Sinarback eSprit 65 LV

Digital camera back for portable use

Operating Instructions

Copyright

Title

Photo: ralph man
Model: lina c/o model-pool / düsseldorf,
makeup / hair: diana fabbricatore

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Intellectual property rights regarding photography

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Trademarks

Advice for using this operating manual

Warning signs and symbols

Warning against possible dangers to personal safety or health

Warning against the occurrence of an electric shock

Warning against electric voltage.

Warning against the risk of stumbling

Warning against risks that might arise from possibly damaged batteries

Warning against the danger of explosion

Warning against hot surfaces

Warning against the occurrence of fire

Warning against possible damage to the device or its component parts

Important advice

Advice or guidelines to be observed when disposing of the camera or its component parts

References

[Info / Esc]	Refers to an operational element that permits to call up a function. All operational elements will be written in capital letters.
|-Settings | Histogramm-|	Refers to the menu path to be followed when selecting a function from the menu.
→	Refers to a chapter or section to be read for further information.
●	Enumeration

Abbreviations

°	Degree (angular measure)
°C	Degree Celsius
CCD	Charged Coupled Device
EMC	Electromagnetic Compatibility

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1 Introduction

Congratulations to your new Sinarback eSprit 65 LV. With the Sinarback eSprit65 LV, you have purchased a reliable digital camera back. The Sinarback eSprit 65 LV can be operated portable or in tethered mode.

Rugged design and easy handling make the Sinarback eSprit 65 LV the ideal instrument for a great variety of applications in professional photography. The operational elements are arranged in accordance with ergonomic principles, and enable quick and easy access to all functions.

The design and functionality of the Sinarback eSprit 65 LV match flawlessly with the Sinar Hy6 medium format camera. The Sinarback eSprit 65 LV is also adaptable to a variety of medium format cameras from other manufacturers currently available on the market.

Before starting to work with your Sinarback eSprit 65 LV, please read this manual carefully. In this way, you will be able to make optimum use of the functions, and to avoid operational errors.

We wish you every success with your Sinarback eSprit 65 LV.

2   Safety Information

2.1   General Advice

Read this manual carefully.
Read the manual carefully before starting to operate your Sinarback eSprit 65 LV. In this way, you will be able to make optimum use of the functions, and to prevent any injuries of persons or damages to the Sinarback. Also, your warranty claims will be maintained. No liability will be accepted for damages and injuries resulting from the non-observance of the information contained in this manual.

Operate the Sinarback and all accessory items as intended.
Any other use than intended will not be covered by the warranty claims.

Do not open the casing of the Sinarback eSprit 65 LV.
Opening the casing of the Sinarback eSprit 65 LV is explicitly reserved to customer service. Any arbitrary opening of the casing leads to the expiry of the warranty claims. No liability will be accepted for personal injuries or damages caused by the arbitrary opening of the casing.

Spare parts and accessories
Use only such spare parts and accessories that are included in your delivery and / or recommended by the manufacturer for the use with the Sinarback eSprit 65 LV. No liability will be accepted by the manufacturer for injuries or damages caused by the use of non-authorized spare parts and accessories. Please contact the manufacturer or your expert dealer for questions regarding spare parts and accessories.

Observe the safety advice and operating instructions of third party suppliers.
The Sinarback eSprit 65 LV is optimally suited for the use with the Sinar Hy6 camera body, however it is also compatible with other medium format cameras. When using this camera with instruments or accessories of third party suppliers, please observe the safety advice contained in the supplied manuals.

No liability will be accepted for injuries or damages resulting from the non-observance of the safety information contained in the manuals of third party suppliers.

Observe the legal regulations for taking and using photographic images.
Make sure to use photographic equipment only in accordance with the laws (e.g. copyright, intellectual property right) effective in the respective country. Images that are not taken for private use only must not be used without permission. In some cases, the capturing of images can also be restricted if the images are intended for private use.

Test the Sinarback eSprit 65 LV before use.

Before you start to operate your Sinarback eSprit 65 LV for the first time, take some test photographs to check whether the Sinarback works flawlessly, and whether the photographic images can be read from your memory card by your computer.

We also recommend checking the functioning of the Sinarback eSprit 65 LV always before taking photographic images at special events (e.g. weddings).

No liability will be assumed for the loss of images.

Handle the Sinarback eSprit 65 LV with care.
The Sinarback eSprit 65 LV is a sensitive, high precision instrument. Please handle it with the appropriate care, and observe the advice for cleaning and maintenance.

Do not use the Sinarback eSprit 65 LV with view cameras.
The Sinarback eSprit 65 LV is equipped with microlenses. It is not recommended to use this Sinarback on view cameras or other cameras that enable displacement. A non-compliance with this advice can lead to undesirable image effects.

2.2 Safety advice for handling the Sinarback eSprit 65 LV

2.2.1 Advice for the prevention of injuries

Do not open the casing and do not disassemble the Sinarback eSprit 65 LV.
There is the danger of an electric shock. If the casing of the Sinarback eSprit 65 LV is open due to damage, do not touch the internal parts. Contact customer service.

Do not insert metal pieces into the magnetic contacts.

Do not insert any metal pieces into the electric contacts of the Sinarback eSprit 65 LV, or into the contacts of any accessory items. There is the danger of an electric shock or of damage to the device.

To prevent the danger of an explosion, do not use the Sinarback eSprit 65 LV nearby easily inflammable liquids or gas.

If the Sinarback eSprit 65 LV was dropped into water, or if the internal parts have got in contact with water, please remove the battery to prevent the danger of an electric shock. Do not use the Sinarback eSprit

65 LV anymore. Contact customer service.

If any abnormal behavior (e.g. smoke, noise, smell) occurs during operation, do not use the Sinarback eSprit 65 LV anymore. Disconnect the Sinarback from the power supply and / or remove the battery. Contact customer service before using the Sinarback eSprit 65 LV again.

2.2.2 Advice for the prevention of damage

Avoid strong magnetic fields.
Strong magnetic fields can damage the functions of the Sinarback eSprit 65 LV or destroy the recorded data. Do not use the Sinarback eSprit 65 LV nearby devices that produce high electro-magnetic fields (e.g. magnets or electric motors).

Avoid contact with sand, dust, toxic gas, water etc.
This can lead to a failure of the Sinarback eSprit 65 LV. If water is on the surface of the Sinarback eSprit 65 LV, wipe it away gently with a dry and soft, wood free tissue. When the Sinarback has been exposed to saline air, the casing has to be wiped with a slightly moistened piece of cloth.

Do not touch the sensor in the digital back. Please use the protective cover when the Sinarback eSprit 65 LV is detached from the camera.

Do not use the Sinarback eSprit 65 LV under water.
The Sinarback eSprit 65 LV is not waterproof, and therefore may not be used for submarine photography.

Prevent the occurrence of condensation water.
Do not expose the Sinarback eSprit 65 LV to rapidly changing environment temperatures. In this way, the occurrence of condensation water outside and inside of the Sinarback eSprit 65 LV can be prevented. Condensation water can lead to damage of the components.

To prevent the occurrence of condensation water, place the Sinarback eSprit 65 LV in a sealed plastic bag when the environment temperatures change. Do not take the Sinarback eSprit 65 LV out until it has accommodated to the new environment temperature.

