

ARRI Electronic Control System Release Notes

Hi-5 & Hi-5 SX Software Update Package (SUP) 3.0.3

RIA-1 Software Update Package (SUP) 2.2.0

ZMU-4 Software Update Package (SUP) 1.2.0

cforce mini RF Software Update Package (SUP) 2.2.0

RELEASE NOTES

Oct 8th, 2024



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A. Introduction

Within the Electronic Control System (ECS) we are transitioning to System Release Notes, as the interaction of many features involves multiple devices of the ECS ecosystem. This offers the opportunity to have a single document to describe features and known issues.

In order to ensure compatibility of components and firmware versions, we highly recommend keeping all devices updated to the most current version.

At the date of the release of this document those are:

Product	Recommended Firmware Version
Hi-5 & Hi-5 SX	3.0.3
ZMU-4	1.2.0
RIA-1	2.2.0
SXU-1	2.1.2
WCU-4	3.3.20
Master Grip	2.0.2
OCU-1	2.0.2
cforce mini RF	2.2.0
cforce mini	2.0.0
cforce plus	2.0.0
CUB-1	3.0.0
CUB-2	1.2.1

Recently updated items are in bold text.

All of the latest firmware versions can be downloaded from the ARRI webpage:

<https://www.arri.com/en/technical-service/firmware/software-updates-ecs>

In addition, our latest Tech Talk about this new firmware is a great way to explore these new features:

<https://www.youtube.com/ARRIchannel>

Please take your time to go through this document before using your ECS product. For more information about this and previous releases, please visit:

<https://www.arri.com/en/technical-service/firmware/software-updates-ecs/>

Overview of new features

Hi-5 & Hi-5 SX SUP 3.0

- New Home Screen
- Single Axis Display
- Revised Camera Control Screen
- Reworked Menu
- Custom Smart Rings
- Smart Rings Safe Mode
- Diopter Compensation (BETA)
- Multi Segment
- Nudge Feature
- License Deactivation
- Further Changes

RIA-1 SUP 2.2

- Nudge Feature
- Cal All renamed Cal FIZ
- Improved lens metadata and camera control for ALEXA LF / ALEXA 65

ZMU-4 SUP 1.2

- Nudge Feature
- Deactivate Rec Button
- Cal All renamed Cal FIZ
- Improved lens metadata and camera control for ALEXA LF / ALEXA 65

cforce mini RF SUP 2.2

- Nudge Feature
- Cinefade Limits
- Calibration in Encoder Mode
- Improved lens metadata and camera control for ALEXA LF / ALEXA 65

B. New Features

B.1. Hi-5 & Hi-5 SX SUP 3.0

This section describes changes from Hi-5 SUP 2.1 to Hi-5 SUP 3.0. Since the introduction of the Hi-5, we have received lots of feedback and feature proposals from users and owners which helps us to evolve the ecosystem in a user-centric way.

Hi-5 SUP 3.0 is an important milestone for the ECS ecosystem, as it marks the introduction of the Hi-5 SX, and it brings multiple new features to the ARRI system. Hi-5 and Hi-5 SX share the same firmware with SUP 3.0 onwards. It is important to notice that all Hi-5 and Hi-5 SX shipped with SUP 3.0 cannot be downdated to a firmware version older than 3.0. Hi-5 Hand Units which were shipped before SUP 3.0 can be downdated as usual.

We are happy to introduce this new firmware version. It advances the ECS ecosystem, and we hope that it will enhance your on-set experience.



New Home Screen

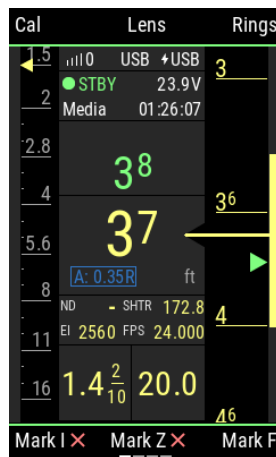
After careful evaluation, we decided to revise the Hi-5 and Hi-5 SX home screen layout. As this is the screen users interact the most, we decided to add hierarchy and reorganize the critical elements.

Rearranging the position of slider and force-pad lens data (in the case of the image below iris and zoom values), provides a cleaner look and made place to add additional information to the home screen.

The knob value remains in the center of the screen, while the display segments above and below are greatly revised. Focusbug Cine RT status icons, for example, are now in the segment above the knob value next to the distance value. The camera status area has been realigned to match other status information. Unit conversion has less contrast to blend in with other information.

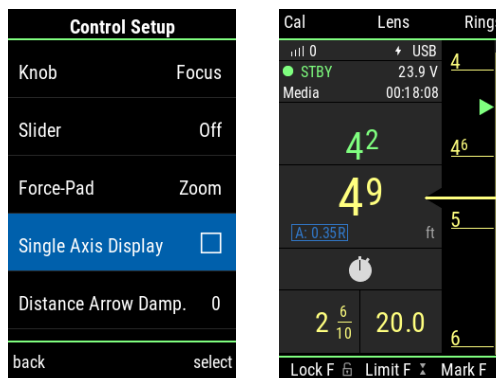
The additional space below the knob value is now used for the new Multi Segment, which is described in a separate chapter below.

Other important improvements to the home screen are the introduction of a zoom scale, automatic scale selection depending on the chosen control element (knob, slider or force-pad), indication of limits in the lens scales, and much more.



