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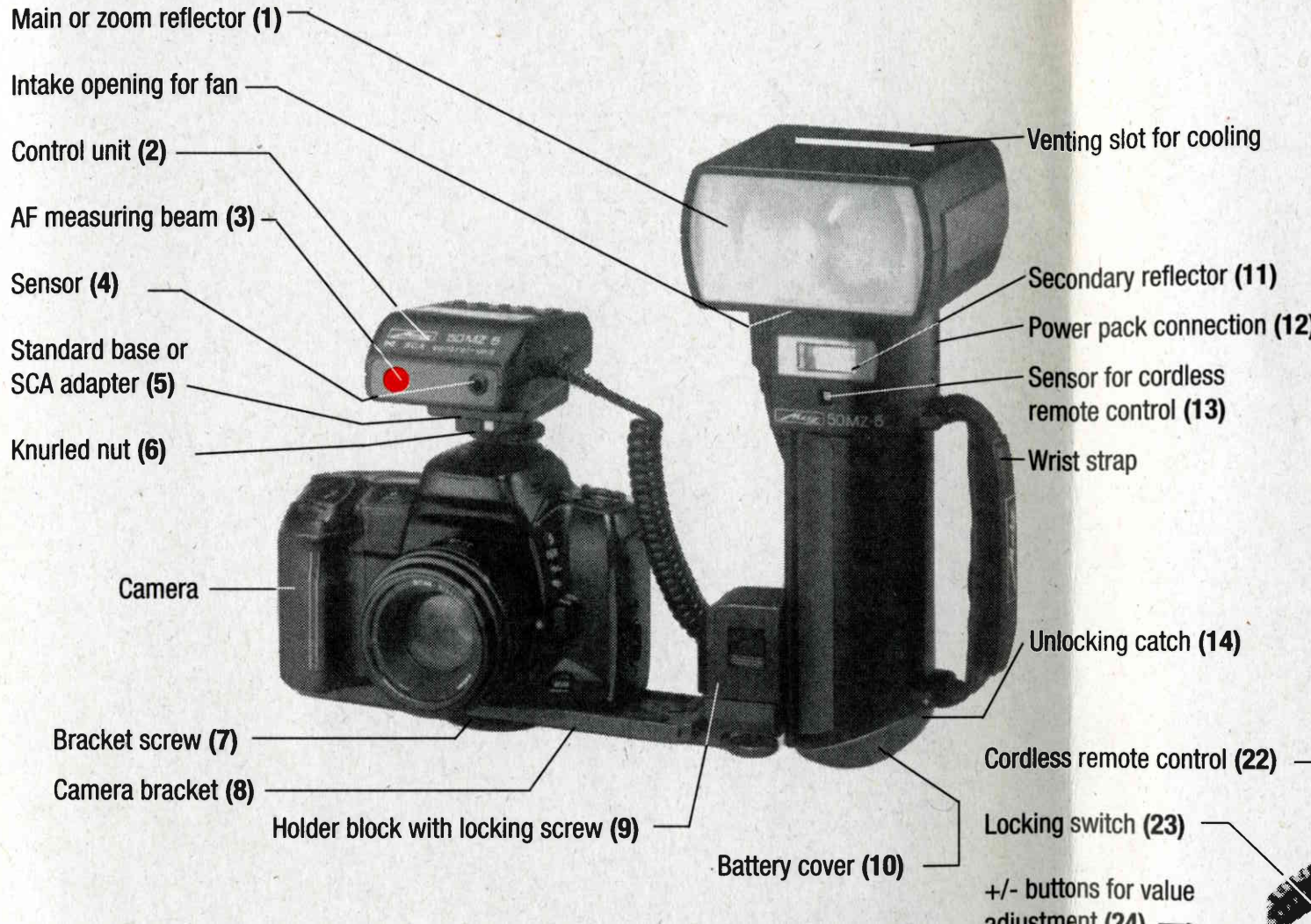
The large manuals are split only for easy download size.



