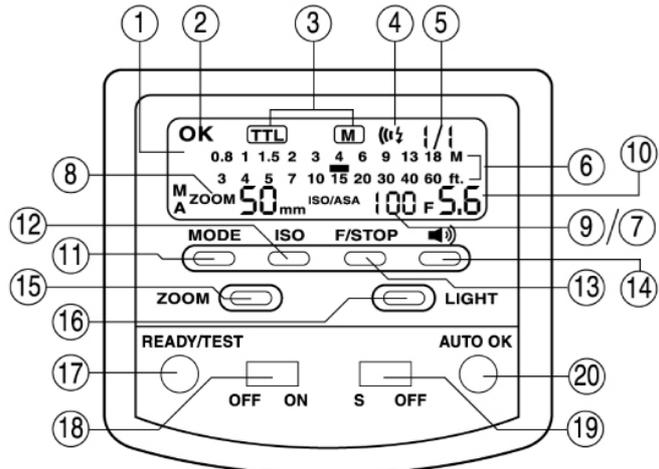
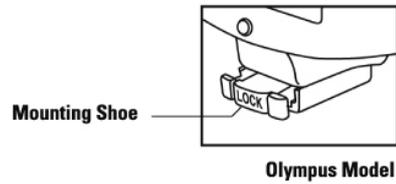
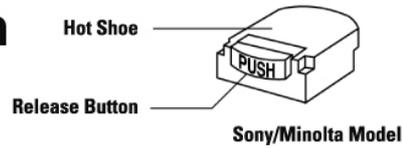
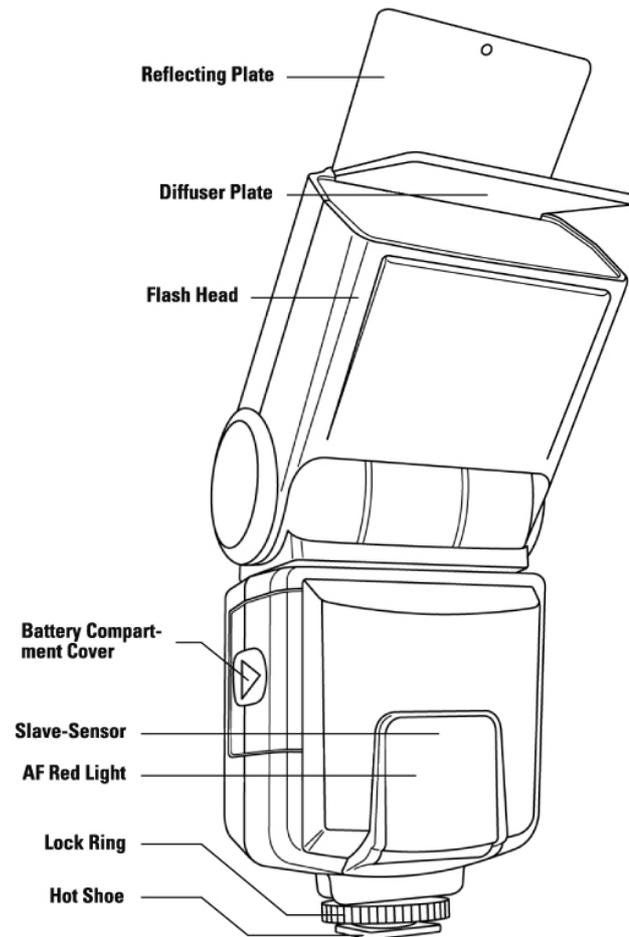