2.2.3   Advice for the storage, maintenance and disposal

Do not store the Sinarback eSprit 65 LV at high temperatures and high air humidity.
High temperatures and high air humidity can lead to the occurrence of mildew. Do not leave the Sinarback eSprit 65 LV in a car where temperatures can get very high. Observe the description of the permitted operational conditions. When environment temperatures are high, store the Sinarback eSprit 65 LV outside of the bag in a dry and well-ventilated location.

Use the protective cover when the Sinarback is detached from the camera. In this way, soiling or damage to the sensor can be avoided.

Do not leave the Sinarback eSprit 65 LV in the sun.

Do not store the Sinarback eSprit 65 LV together with preserving agents or chemicals, or in humid or dusty environments.

Do not store the Sinarback eSprit 65 LV near heat sources.

Store the Sinarback eSprit 65 LV out of the reach of children.
A broken digital back or its electric components may cause injuries.

Cleaning of the Sinarback eSprit 65 LV
Only use the included cleaning kit to clean the sensor of the Sinarback eSprit 65 LV. Refer to chapter 9   Cleaning and maintenance" for further information.

Disposal
The Sinarback eSprit 65 LV must be disposed of in accordance with special WEEE guidelines. The supplier offers to take back the product at the end of the product life cycle, and to take care of the disposal according to the effective environmental protection guidelines.

2.3   Safety advice concerning the battery and the battery charger

Use only the Sinar V 290-batteries that are included in your delivery. No liability will be accepted for any damages or injuries caused by the use of non-authorised batteries.

Operate the battery and the battery charger only as intended.

- Do not open or disassemble the battery or alter it in any way.
- Do not expose the battery to high temperature.
- Do not insert the batteries in converse polarity.
- Only use and charge the battery under the permitted operating temperature and conditions.

Keep the battery and the battery charger out of the reach of children.
Batteries can be damaged or swallowed, and can cause severe injuries. When charging the battery, make sure that the battery charger and the battery are out of the reach of children. Avoid the danger of a life-threatening electric shock.

Keep the battery and the battery charger away from fire.
There is the danger of an explosion and of an electric shock.

Keep the battery and the battery charger away from water.
If the battery or the battery charger has been in contact with water, do not use them until they have dried completely.

Do not use damaged batteries.
If battery liquid is leaking from the battery, do not touch the battery liquid. Contact of battery liquid with the eyes can lead to the loss of your eyesight!

Avoid any contact of the liquid with the eyes, skin or clothes. If skin or eyes have been in contact with battery liquid, use plenty of water and wash off the liquid without rubbing. Do not use any cleaning agents. Consult a physician immediately.

Do not use the damaged battery anymore.

If a battery is changing color or form, or if smoke is emitting from the battery, take the battery out of the Sinarback eSprit 65 LV. Be careful not to burn your hands.

If a battery is changing color or form, if extreme heat is occurring or if smoke is emitting from the battery during battery charging, disconnect the charger from the power supply to prevent the occurrence of fire.

To prevent the occurrence of fire, do not use the battery charger near inflammable gas or liquids.

Do not store the batteries and the battery charger nearby heat sources. The cables or the instruments can be deformed and suffer damage. There is the danger of fire or an electric shock.

Do not use damaged cables and accessories.
Damaged cables imply the danger of a life-threatening electric shock. Do not cut, damage, extremely bend or twist cables.

Do not let cables trail across the floor.
Make sure to place the cables safely to prevent the danger of accidental stumbling.

The battery has to be disposed of in compliance with the WEEE-guidelines. Do not dispose of the battery together with usual domestic refuse. Use the containers provided at the collection points.

2.4 Norms and standards

The product complies with the following norms and standards:

EMC   Electro-magnetic compatibility

Europe: EN61000-6-3:2001 Emission (specified by EN55022 Class B)
                 EN 61000-6-1:2001 Immunity (specified by EN55024)

USA / Canada: FCC part 15 class B

ROHs

WEEE: Disposal

2.5 **Environmental conditions**

Operating temperature:	0 °C … +45 °C
Storage temperature:	-10 °C … +60 °C
Humidity for storage and operation:	5 % … 80 %, non-condensing

3　　　Scope of delivery

The following items are included in the delivery.

Item No.	Item
	Sinarback eSprit 65 LV
551.63.055	Firewire cable 1394 B, 4.5 m
552.36.096	Sinar V290 battery, 7.2 V Li+
552.36.093	Charger V290 battery, complete
552.37.092	CF card 4 GB
552.37.090	CF card reader
751.43.003	Gray card
551.43.097	White shading diffusor 100
551.43.090	Sinarback software on CD
551.33.090	Digital cleaning kit
475.45.029	Sinarback transportation case

4 General information

4.1 Operational elements and interfaces

Release lever

Battery case cover

Display

Trackball

Button [Info / Esc]

Button [Settings]

Button [Power]

