Hi-5 SUP 2.0

Software Update Package SUP-Hi-5-2.0.0-20230317.swu

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A. Introduction

ARRI is happy to introduce Hi-5 SUP 2.0 – the biggest update for Hi-5 we've released to date. In SUP 2.0, we are introducing ten major new features to enhance your on-set experience and many other smaller updates, improvements, and bug fixes. Highlights for SUP 2.0 include a frequency analyzer, a new predictive lens mapping workflow, and a customizable home screen featuring nine user buttons at your fingertips. A detailed explanation of the update can be found in the release notes. Alternatively, our latest Tech Talk is also a great way to explore the new features:
https://youtu.be/kRvWf46j38A

The SUP 2.0 is released as a combined update for the Hi-5 hand unit and RIA-1 and it is important to also update the RIA-1 to SUP 2.0 when working with it. The latest firmware can be downloaded from the ARRI webpage:
https://www.arri.com/en/technical-service/firmware/software-updates-ecs

We highly recommend updating the Hi-5 and the RIA-1 to firmware 2.0.

Please take your time to go through this document before using the Hi-5. For more information about this and previous releases, please visit:
https://www.arri.com/en/technical-service/firmware/software-updates-ecs/hi-5-software-update

B. Update Instructions

How to get a Software Update Package

You can find the Software Update Package (SUP) in the Hi-5 download section on:

https://www.arri.com/en/technical-service/firmware/software-updates-ecs/hi-5-software-update or on
https://www.arri.com/en/camera-systems/electronic-control-system/hi-5

Download the latest Software Update Package to your computer.

Make sure the power supply of the Hi-5 is stable, e.g. by using a fully charged battery. Please note that powering over USB is not recommended during updating.

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 the Hi-5 on.
(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.

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

C. New Features with SUP 2.0

Frequency Analyzer for RF-EMIP

Frequency Analyzer shall help you to select a radio channel. When using the RF-EMIP Radio Module, the new frequency analyzer function of the Hi-5 gives users visual feedback about the level of traffic across the 2.4Ghz frequency spectrum. Users can navigate through the available radio channels and choose one with the lowest level of interference. The Hi-5 can also be used as a "wireless sniffer" by walking around the set with the frequency analyzer activated.

The initial sort order is by radio frequency which can be changed to channel order by pressing the SORT button.

User Button Home Screen

Home Screen FUNC levels

The features of the main pages 1-3 are rearranged to optimize the workflow on set. Mark F/I/Z is now on the first level page, while Hide and Show F/I/Z is moved to the second page and Lock F/I/Z to the third page. Additionally, a new and fully customizable 4th main page is added, allowing users to create a User Button Home Screen.

User Button Home Screen (new 4th FUNC page)

A new, fourth, home page for the Hi-5 allows users to customize the six front-facing display buttons to their liking. Camera functions, Hi-5 functions, Distance Measuring Device functions and menu shortcuts can be assigned, bringing the total number of custom buttons at easy reach to 9. Home page user buttons can be renamed, and the new shortcut of FUNC + UB allow user buttons to be remapped on the fly.

User Buttons

The introduction of the new User Button Home Screen led to many additional user buttons in the Hi-5 with SUP 2.0. To ensure a good overview and fast workflow, they are now categorized:

New categories for User Buttons

The user button menu now includes subcategories:

- Hi-5
- Camera
- Distance
- Cinefade
- Menu Shortcuts

Hi-5 User Buttons

This category contains user buttons to change the Hi-5 settings, or to tun on / off several features via the Hi-5, that don't fit into the other categories.

For example:

- Create Marks for each axis

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- Disable Touchscreen – Locks or unlocks the Hi-5 touchscreen
- Stealth Mode Toggle – turn on / off LEDs of LBUS devices on camera when connected via RIA-1 or cforce mini RF.
- Deactivate Smart Ring – Ignore the currently attached smart ring to get the full lens scale
- Camera Record – REC added as a user button

Distance User Buttons (incl Focusbug User Buttons)

Focusbug user buttons are now located in the distance menu and have been extended:
- Focus Tracking Press - Press-&-hold the user button to engage focus tracking
- Focus Tracking Toggle – Turn on / off focus tracking
- 2x View – turn on / off 2x View of the CineRT
- 2x View Value Toggle - Switches the displayed source when 2x View is activated
- Focusbug FOV – Switches through the Cine RT Base field of view settings (Default/Wide/X-Wide)
- Focusbug Limit – Activates limits defined in the Focsubug menu or Cine RT Hand Unit
- Focusbug Lockout – Activates the lockout defined in the Focsubug menu or Cine RT Hand Unit
- Crossover Mode – Activates crossover mode
- Focusbug Next Source – Switches through accessible sources
- Direct selection of sources as separate userbuttons - Horn (Default/Wide/X-Wide) or Bug 1-4

Cinefade User Buttons

With the upcoming new Cinefade license, there are some new user buttons to support this functionality:
- Cinefade Filter+
- Cinefade Filter-
- Cinefade Set – This activates Cinefade mode or switches to Cinefade if RotaPola or Variable ND was active

Menu Shortcuts

Several user button to navigate directly to a Hi-5 sub menu.

