

MECABLITZ 28 AF-3 digital

Canon / Minolta / Nikon / Olympus

Bedienungsanleitung

Gebruiksaanwijzing

Manuale istruzioni

Mode d'emploi

Operating instruction

Manual de instrucciones

Foreword

Congratulations on purchasing our flash **28 AF-3 digital** and thank you for the confidence in our products.

The following pages give useful instructions for proper operation of the flash unit and a survey of all its sophisticated functions.


Please read these operating instructions carefully, even if one or the other point may not appear to be very interesting at first sight. Although our designers have attached great importance to making the operation of the flash unit as simple as possible, the cameras with which it will eventually be used often offer a great diversity of capabilities.

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Please also fold open the illustrated page at the end of these instructions.

We wish you great pleasure with this new flash unit.

Please note:

- The **28 AF-3 C digital** flash unit is only suitable for **Canon cameras** with TTL flash control or E-TTL flash control.
 - The **28 AF-3 M digital** flash unit is only suitable for **Minolta-Dynax / Maxxum cameras** with TTL flash control and Minolta Dimage digital cameras with preflash metering or ADI flash control.
 - The **28 AF-3 N digital** flash unit is only suitable for **Nikon cameras** with TTL flash control or i-TTL flash control.
 - The **28 AF-3 O digital** flash unit is only suitable for **Olympus Camedia digital cameras**.
-  *The individual above mentioned flash units cannot be used for cameras made by other manufacturers. Be sure to use your flash unit only with cameras of the above described camera systems!*

Contents:


1. Safety instructions	85
2. Preparations	86
2.1 Power supply	86
2.2 Loading and replacing the batteries	86
2.3 Mounting / removing the flash unit	87
2.4 Switching the flash unit on and off	87
3. Flash coverage and reflector attachments	88
4. Flash modes	89
4.1 TTL flash mode	89
4.2 Only 28 AF-3 C digital: Canon E-TTL flash mode	90
4.3 Only 28 AF-3 M digital: TTL preflash metering and ADI-flash metering	91
4.4 Only 28 AF-3 N digital: i-TTL and i-TTL-BL flash modes	92
4.5 Only 28 AF-3 O digital: TTL with preflash for Camedia digital cameras	93
4.6 Manual flash modes M and MLo	94
5. Dedicated flash functions	94
5.1 Flash readiness indication	94
5.2 Correct exposure indication	95
5.3 Automatic flash sync speed control	95
5.4 Manual TTL flash exposure correction	96
5.5 Flash synchronisation	96
5.6 AF measuring beam	97
5.7 Automatic maximum flash range indication	98
5.8 Preflashes for red-eye reduction	99
5.9 AUTO-FLASH / Triggering control	100
6. Special functions	100
6.1 Deactivating the AF measuring beam	100
6.1.1 Reactivating the AF measuring beam	101
6.2 Meter-feet changeover (m - ft)	101
6.3 Resetting the flash unit's settings	101
7. Troubleshooting, remedies and after-sales service	102
8. Technical data	104

Table 1: Dedicated flash functions

	28 AF-3 Canon	28 AF-3 Minolta	28 AF-3 Nikon	28 AF-3 Olympus
Flash readiness indication in camera's viewfinder or display panel	•	•	•	•
Correct exposure indication in camera's viewfinder or display panel	x	•	•	x
Automatic flash sync speed control	•	•	•	•
TTL flash control (standard TTL without preflash)	•	•	•	x
Automatic fill-in flash in daylight	•	•	•	•
Canon E-TTL flash control (Canon specific)	•			
Canon FE flash exposure storage (Canon specific)	•			
Minolta Dimage TTL preflash metering (Minolta specific)		•		
Minolta-Dimage ADI flash metering (Minolta specific)		•		
Nikon i-TTL flash control (Nikon specific)			•	
Nikon i-TTL-BL flash control (Nikon specific)			•	
Olympus TTL flash control with preflash (Olympus specific)				•
Manual flash exposure correction	•	•	•	•
1 st or 2 nd curtain synchronisation (REAR)	•	•	•	•
Slow synchronisation (SLOW)	•	•	•	•
AF measuring beam control	•	•	•	•
Automatic maximum flash range indication in LC display panel	•	•	•	•
Preflash function for red-eye reduction	x	x	•	•
AUTO FLASH / triggering control	•	•	•	•
Wake-up function	•	•	•	•

• = Dedicated flash function is supported by the flash unit.

x = Dedicated flash function is not supported by the camera's system.

 **Please note that the corresponding dedicated flash function will be performed only if also supported by the camera. Please refer to your camera's operating instructions to find out whether or not your camera supports the individual function.**

1. Safety instructions

- The flash unit is intended and approved only for photographic use.
- NEVER fire a flash from a very short distance directly into the eyes of persons or animals. This can cause damage to the retina and may even lead to blindness.
- NEVER trigger a flash in the vicinity of flammable gases or liquids (petrol, solvents, etc.), since this may cause EXPLOSIONS!
- NEVER shoot flash pictures of car or bus drivers, cyclists or motorcyclists, or train drivers while the vehicle is moving! This may dazzle the person concerned and result in an accident.