IEEE – 1394b / FireWire

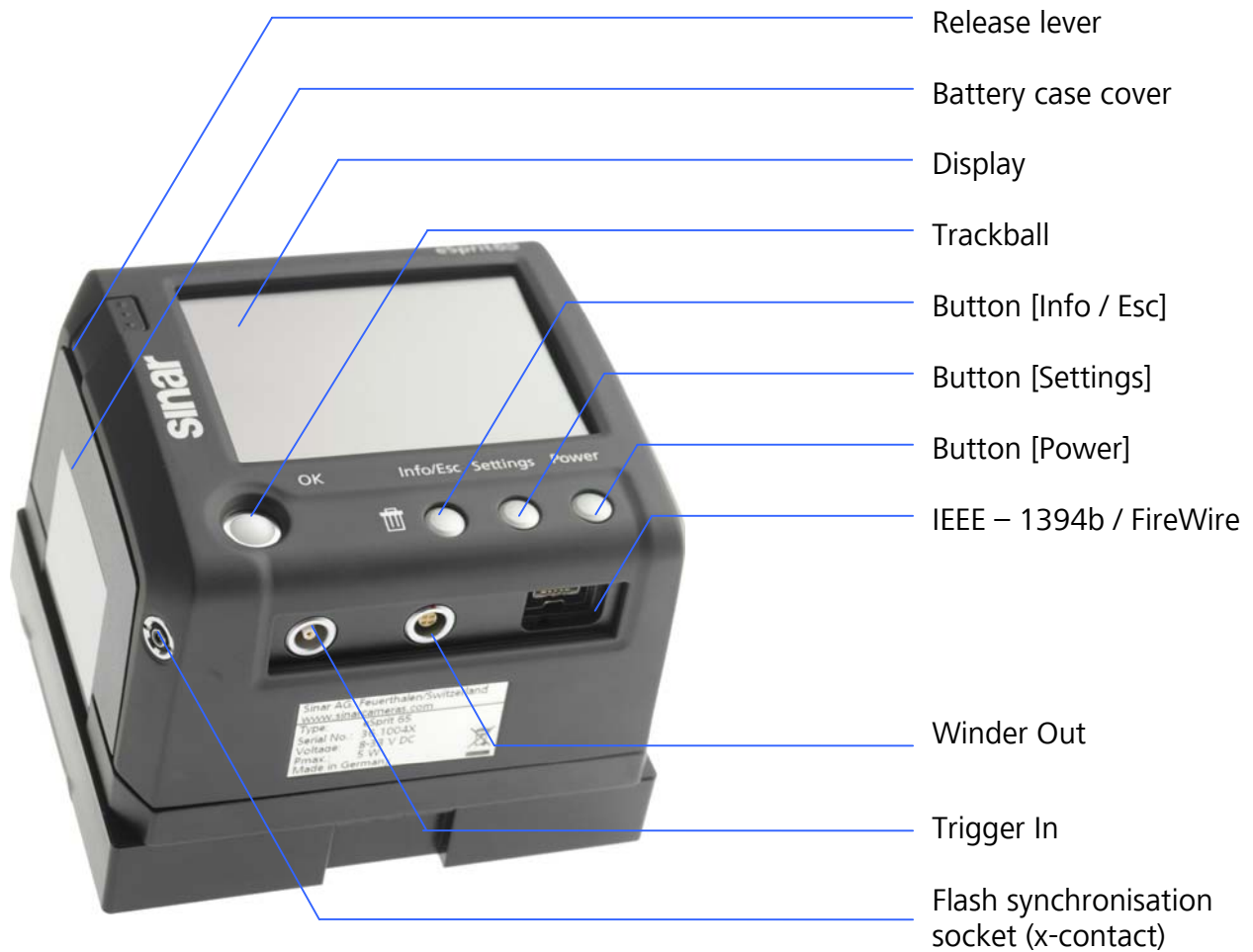Winder Out

Trigger In

Flash synchronisation
socket (x-contact)

Fig. 4 / 1 Sinarback eSprit 65 LV with operational elements and interfaces

4.2   Operational modes

Tethered mode   In tethered mode, the Sinarback eSprit 65 LV is connected to the computer via FireWire. The Sinarback is remote-controlled using the suitable remote-control software Sinar eXposure^{TM}.

Portable mode   In portable mode, the Sinarback eSprit 65 LV is controlled by using the operational elements at the camera body and the Sinarback.

Note: You need the software Sinar eXposure^{TM} for the operation in tethered mode. Please contact your expert dealer for further advice.

4.3   Power supply

The power supply depends on the operational mode and the used computer.

Firewire   FireWire is suitable for the operation in tethered mode. The battery can be left in the Sinarback eSprit 65 LV, as power will not be consumed from the battery when the FireWire is used.

Battery   The battery is suitable for the operation in portable mode.

Power saving mode   In the menu "Settings", a time span of inactivity can be selected. After this time span, the display of the Sinarback eSprit 65 LV is turned down automatically, and the Sinarback eSprit 65 LV is set to the power saving mode. Pressing any button on the Sinarback eSprit 65 LV, the display is reactivated.

4.4   Data saving

Computer   When the Sinarback eSprit 65 LV is remote-controlled from a computer, the images are saved in the selected directory on the computer. For further information, refer to the information in the user manual of Sinar eXposure^{TM}.

Memory card   When the Sinarback eSprit 65 LV is operated in portable mode, the images taken are saved on the memory card.

4.5　　　　　Interfaces

IEEE-1394b-interface (FireWire 800)	Via IEEE-1394b-interface, the Sinarback can be connected to a computer and operated using Sinar eXposure^{TM}. The captured images are saved directly to the hard drive of the computer.
Trigger In	The trigger interface is necessary to synchronize the Sinarback with the camera body when a medium format camera is used that is not equipped with a modern bus system. Connect the trigger cable to the Trigger In-socket of your Sinarback eSprit 65 LV, and to the flash synchronization socket of the medium format camera. If a flash device is used, it has to be connected to the additional flash synchronization socket of the Sinarback eSprit 65 LV.
Flash synchroni-sation socket	When the flash synchronization socket at your camera is in operation, for example when the trigger cable is used, connect the flash device or studio flash unit to the flash synchronization socket of the Sinarback eSprit 65 LV.
Winder connection	The winder socket enables the remote control of a medium format camera that is equipped with a winder. Connect the winder cable to the medium format camera and to the Sinarback. Please note that you also have to use a trigger cable.
Note:	Please refer to Fig. 4 / 1 for an illustration of the connections.

4.6　　　　　Change of format

The Sinarback eSprit 65 LV can be operated in landscape or portrait format. When the Sinarback is tilted, the display is automatically adapted to the selected format.

When the Sinarback eSprit 65 LV is operated with a Sinar Hy6 system and a revolving adapter, the Sinarback eSprit 65 LV can be turned independently from the camera.

Note:	The revolving adapter can be purchased separately. In the delivery of the adapter, you will receive a separate documentation describing the assembly.

5 Assembly and commissioning

5.1 Assembling and attaching the Sinarback eSprit 65 LV

To attach the Sinarback eSprit65 LV to your camera, an adapter is necessary. The adapter depends on the camera type. In the following, the use of a fixed adapter is described.

Note: The information about your camera type has been taken with your order, and the necessary adapter kit is included in your delivery. If you are using another adapter than the one described in the following, a separate documentation describing the assembly of the adapter is included in your delivery.

Fig. 5 / 1 Example adapter kit

The adapter plate is attached to the Sinarback by means of three recessed screws and a spacer. The spacer serves for the precise alignment of the sensor surface. It has to be attached between the adapter plate and the Sinarback, otherwise the captured images might possibly not be clearly focused.

1.   Remove the protective cover from the Sinarback eSprit 65 LV.

2.   Attach the Sinar adapter plate to the Sinarback by first placing the spacer onto the front of the Sinarback and then placing the adapter plate onto the spacer.

Place the spacer in a way that the indentation points to the lower right corner of the Sinarback eSprit 65 LV (Fig. 5 / 2).

Fig. 5 / 2 Attachment of adapter plate

Make sure that the three holes in the adapter plate (marked with the red circles in Fig. 5 / 1) are placed over the three holes in the Sinarback.

3.   Fix the adapter plate to the Sinarback by inserting the screws into the three holes. Tighten the screws alternately a little, do not fix one screw completely at a time. In this way you can avoid that the adapter plate would be fixed askew.

4.   Attach the Sinarback to the camera. Make sure to lock all four of the pins simultaneously to attach the Sinarback safely.

Fig. 5 / 3 Attachment of the Sinarback eSprit 65 LV

5.2 Inserting and removing the battery

Fig. 5 / 4 Sinarback eSprit 65 LV with open battery compartment

Inserting the battery	To open the battery compartment, press the release lever. Insert the battery into the battery compartment with the contacts ahead.
Removing the battery	Open the battery compartment, and open the battery chamber by moving the battery locking. Take the battery out of the compartment.
Note:	Use only the **Sinar V290 batteries** that are included in your delivery, and / or that have been authorised by Sinar AG. Your warranty will become void if non-authorised batteries are used.

5.3 Inserting and removing the CF-card

Inserting the CF-card	Insert the CF-card with the pin sockets ahead into the CF-card slot until it locks.
Removing the CF-card	To release the CF-card, press the CF-card release button and take the CF-card out of the CF-card slot. Refer to Figure 5 / 4 "Sinarback eSprit 65 LV with open battery compartment ".

Image saving   While an image is being saved, a red lamp next to the CF-card blinks. During this time, do not remove the CF-card, otherwise the image saving process might be interrupted and the images are not saved.

Note: The CF-cards recommended for use with the Sinarback eSprit 65 LV are mentioned in the appendix. Use only recommended CF-cards.