Digital Power Zoom Flash DÖRR DAF-42

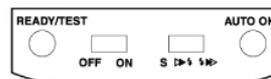
Instruction Manual



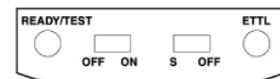
Nomenclature



Nikon, Sony-Minolta, Olympus und Panasonic Models



Pentax/Samsung Model



Canon Model

1. LC display
2. Exposure OK indicator
3. Mode setting indicator TTL/manual
4. Beeper indicator
5. Power level indicator in manual mode
6. Flash range distance bar
7. OFF / Automatic power shut off
8. Zoom position indicator
9. Film Speed indicator
10. F/Stop (aperture indicator)
11. MODE button to select flash mode
12. ISO button to select film speed
13. F/Stop button to set aperture
14. Beeper ON/OFF button
15. ZOOM selector button automatic/manual
16. LIGHT button to illuminate LCD
17. Flash READY indicator and TEST button
18. Power OFF/ON switch
19. Slave mode switch
20. AUTO OK (exposure OK indicator)

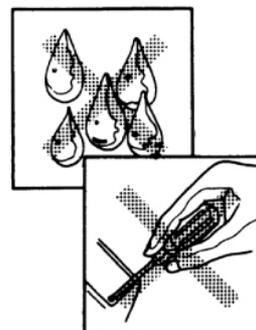
Preface

Thank you for purchasing a DÖRR zoom flash. It was specifically developed for digital cameras with TTL flash control. Before using the DAF-42 for the first time, we recommend to read this instruction manual carefully so that you can benefit from all functions of your new flash. Please also adhere to the indications for flash photography in the instruction manual for your camera.

Important Information

Before using this flash, please pay attention to the following safety instructions:

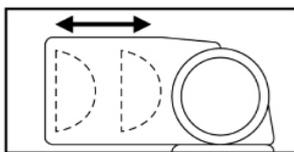
- In case of failure, do not attempt to disassemble the flash yourself as there is high voltage circuitry inside. In case the flash proves to be defective, send it to your local dealer or service agent of your country. In case the flash should break, make sure not to touch the inside elements.
- The flash is a technical precision device that can be damaged due to impacts and other ungentle handling.
- This flash is not weatherproofed. It should be protected from rain and excessive humidity to avoid irreparable damage.
- Be sure to protect the flash from high temperatures. Never leave it in the car exposed to direct sunlight. Avoid extreme temperature fluctuations.
- Never clean the flash with gasoline or other strong detergents.





Automatic Zoom Control

Your viewing angle depends on the focal length of the lens you are using. For example, by using a 24 mm wide angle converter you obtain a considerably larger viewing angles as with an 85 mm tele converter. To align the illuminated angle of the flash to the viewing angle of the lens, the flash features an automatic-power-zoom control. The reflector automatically adjusts to preset focal lengths ranging from 24 to 85 mm. Should your camera not support this function, you can also position the reflector manually. To do so, press down the ZOOM button as many times as necessary to obtain the desired focal length on the LC display. In manual zoom mode, the letter "M" appears before the focal length indication on the LC display.



Following settings are possible:

- super wide angle: 24 for focal lengths of 24-28 mm
- wide angle: 28 for focal lengths of 28-35 mm
- moderate wide angle: 35 for focal lengths of 35-50 mm
- regular: 50 for focal lengths of 50-70 mm
- moderate tele: 70 for focal lengths of 70-85 mm
- tele: 85 for focal lengths of 85 mm and higher

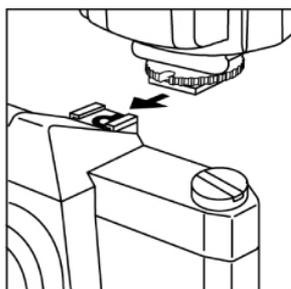
Please bear in mind that the maximum flash range changes in accordance with the focal length in use. At ISO 100 you can read off the values for the flash range from the table below:

	24 mm	28 mm	35 mm	50 mm	70 mm	85 mm
F 2,8	0,6-8,9 m	0,7-10 m	0,7-11,4 m	0,8-13,6 m	0,85-14,3	0,9-15 m
F 4	0,6-6,25 m	0,7-7 m	0,7-8 m	0,8-9,5 m	0,85-10,1	0,9-15 m
F 5,6	0,6-4,4 m	0,7-5 m	0,7-5,7 m	0,8-6,8 m	0,85-7,8	0,9-7,5 m
F 8	0,6-3 m	0,7-3,5 m	0,7-4 m	0,8-4,7 m	0,85-5,0	0,9-5,2 m

Mounting and Removing the Flash from Camera

Before mounting the flash unit onto your camera, be certain that the power switch is turned OFF.