- Only use the approved power sources specified in these operating instructions.
- NEVER attempt to open or short-circuit batteries!
- NEVER expose batteries to excessive temperatures such as intensive sunlight or a fire!
- Remove exhausted batteries immediately from the flash unit. Such batteries may leak, releasing chemicals which can damage the flash unit.
- NEVER attempt to recharge dry batteries!
- Do not expose the flash unit to dripping or splashing water.
- Do not expose your flash unit to high temperatures and humidity. Do not keep it in the glove compartment of your car.
- Do not touch the diffuser after firing several flashes at short intervals. Danger of burns!
- When taking flash shots at full light output and in rapid succession observe an interval of at least 3 minutes after 20 flashes.
- NEVER place material that is impervious to light in front of, or directly on the reflector. If this is not observed, the high energy of the flash light

may cause burning or bleaching of the material or may damage the reflector.

- NEVER dismantle the flash unit! DANGER: HIGH VOLTAGE! Repairs must only be completed by an authorised repair service.
- Do not touch the contacts of the flash unit.
- The flash unit must not be used if the case has been so badly damaged that internal components are exposed. Remove the batteries!
- Do not use defective batteries!

2. Preparations

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2.1 Power supply

The flash unit can be operated with any of the following batteries:


- 2 alkaline-manganese dry-cell batteries 1.5 V, type IEC LR03 (size AAA). Maintenance-free power source for moderate power requirements.
- 2 nickel-metal-hydride batteries 1.2 V, type IEC HR03 (size AAA). They have a significantly higher capacity than NiCad batteries and are less

harmful to the environment (no cadmium). They permit very fast recycling and are economical in use because they are rechargeable.

- 2 NiCad batteries 1.2 V, type IEC KR03 (size AAA).

 ***The batteries are exhausted if the recycling time exceeds 60 seconds when firing flashes at full light output. Remove the batteries from the flash unit if you are not going to use it for an extended period of time.***


2.2 Loading and replacing the batteries

- Turn off the flash unit by its main switch.
- Slide the battery compartment cover to the outside of the flash unit.
- Insert the batteries as indicated by the symbols in the battery compartment.
-  ***When loading the batteries ensure that their + and - poles are aligned with the symbols. Transposed poles can destroy the flash unit. Always exchange both batteries, replacing them with identical batteries of the same capacity from the same manufacturer! Do not***

dispose of spent batteries in the domestic waste bin. Spent batteries should be handed in to an appropriate collecting point.

- Close the battery compartment cover and slide it towards the unit's foot.

2.3 Mounting / removing the flash unit

 **Switch off the flash unit before mounting or removing it.**

Mounting


- Press the unlocking button at the rear of the flash unit and simultaneously slide the flash unit's foot all the way into the camera's flash shoe.

Removing

- Press the unlocking button at the rear of the flash unit and simultaneously withdraw the flash unit from the camera.

2.4 Switching the flash unit on and off

To switch on set the main switch to "ON". To switch off push the main switch down.

 **The dedicated flash functions can only be performed if both the camera and the flash unit are switched on. Additionally, a data exchange must have taken place between the camera and the flash unit. For this purpose it is necessary to lightly press the camera's shutter release.**


Automatic switch-off function / AUTO OFF

To save battery power and prevent inadvertent battery discharge the flash unit is factory-set to switch over to standby mode (AUTO OFF) approx. 3 minutes after:

- switch-on,
- a setting procedure,
- firing a flash.


The flash readiness signal and the indications on the LC display panel go out. After automatic switch-off the last used settings are retained and instantly available when the flash unit is switched on again.

The flash unit is reactivated merely by depression of any key or by lightly pressing the camera's shutter release (wake-up function).

 **The flash unit should always be turned off by its main switch if it is not going to be used for a prolonged period.**

3. Flash coverage and reflector attachments

If there is no attachment in front of the reflector, the flash unit provides full lighting coverage for normal 35 mm shots with lenses as of 35 mm focal length. If a wide-angle diffuser (2.5 mm) is used in front of the reflector, the flash will cover the image angle of a 24 mm lens. When positioning the telephoto attachment (7 mm) in front of the reflector the flash unit will fully illuminate shots taken with a telephoto lens of 85 mm focal length and longer. The attachments can be placed from above.

 **Please note that the effective range of the flash light is diminished by using a wide-angle diffuser, and increased with a telephoto attachment. For digital cameras take into account that the focal lengths are given for the 35 mm format (see operating instructions of the individual camera).**

For correct maximum flash range indication on the flash unit's LC display it is necessary to set the reflector status on the flash unit, taking into account whether the flash unit is being operated with or without a reflector attachment.

Operation with wide-angle diffuser ("WIDE")

When using the 24 mm wide-angle diffuser (2.5 mm), continue depressing the "ZOOM" button until "WIDE" is indicated on the LC display.


Operation with telephoto attachment ("TELE")

When using the 85 mm telephoto attachment (7 mm) continue depressing the "ZOOM" button until "TELE" is indicated on the LC display.

