

ALEXA Mini

QUICK GUIDE

16 August 2018



Imprint

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Original version.

NOTICE

This document is a Quick Guide only. For detailed operation instructions, please refer to the User Manual.

For Further Assistance

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Document Revision History

Document ID: K4.0021443

Version	Release	Date
2.5	K08771	28 May 2015
2.6	K08877	14 July 2015
3.0	K08941	02 Nov 2015
4.0	K09035	23 May 2016
4.1	K09086	7 June 2016
4.2	K09194	8 Nov 2016
5.3	K09697	30 May 2018
5.4	K09801	16 August 2018

Contents

1	For Your Safety / 为了您的安全	5
1.1	Risk Levels and Alert Symbols / 危险级别和警示标志	5
1.2	Vital Precautions / 重要安全措施	6
1.3	General Precautions / 般安全措施	8
2	Audience and Intended Use	9
3	Scope of Delivery and Warranty	10
4	Camera Layout	11
4.1	Front Connectors	13
4.2	I/O Panel	13
4.3	Media Panel	15
4.4	Product Identification	16
5	Basic Camera Operation	17
5.1	Power Supply	17
5.2	Switching On and Off	17
5.3	Inserting and Removing a CFast 2.0 Card	18
5.4	Inserting and Removing USB Medium	
5.5	Starting Recording via REC button	19
5.6	Multi Viewfinder MVF-1	20
5.7	User Monitor	22
5.8	Camera Control Panel CCP-1	22
5.9	Home Screen	23
5.10	Camera Menu	24
5.11	Operation without MVF-1 or CCP-1	25
5.11.1	Function Button FN and Camera Buttons 1-3	25
5.11.2	Web Remote	26
5.12	Licensing	27
6	Camera Preparation	28
6.1	Changing a Lens	
6.2	Changing the Lens Mount	29
6.3	Mounting the Camera to a Bridge Plate	31
6.4	Mounting and Unmounting the White Radio Antenna	
6.5	Connecting the MVF-1	33
6.6	Adjusting the MVF-1	34
6.7	Adjusting the Monitor	34
7	Appendix	35
7.1	Technical Data	

7.2	Declarations of Conformity	37
7.3	Dimensional Drawings	40

1 For Your Safety / 为了您的安全

Before use, please ensure that all users read, understand and follow the instructions in this document fully. 使用前,请确保所有的用户都已经阅读、理解,并遵循本文档内的操作说明。

1.1 Risk Levels and Alert Symbols / 危险级别和警示标志

Safety warnings, safety alert symbols, and signal words in these instructions indicate different risk levels:

A DANGER!

DANGER indicates an imminent hazardous situation which, if not avoided, **will result in** death or serious injury.

A WARNING!

WARNING indicates a potentially hazardous situation which, if not avoided, **may result in** death or serious injury.

▲ CAUTION!

CAUTION indicates a potentially hazardous situation which, if not avoided, **may result in** minor or moderate injury.

NOTICE

NOTICE explains practices not related to physical injury. No safety alert symbol appears with this signal word.

Note: Provides additional information to clarify or simplify a procedure.

本文档内的安全警告、安全警示标志和标识词语指示不同的危险级别:

▲ 危险

危险表示危急、有危害的情景,若不防范,则会导致死亡或严重的伤害。

▲ 警告

警告表示有潜在危害的情景,若不防范,则可能会导致死亡或严重的伤害。

▲小心

小心表示有潜在危害的情景,若不防范,则可能会导致中等或较轻的伤害。

提示

注意表示此行为不会导致人身伤害。因此此标识词语中不含警告标志。

注:注意中会提供用于解释或简化工作的额外信息。

1.2 Vital Precautions / 重要安全措施

A DANGER!

High voltage! Risk of electric shock and fire!

Short-circuits may entail lethal damage!

Before use, read and follow all valid instructions.

Use solely and exclusively as described in the instructions.

Never open. Never insert objects.

For operation, always use a power source as indicated in the instructions.

Always unplug the power cable by gripping the power plug, not the cable.

Never try to repair. All repair work should be done by a qualified ARRI Service Center.

Never remove or deactivate any safety equipment (incl. warning stickers or paintmarked screws).

Always protect from moisture, cold, heat, dirt, vibration, shock, or aggressive substances.

Never cover any fan openings.

▲ 危险

高电压!有触电或起火风险!

短路将引起致命危险。

使用之前,请仔细阅读所有未过期的使用说明,并严格遵循。

切勿打开机身。切入插入任何物体。

操作时,请务必使用说明中指出的电源。

断开电源时请握住电源插头,而不是电线。

切勿尝试自行维修。所有的维修工作必须由具备资质的ARRI 维修中心进行。

切勿移除或毁坏任何安全设施(例如警告贴纸或涂漆标示的螺丝)。

务必避免潮湿、寒冷、炎热、多尘、震动、冲击或严酷的使用环境。

切勿覆盖任何风扇开口。

A CAUTION!

Condensation! Risk of electric shock and fire!

Condensation may form on the sensor and electrical connections when exposing the camera to sudden changes of temperature or humidity!

To avoid injury and damage, never operate the camera when condensation occurs.

▲小心

冷凝!有触电或火灾风险!

当将摄影机暴露于温度或湿度迅速变化的环境中时,影像传感器和电子部件连接处可能会产为了您的安全6生的冷凝。

为了避免受伤或设备损坏,在冷凝发生时切勿操作摄影机。

A CAUTION!

Heavy weight! Risk of injury and damage!

If placed on an unstable surface, the camera can fall and cause serious harm!

Always place the camera on proper support devices. Safely attach it as described in the instructions.

A小心

设备重量较大!有受伤或设备损坏风险!

若安置于不稳定的位置,则摄影机可能会掉落,并造成严重的伤害。

务必将摄影机安装于适当的支撑设备上。请按照说明中所描述的方法来安全地安装摄影机。

A CAUTION!

Hot surfaces! Risk of injury and damage!

During extended operation or operation in high ambient temperatures, the fan outlet at the camera rear, the CFast drive and the CFast card can get hot.