The camera's built-in flash must be shut and locking ring must be turned. Models Nikon, Canon, Pentax/Samsung and Panasonic: Carefully slide the flash unit onto the camera's flash shoe. In order to guarantee a proper functioning contact between flash and camera, the locking ring should be tighten.



When removing the flash from the camera, reverse the steps.

Model Olympus:

Carefully slide the flash unit onto the camera's flash shoe. In order to guarantee a proper functioning contact between flash and camera, the LOCK button should be pressed. When removing the flash from the camera press the two buttons along side LOCK. Now you can easily remove the flash unit from the camera.

Model Sony/Minolta:

Slide the flash unit onto the camera's flash shoe until it locks into place. In order to remove the flash unit from the camera, press the PUSH button. Now the flash can easily be removed from the camera.

Color Temperature and White Balance

Color Temperature of the DAF-42 is 5000 K. The automatic white balance of digital cameras automatically selects this color temperature. Color differences can occur with changing light. It is therefore recommended to set the white balance manually on your digital camera. Depending upon the camera model the white balance would be set at 5000 K or flash symbol.

TTL Flash Control with Auto Mode

After connecting the flash onto your camera, first turn on your camera and set it to auto mode and then turn the power switch of your flash to ON. The flash is preset to TTL flash control. On the LC display appears "TTL". When the flash READY indicator lights up on the flash, you only need to press down the shutter release of your camera. Most cameras also feature a flash ready indicator in the viewfinder. (Please refer to your camera's instruction manual.)

TTL flash control ensures exact illumination of the object by controlling both the camera's and the flashgun's amount of light. The flashlight reflecting off the object is measured through the lens (TTL - through the lens). When the amount of light needed for an accurate exposure has been reached, a stop signal is passed to the flash causing the light output to be interrupted.

Additionally your camera automatically is preset to the best possible aperture and exposure time. TTL flash control offers besides high exposure accuracy and easy handling further advantages:

- all settings and exposure adjustments are omitted
- extensions are automatically considered (e. g. when using extension tubes)
- filter factors are automatically considered
- automatically considers the variable lens speed of zoom lenses
- automatically presets to the film speed in use
- automatic consideration of indirect flashing and diffuser plate utilization
- only collects the light amount necessary for a proper exposure (TTL)

TTL Flash Control with Automatic Time Release

TTL also allows you to take shots with a focus range of your choice and automatic time release. For this set your camera to automatic time release mode and the flash to TTL. Now you can manually set your camera to the aperture desired. Please keep in mind that by choosing a smaller aperture (larger aperture count) the flash range will also reduce. Your camera automatically controls the flash synchronization period needed, and together with TTL flash control correct exposed picture results are reached.

TTL Flash Control with Automatic Diaphragm Mechanism

First set your camera to automatic diaphragm mechanism mode, then set your flash to TTL mode. Now you can set your camera to a shutter speed of your choice. However, values falling below the shortest flash synchronization period can not be selected (most cameras automatically prevent this). Together with the camera's automatic diaphragm mechanism, TTL flash control ensures correct exposed objects.

TTL Flash Control with Manual Exposure Setting

Set your camera to manual exposure and the flash to TTL. Now you can set your camera to a shutter speed of your choice. However, values falling below the shortest flash synchronization period can not be selected (most cameras automatically prevent this). TTL flash control ensures a proper illumination of the object.

Exposure OK Indicator

The DAF-42 features an exposure indicator. This indicator shows you whether the fired flash sufficiently illuminated the object or whether you should repeat the shot using a shorter distance. In case the illumination was sufficient, "OK" appears for approx. 2 seconds on the LC display. Simultaneously the AUTO OK light glows. With activated beeper signal a beeper sounds once. The exposure OK indicator only activates in TTL mode.