Operation without reflector attachment

When no reflector attachment is used, then continue depressing the "ZOOM" button until "TELE" and "WIDE" disappear from the LC display.

The setting becomes instantly effective and is automatically saved.

 **Various cameras do not transmit any digital data to the flash unit. In this case there is no maximum flash range indication given so**

that the reflector status setting is either not possible or necessary.

4. Flash modes


The different flash modes, e.g. TTL, manual flash mode M and MLo, are selected by repeated depression of the "MODE" button. The selected flash mode flashes on the LC display of the flash unit.

4.1 TTL flash mode

The TTL flash mode is a very simple way to achieve excellent flash shots. In this mode exposure readings are taken by a sensor built into the camera which measures the light reaching the film through the camera lens (TTL). The electronic control circuit within the camera transmits a stop signal to the flash unit as soon as the film has been exposed by the correct amount of light, thereby instantly interrupting the flash. The advantage of this flash mode is that all factors influencing correct exposure of the film (filters, change of aperture and focal length with zoom lenses, extensions for close-ups, etc.) are automatically taken into account. You need not worry about setting the flash, the camera's elec-

tronic system automatically determines the correct amount of flash light required. For the maximum flash range please observe the distances given in the LC display of the flash unit (see section 5.7). If flash exposure was correct, the LC display of the flash unit indicates "o.k." for about 3 sec. (see section 5.2).

Normally, the TTL flash mode is supported by all camera modes, e.g. Program "P" (Full Auto Mode or "Green Square"), Aperture Priority Mode ("A" or "Av"), Shutter Priority Mode ("T", "Tv" or "S"), programmed image control or scene modes (landscape, portrait, sports, etc.), Manual Mode "M", etc.

 ***Various digital cameras do not support the "normal" TTL flash mode. In this case it is necessary to select the given advanced variant of the TTL flash mode on the flash unit.***

Setting on the flash unit

- Switch on the flash unit.
- Continue depressing the "MODE" button until "TTL" flashes on the display.

The setting becomes immediately effective and is automatically saved after 5 sec.

Automatic TTL fill-in flash

Most camera models automatically activate the fill-in flash mode when in Full Auto Mode, Program “P”, Vari or a scene mode in daylight (see operating instructions of the camera).

Fill-in flash overcomes troublesome dense shadows and produces a more balanced exposure between subject and background with contre-jour shots. The camera’s computer-controlled metering system sets the most suitable combination of shutter speed, working aperture and flash output.

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ⓘ *Ensure that the contre-jour light source does not shine directly into the lens as this will mislead the camera’s metering system!*

There is no setting made or indication given on the flash unit for this function.

4.2 Only 28 AF-3 C digital: Canon E-TTL flash mode

The E-TTL flash mode is an advanced variant of the “normal” TTL flash mode. Prior to shooting, the

reflection of the subject is measured by way of a preflash. The camera evaluates the reflected preflash light so that the subsequent flash exposure is optimally adapted to the prevailing photographic situation (see operating instructions of your camera). The measuring preflash does not contribute to the exposure.

Settings and displays

- Switch on the flash unit
- Lightly touch the camera’s shutter release for data exchange between flash unit and camera.
- Continue to depress the “MODE” button on the flash unit until “E-TTL” flashes on the display.
- The setting becomes instantly effective and is automatically saved after 5 sec.

ⓘ *Most digital cameras support the E-TTL flash mode only in the full auto mode (AUTO), Program “P”, “Av”, “Tv” and the programmed image control modes. Other flash modes such as normal TTL or Manual M or MLo are not possible in these camera modes. The manual M or MLo flash mode is supported*

by the digital cameras only in the camera's manual mode "M". Please also refer to the camera's operating instructions.

Setting on the flash unit

👉 With some cameras the E-TTL mode is automatically activated on the flash unit when the green full auto mode or a programmed image control mode is selected.

FE flash exposure storage

Some Canon cameras offer the possibility of FE flash exposure storage. This is supported by the flash unit in the E-TTL flash mode.

FE flash exposure storage in E-TTL mode permits the amount of light required for the subsequent shot to be determined and stored prior to exposure. This can be expedient when flash exposure has to be adapted to specific details that may not necessarily be identical with the main subject.

Focus the camera's AF sensor metering area on the zone whose flash exposure is to be predetermined. When the FE button on the camera is actuated (the designation may vary with individual

camera models - see camera's operating instructions) the flash unit will fire an FE test flash. The electronic measuring circuit inside the camera assesses the reflected light of the FE test flash to determine the light output required for the subsequent exposure. The main subject can thereafter be focused with the AF sensor metering area of the camera. When the shutter release is pressed the picture will be exposed with the previously determined light output.

Due to system-inherent reasons any changes in the light situation after the FE test flash has been fired will not be taken into account when the picture is shot.

Some cameras do not support FE flash exposure storage in the "green" full auto mode or programmed image control modes (see camera's operating instructions).