Single Axis Display

The single axis display is the standard mode for the Hi-5 SX. It can also be used in the Hi-5 if a cleaner look is preferred or in setups where only one axis is controlled. Besides the cleaner screen, it still provides all relevant lens and camera information. This feature can be turned on/off on the Hi-5 or Hi-5 SX with All-Axis license via MENU > CONTROL SETUP.



Revised Camera Control Screen

The Camera Control Screen has been reworked to achieve quicker access to the tiles. All selectable items are now in a single column and can be accessed via the Force-Pad, which makes navigation much quicker. The font size on the tiles has been increased to make the current camera settings more legible.

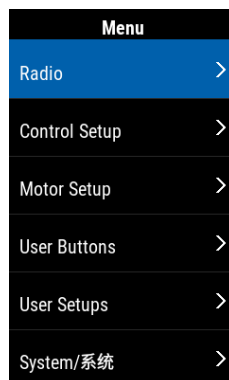


Reworked Menu

The main menu has been reworked and reduced to just six main settings, in case no licensed feature device (like Focusbug or Cinefade) is connected to the system. The RADIO menu has been removed as a home screen button and is now part of the main menu. The RINGS menu on the other hand is removed from the main menu and replaces the previous RADIO home screen button.

The SYSTEM menu now contains further settings like BUTTONS + DISPLAY, LICENSED FEATURES, NUDGE and more. Within the BUTTONS + DISPLAY menu, all display customizations are found in the LIGHT + COLOR submenu, while the multi segment can be configured in the MULTI SEGMENT submenu.

Overall, the new menu structure should make it easier to find the correct setting and provide a smoother on-set experience.



Custom Smart Rings

Custom smart rings are a new and powerful tool which allows users to create their own personalized Focus or Iris rings. Users can create their individual ring scale, as well as a unique ring design. The ring scale can be flashed to a blank custom smart ring and used with any Hi-5 or Hi-5 SX.

Note: A custom smart ring can be used with any Hi-5 or Hi-5 SX and not only with the unit it is created with.

The custom smart ring creation is available to all Hi-5 hand units and to Hi-5 SX hand units with the Plus license, while the use of custom smart rings is possible without any license.

The process of making a custom smart ring is quick and simple and a custom smart ring could theoretically be marked by hand. Creating and printing a ring design is optional and provides a beautiful and unique possibility to give the smart rings a personal touch. Furthermore, custom smart rings make it possible to create focus or iris rings that only cover very little range, spread out over a large part of the ring or create a setup where every custom smart ring has certain marks at the exact same position.

Especially useful for custom iris rings, it is now possible to reduce the spread of the scale to less than the knob rotation by adding one more stop at the close knob position (e.g. on a lens with T16 add a T22 mark) and then moving the close iris to the desired position.

As it might need some time to get used to the custom smart ring, we recommend setting your rings up in advance of a shot before using them on set.

Creating Custom Smart Rings – Quick Guide

Prerequisites:

- Hi-5 or Hi-5 SX with Plus license
- Blank ring
- USB drive
- PC or laptop with a graphics tool (e.g. Inkscape (freeware) or Adobe Illustrator)
- Office laser printer (recommended) or inkjet printer
- A4 (or similar) sized labels - we have seen better results on matte surfaces rather than on glossy ones

Create a custom smart ring scale:

- Enter the RINGS menu and select CREATE CUSTOM RING
- Follow the steps of the user interface until the custom ring scale can be created
 - Use the Hi-5 knob to select values of the ring scale
 - Go to the closed knob position to modify one end of the scale
 - Got to the open / far knob position to modify the other end of the scale
 - Any value of the scale can be grabbed and moved or deleted again. Up to five scale values can be individualized including the close and far values.
 - The scale between values can be set to logarithmic or linear except the scale towards infinity which must remain logarithmic.
- Flash the scale to any blank custom ring as a final step of the ring creation user interface.
Note: Pre-marked smart rings are protected and can't be customized.

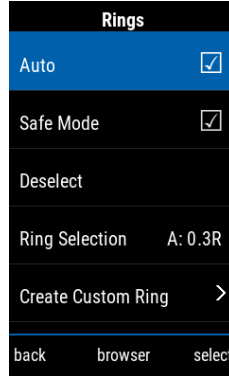
Create a custom smart ring design:

- Go to the RINGS > MANAGE CUSTOM RING menu and select DESIGN PRINTABLE SCALE
- Select the density of your scale via the density button
- Create your unique basic design by choosing the length and width of the major scale lines and by moving the numeric values.
Note: Major lines are lines with a numeric value.
- Press the minor button and modify the design of the minor lines.
- Save the custom ring design file (*.svg vector graphics) to a USB drive connected to the Hi-5. The file will be stored under: ARRI\Hi-5\RINGS.
- Open the file on your PC and go as crazy as you like with the design – it might make sense to remove lines, modify font sizes and add coloring for day-to-day use.
- We recommend making a test print on paper to check the measurements and color reproduction. There is a ruler printed with the ring design and you can simply measure if it has the correct length.
- Print the design on a label via an office printer and make sure the dimensions are correct.
- Cut out the printed ring design and attach it to the blank ring – we recommend starting at the notch and working your way around the ring from there.
- If you used an inkjet or plan to make marks on your ring, it is recommended to cover the ring with a transparent adhesive tape of your choice. There are writeable matte choices that work well.