Shortcut for User Button assignment

Instead of going through the Hi-5 menu, there is shortcut to directly assign any user button by holding the FUNC button and then pressing the corresponding user button. The shortcut with the new Home Screen User Buttons, but also with User Buttons 1-3.

User Button renaming

You can rename the Home Screen User Buttons to your liking by pressing the rename button in the User Button selection screen. The renaming of the user buttons is limited by 6 letters.

Predictive Lens Mapping

Lens programming has been reworked with SUP 2.0.
Predictive lens mapping helps you to speed up the process of making lens files. The Hi-5 will now suggest distance markings to users while creating a custom lens file. Previously, the next-furthest lens marking had to be selected via the force pad. Now, suggested focus distances will change based on how far the knob has been rotated. This improvement eliminates the need to input the correct focus distance in most situations.

Lens File System

Lens File Browser

A new lens file browser enhances the ability of users to manage multiple sets of lens files at once. Like the behavior of a traditional PC-style file explorer, the file browser allows for folder creation and organization, as well as lens file copying, moving, importing, and exporting.

The Lens File Browser can be accessed via Lens > Lens Files > Browser

Favourite page

User have now the possibility to select any lens folder in the Hi-5 lens file browser as favourite by pressing the favourite button. The selection is indicated by the by ★ symbol in the new lens file browser. Lens file favorites can quickly be changed between different folders, streamlining the process of moving between multiple lens packages. This feature allows users to have faster access to their most frequently used lens files on the set.

It is also possible to select the Recent Lens Files as favourite.

The favourite page can be accessed via Lens > Lens Files.

New Smart Rings

Left Hander and Reversed Focus Rings

Focus pullers who would prefer to pull focus in either a reverse, right-handed manner or as a left-hander are now able to use our new portfolio of 40 smart rings. Smart Focus Rings are automatically detected by the Hi-5 and will auto-select the corresponding focus knob and screen orientation for users.

Left Hander and Reverse Focus Rings will be available soon.

Smart Iris Rings

Smart Iris Rings enhance the use of the Hi-5 as a dedicated iris controller, typically used by DITs and DPs. Smart Iris Rings will automatically assign the focus knob to control an iris motor and will move the iris scale display to the right side of the Hi-5, next to the knob. Smart Iris Rings are available in five variations, used depending on the widest iris markings on the lens. The T1, T1.4, T2 and T2.8 rings are evenly marked to T22 whereas the fifth Smart Iris Ring offers a range of T1 – T32 and Closed.

Smart Iris Rings will be available soon.

Iris Knob Scale

It is also possible to assign the Iris scale to the knob without the use of a Smart Iris Ring by setting the know to Iris (Menu > Control Setup) and selecting Knob as a Scale side.

Distance Arrow Damping

Damping can now be applied to the distance arrow that shows the position being measured by the distance measuring device on the focus scale. This will prevent eratic jumping around as focus distances rapidly change, making it easier for focus pullers to match the mark. Distance arrow damping does not affect the readout of the distance or the measuring device itself and can be set in a range from 0-25.

Distance Arrow Damping can be set via Menu > Control Setup > Distance Arrow Damping

Tally Status Knob Color

The previous selection of seven colors has been expanded with the option to set the focus knob backlight to display the tally status. The Hi-5 will then change color between green for standby, red for record, and blue when there is no media inserted, providing a clear and obvious indication of the camera status.

The Knob Color can be set via Menu > Settings > Light & Color > Knob Color

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Manual T-stops & focal lengths

It's now possible to show a depth of field indicator on the Hi-5 while only using a focus motor, thanks to an upgrade to the manual T-stop and focal length function. Set via the lens menu, previous versions required specially created lens file to unlock the function which can now be used with any lens file.

Manual T-stop and focal length setting is only possible when connected to a RIA-1 or cforce mini RF and if no lens data of the corresponding axis is available. LDS or Cooke/i lenses will provide lens data if the lens mount is active. In case of a mapped lens, the setting is active, if no motor of the corresponding axis is connected.