4.3 Only 28 AF-3 M digital: TTL preflash metering and ADI-flash metering

👉 For system-induced reasons these flash modes are only possible with Minolta Dimage digital cameras!

TTL-preflash metering

The TTL flash mode with preflash metering is an advanced variant of the “normal” TTL flash mode. Prior to shooting, the reflection of the subject is measured with a preflash. The camera evaluates the reflected preflash light so that the subsequent flash exposure is optimally adapted to the prevailing photographic situation (see operating instructions of your camera).

Settings and displays

The flash unit must be switched to “TTL” mode (see 4.1). On the camera, the flash mode “TTL preflash metering” must be set (see operating instructions of the camera).

There is no indication for TTL preflash metering on the flash unit's display.

ADI flash metering (Advanced Distance Integration)


ADI flash metering is a TTL preflash metering mode (see above) that has been additionally extended by guide number control. In this mode the camera additionally takes into account the data relating to the subject's distance (see operating instructions of the camera).

Settings and displays

The flash unit must be switched to “TTL” mode (see 4.1). On the camera, the operating mode “ADI flash metering” must be set (see operating instructions of the camera).

ADI flash metering is not indicated on the flash unit's display.

4.4 Only 28 AF-3 N digital: i-TTL and i-TTL-BL flash modes

 ***These flash modes are only available with appropriate Nikon SLR cameras (e.g. Nikon D70; see operating instructions of the camera)!***

i -TTL flash mode

i-TTL flash mode is an advanced variant of the “normal” TTL flash mode. When shooting a picture, several weakly visible preflashes are fired by the flash unit prior to exposure. The camera then evaluates the reflected preflash light so that the subsequent flash exposure is optimally adapted to the prevailing photographic situation (see operating instructions of the camera).

Settings and displays

The flash unit must be switched to "TTL" mode (see 4.1). The i-TTL flash mode will automatically be activated for operation with suitable cameras.


i-TTL-BL flash mode

With this setting in i-TTL flash mode, the camera additionally takes into account data relating to the subject's distance (see above).

For i-TTL-BL flash mode, both the camera and the lens must support the evaluation of distances (see operating instructions of the camera and the specifications for the given lens).

Some cameras only support the i-TTL flash mode for SPOT exposure metering. The i-TTL-BL flash mode can then not be activated.

Settings and displays

- Switch on the flash unit.
- Continue depressing the "MODE" button until "TTL" and the symbol  flash on the display. Appropriate cameras will then automatically activate the i-TTL-BL flash mode.

- The setting becomes immediately effective and is automatically saved after 5 sec.

4.5 Only 28 AF-3 O digital: TTL with preflash for Camedia digital cameras

The TTL flash mode with preflash metering is an advanced variant of the "normal" TTL flash mode. Prior to shooting, the reflection of the subject is measured with a preflash. The camera evaluates the reflected preflash light so that the subsequent flash exposure is optimally adapted to the prevailing photographic situation (see operating instructions of your camera).

Settings and displays

The flash unit must be switched to "TTL" mode (see 4.1). This is not specifically displayed by the flash unit.

- ⓘ ***The camera system does not permit "normal" TTL flash control without metering preflash.***


4.6 Manual flash modes M and MLo

In these modes the flash unit fires an uncontrolled flash at full light output P 1/1 when in "M" mode or partial light output P 1/8 when in "MLo" mode.


Adaptation to the prevailing photographic situation is by selecting a corresponding aperture on the camera or by setting the partial light output. The LC display of the flash unit indicates the flash-to-subject distance required for correct flash exposure (see 5.7).

Setting procedure


- Continue despressing the "Mode" key on the flash unit until "M" or "MLo" flashes on the display. The setting instantly becomes effective and is automatically saved after 5 seconds.

 ***On some cameras, the manual flash mode "M" or "MLo" is only supported in the manual camera mode "M". (Please refer to the camera's operating instructions).***

5. Dedicated flash functions



 ***Dedicated flash functions are flash functions that have been specifically adapted to a given camera system (Canon, Minolta, Nikon, Olympus) (see Table 1). The supported flash functions depend on the type of camera used. It is impossible to describe in detail all camera types and the individual dedicated flash functions within the framework of these instructions. Therefore please refer to the flash mode description in your camera's operating instructions.***

5.1 Flash readiness indication

The flash readiness symbol  lights up on the flash unit when the flash capacitor is charged, thereby indicating that flashes can be fired for the next shot. Flash readiness is also transmitted to the camera for corresponding indication in the viewfinder or on the camera's display panel (see camera manual).

If a picture is shot before flash readiness is signaled, then the flash unit will not be triggered so that the exposure may be incorrect if the camera has

changed over to flash sync speed in the meantime (see 5.3).

 ***If the flash unit is ready for firing you can trigger a test flash with the manual firing button .***

5.2 Correct exposure indication

The “o.k.” correct exposure confirmation only appears for about 3 s in the flash unit’s LC display if the shot was correctly exposed in TTL flash mode or the corresponding advanced variant of TTL flash mode. If “ok” is not displayed then this means that the shot was underexposed. The shot will then have to be repeated with the next smaller f-number (e.g. f/4 instead of f/5.6) or the flash-to-subject distance must be reduced. Please note the maximum flash range indicated on the flash unit’s display (see 5.7).