Smart Rings Safe Mode

With Hi-5 SUP 3.0 we are introducing another safeguard to ring detection. SAFE MODE will keep the current smart ring active until a new smart ring is attached. Thus, removing a smart ring with SAFE MODE enabled will have no effect and there is no risk of undesired smart ring detachment.

SAFE MODE is enabled by default, and it is recommended to keep it active.



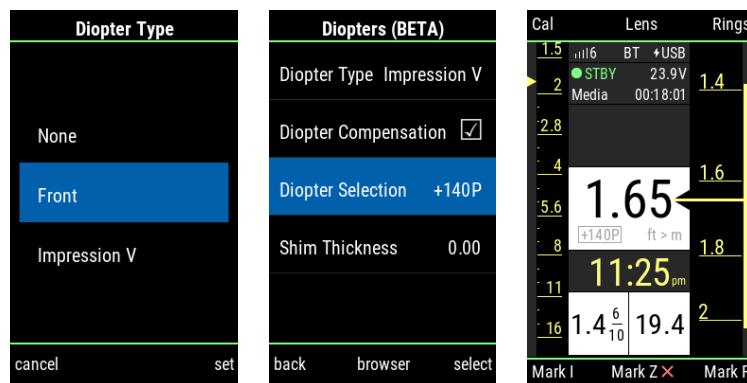
Diopter Compensation (BETA)

Diopter Compensation is a new feature for the Hi-5 and Hi-5 SX with Plus license that is currently in beta stage. With diopter compensation active, the lens data is corrected for the focus shift happening due to a front diopter or a Signature Impression V Filter.

A diopter type (Front or Impression V) can be set via LENS > DIOPTERS (BETA). Depending on the diopter type, different parameters must be set:

- For front diopters, the distance between the image sensor and the diopter glass (Sensor to Diopter), as well as the Diopter Power are the determining parameters. For the given parameter pair, the achievable focus range (near and far limit) is shown on the screen. This allows the user to determine if the chosen diopter power is suitable for the specific use case immediately.
- For Signature Impression V Filters, it is mandatory to select the diopter type (e.g. +230P) and the used shimming thickness of the lens. The algorithm is designed to compensate for small deviations of the flange focal distance (FFD) due to varying iris or zoom values. We therefore recommend using a standard 2mm shim for negative filters while no shim is required for positive filters.

DIOPTER COMPENSATION can be turned on/off by checking the corresponding field in the menu, or via a User Button. When active, all compensated FIZ values will be highlighted with a white background. The compensation is only applied to the current FIZ values (numerical values), but not the lens scales. These are not altered and represent the values of the lens barrel. Therefore, focus tracking is deactivated when diopter compensation is active.



Multi Segment

The rearranged home screen creates room for an entirely new customizable screen segment. This new Multi Segment can be used for a variety of tools and display options.

The function of the Multi Segment can be configured in the new Multi Segment Menu: MENU > SYSTEM > BUTTONS + DISPLAY > MULTI SEGMENT or via the touch screen by touching the multi segment area. (Only exception is the Timer feature which has a shortcut to the multi segment menu via a display button).

For visually distinguishing the segment or different Hand units, the background color of the Multi Segment can be modified in MENU > SYSTEM > BUTTONS + DISPLAY > LIGHT AND COLOR > MULTI SEG. COLOR



Please note that the visual elements in the Multi Segment are not dependent on the background color and certain feature / color combinations may be hard to read in certain situations.

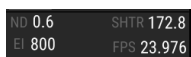


The multi segment is a new way of customizing the Hi-5 and Hi-5 SX home screen and we are happy to receive new ideas and proposals for additional multi segment features.

With SUP 3.0 the following options are available:

Camera Info

This option enables a small display of important camera settings to be always visible. Please note that as of ALEXA 35 SUP 2.0 Enhanced Sensitivity cannot be displayed on the Hi-5 or Hi-5 SX yet.



Distance

The readout of a second distance source (as configured in the Focusbug menu) can be displayed with numerical values in addition to the arrow on the focus scale.



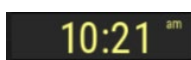
AUX

The AUX axis is an optional lens axis. The percentage scale can now be selected as a multi segment option. Please note that for the Hi-5 SX, this option is only available with the All-Axis license.



Clock

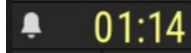
In instances where timecode does not convey that information, we have added a display of the Hi-5 system time. The preference between 12h and 24h can be set in MENU > SYSTEM > TIME + DATE > CLOCK DISPLAY



Timer

There are situations where it can be handy to get quick time measurements. *Timer* will count down a predetermined interval, whereas *Stopwatch* will count up indefinitely. If desired, the *Timer* and *Stopwatch* can be synchronized to recording start/stop (*Sync to REC*).

All options can be modified when long pressing the multi segment. A short press will start the timer / stopwatch. In addition, users can set a multi segment interaction user button to interact with the multi segment.



Nudge Feature

Nudge is a new and unique feature to enable silent communication between members of the camera department. A Nudge can be triggered from several ARRI devices, while the receiving device can be set to vibrate or to show a display notification. At the date of this release, nudge can only be sent from and to wireless devices connected to the same radio receiver (e.g. a RIA-1 or ALEXA 35 camera). It is currently not possible to use nudge when connected via LBUS.