5.4   Charging the battery

A battery charger is included in the delivery of your Sinarback eSprit 65 LV. Connect the cable of the battery charger to the socket at the rear side of the battery charger and to the wall socket.

The battery charger is ready for use when the light "Charge" at the battery charger turns green and blinks.

Insert the battery into the battery charger with the contacts ahead.

When an empty battery is inserted into the battery charger, the light "Charge" turns red. When the battery is completely charged, the light turns green, and the battery can be used.

Battery charging can take about 2 - 3.5 hours depending on the condition and the age of the battery.

Fig. 5 / 5 Battery charger with inserted battery

Note: Refer also to the documentation of your battery charger. This documentation is included in your delivery.

6 First use

6.1 Overview over the menu

The menu of the Sinarback eSprit65 is operated using the operational elements. The menu is structured as following:

Settings   The settings for the image capture can be set. This menu is opened pressing the button [Settings]. Navigation in this menu and selection of items is possible by moving the trackball.

Acquisition   The capture settings for the image can be set. The menu "Acquisition" is opened by pressing the trackball. Also, the capture settings applied to the next image can be checked.

Contact sheet   Here, images can be displayed, zoomed and deleted. Also, the image information can be displayed. The contact sheet is opened by scrolling the trackball downwards. The menus "Settings" and "Acquisition" have to be closed.
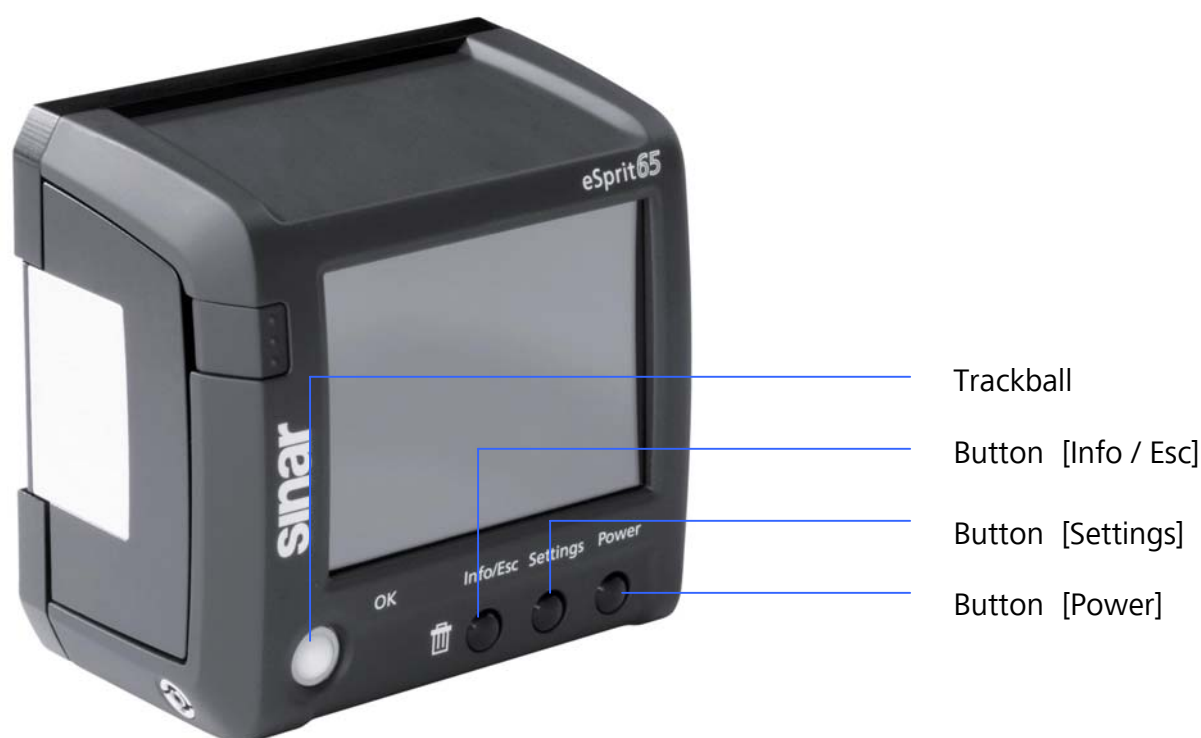
6.2 Operational elements and their functions

Trackball

Button [Info / Esc]

Button [Settings]

Button [Power]

Fig. 6 / 2 Sinarback eSprit 65 LV with operational elements

The Sinarback eSprit 65 LV is operated using the operational elements at the front. The main functions of the operational elements are summarized in the following table. A more detailed description of the menu functions can be found in chapter 7   Operating the menu .

[Power]	Switches on and off the Sinarback eSprit 65 LV.	
[Settings]	Opens and closes the menu "Settings" of the Sinarback eSprit65 LV.	
[Info / Esc]	The menus "Settings" and "Acquisition" can be left without applying any changes or selected functions.	
	In a loaded image, the following image information is displayed when pressing the button repeatedly:	
	- Capture settings: aperture, shutter speed, ISO number, capture date and time - Image with histogram - Image with grid - Image without overlay	
Trackball	*Navigation*	Navigation in the menu (when the menu is opened).
	Image selection	Opening the contact sheet, selecting and zooming images from the contact sheet.
	Selection	Select items from an open menu.
	Acquisition	Open the menu "Acquisition".
[Info / Esc] & [Settings]	By simultaneously pressing the two buttons, selected images can be deleted.	

6.3   Getting started

Make sure that your Sinarback is safely attached to the camera. Set up the power supply between the Sinarback and the camera (→ chapter 4.3   Power supply).

Switch on your camera, then switch on the Sinarback by pressing [Power]. For the operation in tethered mode, connect the Sinarback to the computer, and start the software Sinar eXposure^{TM}, then switch on the camera. For further information, refer to the software manual of Sinar eXposure^{TM}.

In the start screen, the main settings and information are displayed:

- Camera body
- Selected image saving format
- White balance
- Resolution (Only if JPG has been selected as capture format).

Fig. 6 / 3 Start screen

Power saving: The Sinarback eSprit 65 LV is switched off automatically after several minutes of inactivity. Pressing any button at the Sinarback eSprit 65 LV reactivates the menu. When working with a Sinar Hy6 camera system, the menu of the Sinarback is reactivated by shortly pressing the shutter release button.

6.4 Capture settings

The capture settings appear in the headline of the image.

Fig. 6 / 4 Capture settings in the image

When the main menus are open, the capture settings are not displayed.

Power supply mode. If power is supplied from the battery, the battery state is displayed.

CF-card
Indicates the availability of a CF-card or the present image saving on a CF-card.

Image number
Indicates the number of images to be captured. In the example in Fig. 6 / 4, there is storage capacity for further 21 images (in the capture settings currently selected)

Captured format
Indicates the format of the captured images (RAW, RAW + JPG, JPG). The capture format is selected in the menu "Acquisition", refer to chapter 7.2 The menu "Acquisition".

White balance
Indicates the selected white balance. Here, manual white balance has been selected. Refer to chapter 7.2.2 "White balance".