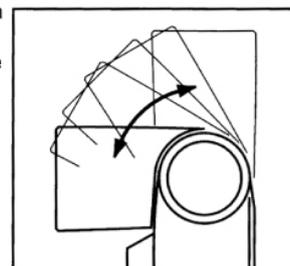
Manual Flash Mode Photography

Press down the MODE button 1x for manual flash mode. On the LC display appears "M" followed by the performance data. Via the MODE button you can reduce the full flash power 1/1 to 1/16 in the following steps: 1/2, 1/4, 1/8 and 1/16. Press down the MODE button until the desired flash performance value appears on the LC display. The aperture on the camera needs to be set manually. Depending on the aperture setting, the desired firing range can be varied. The firing range at a certain lens stop can be read off from the flash range indication on the LC display.

Indirect Flash Photography

The DAF-42 equipped with a bounce and swivel head which allows you to change the direction of the flash up to 270° vertically and up to 90° horizontally. You can avoid direct flashing onto objects by positioning the flash towards a reflection surface. This surface should be neutrally white (e. g. white ceiling, white wall) as the light will be reflected in the color of the surface flashed on. This leads to color distortions when using colored reflecting surfaces. Indirect flash photography offers you the following advantages:

- avoiding harsh shadows
- avoiding red eyes





- soft outlines and even illumination (particularly suitable for portraits)
- avoiding disturbing light reflections off non-metallic surfaces such as windows, glasses, or water.

On the backside of the flash you can read off the position of the bounce angle. When tilting the flash head, no flash range is indicated on the LC display as the light path length does not comply with the distance to the object but with the distance:

flash → reflecting surface → object. Please consider that indirect flash photography reduces the flash range. In TTL mode the flash and the camera automatically ensure proper dosage of the flash's power output. With indirect flash photography the power-zoom function is inactive. Please select the focal length manually. Further the flash range, film speed and aperture are not indicated on the LC display. Still, TTL flash control is active.

Indirect Flash Photography with Reflecting Plate

If you want to flash indirectly but no adequate reflection surface (white ceiling/white wall) is available, you can use the built-in reflecting plate. One advantage to "regular" indirect flashing: The distance flash → reflecting surface → object is shorter.

The reflecting plate is integrated in the flash head above the diffuser plate. To use, slide it out until the stopper is reached.

Diffuser Plate

Especially with portraits a softer illumination is advantageous. Alternatively to indirect flashing this can also be achieved by using a diffuser plate. The diffuser plate is integrated in the flash head beneath the reflecting plate. To use, slide it out until the stopper is reached and the diffuser plate flaps over the reflector. Please consider that the flash range reduces when using the diffuser plate. In TTL mode the flash and the camera automatically ensure proper dosage of the flash's power output. The reflecting plate is integrated in the flash head above the diffuser plate. To use, slide it out until the stopper is reached.

Red-Eye Effect

With flash photography, the subject's eyes may appear red in a picture. This is caused by flashlight reflecting off the blood circulated retina. This phenomenon especially appears when the flash is located close to the lens axis. Weak ambient light even supports the red-eye effect as the pupils will widen.

A secure method to avoid the red-eye effect is to use indirect flash photography. But even with direct flashing, the design of the DAF-42 reduces the red-eye effect as the flash head is located as far as possible from the optical axis. The larger the flash angle of incidence the lesser the red-eye effect.

Flash Synchronization

Digital Cameras: All shutter speeds can be used for flash photography. There are no restrictions.

Analog Cameras: Synchronization time refers to the shutter speeds which will allow flash photography. Special attention must be paid in the case of short shutter speeds. Each camera model features a "shortest" synchronization - the so-called x-synchronization. Please review the instruction manual of your camera. Shorter shutter speeds than the x-synchronization should under no circumstances be used in order to avoid incorrect exposures.