MECABLITZ 50 MZ-5

Operating Instructions

Key to parts



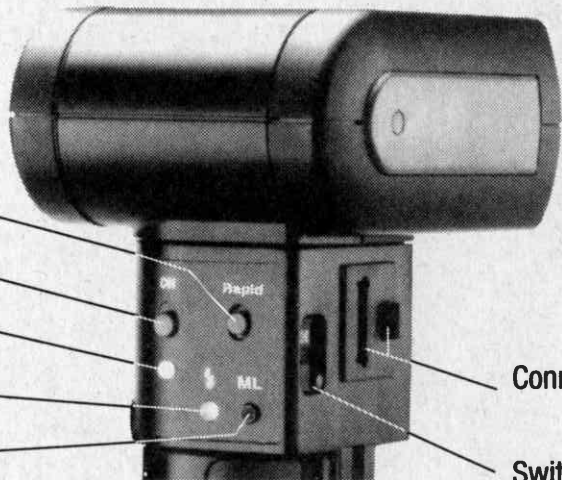
Rapid ON/OFF (15)

Main switch (16)

Operating light (17)

Manual firing button and
flash-ready light (18)

Modelling light(19)



+/- buttons for value
adjustment (24)

Rapid ON/OFF (25)

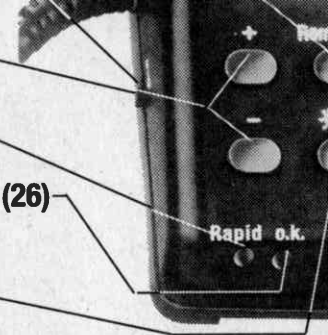
Auto-check exposure o.k. (26)

LCD light (27)

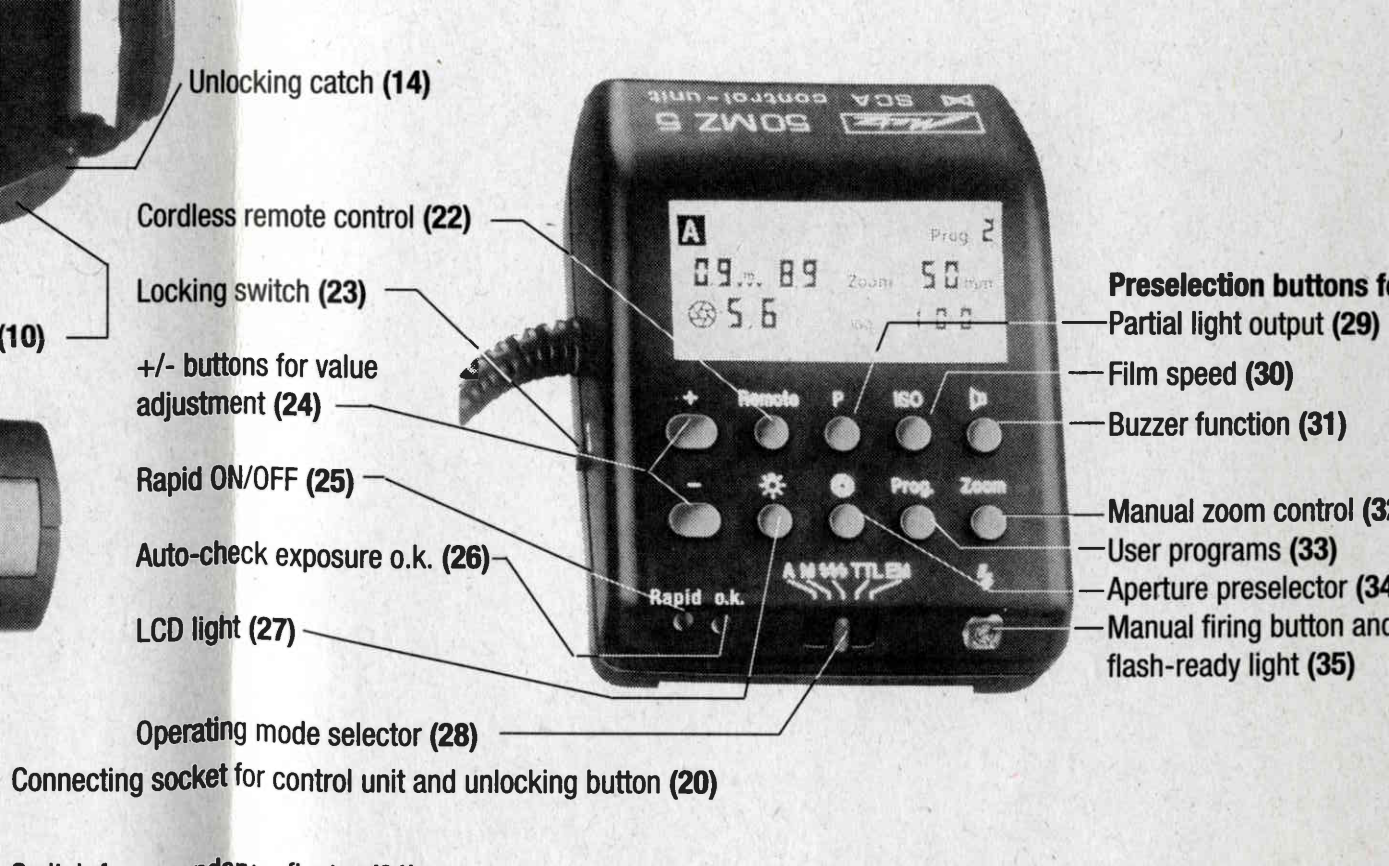
Operating mode selector (28)