Cinefade License

Cinefade License for Hi-5 will be available soon.

The Cinefade License includes RotaPola & Variable ND control, as well as the Cinefade effect. Cinefade allows filmmakers to vary depth of field in a single shot at constant exposure, enabling the gradual transition between a sharp and a blurry background.

The Cinefade license will initially be supported when connected via the RIA-1.
With a license installed and Cinefade connected, a new Cinefade menu is available in the main menu.
This menu allows to choose between RotaPola, Variable ND and Cinefade mode, adjust the save range and define if distance value or filter value is shown on the Hi-5 display.

The Cinefade device can be controlled with the Force-Pad or via user buttons. The Force Pad of the Hi-5 can be set to Filter via Menu > Control Setup > Force Pad > Filter. In addition, user buttons can be used as a control input.

Further changes

Lens Data Source Autoselect
This release features an automated selection of the lens date source setting. This ensures that the lens data is synchronized within the camera system and avoids the possibility of different lens data between camera and motor controller. Previously, the lens data source had to be set in the Hi-5 lens menu. With SUP 2.0, this menu entry isn't available anymore in the Hi-5.

Improved Menu System
The most-frequently used menus were moved up in the menu order. Additionally, a Settings menu is added which includes:
- Light & Color
- Vibration
- Sound

Active Focus Tracking Visualization
Active focus tracking now is clearly indication by an inversion of the colors on the distance measuring device display.

Force-Pad Default Speed
The default motor control speed of the force pad is reduced to 25 instead of 100 which was a request from many users and it will provide a smoother zoom response in the standard settings.

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The force pad speed can be change via Menu > Control Setup > Force-Pad.

Codec on Camera Page
Used codec ARRIRAW and Apple ProRes are now shown in the camera screen.

Internal and External Marks
SUP 2.0 now distinguishes between internal and external marks. Internal marks are set via the Hi-5 and external marks though an external device like a Cine RT hand unit in Tape Measure mode. Internal marks are white and external marks are green per default.
The color of internal and external markers can be changed in the Light & Color menu: Menu > Settings > Light & Color.

Screen Saver Mode
It is now possible to active a Screensaver function by pressing FUNC + Power simultaneously.
The Screen Saver menu can be found in Menu > Settings > Light & Color > Screen Saver

Lock & Bluetooth Symbol on Main Screen
A lock symbol and Bluetooth symbol are added to the main screen. Lock indication will show if users disable Force-Pad in control setup, disable touchscreen in control setup or lock the entire hand unit by double pressing the power button.

Focus Scale Zoom
It is now possible to zoom out to see the full range of the focus scale.

Clear Logfile
It is now possible to clear internally stored logfiles in the system menu via Menu > System > Clear Logfiles

D. Bugfixes

Loosing connection to automatic or manually set smart focus ring
This release fixes a problem that caused automatic or manually set smart focus rings to get unloaded occasionally.

Unintentional setting of new lens limit while clearing lens limits
This release fixes a problem that occurred when deleting an axis limit and moving the control element by accident while doing so.
This resulted in a small limit range, which gave the wrong impression of no motor control.

Inconsistent prerecording behaviour with Alexa 35
Fixed an issue that prevented the Hi-5 to display camera settings when prerecord was active, now with active prerecording locked settings are not changeable.

Sony Venice 1 and Venice 2 playback issues
Fixed an issue that caused the Hi-5 to lose motor control after exiting playback.

Prepare USB medium error
Fixed an issue that caused an unhandled error after successful USB medium preparation.

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New motor popup during lens programming

Fixed an issue that caused a new motor popup for a currently controlled motor during lens programming.

Wrong cliplist after CODEX drive change

Fixed an issue that caused the old cliplist to be displayed after the recording medium on the camera has been changed.

Wrong global unit in default settings with RIA-1

A bug is fixed which caused lens files with imperial units to be displayed in metric when the cameras global unit was set to default.
Now, the unit of the lens file is used when the global unit is set to default.
RIA-1 SUP 2.0 or higher is mandatory, if the Hi-5 SUP 2.0 is used in combination with the RIA-1.

FPS/shutter custom value issue with RIA-1

Fixed an issue where camera settings were not displayed correctly in the Hi-5 if a custom value was set before.

Improved radio module reinitialization

Fixed an issue that caused the radio module reinitialization to get stuck, after a short contact loss or a short disruption of the radio connection.