Never cover, obstruct or block the fan in- or outlets while the camera is powered.

▲小心

表面极烫!有人身伤害或物品损失危险!

由于长时间使用或在高温环境下使用,摄影机后部的散热口位置、CFast卡槽位置、CFast卡可能会变得很热。

在摄影机运行时,切勿遮挡、阻塞或覆盖风扇进风口或出风口。

1.3 General Precautions / 般安全措施

NOTICE

Even rugged cameras use components sensitive to improper use.

Direct sunlight can result in camera housing temperatures above 60 °C (140 °F). At ambient temperatures above 25 °C (77 °F), protect the camera from direct sunlight.

Protect the optical system and sensor: Never point the camera or viewfinder into direct sunlight.

Avoid permanent sensor damage: Never let any direct light or reflections from highenergy light sources (e.g. laser beams) enter the camera's optical path.

Protect the sensor: Always keep a lens or protective cap on the empty lens mount. Change lenses in dry, dust-free environments only.

Always clean the sensor cover glass according to ARRI instructions. Instructions can be downloaded from the ARRI website in the ALEXA download section.

Only use the tools, materials and procedures recommended in this document. For the correct use of other equipment, see the manufacturer's instructions.

提示

即使本摄影机非常坚固,也是由敏感的组件所组成的,请谨慎使用。

当改变摄影机安装支撑设备或系统时(特别是更换电缆),请务必断开摄影机电源。

注意保护光学系统和影像传感器:切勿将摄影机或取景器直接面朝直射阳光。

避免对影像传感器造成永久性伤害:切勿让任何来自高能量光源(例如激光)的直射 光或反 射光进入摄影机的光路系统。

注意保护影像影像传感器:空镜头卡口上务必安装镜头或保护盖。更换镜头时,务必在干燥、无尘的环境中进行。

请完全并仅按照用户手册中所描述的方法来清洁影像传感器保护玻璃。若清洁不成功,请咨询ARRI维修中心。切勿尝试打开保护玻璃。

清洁影像传感器保护玻璃时,务必遵守ARRI说明书中描述的方法。

仅使用本文档中建议使用的工具、材料和操作方法。若要正确地使用其他设备,请参阅其制造商的说明书。

2 Audience and Intended Use

NOTICE

The product is solely and exclusively available for commercial costumers and shall be used by skilled personnel only. Every user should be trained according to ARRI guidelines.

Use the product only for the purpose described in this document. Always follow the valid instructions and system requirements for all equipment involved.

The ALEXA Mini is a 35mm digital camera solely and exclusively for recording images at various resolutions suitable for a variety of distribution formats:

- ProRes 422 LT, ProRes 422, ProRes 422 HQ, ProRes 4444, ProRes 4444 XQ, and ARRIRAW* codec
- Rec 709 and Rec 2020 encoding (through use of look files), Log C or ARRIRAW* encoding
- CFast 2.0 card recording
- Up to 200 fps with full image quality
- 35 mm CMOS sensor in 16:9 or 4:3* modes
- EVF with OLED eyepiece
- Fold-away monitor for both live view and user interface access
- Small and lightweight built for high mobility and special applications
- * Feature requires licensing.

3 Scope of Delivery and Warranty

NOTICE

Product and packaging contain recyclable materials. Always store, ship and dispose according to local regulations.

ARRI is not liable for consequences from inadequate storage, shipment or disposal.

Delivery

On delivery, please check if package and content are intact. Never accept a damaged/ incomplete delivery. A complete delivery includes:

- ALEXA Mini camera with lens mount according to order: Titanium PL LDS Mount with LBUS connector (K2.0003216), AMIRA PL LDS Mount (K2.0001107), EF Lens Mount (K2.0001103), B4 Lens Mount (K2.0001237)
- White Radio Antenna
- USB memory stick
- 3.0 mm Allen key
- Quick Guide
- Original packaging incl. drying agent

NOTICE

ARRI offers an increasing variety of product bundles and additional accessories.

For details, please consult our website or your local ARRI Service Partner.

Warranty

For scope of warranty, please ask your local ARRI Service Partner. ARRI is not liable for consequences from inadequate shipment, improper use or third-party products.

4

Camera Right



- Fan Intake
- LBUS Connector
- Integrated WiFi Antenna
- 4 I/O Panel

1 2

3

Camera Left



- FN Function Button
- Camera Buttons 1-3
- Record Button Camera Status LED

Camera Top



- MAP-1 (K2.0006334)
- MVB-1 (K2.0006140)
- MVF-1 Buttons
- Record Button

1

2

3

4

5 MVF-1 Tally Light

Camera Bottom



- 1 MVF-1 Type Label
 - MVF-1 PLAY Button
 - Camera Type Labels
 - LBUS Connector

Camera Front



- RMB-3 (K2.0006186)
- Lens Mount

1

2

3

1

2

3

4

5

6

7

8

9

- LBUS Connector
- 4 Audio Connector

Camera Back



- Fold-away monitor
- EVF OLED Eyepiece
- **Timecode Connector**
- White Radio Antenna
- I/O Panel
- Media Panel
- Ethernet Connector
- Boot Status LED Power Button
- 10 Camera Status LED 11
 - Fan Outlet

4.1 Front Connectors



1 Audio Connector 2 LBUS Connector

Audio (5-pin LEMO)



2-channel +24dBu line level audio input. Use the ALEXA Mini Audio connector with cable (K2.0006171) to connect audio sources.

LBUS (4-pin LEMO)



LBUS connector for daisy-chainable LBUS devices such as cforce mini lens motors, cforce plus lens motors, ARRI Master Grips and ARRI LCUBE CUB-1. Note: the LBUS connector is only available with the Titanium PL Lens Mount (K2.0003216).

4.2 I/O Panel



- 1 TC Timecode Connector
- 2 White Radio Antenna Connector
- 3 EVF Connector for MVF-1 or CCP-1
- 4 SDI 1&2 SDI Outputs
- 5 BAT Main Power Connector
- 6 EXT External Connector
- 7 ETH Ethernet Connector

TC (5-pin LEMO)



The TC connector is a 5-pin LEMO socket. It accepts and distributes LTC (Longitudinal Time Code) signals.