At the moment, nudge can be triggered from a Hi-5, Hi-5 SX or ZMU-4 via user buttons and it will be extended to further hand units and cameras with future SUPs.

Nudge can be received at a Hi-5, Hi-5 SX and WCU-4.

For Hi-5 and Hi-5 SX, nudge can be configured in the system menu: MENU > SYSTEM > NUDGE. The factory default notification for Hi-5 and Hi-5 SX is none. Nudge notification cannot be configured for the WCU-4, and all WCU-4 devices will vibrate at a nudge event.

Nudge is a new and novel idea that we are still developing. It still has limitations and will improve and grow in future. Please test if nudge is working in your setup before using it on set.

License deactivation

It is now possible for the owner of a license to deactivate/reactivate the corresponding feature in the Hi-5 or Hi-5 SX Hand Unit:

- Store the license file onto a USB drive under ARRI\Hi-5\LICENSES and connect it to your hand unit.
- Go to the license menu: MENU > SYSTEM > LICENSED FEATURES.
- Press & hold the FUNC button to show the deactivate option.
- Press deactivate

Reactivating a deactivated license is similar to installing a license and requires the same license file on a USB drive.

Note: Only licenses which are actively installed on a hand unit can be deactivated. It is therefore not possible to deactivate an All-Axis or Plus license of an original Hi-5.

Further changes

Enter teeth count when writing LDA

It is now possible to see and change the motor teeth count setting during the lens mapping process. Setting the actual teeth count value is essential to ensure the creation of an accurate LDA table.

Deactivate Rec Button

To avoid accidental REC commands, it is now possible to disable the REC button. This option can be found in the following menu: MENU > SYSTEM > BUTTONS + DISPLAY > DISABLE REC BUTTON

Tail-slate during recording

It is now possible to enable/disable tail-slate mode even when a recording has already been started. A long touch on the REC indicator on the display will now enable/disable tail-slate mode and display the according icon.

Automatic calibration skip

It is now possible to automatically dismiss all skippable calibration requests. This option can be found in the following menu: CAL > AUTO CAL SKIP

B.2. RIA-1 SUP 2.2

The RIA-1 SUP 2.2 is mostly a compatibility and bugfix update to ensure that it works with the latest Hi-5 and Hi-5 SX SUP 3.0 features. In addition, it contains a few features and improvements that are listed below.



Nudge Feature

The RIA-1 now supports and broadcasts the nudge feature from and to wireless devices as described above. It is currently not possible to use nudge when connected via LBUS.

Cal All renamed Cal FIZ

We decided to change the Calibrate All command to Focus / Iris / Zoom motors only. A motor set to the AUX axis must be calibrated separately.

Any old calibrate ALL command received by the RIA-1 will also only calibrate F / I / Z motors.

Improved lens metadata and camera control for ALEXA LF / ALEXA 65

The RIA-1 can now be connected via a single CAM - LCS connection (ARRI Cam – LCS cable: K2.0034580) to ALEXA LF and ALEXA 65 cameras. This connection forwards all lens metadata and camera control commands. This includes camera control over changeable parameters and starting / stopping a recording.

B.3. ZMU-4 SUP 1.2

The ZMU-4 SUP 1.2 is mostly a compatibility and bugfix update to ensure that it works with the latest Hi-5 and Hi-5 SX SUP 3.0 features. In addition, it contains a few features and improvements that are listed below.



Nudge Feature

The ZMU-4 now supports and broadcasts the nudge feature from and to wireless devices as described above. It is currently not possible to use nudge when connected via LBUS.

In addition, a *Nudge* user button was added, which enables to trigger nudge events from the ZMU-4. However, the ZMU-4 cannot indicate a received nudge event.

Deactivate REC Button

It is now possible to deactivate the function of the REC Button in the ZMU-4 menu to avoid unintentional triggering. The tally LED will always display the camera status regardless of this setting. The REC control can be deactivated under MENU > CONTROL > REC.

Cal All renamed Cal FIZ

We decided to change the Calibrate All command to Focus / Iris / Zoom motors only. A motor set to the AUX axis must be calibrated separately.

Any old calibrate ALL command received by the RIA-1 will also only calibrate F / I / Z motors

Improved lens metadata and camera control for ALEXA LF / ALEXA 65

When used as a radio host device, the ZMU-4 can now be connected via a single CAM - LCS connection (ARRI Cam – LCS cable: K2.0034580) to ALEXA LF and ALEXA 65 cameras. This connection forwards all lens metadata and camera control commands. This includes camera control over changeable parameters and starting / stopping a recording.

B.4. cforce mini RF SUP 2.2

The cforce mini RF SUP 2.2 is mostly a compatibility and bugfix update to ensure that it works with the latest Hi-5 and Hi-5 SX SUP 3.0 features. In addition, it contains a few features and improvements that are listed below.



Nudge Feature

The cforce mini RF now supports and broadcasts the nudge feature from and to wireless devices as described above. It is currently not possible to use nudge when connected via LBUS.

Cinefade Limits

The cforce mini RF now supports the Cinefade VariND and RotaPola limits of a Hi-5 or Hi-5 SX handunit.

Calibration in Encoder Mode

A cforce mini RF in encoder mode will now return to its last known relative lens position after calibration. cforce mini or cforce plus motors are not affected by this change.