Using the DAF-42 with TTL mode the x-synchronization of your camera will be set automatically.

Front and Rear Curtain Synchronization

(only Model Pentax/Samsung)

Position the switch in the middle if you want to fire the flash synchronously onto the rear curtain.

In this mode the flash does not fire onto the opening of the front curtain, but is only triggered shortly before the rear curtain activates. This mode will only effect picture results when taking shots of moving objects and by using a shutter speed of > 1/30 s:

- When taking pictures of moving objects with long-time exposure, a motion light trail, caused by the ambient light, appears in front of the moving object. Thereafter the flash is triggered and then the movement is photographed. With flash synchronization onto rear curtain the order is reversed. First the movement is photographed. Shortly before the rear curtain activates, the flash is triggered. Now, the motion light trail appears after the moving object on the photograph. The picture gives now the impression of dynamic and speed.
- Use manual exposure on your camera and set shutter speed and aperture manually. This way a precise accommodation of the shooting situation is better warranted.

- To avoid blurred pictures, the use of a DÖRR tripod is recommended.

Move the switch to the right if you want to flash "regular" that is utilizing the front curtain.

Long-Time Synchronization

To achieve a balanced light ratio between object and background in weak ambient light, a longer exposure time is recommended. Thereby, the main object in the foreground is illuminated by the flash while the background is adjusted to the brightness of the main object through a longer exposure time. (With "regular" flashing the background would disappear in the dark.)

Extended time synchronization helps you to achieve great effects, e. g. by taking portraits at the fair grounds with an evening setting as background or in a neon-lit shopping center. To set your camera to a longer exposure time of your choice, set your camera to automatic diaphragm mechanism or manual exposure control. Some camera models allow for extended time synchronization also in auto mode or with automatic time release. To avoid blurred pictures, the use of a DÖRR tripod is recommended.

Using the Flash with Daylight

Although on sunny days the light may be sufficient to restrain from using the flash, depending on the position of the sun more or less unsightly shades may appear on faces and other objects. Also, shots made with back light often cause the main object to be underexposed. Therefore, it is advisable to use the flash also in sufficient daylight. Therewith, the above mentioned problems can be avoided. Furthermore, the colors on your pictures will be intensified and the image contrast will be enhanced as well.



Slave Function

The DAF-42 can also be triggered wireless from a distance (e. g. via the built-in camera flash). Thereto position the slave switch to S. Now the slave photocell is activated. The photocell catches reflecting light from the built-in camera flash and synchronously triggers the DAF-42. The distance range is over 10 m. In slave mode TTL flash control is automatically deactivated. In manual flash mode the flash is set automatically to full flash power. Via the mode button you can reduce the capacity down to 1/16 of the full capacity.

Power Source

This flash operates with 4x 1,5V Mignon alkaline batteries (type AA) or rechargeable NiMH-batteries of the same type can be used.

Note: Rechargeable NiMH batteries are more economical and environment-friendlier than conventional batteries.

Hints for using Batteries:

- Before inserting the batteries into the device, ensure that both contacts of the batteries and the flash are clean.
- Ensure to always use 4 batteries of the same capacity, manufacturer and of the same type (AA).
- Never mix batteries and NiMH rechargeable batteries.
- Remove the batteries from the flash when not in use for a longer time period.
- Batteries develop their full power at approx. 20°C. To ensure full power in cold weather as well, you should protect the flash from coldness (e. g. keep it close to your body).
- Do not throw batteries into open fire. Only recharge batteries which are designed for this purpose (NiMH rechargeable batteries). Otherwise there may be explosion risk!
- Used batteries should not be thrown away with domestic waste but should be turned in at a specialized photo dealer or any other appropriate facility to ensure an environment-friendly disposal.

Inserting the Batteries

- Open the battery cover by sliding it in the direction of the arrow and swing open. The power switch should be in OFF position now.
- Insert 4 Mignon batteries into the compartment. Please refer to the +/- signs in the battery compartment for correct polarity.
- Close the battery cover and slide it in opposite direction of the arrow until it locks in.