White Radio Antenna Connector



Connector for the white radio antenna. White radio allows for wireless lens control, lens data communication and remote control of basic camera functions.

Note: Do not leave the antenna connector open during operation or transport. The radio module inside could be damaged by electrostatic discharge on the open connector. Use the originally supplied antenna only (K2.0001996).

EVF (16-pin ODU)



The EVF connector connects a MVF-1 or CCP-1 to the camera.

SDI 1&2 (BNC)



Both SDI BNC connectors are carrying SDI signals in 1920 x 1080 (422 1.5G, 422 3G, 444 3G) as well as 3840 x 2160 (DL 422 3G, 422 6G, DL 422 6G).

Through a hardware modification, SDI 2 can be reconfigured to a SYNC IN connector for analog genlock signals (Black burst, Trilevel sync). Please contact an ARRI camera service center for more information.

BAT (8-pin LEMO)



The BAT connector is the main power input of the ALEXA Mini and accepts an input voltage range from 10.5 to 34 V DC.

EXT (7-pin LEMO)



A multi-pin accessory connector for communication with various accessories, carrying two CAN buses and unregulated accessory power output at battery voltage level (1.1 A max.). With external adapter EXT-RS (K2.0006170), R/S functionality is supported.

ETH (10-pin LEMO)



ALEXA Mini uses a 10-pin LEMO connector. Use the ALEXA Ethernet Cable KC 153-S (K2.72021.0) to connect the Ethernet connector to a standard RJ-45 Ethernet port.

Note: The ALEXA Remote Control Unit RCU-4 cannot be used with the ALEXA Mini.

4.3 Media Panel



- 1 Card Status LED
- 2 CFast 2.0 Card Slot
- 3 USB Connector
- 4 Media Lid

Card Status LED

The card status LED allows for a quick check of the card status:

Status LED	Card State
Off	No card inserted
Green	Ready to record
Flashing red	Recording
Solid red	Not ready to record, card full or card invalid

USB Connector



Interface for USB memory sticks with FAT file system. The camera saves data such as user setups, frame grabs and system logs to the USB memory sticks. The USB port can also be used to charge USB devices and supplies 5V with a maximum current of 500mA.

A CAUTION!

Hot surfaces! Risk of injury and damage!

During extended operation or operation in high ambient temperatures, the fan outlet at the camera rear, the CFast drive and the CFast card can get hot.

Never cover, obstruct or block the fan in- or outlets while the camera is powered.

4.4 Product Identification



The FCC conformity label and the CE type label with serial number (1) are located on the bottom of the camera. The serial number consists of the last 5 digits of the equipment number K1.0003873-XXXXX.

5 Basic Camera Operation

5.1 Power Supply



The ALEXA Mini accepts an input voltage range from 10.5 to 34 V DC. The camera can be solely powered through the 8-pin LEMO BAT connector located at the back of the camera. Do not supply power outside the specified voltage range.

You can use a KC50-S (K2.75007.0) or KC50-SP-S (K2.0001275) power cable or one of the various on-board adapter plates for V-mount and Gold Mount batteries to supply the camera with power.

NOTICE

For maximum operation time, always use fully charged batteries with 10.5 to 34 V DC (50 W minimum).

Always keep the BAT connector accessible so that the cable can be unplugged quickly in case of emergency. Do not use power cables longer than 4m.

5.2 Switching On and Off

The power button is located at the lower left on the back of the camera. The power button's background light is illuminated when the power on the BAT connector is in the valid range.

1



- Power Button with background illumination
- 2 Boot Status LED
- 3 Camera Status LED

Switching On the Camera

Press the power button (1).

The camera starts booting. While the camera is booting up, the boot status LED (2) is flashing blue. As soon as the camera has finished the boot process, the boot status LED turns to solid blue. During the boot process, the ARRI logo is shown in the monitor of the MVF-1 and the CCP-1 (if connected).

Switching Off the Camera

Press and hold the power button (1) until the camera has switched off and the boot status LED (2) turns off.

On the monitor of the MVF-1 and CCP-1 as well as in the viewfinder and the SDI outputs, a countdown appears while you press and hold the power button. On reaching zero, the camera switches off.

5.3 Inserting and Removing a CFast 2.0 Card



- 1. To insert the card, open the lid (1).
- 2. Align the card's positive edge (3) facing the camera rear.
- 3. With the contact pins first, gently insert the card until it audibly locks (2).
- 4. Gently close the lid (1). **Never** force it closed on an unlocked card.



- 1. To remove the card, open the lid (1).
- 2. Gently push on the card until it unlocks audibly (2).
- 3. Remove the card.

NOTICE

ALEXA Mini does not accept ALEXA-formatted CFast 2.0 cards, and vice versa.

Before using a CFast 2.0 card with ALEXA Mini, you **must** erase it in-camera to create the required file system.

Avoid damage to the contacts of both camera and card. Always insert cards as described in this document.

Never change memory cards when recording - this may damage the recorded clip.

5.4 Inserting and Removing USB Medium

The ALEXA Mini saves data such as user setups, frame grabs and system logs to a USB memory stick. Firmware, additional frame lines and ARRI Look File 2 files can be loaded onto the camera from the USB memory stick. The USB slot is located at the back of the camera below the CFast 2.0 card slot. To access the USB slot, open the media lid.

The USB memory stick needs to be FAT-formatted and requires a special folder structure in order to work with the camera. This folder structure can be prepared in camera and the folder preparation will not alter existing folders and files on the USB medium.

The USB icon in the status section on the HOME screen of the user interface reflects the USB medium status (useable, read/write, write-protected, invalid).



- 1. Open the media lid (1).
- 2. Connect a FAT-formatted USB stick (3) to the camera's USB slot (2).

You can remove the stick from the camera without unmounting it.

The camera only supports USB memory sticks or pendrives, FAT-formatted with MBR partition table and with a maximum capacity of 16GB. Hard drives or similar can not be recognized.

