numbers starting with '273xxxxx' are not compatible with ALEXA Mini LF SUPs lower than 7.1.2.

Codex Compact Drive 1TB Update

A firmware patch is available to address a firmware error with Codex Compact Drives with the serial number range from 10020001 to 10022568. Drives outside this serial number range already run the latest firmware and require no update. On rare occasions, this firmware error could cause a Compact Drive to take a long time to load in the camera, Dock or Reader, not load at all or result in the camera status "INVALID". For all ALEXA Mini LF owners we recommend updating their Compact Drives to this new firmware. If you have access to an ALEXA 35, all 1TB Drives requiring an update will be identified and updated in this camera. Unfortunately, this feature is not available on ALEXA Mini LF. If you do not have access to an ALEXA 35, you can also send these drives to any [Codex](#) or [ARRI Service station](#) for a free software update.

Please note that Mini LF SUP 7.3 will not update Compact Drives. ALEXA Mini LF cameras running SUP 7.1.2 and higher are compatible with Compact Drives with and without the update. More information can be found on the ARRI Website [here](#).

Software Compatibility Notes and Sample Footage

- A document providing an overview of postproduction tools that support files recorded with ALEXA Mini LF cameras ("ALEXA Mini LF Supporting Tools & Software Overview.pdf") can be found in the download section of the ALEXA Mini LF webpage.
- ARRIRAW files recorded with ALEXA Mini LF cameras with SUP 7.2 or later can be processed with the ARRI Reference Tool (ART) or the ARRIRAW Converter (ARC). Metadata can be extracted with the ART or the ARRI Meta Extract (AME). All are free-of-charge software applications.

Please note that the ARC and AME will not be developed any further, as we have moved all their features into the [ARRI Reference Tool \(ART\)](#), which is the reference tool of choice now for all ARRI digital cameras (except the ARRIFLEX D-20/D-21). The ART allows you to process ARRIRAW from Mini LF with either the original ARRI color science (LogC3/AWG3) or with the new REVEAL Color Science (LogC4/AWG4), which provides greatly improved image quality as well as compatibility with footage shot on ALEXA 35. If you want to use the ARC or AME, please update both to the latest release versions (ARC 4.4 and AME 4.4).

- Please note, that macOS X version 10.14.4 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 2.1") is required to play back downloaded MXF/Apple ProRes footage in Apple QuickTime Player.
- Sample footage shot with the ALEXA Mini LF camera can be downloaded [here](#).

Registration

If you have not done so already, please make sure you 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 12-month extended warranty for free. You can find the registration [here](#).

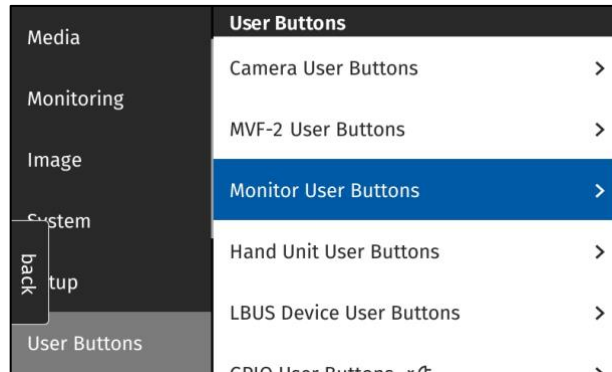
B. New Features and Changes

Camera Control Monitor CCM-1 Support

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" 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. 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



CCM-1 to be used with ALEXA Mini LF SUP 7.3 needs CCM-1 SUP 5.5.1 installed, which can be found [here](#).

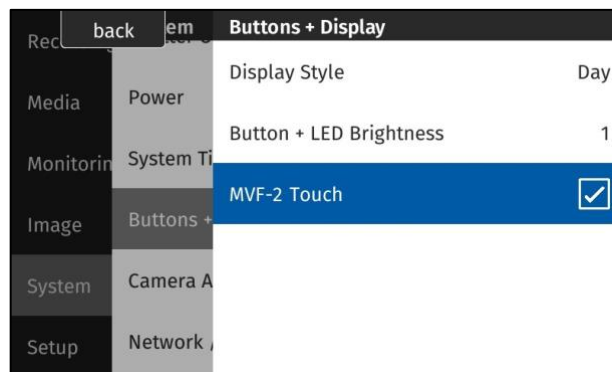
Touch on Multi Viewfinder MVF-2

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.