Depending on the type of camera used, the flash unit transmits the correct exposure confirmation signal to the camera for corresponding indication in the viewfinder or on the camera’s display panel (for system-inherent reasons, this does not apply to Canon and Olympus cameras).


There is no correct exposure confirmation given in the manual modes M or MLo.

5.3 Automatic flash sync speed control

Depending upon the camera model and camera mode, the shutter speed is changed to flash sync speed when flash readiness is reached (see camera’s operating instructions).

Shutter speeds faster than the camera sync speed cannot be adjusted or they are automatically changed to the camera’s sync speed. Various cameras have a sync speed range, e.g. 1/30th sec. to 1/125th sec. (see camera’s operating instructions). The actual sync speed set by the camera depends upon the camera mode, the ambient light and the focal length of the lens used.

Shutter speeds slower than the flash sync speed can be used, depending upon the camera mode and the selected flash synchronisation (see also 5.5).

 ***Various digital cameras are equipped with a between-the-lens shutter. Such cameras permit the use of flash at all shutter speeds, however there is no automatic flash sync***

speed control. If you need the full light output of the flash unit you should not set shutter speeds faster than 1/300 sec.

5.4 Manual TTL flash exposure correction

The TTL auto flash mode of most cameras is matched to a 25 % degree of light reflection by the subject (average amount of light reflected by subjects when taking flash shots). Consequently, a dark background that absorbs a great deal of light, or a bright background that reflects a great deal of light, can result in under or over exposure, respectively.

To offset this effect a correction value can be set on some cameras to manually match the TTL flash exposure to the photographic situation. The extent of correction depends on the contrast prevailing between subject and background.


A dark subject in front of a bright background:
Positive correction value.

Light subject in front of a dark background:
Negative correction value.

Correction value settings can change the maximum flash range indicated on the flash unit's LC

display and match it to the given correction value (depends upon the camera model)!

Exposure correction by changing the lens diaphragm is not possible because the camera's automatic exposure system will automatically regard the changed diaphragm as the normal working aperture.

 ***After the exposure do not forget to reset the TTL flash exposure correction back to the normal value on the camera!***

5.5 Flash synchronisation


Normal synchronisation

In normal synchronisation the flash unit is triggered at the beginning of the shutter time (1st curtain synchronisation). Normal synchronisation is the standard mode on all cameras, and is suitable for most flash shots. Depending upon the given mode, the camera is changed over to the camera's sync speed, the customary ones being between 1/30th sec. and 1/125th sec. (see camera's operating instructions). No settings have to be made on the flash unit, nor is there any display for this mode.

REAR - Second-curtain synchronisation

Some cameras offer the facility of second-curtain synchronisation (REAR mode) triggering the flash unit by the end of the exposure time. Second-curtain synchronisation is particularly advantageous when using slow shutter speeds (slower than 1/30 s) or when shooting moving objects that have their own source of light. Second-curtain synchronisation gives a more realistic impression of movement because the light streaks behind the light source instead of building up in front of it, as is the case when the flash is synchronised with the 1st shutter curtain. Depending on its operating mode, the camera uses shutter speeds slower than its sync speed.

The REAR function must be set on the camera (see camera's operating instructions). No settings are made on the flash unit nor is there any display for this function.

 ***On some cameras the REAR function is not possible in certain operating modes (e.g. full auto mode, or certain Vari or programmed image control modes or Red-Eye-Reduction)***

so that it cannot be selected. It will then be automatically deleted (please refer to the camera's manual).

Slow synchronisation / SLOW

Various cameras feature SLOW flash synchronisation in certain modes. This setting will give added prominence to the background at lower ambient light levels. This is achieved by matching the shutter speed to the ambient light. Accordingly, shutter speeds that are slower than the camera's sync speed are automatically adjusted by the camera. Some cameras automatically activate SLOW synchronisation in connection with certain camera programs (e.g. night shots program, etc.) (see camera's instruction manual). No settings are made on the flash unit nor is there any display for this mode.

 ***Use a tripod to avoid camera shake with slow shutter speeds!***

5.6 AF measuring beam

The AF measuring beam is activated by the camera's electronics when the ambient lighting conditions are insufficient for automatic focusing. De-

pending on the type of camera and flash unit, the flash unit fires a series of short flashes or the built-in AF beam emitter is activated (only 28 AF-3 O).

The camera lens must be switched to AF to be able to activate the AF measuring beam. Besides, the AF mode "Single AF" or "ONE-SHOT-AF" must be set on the camera. Should your camera have several AF sensors we recommend to only activate the camera's central AF metering area. If a decentral AF sensor is manually selected by the photographer, or automatically by the camera, it may happen that the AF measuring beam is not activated. In such instances some cameras will use the AF illuminator integrated in the camera.