NOTICE

5.5 Starting Recording via REC button

The REC button (1) is located on the left side of the camera, on the MVF-1 and the Camera Control Panel CCP-1. The camera status LED (2) next to the REC button reflects the camera's status. Recording can only be started with a valid CFast card inserted.



Camera Status LED state	Camera State
Solid green	Ready for recording
Solid red	Recording, Pre-recording
Off	Idle and not ready for recording (CFast card is full, no CFast card is inserted or CFast card is not valid).

Camera Status LED state	Camera State
Flashing red/green	Camera is in an error state.

NOTICE

Pressing the record button returns the MVF-1 user interface to the home screen and disables the menu access.

Recording disables the home screen buttons for *FPS, TC, Shutter,* and *Look* settings.

Connecting or disconnecting devices or cables while recording can disturb the audio/image signal due to static electricity.

5.6 Multi Viewfinder MVF-1



User Monitor (Live View and User Interface)

The 3.2" fold-away monitor with up-and-down tilt function can display the camera live image or the main user interface, providing full access to camera functions and menus. Use the monitor button (7) to toggle between live view and user interface.

PK (Peaking Button)

The peaking button activates and deactivates the peaking tool on the viewfinder and the monitor.

For more information on peaking please refer to the user manual.

EXP (Exposure Tool Button)

The EXP button activates and deactivates the exposure tool for the viewfinder and the monitor.

For more information on the exposure tool please refer to the user manual.

VF-1 and VF-2 User Buttons

The MVF-1 has two user buttons, VF1 and VF2 (4, 5). You can assign frequently used functions to each button.

For more information on how to assign user buttons please refer to the user manual.

REC Button

The recording button starts and stops recording to the CFast 2.0 card. With no CFast 2.0 card inserted, the button is inactive.

M (Monitor Button)

Press the M (Monitor) button (7) to change the monitor mode between live view and user interface.

Proximity Sensor

This infrared sensor automatically deactivates the MVF-1's internal OLED panel when you withdraw your eye. The sensor is placed either on the bottom left-hand side of the viewfinder (generation 1), or it is integrated into the eye cup (generation 2).

The ALEXA Mini MVF-1 contains the generation 2 proximity sensor.

Diopter Adjustment

With the camera switched on and looking into the viewfinder, twist the ring (9) left or right to adapt the viewfinder image to your visual acuity. The diopter adjustment can compensate from -5 to +5 diopters.

Screen Buttons

The functionality of the screen buttons (10) depends on the monitor mode. With the monitor in live view mode, press the lower screen buttons to toggle the status bar content. When the monitor is set to show the user interface, the screen buttons give quick access to main camera settings and allow for various other adjustments in the camera menu.

Jogwheel

Using the jogwheel (11), you can scroll or navigate through lists and menus to change and confirm settings.

PLAY Button

The PLAY button is located on the bottom side of the MVF-1. Press and hold the PLAY button for two seconds to start in-camera playback from the CFast 2.0 card.

NOTICE

Constantly covering the proximity sensor of the MVF-1 can cause an irreversible burn-in on the viewfinder OLED display. If you need to cover the viewfinder, please disable the EVF OLED first using the EVF power setting:

MENU > Monitoring > EVF/MONITOR > Settings > EVF Power.

NOTICE

Heated Eyecup HE-6 is not compatible with the MVF-1 viewfinder. When using the heated eyecup HE-6, the proximity sensor that activates the OLED display will always be covered. In this state, the OLED display will not switch off when not in use, this can cause an irreversible burn-in on the OLED display.

Please use the Heated Eyecup HE-7 instead. This is compatible with all MVF-1 viewfinders starting with serial number 2151, or viewfinders with the eyepiece upgrade installed (proximity sensor is located at the eyepiece).

5.7 User Monitor



The MVF-1 user monitor has eight screen buttons, four above (2) and four below (3) the screen (4). Their function depends on the screen content and is labeled directly above or below each button. Unlabeled buttons do not have a function for that screen. A grayed-out label indicates that the function is currently not available. Using the jogwheel (1), you can do the following:

- Scroll or navigate through lists and menus
- Change values (by scrolling up or down)
- Access and confirm settings (by pressing the jogwheel)

5.8 Camera Control Panel CCP-1

The Camera Control Panel 1 (CCP-1) is a standalone control panel, containing the display and a subset of the buttons of the MVF-1. Like the MVF-1, it can display the camera's live image or the main user interface, and the buttons reflect the behavior of the equivalent buttons of the MVF-1. It can be used as the only control panel or with a MVF-1 daisy-chained to it.



- 1 REC Recording Button
- 2 VF-1 User Button
- 3 VF-2 User Button
- 4 M Monitor Button
- 5 PLAY Button
- 6 Jogwheel

Connecting the CCP-1



Connect the CCP-1 CAM connector with the EVF connector of the camera. When it is used alone with the camera, the CCP-1 always shows an image. When a MVF-1 is daisy-chained to the CCP-1, the MVF-1 will show an image in the EVF, but only one of the two monitors, either of the MVF-1 or the CCP-1 is active. If the monitor of the MVF-1 is closed, the CCP-1 is activated.

If the monitor of the MVF-1 is opened, the monitor will be activated.

- Activate the MVF-1 by pressing a screen button on the MVF-1.
- Activate the CCP-1 by pressing any button except the REC button on the CCP-1.

5.9 Home Screen

The HOME screen is the ALEXA Mini's default screen. It shows the most important camera parameters and gives quick access to changing them through the screen buttons:



MENU

While the monitor is showing the HOME screen, press the jogwheel to access the camera menu.

ALERT Screen

The ALERT screen communicates critical system states to the user. They require immediate attention and remain active until the state returns to normal. A red exclamation mark, visible on the home screen, the monitor, EVF and SDI overlays (if active) indicates active alert messages, press the round '!' button to read them.

FPS Sensor Frame Rate Setting

FPS shows the sensor frame rate, allowing adjustments from 0.75 to 200 fps

Note: The maximum frame rate that can be set is dependent on the recording resolution and the codec.