Hint: The last known relative motor position might be different to the last Iris, Focus or Zoom value – especially if the lens has a different scale. Please check that the correct value is set after calibration.

Improved lens metadata and camera control for ALEXA LF / ALEXA 65

The cforce mini RF can now be connected via a single CAM - LCS connection (ARRI Cam – LCS cable: K2.0034580) to ALEXA LF and ALEXA 65 cameras. This connection forwards all lens metadata and camera control commands. This includes camera control over changeable parameters and starting / stopping a recording.

C. Update Instructions

How to get a Software Update Package

Download the latest Software Update Package to your computer.

Make sure the power supply of any ECS device is stable, e.g. by using a fully charged battery. Please note that powering over USB is not recommended during updating.

The latest firmware can be downloaded from the ARRI webpage: arri.com/sups

There are multiple approaches to update your ECS devices. For specific instructions please refer to the respective manual. It is recommended to update devices with a USB port directly via USB. Other options would be updating via LBUS through a Hi-5 or ALEXA camera.

Note: The ECS sync app is currently under maintenance and updating via the app is not possible for the time being.

Note: It can happen that an ALEXA camera shows an error message at the end of the update step when updating an ECS devices via LBUS. Usually, the update is successful and please check the firmware version of the updated device in case. This is a known issue and might happen due to a changed timing at the end of the update process. We are working on a solution and recommend other update procedures for the time being.

An Hi-5 update procedure is shown as an example below:

Hi-5 Update Procedure via USB

The Hi-5 software can be updated using a USB-A or USB-C drive.

The USB-A slot is located below the display on the bottom of the Hi-5, covered by a plastic cap. Press the release pin to open the cover.

The USB-C slot is located above the display on the top side of the Hi-5, covered by a rubber cap. Lift and turn the rubber cap gently to access the USB-C slot.

- (1) Turn on the Hi-5.
- (2) Insert the USB drive into the corresponding USB slot.
- (3) Prepare the USB drive by entering the settings menu and selecting System/Update/Prepare USB medium.
- (4) Unplug the USB drive from the Hi-5 and connect it to your computer.
- (5) Copy the Software Update Package file into the folder *ARRI/Hi-5/SUP*, created on the USB drive.
- (6) Eject the USB drive from your computer and insert it into the corresponding USB slot of the Hi-5.
- (7) Enter the settings menu and go to *System/Update/Firmware Update* and select the update file.
- (8) Confirm your selection by pressing 'select'.
- (9) Wait for the update file to be validated, then confirm by pressing 'update' and follow the update procedure.
- (10) The update process takes about 90 seconds. The Hi-5 will re-boot two times during the update process. Then the update is completed.

- (11) Please double check the software version under System/System Info.

Do not remove the USB drive while updating the Hi-5!

Please Note: after the update of any component all devices in the ECS System have to be restarted.

D. ECS Ecosystem Known Issue Data Base

This list shall be a data source for known issues of the ARRI ECS ecosystem and help during trouble shooting. Please make sure that each device is updated to the latest firmware and always make sure to read the corresponding release notes and manual of each device.

The latest firmware can be downloaded from the ARRI webpage: arri.com/sups

Hi-5 General Issues

LBUS Update sometimes does not show progress

Sometimes, when starting an LBUS update the progress bar is not shown. The Unit will still accurately report the update success.

Lens mapping not possible with 2 Hi-5 Units

Lens programming is only possible if there is only one Hand Unit connected to the camera. Please disconnect any additional units while mapping.

ALEXA 35: Not possible to set Enhanced Sensitivity (ES) via Hi-5

Currently it is not possible to select Enhanced Sensitivity Modes on the Hi-5.

Those EI values must be selected on the camera via User Button, Viewfinder or Web-remote.

Radio state shows "REJ" shortly with RF-2400

When using a RF-2400 module for the first time or after a factory reset, the radio state is shortly displayed as "REJ". This is part of the initialization sequence of the Radio Module and only a visual irritation without further impact.

SDI status information can't be set to "safe"

This SDI setting is currently not settable via hand units as it is not transmitted by ALEXA Mini/Mini LF. For ARRI ALEXA models, SDI "safe" does not exist. Please set the "safe" option on the camera.

No lens scale via LDA

In rare cases, a camera does not load a LDA file properly, resulting in no lens scales on the Hi-5. Clear and reload the lens file in that case.

A calibration process is briefly indicated, when skipping calibration

When skipping a calibration request the hand unit might briefly indicate a calibration. This does not affect operation.

Blinking iris motor trail and depth of field bar

In some cases when connected to a RIA-1, it could happen that the iris motor trail bar is blinking sporadically, which results in a very wide depth of field bar. Turning the focus knob resets the depth of field bar to its actual depth.

Hi-5 can't connect to camera with EMIP radio module

It rarely happens that the Hi-5 can't connect to a camera via the EMIP radio module. The Hi-5 shows the radio connection indication bars greyed out. Unplug the radio module and reconnect it to the Hi-5 in this case.

Calibration cannot be skipped, when switching between LDA and LDS

In some cases, after calibrating an LDS lens, a subsequent switching to an LDA file results in a non-skippable calibration request. This can't be fixed on the Hi-5, as some cameras handle this like a lens change and request a mandatory motor calibration.