Locked axis in lens programming

It was previously not possible to program a lens if an axis had been locked, now axis control restrictions get dismissed when entering lens programming.

E. Known Issues

This is a list of known issues for this software update package.

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.
Workaround: Those EI values must be selected on the camera via User Button, Viewfinder or Webremote.

Manual T-stop/focal length requires a restart

Manual T-stop/focal length requires a restart, if the system previously had an iris or zoom motor connected.

Leaving user button quick select menu trigger User Button

Leaving user button quick select, (FUNC + UB) via back or select triggers the function defined for UB 7 or UB 9.
This will be fixed with the next software update.
For the time being, please don't set critical functions on UB 7 or UB 9.

OCU-1 override with Iris Rings

When overriding Iris control with an OCU-1, it is theoretically possible to set the Iris to a value outside the Iris ring scale in case the lens has a wider scale than the ring. In this situation, the motor position can't be caught via the Hi-5 as long as the smart Iris ring is attached.
Workaround: remove the smart Iris ring to expand the scale to the full lens scale.

Cforce mini RF: AUX axis has no new motor pop up

When using the Hi-5 in combination with a cforce mini RF, the AUX axis is controllable without a motor popup. This may cause issues in setups with more than one hand unit.

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cforce mini RF: Axis change freezes camera or leaves motor unresponsive

Changing axis on a connected cforce mini RF (F/I/Z/AUX) might leave the motor unresponsive or freeze the camera.
Workaround: Re-plug the motor controlling the desired axis or restart the system.

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.

Manual calibration not working via LBUS

Currently the manual calibration feature can only be used when connected wirelessly to the RIA-1 or cforce mini RF. Manual calibration is not supported when connecting the Hi-5 hardwired via LBUS the LBUS daisy chain.

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.
Workaround: Use or program a LDA file

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.
Workaround: Set the "safe" option via 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.
Workaround: Unload and reload the corresponding lens file.

A calibration process is briefly indicated, when skipping calibration

Does not affect operation.

Blinking iris motor trail and depth of field bar

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

Serial number not always shown in lens editing menu

When editing a lens file and reaching the "enter serial number" step, in some cases the serial number is not shown.
Workaround: Restart the lens editing or fill the serial number once more.

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.
Note: This is a normal behavior for a smart battery. The real capacity is determined during its first discharge cycle.

No scales for LDS-data in Hi-5 display after factory reset

After factory reset, upon first connection, the Hi-5 displays the LDS-data only in numbers without any scales.
Workaround: Disconnect the Hi-5 from the camera or restart the hand unit.

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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.

Workaround: Unplug the radio module and reconnect it to the Hi-5.

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.

No camera control via cforce mini RF connected to the camera LBUS

The cforce mini RF currently doesn't support camera control and playback features over LBUS.
It is not possible to use a cforce mini RF for camera control of an ALEXA 35 camera.

Workaround: For ALEXA Mini and Mini LF, use the CAM to EXT connection from the motor to the camera.

Pre-marked ring indication with cforce mini RF is always colored red

When using a cforce mini RF with the Hi-5, the pre-marked ring symbol is colored red instead of being shown in white color. This will be fixed with the next software update of the cforce mini RF.

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.

Workaround: Activate pre-recording via camera or assign a user button on the RED camera to Start/Stop.

RED HELIUM Playback control issues

When using the Hi-5 with cforce mini RF or RIA-1 on a RED HELIUM camera, the playback control might not work properly or the camera might stay in playback.

Workaround: Leave Playback via camera.

RED Komodo: Playback manipulation not possible

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

System info radio region of RF-2400 always displayed as world

When checking the radio region in system info the region is always displayed as "world".

LCUBE CUB-1: Distance value wrong

When using the Hi-5 in combination with a RIA-1, LCUBE CUB-1 and a distance measure device, in some cases a wrong distance value is shown.

Workaround: Use the integrated serial interface of the RIA-1 for distance measure devices or power cycle the RIA 1 & CUB 1.

Manual calibration with active cal request

When using the Hi-5 in combination with a RIA-1 or cforce mini RF and using the manual calibration feature for motors, it might happen that after the manual calibration the scales get greyed out with a RED cross above the scale, while having full control of the motor.

Workaround: Perform another manual calibration or reboot the RIA-1/cforce mini RF.

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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.

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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.

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

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.
Workaround: 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.

USB-A doesn't always work

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

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.)
Workaround: 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, the Hi-5 will not vibrate but beeps instead, when supplied only via the USB-C port.
Workaround: Power the Hi-5 with a battery.

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.