ISO 100 ISO-sensitivity

7 Operating the menu

7.1 Menu "Settings"

Pressing the button [Settings] alternately opens and closes the menu "Settings".
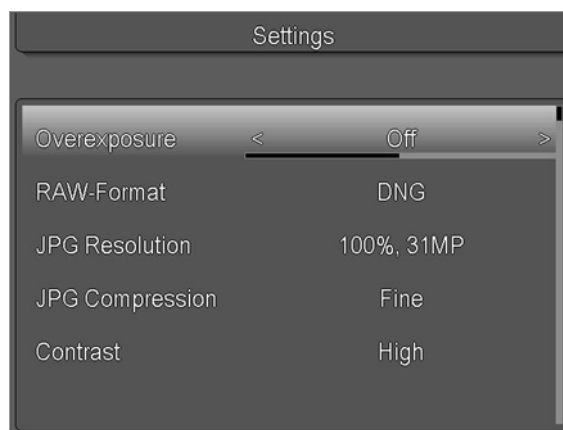
Fig. 7 / 1 Menu "Settings"

Navigating in the menu   Menu items are selected by scrolling the trackball upwards or downwards. The selected menu item is highlighted. By pressing the trackball (function [OK]), the menu item is selected, and the settings of the menu item can be selected by scrolling the trackball left or right.

Applying menu settings   By pressing [OK], the changes are applied, and the navigation is enabled again. By pressing [Info / Esc], the menu item is left without applying any changes.

7.1.1 Overexposure

In this menu, the highlighting of overexposed areas in the image can be activated. Per default, the overexposure is set to "On". All image areas with a value > 250 will be marked. The overexposure is also indicated if only one of the RGB-channels is overexposed.

7.1.2 RAW Format

Select the raw image format for the captured images ("Digital negative"). The following formats are available:

- Sinar RAW - RAW format specific for Sinar
- DNG
- DNG compressed

7.1.3 JPG Resolution

Select the JPG-resolution for the images. The percentage of the JPG-resolution and the pixel number are indicated. The following resolutions are available:

- 25% / 3 MP
- 50 % / 8 MP
- 75 % / 17 MP
- 100 % / 31 MP

Please note: The higher the selected resolution of the JPG-file, the more storage capacity of the memory card is required.

7.1.4 JPG Compression

Select the JPG compression of the images. Two levels are available:

Fine   The compression is very low; the image files are larger.

Normal   The compression is higher; the image files are smaller.

7.1.5 Contrast

The contrast can be set in the following steps:

- Low
- Moderate
- Normal
- High
- Highest

Note: The contrast settings are only applied to the JPG-files.

7.1.6   Saturation

The image saturation gradually increases from a black- and white image (lowest saturation) to a brightly colored image (highest saturation).

- Black / White
- Low
- Moderate
- Normal
- High
- Highest

The saturation settings are only applied to the JPG-files.

7.1.7   Sharpness

Set the image sharpness. When a degree of image sharpness is selected, a software-based sharpness filter is applied to the image.

The intensity of the sharpness filter can be selected:

- Off
- Low
- Normal
- High
- Highest

When "Off" is selected, no sharpness filter is applied and the JPG-image is saved with the captured image sharpness.

Note: The sharpness filter is only applied to the JPG-files, not to the RAW-files.

7.1.8   Noise filter

The noise filter is applied to the images, and suppresses the effects of the sensor noise.

On   The noise filter is always applied to the images.

Auto   The noise filter is automatically applied at exposure times > 1 sec.

Off   No noise filter is applied.

7.1.9 Histogram

The histogram shows the frequency distribution of the color values of an image.

The following histogram settings are available:

Standard   The distribution of the brightness values over all color channels is displayed in one histogram. The histogram is displayed in gray.

RGB   The distribution of the brightness values is displayed for each RGB-channel in a separate histogram. The histograms have the color of the respective RGB-channel.

Display histogram

The histogram is displayed in an image captured or loaded from the contact sheet. To load and display a captured image, leave the menu "Settings" and open the contact sheet. Select the image in the contact sheet using the trackball, and display the image in full screen mode.

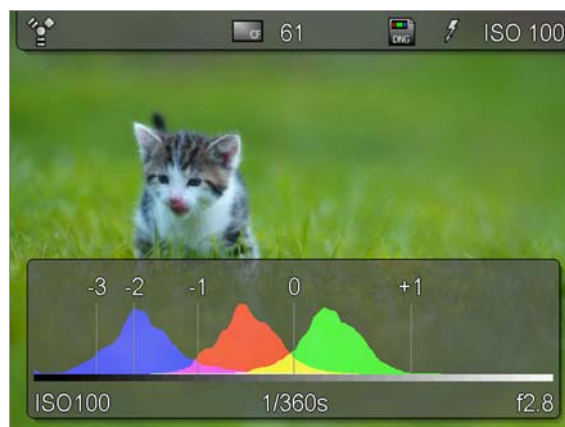Press the button [Info / Esc] to display the histogram.

Fig. 7 / 2 Image with RGB-Histogram

7.1.10 Color space

Select the color space that defines the color for the display devices used for further processing the captured images. Three different color spaces can be selected depending on the periphery devices:

- Adobe RGB
- sRGB – Standard RGB
- ECI RGB

7.1.11 Load and save settings

A specific set of settings can be saved as a user profile. When loading a user profile, these settings are automatically applied and do not have to be set again. Three user profiles can be saved and loaded.

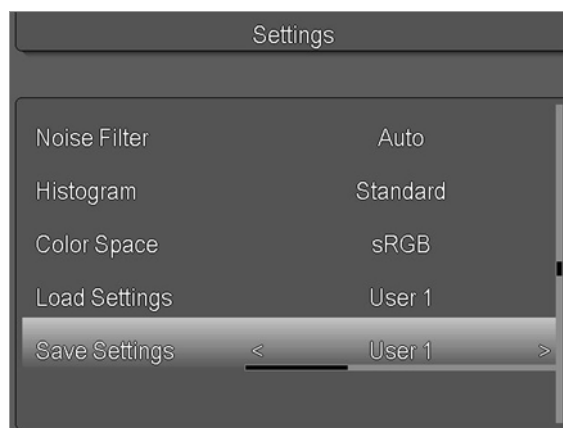Using the menu item "Load Settings", a saved user profile is loaded.

Fig. 7 / 3 Menu "Settings – Save settings"

By saving a new set of settings under the same name, an existing user profile can be overwritten. Using the item "Reset", the Sinarback eSprit 65 LV is reset to the factory settings.

The following settings are saved as part of the user profile:

- ISO-settings
- White balance
- Color Temperature: The color temperature is set to 6000 K when the device is started.
- Manual white balance (pipette)
- Raw file format
- File format
- Display of over exposure
- Resolution of the JPG-Files
- Compression of the JPG-Files
- Contrast settings
- Saturation
- Sharpness
- Noise filter
- Histogram
- Color space
- Image numbering
- Display brightness
- Camera body
- Power save
- Language
- Time and date

7.1.12   Picture numbering

Here, the picture numbering on the CF-card is set.