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🗨️ *On some cameras only the AF illuminator integrated in the camera will be activated. Or, it is either the flash unit's AF measuring beam that will be activated or the camera's AF illuminator, depending on the ambient lighting conditions. Zoom lenses with a small initial aperture, converters and filters may significantly reduce the effective range of the AF measuring beam. For the settings on the*

camera please refer to the corresponding notes in your camera's operating instructions.

5.7 Automatic maximum flash range indication

The maximum flash range is indicated on the flash unit's LC display in the flash modes TTL, Manual M and MLo when the camera automatically transmits the data for ISO sensitivity and aperture to the flash unit. The distance range is only indicated after data exchange between flash unit and camera has been completed. For this purpose switch on the camera and lightly touch the shutter release.

If your camera does not transmit these data then the maximum flash range will not be indicated.

🗨️ *Correct display presupposes that the reflector status (operation with wide-angle diffuser or telephoto attachment) is manually set on the flash unit according to the corresponding camera values (see section 3). Indication of the maximum flash range can be in meters (m) or feet (ft) (see section 6.2).*

Maximum flash range indication in TTL flash mode

The flash unit's LC display indicates the maximum flash range. The indicated value relates to a factor of 25 % of light reflection by the subject, which applies to most photographic situations. Pronounced deviations from this reflection factor, e.g. with highly reflective or poorly reflecting objects, can influence the maximum flash range of the flash unit.

Always observe the maximum flash range indicated by the flash unit's LC display. The subject should be within approx. 40 % and 70 % of the indicated value. This gives the electronic circuit sufficient scope for compensation. To avoid overexposure, the minimum flash-to-subject distance should not be less than 10 % of the indicated value. Adaptation to the given photographic situation is possible by changing the aperture setting on the lens.

Maximum flash range indication in the manual flash modes M and MLo

The flash unit's LC display indicates the distance to be maintained for correct exposure of the subject.

Adaptation to the given photographic situation is achieved by changing the aperture setting on the lens and selecting either "M" for full light output or "MLo" for partial light output (P 1/8) (see 4.6).

Exceeding the display range

The LC display of the flash unit can indicate a maximum range of 199 m or 199 ft. The display range of feet (ft) may be exceeded in the event of high ISO values and large aperture openings. This is signalled by the flashing of "199ft".


5.8 Preflashes for red-eye reduction


Red eyes are always the result of a physical effect. This arises whenever a person looks more or less straight into the camera, the ambient light is relatively dark, and the flash unit is mounted on or directly next to the camera. The flash unit illuminates the back of the eyes, revealing the blood-filled retina through the pupil. This is recorded by the camera as a red spot in the eyes.


The red-eye reduction facility brings about a significant improvement in this respect. When this function is used, the flash unit will fire one or more weakly visible preflashes (depending on the

camera type) prior to shutter operation, which are followed by the main flash. These preflashes induce the pupils to close down, thereby diminishing the red-eye effect.

The preflash function is set on the camera. An activated preflash function is indicated on the camera's LC display by a corresponding symbol (see operating instructions of the camera). There is no setting made on the flash unit, nor an information given on the flash unit's display.

 ***The preflash function for red-eye reduction is only possible with cameras that support this mode!***

 ***On some cameras, the preflash function only supports the camera's internal flash unit or an illuminator incorporated in the camera body (see operating instructions of the camera). In this case the flash unit will not fire any preflashes (see operating instructions of the camera).***

 ***With some cameras, the preflash function is not possible if 2nd curtain synchronisation (REAR) is set.***

5.9 AUTO-FLASH / Triggering control

If the ambient light is sufficient for an exposure in normal mode, then the camera will prevent the flash unit from firing flashes. Accordingly, no flash is triggered when the camera's shutter release is pressed. On various cameras, the triggering control only works in the Full Auto Mode or Program "P", or it must be activated on the camera (see operating instructions of the camera).

6. Special functions

6.1 Deactivating the AF measuring beam

The AF measuring beam of the flash units 28 AF-3 C, 28 AF-3 M und 28 AF-3 N can be deactivated if this is required:

- Switch off the flash unit.
- Keep the "MODE" key and the manual firing button depressed.
- Switch on the flash unit.
- "AF / - -" is indicated on the display.

6.1.1 Reactivating the AF measuring beam

- Switch off the flash unit.
- Keep the "MODE" key and the manual firing button depressed.
- Switch on the flash unit.
- "AF / On" is indicated on the display.

 ***The flash unit's AF-measuring beam is only switched on if this function is supported by the camera.***

6.2 Meter-feet changeover (m - ft)

Proceed in the following manner to change between m / ft:

- Turn off the flash unit by its main switch.
- Keep the "ZOOM" key depressed.
- Turn on the flash unit by its main switch.
- Release the pre-select key.

The display changes from "m" to "ft" or from "ft" to "m". The selected unit of measurement is retained after the flash unit has been switched off or the batteries have been exchanged.

6.3 Resetting the flash unit's settings

- Switch on the flash unit by its main switch.
- Keep the "MODE" button depressed for about 5 sec.

The following settings are set:

- The AF measuring beam is activated.
- The reflector status is set at 35 mm illumination without reflector attachment.
- Distance indication is set to "m".
- The TTL flash mode is activated.