Global Unit of camera is not synchronized with Hi-5 when using LDA

With some lens files the "Global unit" on the camera may differ from the unit shown at the Hi-5, as some LDA files don't contain both scales (meters and/or feet).

Switching the global unit in the camera menu, will only switch the camera's display unit, but this change will not be passed on to the Hi-5.

Change the unit on the Hi-5 in the menu LENS > DISPLAY UNIT.

USB-A doesn't always work

Occasionally it happens that a USB drive is not recognized by the Hi-5 hand unit (USB indication missing on the LDD screen). Remove and reconnect the USB device in that case. Make sure that no USB device is connected to the other USB slot of the Hi-5.

Editing a lens-file from 'recent' list not possible

It is currently not possible to edit a lens file when it is selected from the 'recent' list. Please select the file from the browser instead.

Starting Recording from Playback does not exit playback

On an ALEXA 35 when a recording is started while the camera is in Playback the Playback mode may not be exited. Always leave playback before starting a recording.

OCU-1 User Buttons do not work when hardwired to Hi-5

When a OCU is wired to a Hi-5, the assigned User Buttons cannot be used.

After LBUS update via Hi-5, external device may need to be power cycled to reconnect

After performing a wired update to a LBUS device from the Hi-5 sometimes the connection is not reestablished after the update has concluded. Power cycle the device to establish a connection.

RF-2400 Radio Module not working after using them in an ARRI TRINITY 2 RCP-3

If the RF-2400 have been used in an ARRI TRINITY 2 Remote Control Panel RCP-3, they must be reconfigured to be ARRI ECS compatible. This is easily done by attaching them to a Hi-5 and waiting for about 10 seconds. As soon as they start working with the Hi-5 again, they are reconfigured and can be used in the Hi-5 ecosystem. This process must be done via the Hi-5 as the RIA-1 and ZMU-4 can't reconfigure the radio modules.

Lens file not synchronized between ECS motor controller and ALEXA camera with WCU-4 in the setup

The WCU-4 has an optional setting WCU-4 > SET LENS DATA > DATA SOURCE > CONTROLLER which disables that an LDA file is synchronized between an ECS motor controller (e.g. RIA-1, cforce mini RF) and an ALEXA camera. If CONTROLLER is set, the ALEXA camera and ECS motor controller can have different Lens Data.

Workaround: Please make sure to set the DATA SOURCE to CAMERA when using a WCU-4 in any setup.

Hi-5 Power Issues

Hi-5 reboots endlessly when powered via USB-C

In very rare cases the Hi-5 screen and blue status LED starts flickering, and the Hi-5 tries to reboot without success. This can occur when the Hi-5 is supplied via USB-C from a device with insufficient power rating. (e.g. when connected to a PC USB-port.)

Remove the USB-C cable and restart the Hi-5 with a battery inserted.

Power only via USB-C - Hi-5 vibration stops working

In some cases, when using the Recording beeper, the Hi-5 will not vibrate but beeps instead, when supplied only via the USB-C port. Power the Hi-5 with a battery in that case.

Hi-5 doesn't start (stuck on ARRI logo) when powered via USB-C

In very rare cases, powering the Hi-5 via USB may cause a corrupted file system on the Hi-5, which results in a stuck booting phase when unplugging.

If possible, shut off the Hi-5 before unplugging the USB-C Cable. If the issue occurs, boot into recovery mode (center and right soft button), wait for the display to light up and then reboot. If this doesn't work, remove the battery, and wait for the Hi-5 to shut down.

Wrong capacity indication of new battery pack

When using a brand-new smart battery for the first time (Li-Ion Battery Pack LBP-3500), the battery capacity status indicates a wrong percentage on the Hi-5 display. This is a normal behavior for a smart battery. The real capacity is determined during its first discharge cycle.

RIA-1 General Issues

Override issues with OCU-1 or Master Grips

Override is not always possible if an OCU-1 or Master Grip are used in combination with a RIA-1:

- 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 RIA-1 in client mode.
- It is currently not possible to use the override function when the RIA-1 is connected to an ALEXA Mini with the optional LBUS – LBUS connection.

Workaround: Connect the RIA-1 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).

Manual calibration issues

Manual calibration is only possible in combination with an ECS motor controller and not, when connected to an ALEXA camera directly.

When using the manual calibration feature on the Hi-5, it might happen that after the manual calibration the scales are greyed out or in override catch mode while having full control of the motor.

Workaround: Perform another manual calibration or reboot the ESC system.

No camera control via LBUS-to-LBUS connection to cameras

The RIA-1 and cforce mini RF don't support camera control and playback features over LBUS. Always use the CAM connector when connecting to a camera.

ALEXA 35: Connect via CAM to LBUS.

ALEXA Mini LF: Connect via CAM to LBUS.

ALEXA Mini / AMIRA: Connect via CAM to EXT.

ALEXA Plus cameras: Connect via CAM to LCS.

Please check the ECS configuration guides on our website for more info.

Lens motor direction change

The standard lens motor direction of ALEXA cameras is left and it can happen that the lens motor direction is automatically changed to left when connecting an ALEXA camera to the RIA-1 or cforce mini RF LBUS or CAM port. Please check the motor direction after connecting an ALEXA camera.