Continuous	The images in a directory are enumerated consecutively. The numbers of the images are also retained if an image is deleted, i.e. there is a "gap" in the image enumeration.
Standard	The images are enumerated consecutively, however if an image is deleted, the next image succeeds. In this way, there are no "gaps" in the image enumeration.
Reset image number	Selecting this function, a new folder is created, and the images that are captured consecutively are saved to this folder. The image enumeration starts with "1".
Reset folder number	Selecting this function, the image number saved in the camera Flash-EPROM is reset. The Flash-EPROM has to be reset when the maximum number of folders and images is reached in order to continue capturing images. A new directory is created, starting with the number 100, and the first captured image will have the number 1.
Note:	When resetting the folder number, the CF-card has to be empty. When continuing to capture images, use an empty CF-card, otherwise the folder number in the EPROM will not be reset.
Background information:	In the Flash-EPROM, the enumeration of the directories and images are saved. The capturing of 999 directories with maximum 9999 files each can be recorded. The number 100 is assigned to the first directory. When the 9999 images per directory are reached, a new directory is created automatically with 0001 assigned to the first image.

7.1.13   Display brightness

The display brightness can be set on a scale from 1 ... 5, with 5 being the highest and 1 being the lowest level of display brightness. In this way, the display brightness can be adapted to the ambient light.

Note:	Higher display brightness leads to higher power consumption.

7.1.14   Format card

The CF-card is formatted, and all files saved on this card are deleted. You need to confirm the dialogue with [Yes].

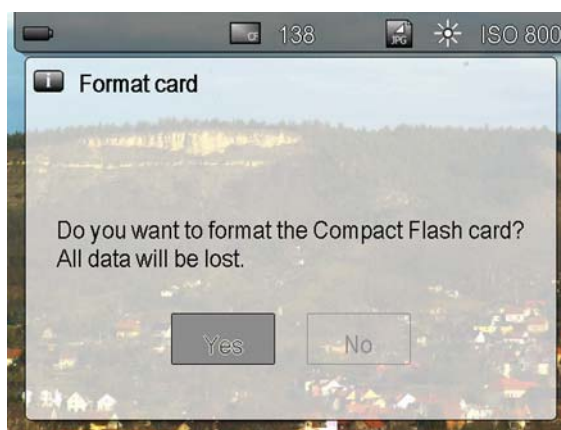After formatting the card, the display changes to the start screen.

Fig. 7 / 4 Format card

7.1.15   Camera body

The Sinarback eSprit 65 LV is compatible with different camera bodies. Select the camera body used with the Sinarback eSprit 65 LV here.

For more detailed information about the supporting camera bodies, refer to the appendix.
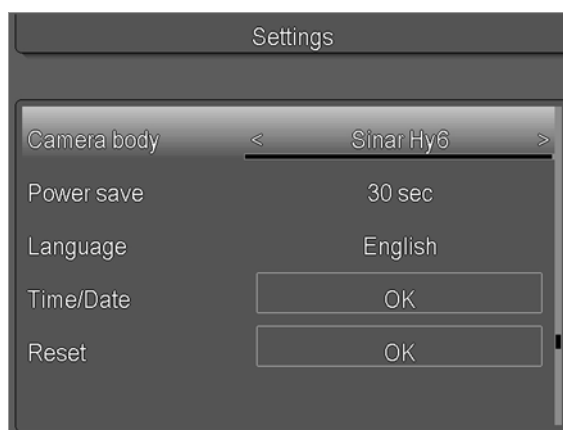

Fig. 7 / 5 Camera body

7.1.16   Power save

After a certain period of inactivity, the display is switched off automatically. The display is activated again by clicking any button at the Sinarback. The following periods of inactivity can be selected: 30 s, 1 min, 5 min.
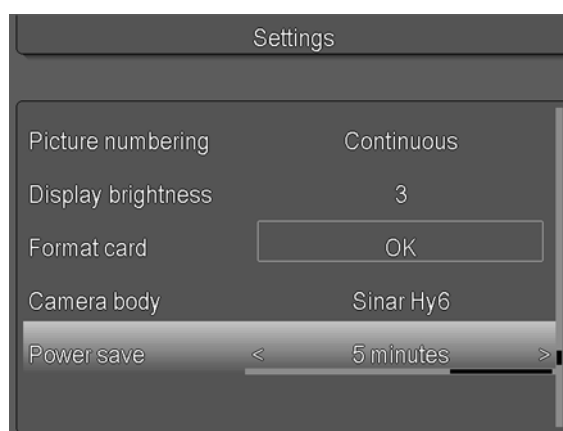

Fig. 7 / 6 Power save

7.1.17 Language

Select the language for the menu of the Sinarback eSprit 65 LV. The following languages are available (in the following order):

- German
- English
- Spanish
- Italian
- French
- Japanese
- Korean
- Chinese
- Turkish

7.1.18 Time / Date

The Sinarback eSprit 65 LV is equipped with an internal clock. Click [OK] to open a dialogue where the time and date can be manually set.

In the dialogue, the currently active item is highlighted blue. Use the trackball to adjust the item. By clicking [OK], the changes are applied and the next item is selected automatically.
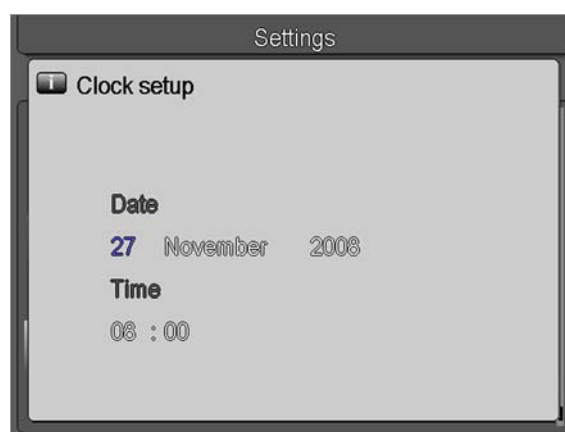

Fig. 7 / 6 Set time and date

By clicking [Info / Esc], the dialogue is left.

7.1.19 Reset

To reset the settings, select the menu item and click [OK]. The resetting of the user settings is confirmed in the display.
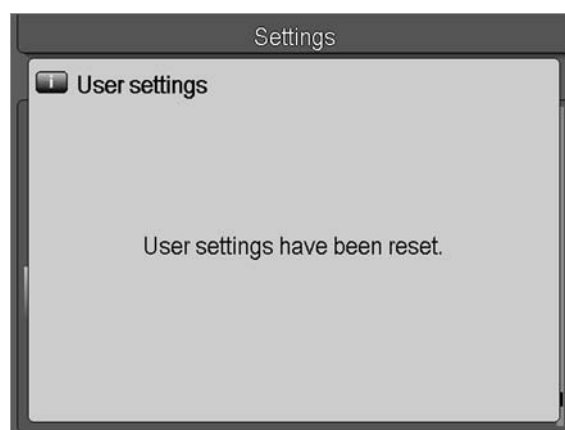

Fig. 7 / 7 Reset to factory settings

7.1.20   Info

Here the information about the firmware, the CF-card, the battery, and the Sinarback are displayed.