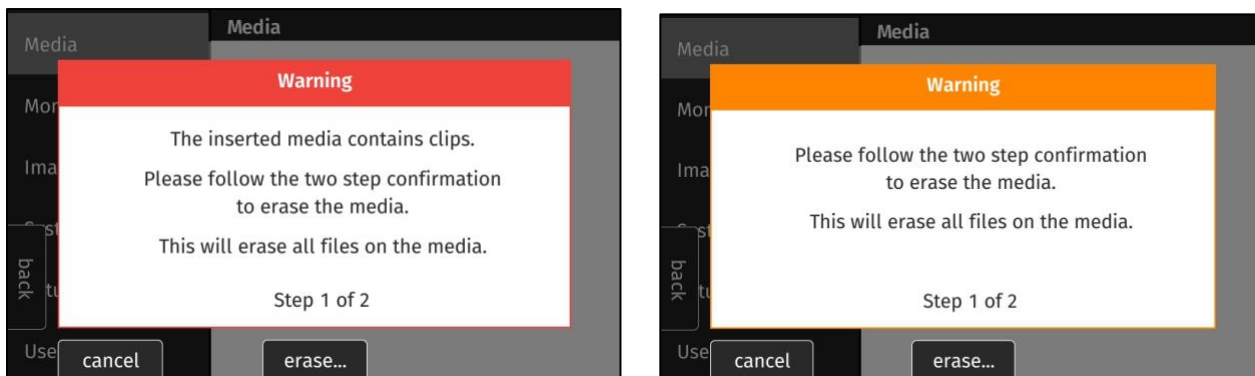
Switch between the live screen and the menu screen by sliding either screen sideways with your finger.

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



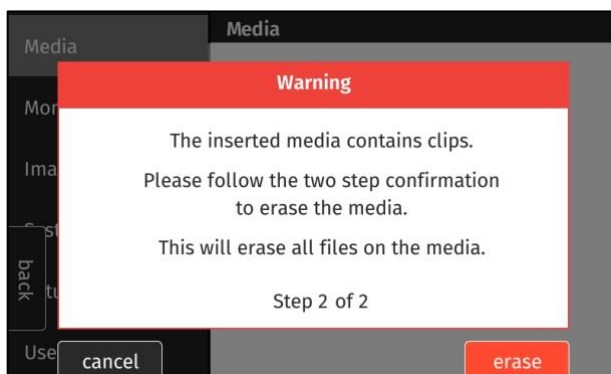
Extended Erase Media menu warnings

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).

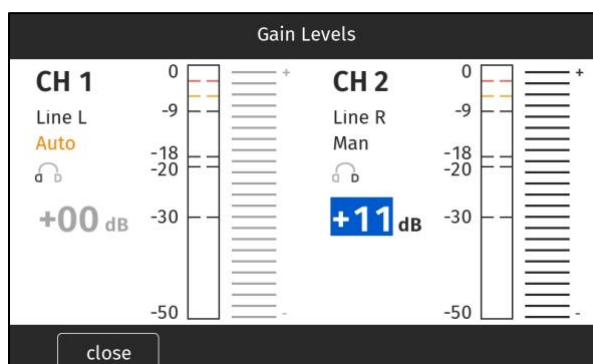
In addition to that there is a clear second step to initiate the erase process to avoid accidental operation.



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.



CAP additions and bugfixes

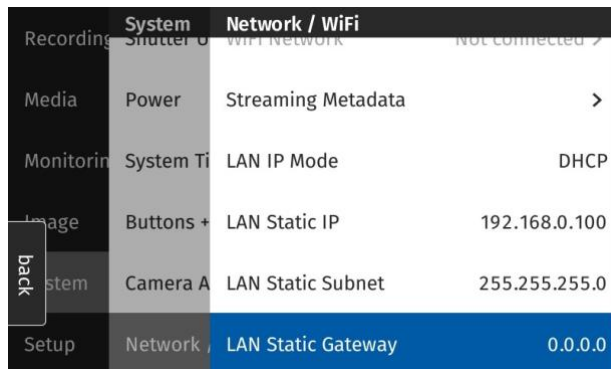
The Camera Access Protocol in the ALEXA Mini LF SUP 7.3 was updated to CAP Version 1.10. This version includes bug fixes and additional commands. These additional commands allow new features to be available from the Camera Companion App. They can also be used by 3rd parties in their products.

WPA-3 Support

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.