Connecting socket for control unit and unlocking button (20)

Switch for secondary reflector (21)



Rapid o.k.



Unlocking catch (14)

Cordless remote control (22)

Locking switch (23)

+/- buttons for value adjustment (24)

Rapid ON/OFF (25)

Auto-check exposure o.k. (26)

LCD light (27)

Operating mode selector (28)

Connecting socket for control unit and unlocking button (20)

Preselection buttons for

Partial light output (29)

Film speed (30)

Buzzer function (31)

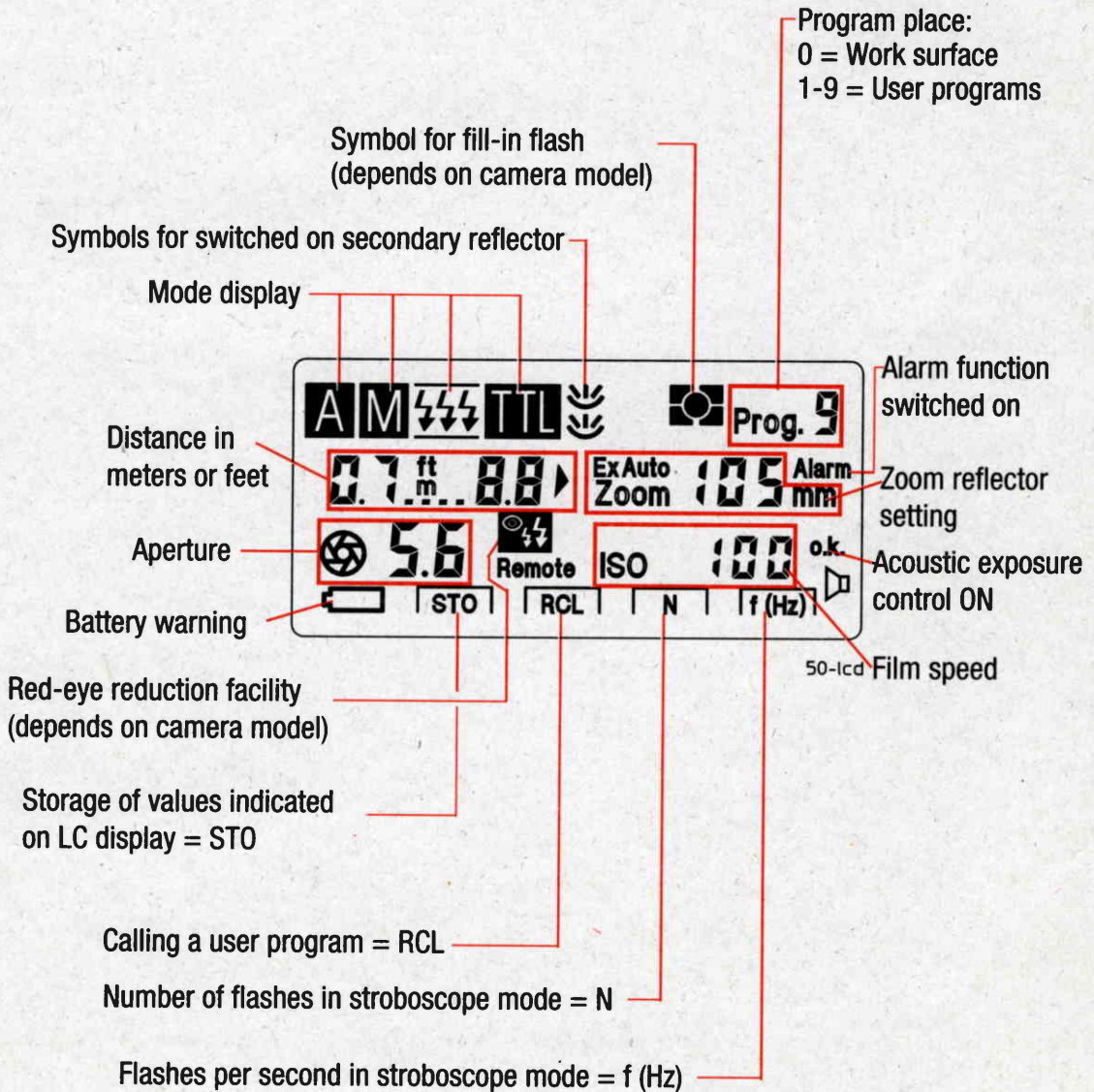
Manual zoom control (32)