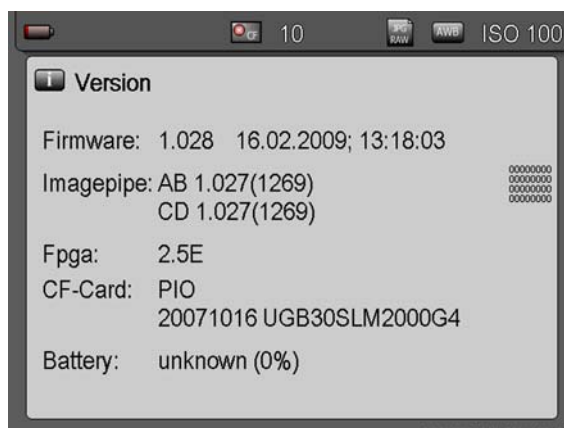Fig. 7 / 8 Information

7.2 The menu "Acquisition"

In the menu "Acquisition", you can define the settings for the image capture. Also, the settings can be checked before the image is captured. The menu "Acquisition" can be directly accessed by clicking [OK].
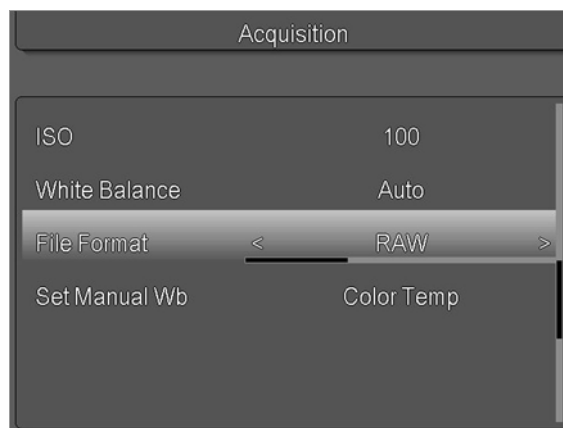
Fig. 7 / 9 Menu "Acquisition"

7.2.1 ISO-sensitivity

For the Sinarback eSprit 65 LV, different ISO-sensitivities in the range from ISO 100 to ISO 800 can be selected. If the camera is equipped with the respective function, this ISO-sensitivity is communicated to the camera, and taken into account by the camera in the calculation of the exposure settings.
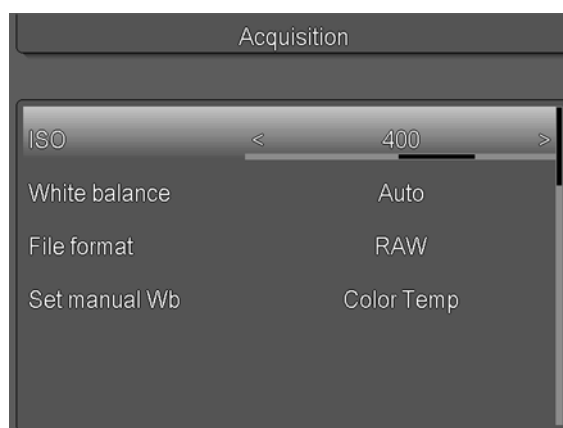
Fig. 7 / 10 Select ISO-sensitivity

7.2.2 White balance

Auto   The white balance is set automatically by the system.

Manual   Carry out a manual white balance with a reference image. The manual white balance is carried out by inserting the color temperature, or by using a reference image ("Pipette"). The color temperature or the pipette are selected in the menu item "Set manual Wb", refer to chapter 7.2.4 Set manual white balance.

Preset profile Select a preset profile. The following profiles are available:

- Tungsten
- Fluorescence
- Flash
- Daylight

- Shadow
- Sunny
- Cloudy

Color Temperature   Apply a manually inserted color temperature to the subsequently captured images. The color temperature is inserted using the function "White balance" (→ chapter 7.2.4 Set manual white balance).

7.2.3   RAW

RAW   The captured images are saved only in RAW-format.

RAW + JPG   The captured images are saved in RAW- and JPG-format.

JPG   The captured images are saved only in JPG-format.

Note:
Here, the saving of the images as RAW- or JPG-data is selected. For the RAW-files, the format (DNG or DNG compressed) is selected in the menu "Settings".

For the JPG-files, the compression and resolution can be selected in the menu "Settings".

7.2.4   Set manual white balance

Here, a manual white balance can be set by capturing a reference image or by selecting the color temperature.

Pipette (Reference image)

To apply a manual white balance, capture a reference image that is not overexposed, and that has a larger neutral gray area in the center. It is recommended to use a gray card. The menu item "White balance" changes automatically to "Manual".

This white balance is saved in the Sinarback, and is applied to the subsequently captured images until a new white balance (manual or automatic) is selected.
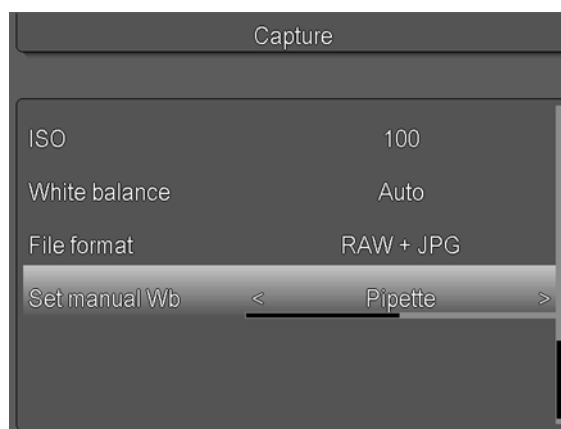

Fig. 7 / 11 Set white balance with pipette

Color temperature

Insert the color temperature manually. In the display, the message "Set WB to 2000 Kelvin" appears per default. To adjust the color temperature, move the trackball. To apply the color temperature, select "Yes" and click [OK].

The color temperature will be applied to subsequently captured images until a new white balance (automatic or manual) is selected.
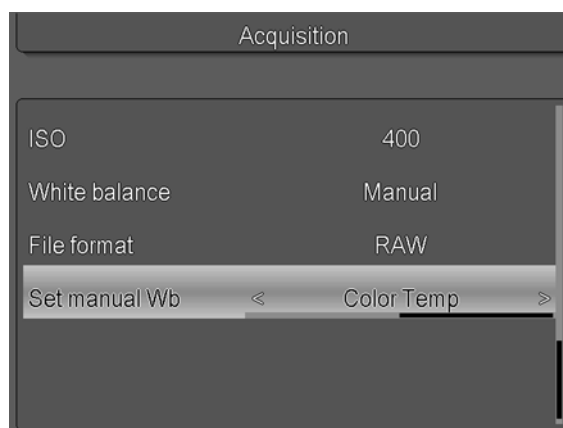
Fig. 7 / 12 Adjust color temperature

Note: The color temperature is saved in the system and retained until another color temperature is set. The application of the color temperature is activated by selecting the function "Color temperature" in the menu item "White balance".

8 Contact sheet

8.1 Contact sheet display

To display the contact sheet, leave the menus ("Settings" or "Acquisition") to display the start screen. Scroll the trackball downwards to open the contact sheet.

When the contact sheet is opened, the images are displayed as thumbnails in a row. The selected image is displayed enlarged above of the thumbnails.
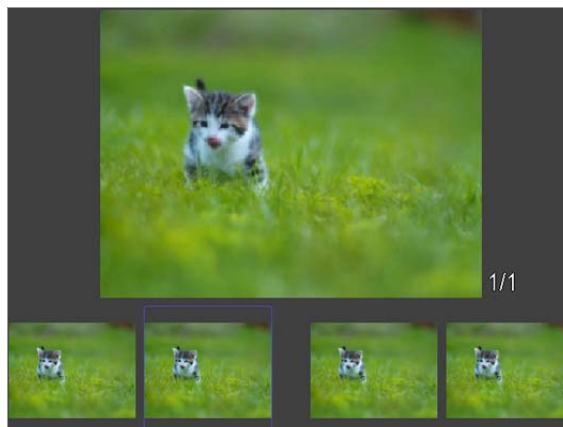

Fig. 8 / 1 Contact sheet

Select images	To select an image, scroll the trackball left or right.
Show / hide info bar	Press the button [Info / Esc] to show or hide the image capture settings.
Delete images	To delete an image from the contact sheet, select the image and click the buttons [Info / Esc] and [Settings] simultaneously. Confirm the query "Delete image?" with "Yes".