TC Timecode Settings

Shows the current timecode value and the active project rate, allows adjustment of timecode format and values.

SHUTTER Settings

Sets the shutter angle of the sensor. Shutter angle and sensor FPS determine exposure time of the sensor in seconds by the following equation: angle / (360 * FPS). Shutter unit can be set to display settings either as angle (5.0° to 356.0°) or exposure time (1s to 1/8000s). The maximum shutter angle is limited by the resulting exposure time (1s max).

WB White Balance Settings

Sets the camera's white balance. This is the color temperature of the light source that the camera is currently adjusted for. In addition to the red/blue correction of the white balance, the ALEXA Mini can also compensate for a green/magenta tint. This value, called CC (color compensation), is shown as an exponent of the WB value. Positive values are marked with a "+" and negative values with a "-".

You can adjust WB from 2,000 to 11,000 Kelvin (here: 5,600) in steps of 10 K for red/ blue correction. You can also color-compensate for green/magenta tints in a range from -16.0 to +16.0. Positive or negative CC color compensation values then appear in superscript (here: +0.0).

For automatic white balance: Use the AW button in the WB screen (HOME > WB > AW) or assign *Auto WB* to a user button and press it twice in one second.

LOOK Settings

Shows the REC path processing setting and the name of the active look. Opens the look screen, which provides further access to processing settings of all image paths and global look as well as in-camera look editing.

El Exposure Index Settings

Shows the current EI rating and ND filter value. Base sensitivity for the ALEXA Mini is 800 ASA. The EI rating can be adjusted from 160 to 3200 ASA and via a submenu in the EI screen the internal ND filters can be operated.

INFO Camera Info Screens

Provides access to various info screens such as camera system info, card info, network info or user button info.

Status Section

The status section gives an overview of other important camera settings such as recording resolution, remaining recording time and battery voltage.

5.10 Camera Menu

The camera menu contains parameters for basic camera setup. It has a tree structure and the name of the current submenu is displayed across the top of every screen. To access the menu, press the jogwheel while the camera is showing the HOME screen. There are eight submenus in the main menu (3) for setting up the ALEXA Mini:

24

	НОМЕ	Recording	-
	(2)	Media	•
	М	Monitoring	•
(1E	System 3	•
	Ν	Setup	•
	U	User buttons	•
		Metadata	•
I	BACK	Electronic Control System (ECS)	•

Basic Menu Operation

- 1. Rotate the jogwheel (1) to scroll up or down to select the desired entry.
- 2. Entries with an arrow navigate to a lower menu level:
 - To navigate to the submenu: press the jogwheel (1).
 - To return to a higher menu level: press BACK (4).
- 3. Entries with a value allow direct editing:
 - To edit a value: press the jogwheel (1), then rotate the jogwheel to select the desired value.
 - To confirm and end editing: press the jogwheel.
 - To cancel editing: press BACK (4).
- 4. To leave the menu: press HOME (2).

5.11 Operation without MVF-1 or CCP-1

5.11.1 Function Button FN and Camera Buttons 1-3



The left camera side is equipped with the function button FN (1) and three buttons labelled 1 through 3 and with additional icons (2), which can act as regular user buttons or perform common camera functions in combination with the function button.

Camera Buttons as User Buttons:

By default, the camera buttons 1 to 3 function as user buttons.

For information on how to assign functions to user buttons, see in the user manual.

Whenever the assigned function is active, the blue LED of the user button is lit.

Camera Buttons to Control Common Camera Functions:

Press and hold the function button (1), then press a camera button (2). You can also press the FN button twice within 0.5 seconds to bring the camera buttons into function selection mode for two seconds. During these two seconds, pressing a camera button will also de-/activate it's function.

The LED of the FN button reflects that a camera function is active. An LED on each button reflects the functional status.

► The following camera functions can be triggered:

Function Button & Camera Button	Function		
	Toggles the overlay menu in the viewfinder and the SDI outputs. In the overlay menu, the camera buttons control the following functions:		
	Camera Button	Function	
EN + 1	1	Select backward	
	2	Select forward	
	3	Access / Confirm	
	For more information,	see in the user manual.	
FN + 2	Prepares a CFast 2.0 tor and SDI out. To cor Any other button can b has finished, press any	card erase and shows a mo nfirm the card erase, press be pressed to cancel the ac y button to clear the messa	essage on EVF, Moni- camera button 3 twice. tion. After the erase ge.
Starts/stops playback from the CFast 2.0 card. During playback, the camera buttons control the following functions:			uring playback, the
	Camera Button	Function	
FN + 3	1	Skip backward	
	2	Skip forward	
	3	Play / Pause	

5.11.2 Web Remote

ALEXA Mini offers a web remote function for full remote control of the camera with a web browser. It requires a connection to the camera via WiFi or Ethernet (with ALEXA Ethernet/RJ-45 Cable KC-153-S, K2.72021.0). By default, WiFi is enabled on the ALEXA Mini. If WiFi is inactive, the web remote must first be used via a cabled ethernet connection in order to enable WiFi.

Once you are connected to the camera either via WiFi or via ethernet, open a web browser and enter the URL: http://mini-xxxxx.local (replace xxxxx with your camera's 5-digit serial number).

To use the web remote function via this URL, your device must support zeroconfiguration networking (zeroconf), e.g. through Apple Bonjour. Without zeroconf, the web remote can be reached via the network's IP adress (WiFi or LAN IP). The WiFi IP is fixed to 192.168.153.1. The LAN IP can be either assigned from a DHCP server or configured manually, and can be checked with an MVF-1 via the INFO > Network info screen.

NOTICE

Frequent reloading of the web remote camera interface connected with WiFi indicates a limited WiFi range. Please place the device closer to the camera or connect via ethernet. You may also consider to use the WiFi client mode which allows to connect the camera to a WiFi network.

5.12 Licensing

You can further enhance the camera's capabilities through licensed features available to purchase online. Visit the <u>ARRI License Shop</u> and follow the instructions for purchasing and downloading license keys.