- Move the power switch to ON. If the batteries are properly inserted, information will appear on the LC display and the flash ready indicator will light up after a few seconds. You can now fire a test flash by pushing down the READY/TEST button.

Automatic Power Saving

To conserve the batteries, the flash features an automatic power saving mode. This mode automatically activates approx. 3 minutes after the flash has not been in use. However, the flash needs to be mounted onto a camera with TTL flash control for this mode to activate. On the display appears OFF. To re-activate the flash, turn the power switch to OFF and then to ON or push down slightly the camera's shutter. The flash is now in stand-by mode again. Should you plan not to use the flash for a longer time period, set the power switch to OFF.

AF Red Light Beam

The DAF-42 equipped with an AF red light beam.

AF reflex cameras require a minimum of contrast for proper distance settings. In weak light conditions the available contrast of the object may not be sufficient for automatic focusing. In this case your flash projects a contrast pattern onto the object as soon the camera's shutter release is slightly touched. With the support of the AF red light beam, the auto-focus system of your camera can now recognize structures and even in darkest rooms the exact distance can be determined quickly and precisely. The AF red light beam covers a range of approx. 1 to 8 m.

Note: Depending on the camera model it may be the case that the camera's built-in AF red light beam takes priority. In this case the AF red light beam of the flash is not activated.

LC Display

The following information can be read off the LC display:

- automatic or manual zoom mode (24/28/35/50/70 or 85 mm)
- lens stop setting
- exposure OK indicator
- flash range indication in m and ft
- TTL indication
- power level indication M in manual mode (full capacity, 1/2, 1/4, 1/8 and 1/16)
- film speed setting ISO/ASA
- beeper signal on

To read off this information from the LC display in weak ambient light, just slightly press the LIGHT button. This will illuminate the LC display for approx. 5 seconds.

Flash Range Indicator

The DAF-42 is equipped with a micro controller that automatically calculates the flash range, indicated as a bear beneath the meter scale. The following factors influence the flash range:

- focal length setting
- film speed used (ISO number)
- aperture setting

Above factors have already been considered when indicating the flash range on the display and when flashing in TTL mode.

Specifications:

Overview Guide No./Focal Length

Capacity/Zoom	Full 1/1	1/2	1/4	1/8	1/16
85 mm	42	29	22	15	11
70 mm	40	27	21	14	10,5
50 mm	38	26	19	13	10
35 mm	32	23	17	12	9
28 mm	28	20	15	11	8
24 mm	25	18	14	10	7

Flash control:	TTL flash control or manual
Guide no.:	24 to 42 / ISO 100 and 85 mm focal length
Power zoom reflector:	automatic zoom position settings to 24, 28, 35, 50, 70 and 85 mm or motor zoom control via zoom button
Bounce angle:	0 - 90° in steps of 0°, 45°, 60°, 75° and 90°
Swivel angle:	270° (180° to the left and 90° to the right)
Flash ready indicator:	red LED on backside of device
AF measuring beam:	measuring range approx. 1 - 8 m
Flash duration:	approx. 1/1.000 s - 1/20.000 s
Flash recycling time:	approx. 0,3-9 s with fresh alkaline batteries approx. 0,3-8 s with NC rechargeable batteries (charged)
Number of flashes:	approx. 150-2.000 with fresh alkaline batteries approx. 130-1.900 with NiMH rechargeable batteries (charged)
Color temperature:	approx. 5000 K
Test release:	by pressing the TEST button on backside of device
Slave-adaptor:	built-in slave function, distance range over 10 m
Diffuser plate:	built-in
Reflecting plate:	built-in
Power supply:	4x 1,5V AA Mignon batteries (alkaline) or rechargeable NiMH batteries of same type
Weight:	280 g (without batteries)
Dimensions:	172 x 72 x 57 mm

Specifications are subject to change without notice.