User programs (33)

Aperture preselector (34)

Manual firing button and flash-ready light (35)

The LC display



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Foreword and general instructions

Congratulations on purchasing this Metz flashgun, and thank you for your confidence in Metz equipment.

It is only natural that you should want to use your flashgun straight away. However, it will be well worth your while to study these Operating Instructions beforehand to ensure that you can operate the flashgun effectively and without any problems.

Please also open the back cover page with the illustrations.

This flashgun can be used with:

- All cameras with a hot shoe
- All cameras with accessory shoe without hot-shoe contact, and with a synchronizing cable
- System cameras

Optimal adaptation to your camera is achieved by using an SCA adapter. The enclosed SCA 300/3000 table will indicate the adapter you require for your particular camera model. This table also indicates the special flash functions that can then be completed by the given system.

Brief survey of the operating functions:

Configuration

- 50 MZ-5 with 301 standard base:

Operating modes possible

Automatic flash mode, ch. 4, p. 14
Manual flash mode, ch. 5, p. 16
Metz automatic remote control, ch. 7.2, p. 24
Stroboscopic mode, ch. 10, p. 28

- 50 MZ-5 with SCA 300 adapter:

Automatic flash mode, ch. 4, p. 14
TTL flash mode*, ch. 3, p. 10
TTL Easy Mode*, ch. 3.1, p. 10
Manual flash mode, ch. 5, p. 16
Metz TTL remote mode*, ch. 7.1, p. 22
Metz automatic remote mode, ch. 7.2. p. 24
Stroboscopic mode, ch. 10, p. 28

*If the camera performs this function.

- 50 MZ-5 with SCA 3000 adapter:

Automatic flash mode, ch. 4, p. 14
TTL flash mode*, ch. 3, p. 10
TTL Easy Mode, ch. 3.1, p. 10
Manual flash mode, ch. 5, p. 16
Metz TTL remote mode, ch. 7.1, p. 22
Metz automatic remote mode, ch. 7.2. p. 24
Stroboscopic mode, ch. 10, p. 28

The SCA 3000 adapter is the most convenient link to your camera! The ISO, zoom and aperture data are transmitted, depending upon the camera configuration!

Foreword and general instructions

General operating instructions

The subsequent instructions are of a general nature. The procedures identified by red numbers must be completed when using a system camera in conjunction with an SCA 3000 adapter.

All steps identified by red numbers and • are completed with the 301 standard base.