Following license keys are available for the ALEXA Mini:

- ALEXA Mini 4:3 License Key
- ALEXA Mini ARRIRAW License Key
- ARRI Look Library License Key

License keys are linked to the camera's serial number and cannot be transferred from one camera to another. The active camera license model (incl. contained features) is available under: *Menu* > *System* > *Licensed features*

For full instructions, see the user manual.

6 Camera Preparation

The following chapters provide information on how to attach commonly used accessories to the camera. ARRI offers a wide range of electronic and mechanical accessories, please see our <u>Camera and Accessories Configuration Overviews</u>.

NOTICE

To avoid damage while assembling and retrofitting, always place the camera on a padded, firm, flat and level surface.

6.1 Changing a Lens

PL Mount Lenses



- 1. Observe maximum lens dimensions (see User Manual).
- 2. To remove a lens (or a lens port cap), rotate the two bayonet levers of the lens mount anti-clockwise (1) as far as possible while grasping the lens firmly. Then carefully slide the lens out of the port.
- 3. To fit a lens, align the notch in the lens flange with the index pin on the mount, keeping the lens rotated into a position where the lens markings are visible from either side of the camera.
- 4. Gently press the lens flange flat onto the lens mount.
- 5. Rotate the two bayonet levers clockwise (2) until the lens is seated properly and locked securely. Do not use any force!

EF Mount Lenses



- 1. To remove a lens (or a lens port cap), rotate the two bayonet levers of the lens mount anti-clockwise (1) as far as possible while grasping the lens firmly.
- 2. Press and hold the button (2) to unlock the lens.
- 3. Turn the lens (3) counter-clockwise, then remove it.
- 4. To fit a lens, align the red dots of both lens and lens mount. Then gently push the lens into the mount.
- 5. Turn the lens clockwise (5) until the bayonet locks.
- 6. Turn the two bayonett levers clockwise (4) to tighten the lens to the lens mount.

NOTICE

Protect the sensor: Always keep a lens or a lens cap on the empty lens mount.

Change lenses in dry, dust-free environments only.

Never exceed the maximum lens dimensions.

Have every lens properly shimmed as prescribed by the manufacturer.

Lens Support

Heavy lenses (above 3kg/6.6lbs) require additional lens support. Using a lens support guarantees that the weight of the lens will not influence the flange focal depth and reduces stress on the lens mount. ARRI offers a wide range of lens supports for 15mm and 19mm studio rods.

6.2 Changing the Lens Mount

The ALEXA Mini's interchangeable titanium PL lens mount can be replaced with any of those designed for the ARRI AMIRA, allowing the use of B4 video and EF mount lenses.

Required Tools and Precautions

- 3.0 mm Allen key
- Camera switched off and power source disconnected
- Lens removed and properly stored
- Make sure to protect all optical surfaces when changing a lens mount

Deinstalling the Lens Mount (here: PL Mount)



- 1. Switch off the camera.
- 2. Crosswise, loosen all four screws (2) with a 3.0mm Allen key.
- 3. Carefully remove the lens mount (1).
- 4. Store the mount in a case for dust protection.

Installing the Lens Mount (here: PL mount)



1. Properly align the lens mount (2) with the two guiding pins (1).

- 2. Crosswise, hand-tighten all four lens mount screws (1).
- 3. Tighten all screws crosswise with the Allen key.

A WARNING!

Condensation! Risk of electric shock and damage!

Humidity may ingress due to misinstalled lens mounts!

When installing a lens mount, always align and attach properly; never apply force.

Hand-tighten all screws crosswise before final tightening.

Always tighten crosswise with the prescribed tool.

A DANGER!

High voltage! Risk of electric shock and fire!

Short circuits may entail lethal injury and damage!

Use original ALEXA-Mini or AMIRA lens mounts only.

Before each lens mount change, always switch the camera off and disconnect all power sources.

Changing the lens mount while the camera is powered may permanently damage the camera and lens mount.

Protect sensor and electrical system: Always store the camera with a lens mount properly installed and capped.

Immediately replace each lens mount after removal.

Change lens mounts in dust-free environment only.

NOTICE

After each lens mount change, always check the back focus of the camera.

Have the back focus always corrected by properly skilled personnel.

Back focus correction requires special tools and training that meet ARRI guidelines.

For all back focus issues, contact a qualified ARRI Service Center.

6.3 Mounting the Camera to a Bridge Plate

To mount the camera to a bridge plate, you need the following accessories and tools:

- ALEXA Mini Adapter Plate MAP-2 (K2.0006347)
- Bridge Plate Adapter BPA-4 (K2.0006352)
- Bridge Plate BP-8 (K4.47460.0)
- Flat screwdriver
- 3.0 mm Allen key

Step 1: Mounting MAP-2 to Camera



- 1. Place the camera bottom up.
- 2. Place the MAP-2 (2) exactly above the mounting points (3) of the camera.
- 3. With the Allen key, attach the screws (1) to the camera and tighten.

Step 2: Mounting BPA-4 to MAP-2



Step 3: Mounting BP-8 to BPA-4



- 1. Place the BAP-4 (2) exactly above the mounting points (3) of the MAP-2 (2).
- 2. With a flat screwdriver, attach the screws (1) to the MAP-2 and tighten.

- 1. Place the BP-8 (2) exactly above the mounting points (3) of the BAP-4 (2).
- 2. With a flat screwdriver, attach the screws (1) to the BAP-4 and tighten.

NOTICE

Always use a flat screwdriver. Never use a coin. A coin does not deliver enough force to ensure a proper lock.

6.4 Mounting and Unmounting the White Radio Antenna



Mounting the Antenna

 With your fingers, thread the antenna (1) onto the camera.

Unmounting the Antenna

Unthread the antenna (1) with your fingers.

NOTICE

Only use original ARRI White Radio antennas.

Do not use the white radio module without the antenna attached.

6.5 Connecting the MVF-1

The Multi Viewfinder MVF-1 is connected to the camera using special HDMI cables. The viewfinder cables are available in different lengths: 0.5m, 0.75m and 1.5m.

Connecting the EVF Cable to the Camera



Connect the ODU connector of the cable (1) to the camera's EVF connector (2, 16pin ODU connector on the I/O panel). For correct orientation, please check the red dots on the EVF connector and the ODU connector of the cable.