LAN Gateway Setting

MENU > System > Network/WiFi > LAN Static Gateway



The screenshot shows a menu interface with a dark sidebar on the left containing options: Recording, Media, Monitoring, Image, Back, System, and Setup. The main area is titled 'System' and 'Network / WiFi'. Under 'Network / WiFi', there are several settings: 'WiFi Network' (NOT Connected), 'Streaming Metadata' (with a right arrow), 'LAN IP Mode' (DHCP), 'LAN Static IP' (192.168.0.100), 'LAN Static Subnet' (255.255.255.0), and 'LAN Static Gateway' (0.0.0.0). The 'LAN Static Gateway' option is highlighted in blue.

Category	Item	Value
System	WiFi Network	NOT Connected
System	Streaming Metadata	>
System	LAN IP Mode	DHCP
System	LAN Static IP	192.168.0.100
System	LAN Static Subnet	255.255.255.0
System	LAN Static Gateway	0.0.0.0

In certain setups, especially for virtual productions, there is a need to define a network static gateway. The default static gateway is a router that forwards network packets when no other route matches the destination of a packet. In a local network, the default gateway is typically the host that is one hop closer to the internet. The IPv4 address of the gateway typically is the first address in a subnet, e.g. 192.168.0.1. As a factory default the gateway is set to 0.0.0.0.

ECS Improvements

CAM (7p) - LBUS (4p) support

The camera now fully supports the CAM (7p) - LBUS (4p) connection to the ARRI Electronic Control System (ECS). As introduced with the ALEXA 35, the CAM port of an ECS motor controller (e.g. RIA-1, ZMU-4) can now be connected to the LPL mount LBUS port. This interface is superior to the CAM (7p) - EXT (6p) connection as camera control commands and lens metadata are transferred. Connection via EXT (6p) is still possible, but not recommended. Remark: The cforce mini RF in radio host mode will support the CAM (7p) - LBUS (4p) connection with the next firmware update. It must be connected via CAM (7p) - EXT (6p) when using firmware SUP 2.0.3 or older.

Lens motor calibration via *calibrate all*

A *calibrate all* command triggered from an ECS hand unit now calibrates all F / I / Z motors connected to the ALEXA Mini LF. This includes motors that are assigned to another control unit, that are completely unassigned, or in encoder mode. In the past, only the lens motors that were actively controlled by the corresponding ECS hand unit were calibrated. An AUX motor must always be calibrated manually and will not be calibrated via *calibrate all*. This change has already been introduced to the Radio Interface Adapter (RIA-1) and to the ALEXA 35. It will be rolled out to all ARRI motor controllers and cameras in the future.

Example: ALEXA Mini LF with a zoom lens and three cforce mini motors connected via LBUS to the camera LPL mount. The focus motor is controlled via a Hi-5, the zoom motor via a ZMU-4 and the iris motor is in encoder mode. A *calibrate all* command from the Hi-5 now calibrates all three cforce motors. In the past, only the focus motor controlled via the Hi-5 was calibrated.

Others

This software version includes several bug fixes and overall stability improvements of the camera.

This software version includes changes to the menu structure and individual renaming of menu items to be consistent with ALEXA 35 menu items.

A skippable calibration request can now be skipped while recording.

Remaining media capacity with light codecs has been fixed.

The focus distance overlay is hidden when no distance data is present.

C. Known Issues – Software

Lenses

ALURA 1.4x and 2.0x Extender are not recognized

ALURA 1.4x and 2.0x Extender are not recognized by the camera and therefore the lens information shown in the menu, the SDI overlays and the WCU-4 show the information of the lens without considering the use of the extenders.

Monitoring

Artifacts on SDI when toggling exposure tool and Color Space is REC 2020

If an SDI output is set to Color Space REC 2020 and the exposure tool on the MVF-2 is used artifacts can be observed on the SDI output. This is critical if that output is being broadcasted or recorded.

MVF-2 can show subtle flickering in upper part

Sometimes a subtle flickering can be observed in the upper part of the image of the MVF-2 viewfinder (through the eyepiece, not the flip-out monitor).

Brightness flicker when EVF Zoom is activated or EVF Surround view is off

Brightness flicker in the upper part of the OLED display can be noticed.

Magnification Limits

Depending on the recording format, the MAGNIFICATION feature can sometimes reach maximum magnification before the top value of 200% is reached. In this case, higher value numbers will be shown in the menu, but actual image magnification will not increase further.

Magenta Image after Mode switch

Sometimes after switching Recording Modes the SDI image may display a magenta tint for up to 5 seconds before returning to the normal image.

Playback

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.

Post

No Mirror image function for MXF/Apple ProRes in DaVinci Resolve

The vertical "Mirror image" function does not work for MXF/Apple ProRes in DaVinci Resolve. However, it will work with ARRIRAW.