Blocked lens axis when using OCU-1 or Master Grips

Please ensure that the OCU-1 or Master Grips are updated at least to SUP 2.0.2.

When using an OCU-1 or Master Grip in a wireless configuration on a ZMU-4 or RIA-1 (client), please ensure that no User Button is assigned to F/I or FIZ toggle.

RF-2400 Radio Module not working after using them in an ARRI TRINITY 2 RCP-3

If the RF-2400 radio modules had been used in an ARRI TRINITY 2 Remote Control Panel RCP-3, they must be reconfigured to be ARRI ECS compatible. This is easily done by attaching them to a Hi-5 and waiting for about 10 seconds. As soon as they start working with the Hi-5 again, they are reconfigured and can be used in the Hi-5 ecosystem. This process must be done via the Hi-5 as the RIA-1 and ZMU-4 can't reconfigure the radio modules.

Deactivate Smart Focus Ring Auto Detection when connecting via RS to Sony Venice cameras

As the Sony Venice cameras don't send the REC / tally status via RS, it could happen that a smart focus ring becomes deactivated during REC.

Therefore, it is recommended to deactivate the automatic smart ring detection in the Hi-5 when connecting to a Sony Venice camera with a CAM – RS cable.

There is no issue when using the CAM – Sony Ctrl cable.

Lens file not synchronized between ECS motor controller and ALEXA camera with WCU-4 in the setup

The WCU-4 has an optional setting WCU-4 > SET LENS DATA > DATA SOURCE > CONTROLLER which disables that an LDA file is synchronized between an ECS motor controller (e.g. RIA-1, cforce mini RF) and an ALEXA camera. If CONTROLLER is set, the ALEXA camera and ECS motor controller can have different Lens Data.

Workaround: Please make sure to set the DATA SOURCE to CAMERA when using a WCU-4 in any setup.

RIA-1 Updating

Update via LBUS is not possible with a connected USB-C drive

Currently RIA-1 can only be updated via LBUS if no USB drive is connected to the RIA-1.

Workaround: Remove the USB-C drive before updating via LBUS or update RIA-1 per USB.

Update via LBUS triggers failure warning

When updating the RIA-1 via LBUS with an ALEXA camera, it might happen that the update fails, and the camera shows an update failed warning.

Workaround: Update the RIA-1 via USB-C.

RIA-1 Update duration via LBUS

If using a camera or a hand unit to update the RIA-1 over LBUS, the update duration is slower compared to the USB-C update and takes 2-3 minutes.

Workaround: Update the RIA-1 via USB-C.

Update via LBUS triggers failure warning

When updating via LBUS with an ALEXA camera, it might happen that the camera shows an update failed warning. Usually, the update is successful and please check the firmware version of the updated device in case.

Workaround: Update the RIA-1 via USB-C or via LBUS with a Hi-5

Update file not found on USB-C drive

The RIA-1 can only see up to 9 update files on the USB drive. Please make sure to clear old SUP versions or use an empty USB-C drive.

cforce mini RF

cforce mini RF in host mode on ALEXA Mini with CAM – EXT and optional LBUS – LBUS connection

If 3 or more lens motors are used in the system, there can be unstable motor control issues or reoccurring new motor pop ups when using a cforce mini RF in radio host mode on an ALEXA Mini camera in case the optional LBUS – LBUS for lens metadata transfer is connected.

Workaround: Don't connect the optional LBUS – LBUS on an ALEXA Mini when using 3 or more lens motors.

Manual calibration issues

Manual calibration is only possible in combination with an ECS motor controller and not, when connected to an ALEXA camera directly.

When using the manual calibration feature on the Hi-5, it might happen that after the manual calibration the scales are greyed out or in override catch mode while having full control of the motor.

Workaround: Perform another manual calibration or reboot the ESC system.

No camera control via LBUS-to-LBUS connection to cameras

The RIA-1 and cforce mini RF don't support camera control and playback features over LBUS. Always use the CAM connector when connecting to a camera.

ALEXA 35: Connect via CAM to LBUS.

ALEXA Mini LF: Connect via CAM to LBUS.

ALEXA Mini / AMIRA: Connect via CAM to EXT.

ALEXA Plus cameras: Connect via CAM to LCS.

Please check the ECS configuration guides on our website for more info.

Lens motor direction change

The standard lens motor direction of ALEXA cameras is left and it can happen that the lens motor direction is automatically changed to left when connecting an ALEXA camera to the RIA-1 or cforce mini RF LBUS or CAM port. Please check the motor direction after connecting an ALEXA camera.

Lens file not synchronized between ECS motor controller and ALEXA camera with WCU-4 in the setup

The WCU-4 has an optional setting WCU-4 > SET LENS DATA > DATA SOURCE > CONTROLLER which disables that an LDA file is synchronized between an ECS motor controller (e.g. RIA-1, cforce mini RF) and an ALEXA camera. If CONTROLLER is set, the ALEXA camera and ECS motor controller can have different Lens Data.

Workaround: Please make sure to set the DATA SOURCE to CAMERA when using a WCU-4 in any setup.

Update via LBUS triggers failure warning

When updating via LBUS with an ALEXA camera, it might happen that the camera shows an update failed warning. Usually, the update is successful and please check the firmware version of the updated device in case.