All steps identified with an asterisk * must be additionally adjusted, depending upon the given type of camera.

When manual settings are necessary on the control unit it is always first necessary to press the corresponding button assigned to the given function. The symbol of the selected function will flash for approx. 5 seconds. The value of the function has to be changed with the + buttons during these 5 seconds, otherwise the existing value will be retained

Example: *The zoom setting is to be changed.*

- 1. Press the manual zoom control button (32) - Zoom will flash for approx. 5 seconds.*
- 2. As long as zoom is flashing press the + button (24) to raise the value, e.g. from 50 to 70. Zoom stops flashing after 5 seconds and the changed value is stored.*

NOTE: *These instructions show illustrations of the LC display. The distances indicated in these illustrations are only examples and not binding!*

1. Safety Instructions

- **NEVER fire a flash in the immediate vicinity of the eyes!**
Flash fired directly in front of the eyes of a person or animal can damage the retina and lead to severe visual disorders - even blindness!
- **Never open or short-circuit rechargeable batteries!**
- **Do not expose batteries to excessive heat, for instance sunshine, etc.!**
- **Never throw exhausted batteries on a fire!**
- **Do not expose the flash unit and charger to dripping and splashing water!**
- **Protect the flashgun against excessive heat and humidity! Do not store the flashgun in the glove compartment of a car!**
- **Do not cover the ventilation slots and intake opening on the flashgun.**
Heat build-up inside the flashgun (temperatures exceeding 40°C) automatically switches on the built-in fan to keep the interior of the flashgun cool.
- **As a result of the high light energy of a series of flashes shot with full light output in quick succession, the diffuser becomes intensely heated in zoom positions of 35 mm and less. In such an event the flash recycling time is automatically extended in order to protect the macablitz against overheating!**
- **Never place material that is impervious to light in front of, or directly on, the reflector screen. The reflector screen must be perfectly clean when a flash is fired. The high energy of the flash light will burn the material or damage the reflector screen if this is not observed!**
- **NEVER dismantle the flashgun! DANGER: HIGH VOLTAGE!**
There are no components inside the flashgun that can be repaired by a layperson.

2. Preparing the flashgun for use



Fig. 1: Mounting the components, and removing the standard base or SCA adapter

2.1 Attaching the control unit and the flashgun to the camera

The **control unit** can only be mounted on the camera with the 301 standard base (5) or with an SCA-300 or SCA-3000 adapter (Special Accessories).

Always switch off the camera and the flashgun before mounting or removing the flashgun. The red-light adapters (see also ch. 7, p. 20) of the SCA 300 System, as well as the SCA 356 and the TTL Multiconnector SCA 305 A, can only be used if the SCA 300 D spacer is mounted between the adapter and the control unit.

Push the **control unit**, with attached adapter or 301 standard base, into the camera's accessory shoe and clamp into position with the knurled nut (6). Insert the plug of the control unit's cable into the flashgun's handle. The control unit is fitted with the 301 standard base for simple flash synchronization.

Mounting the **flashgun**:

- Fasten the camera bracket (8) with the bracket screw (7) to the camera's tripod bush.
- Press the unlocking catch (14) on the Nicad battery, and turn the battery cover (10) anti-clockwise until the 1st lock-in position is reached.
- Insert the holder block of the camera bracket into the guiding groove of the flashgun.
- Fasten the holder block with the locking screw (9).
- Turn the battery cover (10) clockwise until it is once again locked. The rectangular projection then covers the opening of the guiding groove.

Removing the control unit, the standard base or the SCA adapter:

To remove the control unit's cable, press the gray release button against the cable's plug while pulling out the cable.

- 1 Push the locking lug upwards towards the control unit.
- 2 Remove the standard base or SCA adapter

2. Preparing the flashgun for use



Fig. 2a: Battery cover

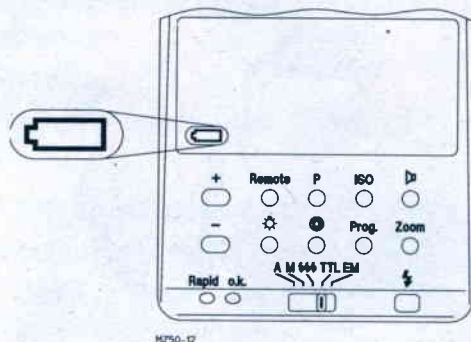


Fig. 2b: Battery warning indicator

Attaching the standard base or SCA adapter:


- Take hold of the battery cover (fig. 2a, only when using the SCA 3000 adapter) in the middle and unclip.
- Push in the SCA adapter or the 301 standard base all the way in.