7. Troubleshooting, remedies and after-sales service

Please observe the following before contacting the after-sales service:

Problem:

The flash unit does not fire flashes.

Question:

Is the flash-ready light on?

- No:
 - Is the flash unit switched on?
 - Has the flash unit switched itself off automatically?
 - Have the batteries been correctly inserted (poles)?
 - Are the batteries fully charged?
- Yes:
 - Activate the flash mode on the camera.
 - Check that the flash unit is correctly mounted in the camera's accessory shoe.

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Problem:

Flash shots are overexposed.

- Check that the flash unit is correctly mounted in the camera's accessory shoe.
- Set the TTL mode on the flash unit.
- The flash-to-subject distance must not be less than 10 % of the maximum flash range.
- Select a lower ISO sensitivity on the digital camera or for the film, or a higher f-number.
- Have you set an exposure correction value for flash shots on the camera?

Problem:

Flash shots are underexposed.

- Check that the flash unit is correctly mounted in the camera's accessory shoe.
- Set the TTL mode on the flash unit.
- The flash-to-subject distance must not exceed the maximum flash range.
- Select a higher ISO sensitivity on the digital camera or for the film, or a smaller f-number.

- Have you set an exposure correction value for flash shots on the camera?

Problem:

Flash shots are not correctly illuminated right out to the edges.

- Mount the wide-angle diffuser.
- Use a longer focal length for your shots.

Problem:

There is no maximum flash range indication on the LC-display.

- Check that the flash unit is correctly mounted in the camera's accessory shoe.
- There has been no data exchange between the camera and the flash unit. Lightly touch the camera's shutter release.
- Your camera model does not transmit all data for the aperture and ISO value to the flash unit.

Problem:

The AF measuring beam in the flash unit is not activated.

- Check that the flash unit is correctly mounted in the camera's accessory shoe.

- The ambient light is too bright.
- The camera is not in "Single-AF" or "One-Shot-AF" mode.
- The AF measuring beam was manually deactivated on the flash unit.
- The camera does not support the AF measuring beam on the flash unit.

Problem:

E-TTL / i-TTL / i-TTL BL cannot be activated on the flash unit.

- Check that the flash unit is correctly mounted in the camera's accessory shoe.
- The camera does not support this flash mode.
- The camera has been switched off.
- There has been no data exchange between the camera and the flash unit. Lightly touch the camera's shutter release for a moment.
- Switch off the REAR mode and SPOT exposure metering on the camera.

Unsuccessful troubleshooting

- Switch off the flash unit by its main switch, wait briefly, and then switch on again.
- Reset the flash unit settings (see section 6.3).

If the flash unit should still not function properly even though all suggested solutions have been observed, then please contact an authorised dealer.

Forming the flash capacitor

For technical reasons it is necessary to switch on the flash unit for approx. 10 minutes (in standby mode) every 3 months. The capacitor incorporated in the flash unit undergoes a physical change if the flash unit is not switched on for prolonged periods.

The batteries must supply sufficient power for flash readiness to be indicated within 1 minute after the unit was switched on.

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8. Technical data

Guide number at ISO 100 / 21°:

28 (with 7 mm telephoto attachment)

22 (without attachment)

16 (with 2.5 mm wide-angle diffuser)

Flash modes:

TTL, Manual M and MLo

and additionally ...

with 28 AF-3 C digital:

Canon E-TTL, flash exposure storage FE

with 28 AF-3 N digital:

Nikon i-TTL, i-TTL-BL

with 28 AF-3 M digital:

Minolta ADI and preflash technology for digital cameras

with 28 AF-3 O digital:

Olympus TTL for Camedia digital cameras

... depending on the type of camera used.

Manual light output settings:

P 1/1, P 1/8

Sensitivity:

ISO 6 ... ISO 6400

Colour temperature:

approx.. 5600 K

Flash duration: 1/300 s ... 1/45000 s with TTL

Recycling times with full-power flash:

with alkaline manganese batteries approx. 8 s

with NiCad batteries approx. 6 s

with NiMH batteries approx. 6 s

Number of flashes at full light output:

with alkaline manganese batteries > 100

with NiCad batteries (250 mAh) > 35

with NiMH batteries (700 mAh) > 100

Light coverage: rectangular

Focal length in keeping with 35 mm format:

As of 24 mm with wide-angle diffuser
(horizontal 75°, vertical approx. 55°).

As of 35 mm without attachment
(horizontal approx. 56°, vertical approx. 40°).

As of 85 mm with telephoto attachment
(horizontal approx. 25°, vertical approx. 18°).