Remote Control

Web Remote: Periodic connection issues

When using the Web Remote with certain OS / Browser combinations the camera may not be found. Use the LAN IP address of the camera in those cases.

Check MENU > INFO > NETWORK INFO LAN IP for the current IP address.

WiFi - No successful reconnection to access point after reboot in client mode

In rare cases the WiFi driver can get stuck after a reboot or resolution change when the camera is in client mode. In this case the camera does not reconnect to the previous access point and the list of discovered networks is empty.

In this case, please reboot the camera to regain WiFi functionality.

Sync

SDI out of sync

If two cameras are being synchronized by syncing only one of them to timecode, the recorded images will be in sync, but the SDI outputs will be slightly out of sync. Supply timecode to both cameras to mitigate this issue.

Warning message unavailable

A camera in settings client mode inherits all settings from the host camera. When attempting to change settings on a camera in settings client mode not all items prompt the warning that these settings can only be changed on the host camera, but instead are not modifiable.

Disabling EXT Sync leads to error message

When disabling EXT Sync the camera can display a software error (#4) and prompt the user to reboot. After rebooting the camera will resume working as expected.

Timecode offset after exiting playback through recording

When exiting playback by pushing the REC button, it is possible for timecode to be offset by one frame. To avoid this, exit playback by pushing the physical playback button on the viewfinder or through the 'close' button in the menu.

EXT Sync: changing codec is not supported

In an EXT Sync setup when changing recording codec on Host puts any Client in a reboot loop. Adjust the codec as needed before setting up EXT Sync.

Usability

Cannot overwrite existing User Pixel Mask

Saving a User Pixel Mask on the USB stick is only possible when the sensor folder on the USB stick does not already contain a User Pixel Mask. If you want to save a User Pixel Mask, make sure the folder is empty or re-name any existing User Pixel Masks. Even then, sometimes a new User Pixel Mask cannot be saved, and the monitor gets stuck with the message 'Exporting user pixel mask, please wait...'. Restarting fixes all of this.

MVF-2 stays black on camera start

In rare cases the MVF-2 can stay black after the camera has booted completely. Replug the Viewfinder in this case.

Updating

ALEXA Mini SUP camera update might fail

In a few cases the camera update may fail with the message 'Last SUP installation was incomplete. Please re-install SUP. (#135)'. In this case, please re-install SUP.

D. Known Issues – Mechanical Accessories

RAB-1 Clamp 2 may experience poor clamping performance

Some early RAB-1 Clamp 2 units (K2.0023406) ran into assembly issues leading to poor clamping performance or the inability to release adequately. If a RAB-1 Clamp 2 is found to slip on the Rear Accessory Bracket RAB-1 (K2.0013937) or not to release correctly, please contact ARRI Service to get the part repaired or exchanged.

Compact Bridge Plate CBP-1 and CBP-2 lever malfunction

To release the Compact Bridge Plate CBP-1 or CBP-2 from a balance plate, the safety catch on the main locking lever of the CBP must be released for the main locking lever to be moved from the BALANCE to the RELEASE position. Some early CBP-1 and CBP-2 units could have the main locking lever moved directly from the LOCK position to the RELEASE position. In that case, please contact ARRI Service to get the part repaired or exchanged.

E. Update Procedure

Where to download the new Software Update Package (SUP)

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

Camera Update Procedure

The ALEXA Mini LF software is updated from a USB memory stick. The SUP Software Update Package (SUP) will update the ALEXA Mini LF 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://mini-lf-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.

Due to an issue with the version of the LPL Mount shipped with SUP 7.2 no device must be connected to the LPL mount during an update, otherwise it will fail and has to be executed again.

- 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) onto your computer.
- If not done beforehand, prepare the USB memory stick for use with ALEXA Mini LF 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/A-MINI-LF/SUP on the USB stick. Then place the downloaded *.lic file in the folder ARRI/A-MINI-LF/LICENSES on the USB stick.
- SUPs contain not only updates for the camera body but also for the MVF-2 viewfinder and the LPL lens mount. Therefore, the MVF-2 viewfinder and the LPL 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...*
- NOTICE: Remove the recording media from camera!
- **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.**
- **Please repeat the last six steps (marked in purple) and update the camera for a second time.**
- It may happen that the Viewfinder goes black during the update and does not provide any further information. In this case do NOT cut off power but check SDI 1 for a red ERROR icon or connect via Web Remote. If you get a "fail", re-run the update.
- 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.