The control unit is automatically synchronized with the camera when it is inserted in the camera's accessory shoe.

Synchronization of cameras without hot shoe is possible with a synch cable (36-50, short or 36-51, 1 m long, Special Accessories) in the socket of the 301 standard base.

2.2 Power supply and battery warning indicator

The flashgun can only be operated with a Metz NiCad Battery Pack 50-40 or the Power Pack P 50 (optional accessory). A charger for the Metz battery pack is supplied with the flashgun. The battery warning light only comes on when the Battery Pack 50-40 is being used. The operating light (17) in the handle starts flashing when the battery is exhausted, and the battery warning light on the LC display becomes illuminated.

 **The flashing battery symbol (fig. 2b) on the LC display indicates that the Nicad battery is almost exhausted.**

 **Spent batteries must not be thrown into the dustbin! Contribute to the protection of the environment and discard spent batteries at the appropriate disposal points!**

2.3 Replacing and charging the battery

- Switch off the flashgun with the main switch (16).
- Press the unlocking catch (14) on the Nicad battery; turn the battery cover (10) by 45° anti-clockwise until it becomes audibly disengaged at the 2nd lock-in position, and remove.

2. Preparing the flashgun for use

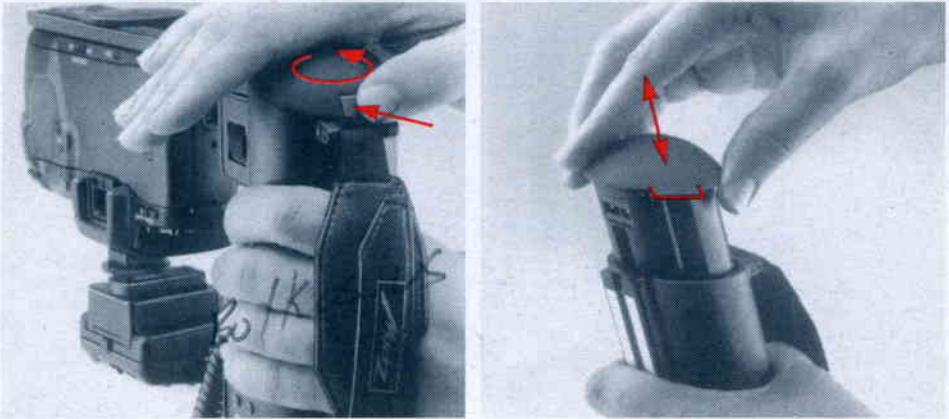


Fig. 3: Unlocking and inserting the battery

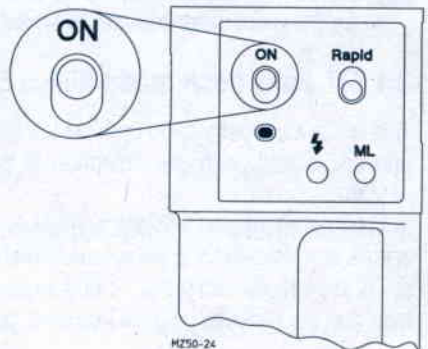
- Connect the charger to the charging socket of the NiCad battery, and then plug into the mains.
 - The charger's timer is switched on when the device is plugged into the mains.
 - The red LED remains illuminated all the while the battery is being charged.
 - After approx. 6 hours the charger is switched over to trickle charging.
 - A flashing red LED (4 sec. "ON", 20 sec. "OFF") indicates that the battery is in trickle charge mode and is ready for operation.
- Turn the battery cover (10) anti-clockwise until the 2nd lock-in position is reached before the battery is returned to the handle.
- For insertion the battery's charging socket must be inside the extension of the aluminium rail of the handle.
- After insertion turn the battery cover clockwise and lock in position.