Connecting the EVF Cable to the MVF-1



- 1. Using your fingers, unscrew and remove the MVF-1's lid (3).
- 2. Connect the Mini HDMI connector of the cable (4) to the MVF-1's Mini HDMI port.
- 3. Reattach the lid.

NOTICE

Only use original ALEXA Mini MVF-1 cables.

Never try to connect the cable to any other connector on the camera than the EVF connector. This may cause permanent damage to both cable and camera connectors.

6.6 Adjusting the MVF-1



- 1. Place the camera bottom-down.
- 2. Slightly loosen the clamp (1) to move the MVF-1 (2) left/right and up/down.
- 3. Unclamp the hinge (3) to swivel the MVF-1 horizontally.
- 4. Close all clamps (1, 3) when the MVF-1 is in the desired position (2).

6.7 Adjusting the Monitor

The 3.2" monitor of the MVF-1 is a fold-away monitor with an up-and-down tilt function.



Fold out (1), swivel (2) and fold in (3) the monitor to put the display visible in the folded-in position.

7 Appendix

7.1 Technical Data

Camera Type	35 mm format film-style digital camera with lightweight and compact carbon body, switchable active sensor area, support for ARRI MVF-1 viewfinder, built-in remote control capabilities via ARRI Electronic Con- trol System and Wi-Fi, support for cforce motors, built-in motorized ND filters, interchangeable lens mounts and ARRI Lens Data System as well as Lens Data Archive.	
Dimensions	Length: 185 mm	
	Height: 140 mm	
	Width: 125mm	
Weight	2.3 kg / 5 lbs (camera body with titanium PL mount)	
Sensor	35 mm format ARRI ALEV III CMOS with Bayer pattern col ray	or filter ar-
Active Photo Sites (with	ProRes S16 HD	1760x980
surround view)	ProRes HD	2880x1620
	ProRes HD Ana.	1920x2160
	ProRes 2K	2867x1613
	ProRes 2.39:1 2K Ana.	2560x2145
	ProRes 3.2K	3200x1800
	ProRes 4K UHD	3200x1800
	ProRes 4:3 2.8K	2880x2160
	ARRIRAW 2.8K	2880x1620
	ARRIRAW Open Gate 3.4K	3424x2202
	ARRIRAW 4:3 2.8K (OG 3.4K)	2880x2160
	ARRIRAW 16:9 HD Ana. (OG 3.4K)	1920x2160
	ARRIRAW 2.39:1 2K Ana. (OG 3.4K)	2560x2145
Shutter	Electronic shutter, 5.0°-356.0°, 1s - 1/8000s	
Exposure Latitude	14+ stops over the entire sensitivity range from EI 160 to E measured with the ARRI Dynamic Range Test Chart (DRT)	l 3200 as C-1)
Exposure Index	adjustable from EI 160-3200 in 1/3 stops	
	EI 800 base sensitivity	
Filters	Built-in motorized FSND filters 0.6, 1.2, 2.1	
Lens Mounts	Titanium PL mount with L-Bus connector and LDS	
	PL mount with Hirose connector and LDS	
	EF mount	
	B4 mount with Hirose connector	
Recording Media	CFast 2.0 memory cards	
Recording Modes	Standard, Pre-recording, Intervalometer, Stop Motion	

Recording Formats	ProRes S16 HD	1920 x 1080
	ProRes HD	1920 x 1080
	ProRes 2K	2048 x 1152
	ProRes 3.2K	3200 x 1800
	ProRes 4K UHD	3840 x 2160
	ProRes 4:3 2.8K	2944 x 2160
	ProRes HD Anamorphic ¹	1920 x 1080
	ProRes 2.39:1 2K Anamorphic1	2048 x 858
	ARRIRAW 2.8K ²	2880 x 1620
	ARRIRAW Open Gate 3.4K ³	3424 x 2202
	ARRIRAW 4:3 2.8K (OG 3.4K) ³	3424 x 2202
	ARRIRAW 2.39:1 2K Ana. (OG 3.4K) ³	3424 x 2202
	ARRIRAW 16:9 HD Ana. (OG 3.4K) ³	3424 x 2202
	¹ requires 4:3 license key	
	² requires ARRIRAW license key	
	³ requires 4:3 and ARRIRAW license keys	
Recording Codecs	ProRes 4444 XQ, 4444, 422 HQ, 422, 422 LT	
	1 requires ARRIRAW license key	
Color Output	REC 709, custom look or Log C	
Look Control	Import of custom 3D LUT, ASC CDL parameters (slope, c saturation)	offset, power,
Adjustable Image Para- meters	Knee, gamma, saturation, black gamma, saturation by hu	e
Focus and Exposure Control	Peaking, Zebra, False color, Waveform	
White Balance	Manual and auto white balance, adjustable from 2000K to 10K steps. Color correction adjustable range from -16 to corresponds to 035 Kodak CC values or 1/8 Rosco value	o 11000K in +16 CC. 1 CC s.
Sound Level	< 20 dB(A) at standard frame rates	
Environmental	-20° C to +45° C (-4° F to +113° F) @ 95% humidity max, densing splash and dust-proof through sealed electronics	non-con-
Viewfinder	Multi Viewfinder MVF-1 (OLED and LCD) with flip-out LC military-grade connector to camera	D screen and
	Camera Control Panel (CCP-1) LCD control panel with op chain MVF-1	otion to daisy-
Wireless Interfaces	Built-in WiFi and white radio modules	
Control Interface	Soft buttons and OSD on SDI output, integration of Trans HD5-ARRI touch interface, WCU-4 hand-unit with control tional parameters.	video Starlite over opera-
Lens Motor Control	Built-in white coded radio interface for ARRI lens and can control, LBUS motor output for daisy-chainable cforce len tors, Lens Data Archive	nera remote s control mo-
WiFi Remote Control	Built-in Wi-Fi interface and web-based remote control from tablets and laptops	n phones,
Custom Control	Optional GPIO interface for integration with custom control	ol interfaces