Weight: approx. 100 g (without batteries)

Dimensions (w x h x d): 58 mm x 85 mm x 32.5 mm

Included:

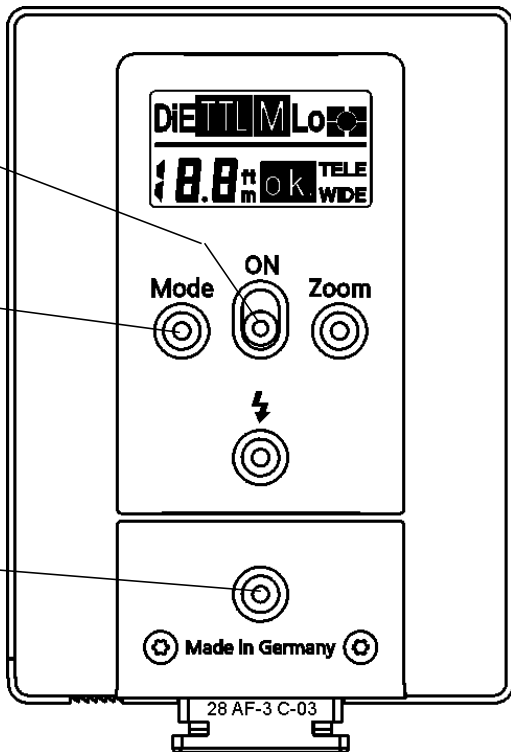
Flash unit, attachments, operating instructions

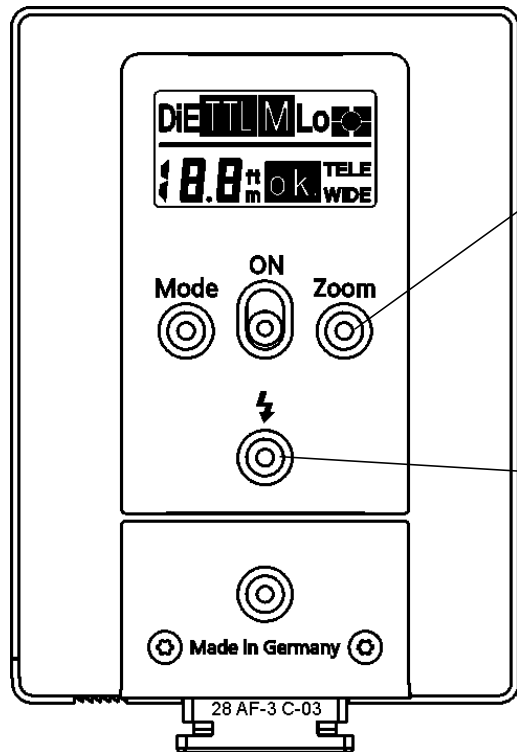


Hauptschalter
Interrupteur général
Hoofdschakelaar
Main switch
Interruttore principale
Interruptor principal

Betriebsartenwahl
Sélecteur de mode
Functieschakelaar
Mode selector
Selettore del modo di funzionamento
Selección de modos de funcionamiento

Entriegelungsknopf
Bouton de déverrouillage
Ontgrendelknop
Unlocking catch
Tasto di sblocco
Botón de desbloqueo



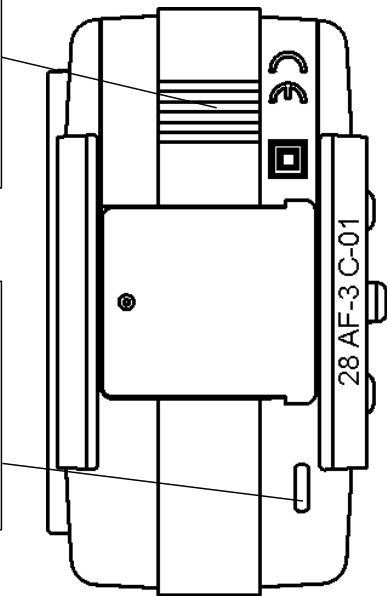


Reflektorstatus einstellen
 Réglage de l'état du réflecteur
 Instelling van de reflectorstatus
 Reflector status setting
 Impostazione della parabola
 Ajustar el estado del reflector

Handauslösetaste und
 Blitzbereitschaftsanzeige
 Bouton d'essai et témoin de recyclage
 Ontspanknop voor handbediening en
 flitsapparaat-aanduiding
 Manual firing button and flash-ready
 indicator
 Pulsante test (emissione manuale del
 lampo) e indicazione di "pronto lampo"
 Tecla de disparo manual e indicación
 de disposición de disparo

Batteriefachdeckel
Couvercle du compartiment des piles
Deksel batterijvak
Battery compartment lid
Coperchio del vano batteria
Tapa del compartimento de pilas

Servicebuchse -für den Fachhändler
Connecteur S:A:V: - pour le revendeur
Servicebus - voorde vakman
Service socket - for service-technician
Presa di servizio - per il rivenditore specializzato
Toma para servicio - Para el distribuidor





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Änderungen und Irrtümer vorbehalten !

Sous réserve de modifications et d'erreurs !

Onder voorbehoud van wijzigingen en vergissingen !

Errors excepted. Subject to changes !

Riserva di modifiche e disponibilità di fornitura.

Con reserva de modificaciones y posibilidades de entrega.

mecablitz 28 AF-3 digital

für Digitalkameras mit Zubehörschuh
for digital cameras with accessory shoe



Art.-Nr. 002833102



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