8.2 Full screen display

To display an image in full screen mode, select it in the contact sheet and scroll the trackball upwards once.

Fig. 8 / 2 Image in full screen display mode

8.3 Display image information

When an image is displayed in full screen mode, the following image information is displayed alternately by pressing the button [Info / Esc] repeatedly.

Capture settings

Click [Info / Esc] to display the capture settings in the headline of the window. The capture settings are described in more detail in chapter 6.3 Getting started.

Fig. 8 / 3 Full screen display with info bar

Image information window

In the lower left corner of the image, the following image information is displayed:

- Aperture
- Shutter speed
- ISO-sensitivity
- Capture date and time
- File format (icon)
- White balance (icon)
- Light metering mode (icon)

Fig. 8 / 4 Full screen display with info bar window

Histogram

The image is displayed with the histogram visualizing the brightness value distribution in the image. The histogram can be displayed as standard (gray values) or as RGB-histogram (brightness values for each color channel). The histogram type is selected in the menu "Settings".

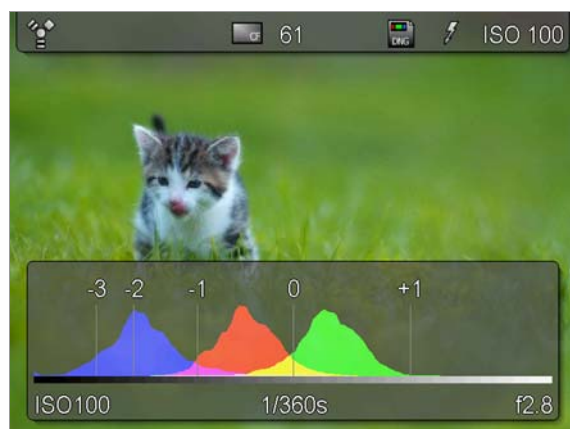The values show the aperture range of the respective histogram values.

Fig. 8 / 5 Full screen display with RGB-histogram

Grid

Display image with a grid.

Fig. 8 / 6 Full screen display with grid

8.4   Zoom

Images can be zoomed in steps of 12 %, 25 %, 50 % and 100 %.

Select the image in the contact sheet, and activate the full screen mode.

To activate the 25 %-zoom mode, move the trackball upwards.
To apply further zoom steps, click [OK].

Fig. 8 / 7 Image with 25 % zoom

The displayed image crop and the zoom factor (in percent) are displayed in the lower right corner of the zoomed image.

Navigation   To navigate within a zoomed image, move the trackball.

Reset to full   To reset the image to the full screen display, click [Info / Esc].
screen display

9   Cleaning and maintenance

Cleaning the Sinarback casing   Use a slightly moistened piece of cloth and carefully wipe away the soiling. Make sure that the cloth is only slightly moistened in order to prevent water from entering the casing.

Cleaning the display   Use a dry and soft, wood-free tissue to clean the display. Be careful not to scratch the display.

Cleaning the sensor   Only use the cleaning kit included in your delivery to clean the sensor.

The following substances and items may not be used for cleaning the sensor

- Domestic cleaning agents
- Substances containing organic solvents, benzyl or diluting agents
- Dry cloth - scratching of the sensor can be caused
- Pressured air

Generally, it is recommended to handle the Sinarback eSprit 65 LV with care, and to avoid any damage or soiling. Use the protection cap to protect the sensor when the Sinarback eSprit 65 LV is not in use. Do not touch the sensor when the protection cover is detached.

10   Appendix

10.1   Symbols

The icons in the icon bar and the information window indicate the following information:

Power supply

Battery

Firewire

Battery state

If power is supplied from the battery, the symbols indicate the battery status from a fully charged battery to an almost empty battery.

CF-card state

Data are written onto the CF-card.

CF-card is inserted.

No CF-card is inserted.

Saving format

DNG
Only DNG-files are saved.

RAW
Only Sinar RAW-files are saved.

JPG and RAW
RAW- and JPG-files are saved.

JPG (fine):
Only JPG-files are saved (low compression).

JPG normal:
Only JPG-files are saved (high compression).

Background information:

The saving format is selected in the menu "Settings" under "RAW" and "JPG-compression", and in the menu "Acquisition" under "File format".

The icons indicate the type of files that are saved, regardless of the menu.

White balance

Automatic white balance

Manual white balance

Tungsten

Fluorescence

Flash

Daylight

Shadow

Sunny

Cloudy

Color temperature

ISO-speed

ISO 100   Indication of the ISO-speed. ISO-speed can be set from 100 to 800, depending on the connected camera.

10.2   Technical data

Sensor type	Kodak KAF31600CE CCD with full frame technology and microlenses
Sensor size	6496 x 4872 pixels (31.6 million pixels) 44 x 33 mm
Display	3'' with 640 x 480 pixels (280 dpi), automatic menu orientation images, histogram, sensitivity, on-board exposure warning, memory status, white balance
File formats	- DNG / DNG compressed - Sinar RAW - JPEG (four file sizes: 31, 17, 8 and 3 million pixels, two compression rates) - DNG + JPG as well as Sinar RAW + JPEG
File size	60 MB (DNG and Sinar RAW 16 bit), 181 / 90 MB (TIFF 48 / 24 bit)
Capture rate	Up to 0.9 exposures per second
Live image	Yes
Exposure time	1 / 10000 second up to 32 seconds
Nominal sensitivity	ISO 100 - 800
Image processing	Fast on-board QuadCore Image Processing (QCIP)
White balance	Automatic, presets, manual
Data storage	High-Speed CF Card Type I (4 GB UDMA CF card included), alternatively also directly on hard disk via Firewire
Active cooling	Yes (ventilator)
Power supply	Alternatively, with rechargeable lithium-ion battery or from computer via Firewire cable
Operating time with battery	Up to 2000 exposures

FireWire interface	IEEE 1394b (800 Mbps, compatible with IEEE 1394b 400 Mbps)
Capturing software	Sinar eXposure™ 6.1 or later
Operating systems	Mac OS X as of 10.4.11 and higher
Computer requirements (recommended)	Apple Macintosh with Intel Core 2 Duo 2 GHz or faster processors with 2 GB RAM or more
Operating temperature	0 − 45 °C / 32 − 113 °F
Dimensions and weight	90 x 87 x 65 mm, 590 g
Camera interface	Sinar Hy6, Hasselblad V 500 series, Hasselblad H1/ H2, Mamiya 645 AFD

10.3   Supported cameras

The following cameras are supported by Sinarback eSprit 65 LV:

- Sinar Hy6
- Hasselblad H1, H2
- Hasselblad V 500 series
- Mamiya 645 AFD

10.4   Recommended memory cards

- Sandisk Extreme IV
- Sandisk Ducati