Power Output	Unregulated power output (outputs battery voltage) with max. 1.1 A
Video Outputs	2x HD-SDI out 1.5G and 3G: uncompressed HD video with embedded audio and metadata, 6G SDI in UHD and 3.2K recording modes.
Inputs	Genlock (optional activation through ARRI Service), Timecode (in and output)
Audio	1x 5-pin LEMO, Balanced stereo line in, Linear PCM, 24 bit 48 kHz, line input max. level +24dBu correlating to 0dBFS
Other Interfaces	USB 2.0 (for user setups, look files etc.)
	Ethernet for service and web remote control
	EXT accessory interface w. RS pin and unregulated power output (outputs battery voltage)

Maximum Recording Frame Rates

Resolution	Codec	Max FPS
S16 HD	ProRes 422LT, 422, 422HQ, 4444	200
	ProRes 4444 XQ	120
HD	ProRes 422LT, 422, 422HQ, 4444	200
	ProRes 4444XQ	120
HD Ana.	ProRes 422LT, 422, 422HQ, 4444, 4444XQ	120
2K	ProRes 422LT, 422, 422HQ, 4444	200
	ProRes 4444 XQ	120
2.39:1 2K Ana.	ProRes 422LT, 422, 422HQ, 4444, 4444XQ	120
3.2K	ProRes 422LT, 422, 422HQ, 4444	60
	ProRes 4444 XQ	30
4K UHD	ProRes 422LT, 422, 422HQ, 4444	60
	ProRes 4444 XQ	30
4:3 2.8K	ProRes 422LT, 422, 422HQ, 4444, 4444XQ	50
16:9 2.8K	ARRIRAW	48
OpenGate 3.4K	ARRIRAW	30

7.2 Declarations of Conformity

EU Declaration of Conformity

Brand Name: ARRI

Product Description: Digital Camera System

- ARRI ALEXA Mini + Viewfinder MVF1 + Camera Control Panel CCP-1
- + Europe Setting for Software 5.3 or later, Primes following Appendix I and Antenna following Appendix II

The designated products conform to the specifications of the following European directives:

For cameras delivered before 13 June 2016:

- 1 DIRECTIVE 1999/5/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity
- 2 DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (recast)

For cameras delivered from 13 June 2016:

- DIRECTIVE 2014/53/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment -OJ L 153, 22 May 2014, p. 62–106
- 2 DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment -OJ L 174, 1 July 2011, p. 88–110

The compliance with the requirements of the European Directives was proved by the application of the following standards:

Essential Requirements regarding No 1:

Following 2014/35/EU	EN 62368-1:2014
	AC:2015-05
	AC:2015-11
Following 2014/30/EU	EN 301 489-1 V1.9.2
	EN 301 489-17 V2.2.1
	EN 55032:2015
	EN 55103-2:2009
	EN 300 328 V2 1 1

Essential Requirements regarding No 2: EN 50581:2012

To evaluate the respective information, we used: <u>http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/index_en.htm</u> Year of affixed CE-marking: 2015

APPENDIX I - List of Primes

Item	Model Name
1	ARRI Lenses with Lens Data System 1
2	ARRI LPL Mount ALEXA Mini/AMIRA + ARRI - Signatures Primes with Lens Data System 2 with focal lenght 18-125mm

ltem	Manufacturer	Model Name	Gain (dBi)	Radation Pattern	Туре	Connector
1	Proant	333 (Ex-it 2400 Fold- able)	2.0	Omni-direc- tional	Dipole	Reverse SMA

FCC Compliance Statement

Class A Statement: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

Note: This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

- WIFI: FCC ID: PPD-AR5B22
- ECS transceiver module: FCC ID: Y7N-EMIP300

Industry Canada Compliance Statement

Complies with the Canadian ICES-003 Class A specifications.

Cet appareil numérique de la Classe A est conforme à la norme NMB-003 du Canada.

This device complies with RSS-210 of Industry Canada.

Cet appareil est conforme à CNR-210 d' Industrie Canada.

This Class A device meets all the requirements of the Canadian interference-causing equipment regulations

Cet appareil numérique de la Classe A respecte toutes les exigences du Réglement sur le matériel brouilleur du Canada.

- WIFI: IC ID: 4104A-AR5B22
- ECS transceiver module: IC ID: 9482A-EMIP300

India WPC Compliance Statement

This product contains the following radio modules:

- WiFi: ETA-1661/2011/WRLO
- ECS transceiver module: ETA-1180/2017/ERLO

China

● ECS Transceiver Module: 本设备包含型号核准代码(分别)为:

CMIIT ID: 2017DJ4562 (M)

... 的无线电发射模块。

- WiFi Module:
 本设备包含型号核准代码(分别)为:

 CMIIT ID: 2012AJ0219 (M)

 ...的无线电发射模块。
- ALEXA Mini:

South Korea

Statement for 2.4 GHz Devices:

"해당무선설비는 운용 중 전파혼신 가능성이 있음"Translation for reference only: This radio device has
the possibility of radio interference.

- ALEXA Mini: Certification No: MSIP-RMM-AXP-K10003873
- ECS Transceiver Module: Certification No: MSIP-CRM-ARg-EMIP300
- WiFi Module: Certification No: KCC-CRM-ATH-AR5B22

7.3 Dimensional Drawings

Dimensional drawings are attached at the end of this document. They can also be downloaded from the ARRI website: <u>https://www.arri.com/alexamini</u>

ALEXA Mini

Technical Data are subject to change without notice.

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ALEXA Mini		Length	Width	Height	Weight
	ALEXA Mini (camera body with titanium PL lens mount)	184.75 mm - 7.27"	124.83 mm - 4.91"	140 mm - 5.5″	~ 2.3 kg/5 lbs

ALEXA Mini

Technical Data are subject to change without notice.



ALEXA Mini		Length	Width	Height	Weight
	ALEXA Mini (camera body with titanium PL lens mount)	184.75 mm - 7.27"	124.83 mm - 4.91"	140 mm - 5.5″	~ 2.3 kg/5 lbs