Workaround: Update via LBUS with a Hi-5

LCUBE CUB-1

LCUBE CUB-1 not compatible with RIA-1

The RIA-1 has a dedicated serial connector and it is not intended to use the RIA-1 and a LCUBE CUB-1 in the same LBUS daisy chain.

Workaround: Use the RIA-1 serial port.

Legacy ARRI cameras

General advice when using an ECS motor controller with ALEXA cameras

Always wait until ALEXA cameras are fully booted before using ARRI ECS. The ECS motor controllers boot much faster than an ALEXA camera which might lead to inconsistencies, if lens files are transferred or motors are calibrated during the camera boot up phase.

In addition, clip list handling requires lots of wireless data and the clip list transfer and clip list handling can be slow if more than 50 clips are stored on the CODEX drive. Please avoid long clip lists if possible.

No codec information with legacy cameras

There is no codec information with ARRI legacy cameras. This issue can't be fixed and was apparent also with the WCU-4, as ARRI legacy cameras don't transmit this information to hand units.

Truncated custom tint with legacy cameras

ARRI legacy cameras (e.g. ALEXA LF) do not support decimal values for custom tint. The custom tint will instead get truncated to the closest value.

Legacy Cameras - No LDA file transfer

LDA transfer to a legacy camera (ALEXA LF / SXT) is not possible.

Use an SD Card to transfer the LDA files to the camera.

RED cameras

General advice:

For the RED camera control license, depending on the type of RED camera (DSMC2, DSMC3), a specific baud rate must be selected in the camera settings. Please see the following table for baud rate setting for specific RED cameras:

	Baud rate
DSMC2: Dragon / Gemini / Helium / Monstro	115200
DSMC3: Komodo, V-Raptor	460800

RED cameras: pre-record doesn't work from Hi-5

When using a cforce mini RF or RIA-1 with the Hi-5, the pre-record function of RED cameras is not supported by the Hi-5.

Please activate pre-recording via camera or assign a user button on the RED camera to Start/Stop.

RED Komodo: Playback manipulation not possible

FFW and FBW in playback mode is not supported by RED Komodo.

Sony cameras

Sony Venice 1&2 no clip list, no progress bar

The camera does not transfer the whole clip list table via the remote interface, only one clip is shown at a time. The progress bar has no function as the current time of the clip is not transferred either.

Sony Venice 1&2 Hi-5 jumps to cam screen in between clips

When browsing or changing clips in playback mode, the camera sends a standby signal in between clips, for this reason the hand unit jumps back to the cam screen in between clips.

Sony Venice 1&2 user buttons not supported

The camera user buttons are not accessible via Hi-5, as the camera does not support this feature via the remote interface.

Sony Venice 1&2: FPS setting accessible with active "fixed FPS"

The FPS setting is always accessible via Hi-5, as the camera does not transport information about a fixed FPS over the remote interface. Changing the frame rate on the Hi-5 in fixed FPS has no effect on the FPS setting in the camera!

Workaround: Set FPS to variable in the camera.

Sony Venice 1&2 camera info not supported

The camera info is not accessible via Hi-5, as the camera does not transport this information over the remote interface.

Sony Venice 1&2: Settings greyed out even when RCP mode is toggled

In some cases, it can occur that camera settings on a Hi-5 are greyed out and cannot be changed by the hand unit, even with active RCP mode. Power cycle the ECS system to regain settings control.

Deactivate Smart Focus Ring Auto Detection when connecting via RS to Sony Venice cameras

As the Sony Venice cameras don't send the REC / tally status via RS, it could happen that a smart focus ring becomes deactivated during REC.

Therefore, it is recommended to deactivate the automatic smart ring detection in the Hi-5 when connecting to a Sony Venice camera with a CAM – RS cable.

There is no issue when using the CAM – Sony Ctrl cable.

Focusbug Cine RT

Clear All Focusbug CineRT marks via RIA-1

There is an issue that the Clear All > All marks command doesn't clear Focusbug Cine RT marks.

Workaround: Focusbug marks can be cleared on the Hi-5 via Clear All > Focusbug or individually by rotating the focus knob to the mark position and pressing the *Mark F* Display button. It is also possible to use the Cine RT handset to clear Focusbug Cine RT marks.

Deactivated Focus Ring when using Focusbug Cine RT and Cinefade in one setup

Currently, an active Focus Ring becomes deactivated when engaging focus tracking in a setup with Focusbug Cine RT and a Cinefade device being connected to the RIA-1 LBUS port.

Workaround: Set focus ring to blank ring to avoid a mismatch of the focus ring and focus scale.

No distance value shown on the Hi-5 or Focusbug license not working

If a distance measure device is connected to the RIA-1, but no distance value is shown, check if the correct serial mode is set in the RIA-1.

Serial Mode > UDM: Use this setting when connected to a ARRI's Ultrasonic Distance Measure (UDM-1) or a CineTape Measure Control.

Serial Mode > Focusbug: Use this setting when connected to a Focusbug Cine RT via ARRI Hi-Speed protocol. Make sure that the ARRI Hi-Speed protocol is also activated in the Cine RT handset.

Cinefade

Cinefade: Filter slightly jittering with LDS lenses

In some setups with LDS lenses, the Cinefade might jitter slightly on its own, while not being controlled. The issue does not occur when using a LDA table.

Cinefade Vari ND mode does not respect optical safe range

When using the Cinefade in Vari ND mode the optical safe range is not considered.