To identify an exhausted battery: Turn the battery cover clockwise until the stop point is reached.

To identify a newly charged battery: Turn the battery cover anti-clockwise until the stop point is reached.

2.4 Switching the flashgun ON and OFF

The flashgun is switched on with the main switch (16). The flashgun is permanently on in the ON position, and the operating light (17) shines. Push the main switch (16) to the lower position to switch off.



M250-2x

3. TTL flash mode

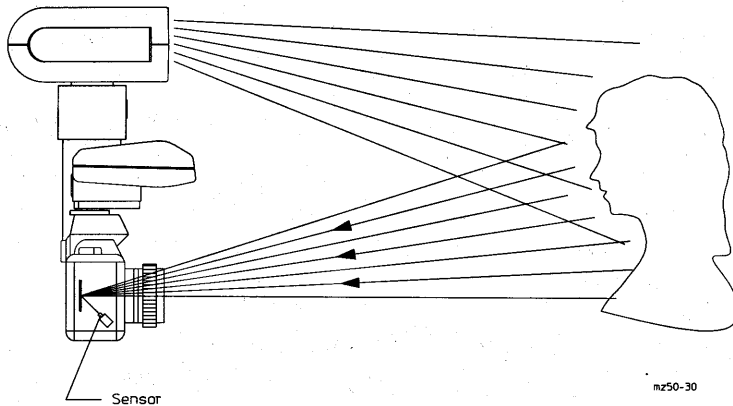



Fig. 4: Measuring method for TTL mode


Perfect flash exposures can be shot in a simple manner in the TTL mode.

The exposure readings in TTL mode are made by the sensor built into the camera (fig. 4). This sensor measures the light reaching the film through the camera lens. As soon as the film has been exposed by the correct amount of light an electronic control circuit within the camera transmits a stop signal to the control unit, and the flash is instantly cut out.



The advantage of this flash mode is that all factors influencing the exposure of the film (filters, change of aperture and focal length with zoom lenses, extensions for close-ups, etc.) are automatically taken into account.

The mecablitz 50 MZ-5 offers two TTL flash modes: the TTL Mode and the TTL Easy Mode.

 **The TTL flash mode is only possible with cameras that feature this function. The control unit must be fitted with a corresponding SCA adapter (see „SCA 3000 System“ instructions and SCA survey table) for this purpose. A film must be loaded in the camera to test the TTL functions.**

 **Exposure corrections may be necessary with pronounced differences in contrast, for instance dark objects in snow (see ch. 14, p. 41).**

3.1 TTL Easy flash mode (EM = Easy Mode)

This is the simplest way to operate the mecablitz in TTL flash mode. All buttons on the control unit are locked, with the exception of the LCD light  (27) and the manual firing button  (35).

In TTL Easy-Mode with the SCA 300 adapter, the zoom position is constantly adjusted to 28 mm to ensure that the subject is always adequately illuminated.

In TTL Easy-Mode with the SCA 3000 adapter, the zoom setting is matched to the focal length of the lens, and the distance range is indicated, provided that the camera supplies the zoom information.

3. TTL flash mode

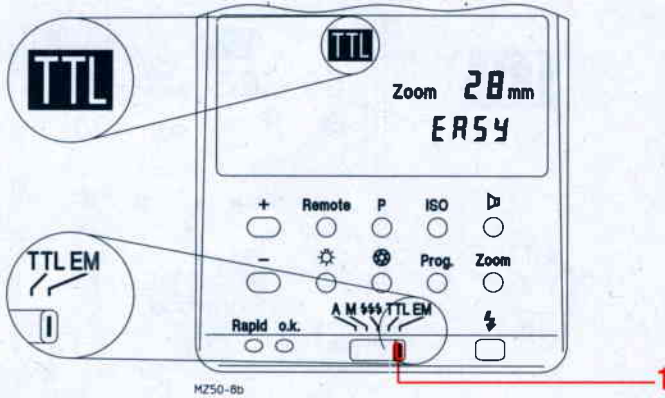



Fig. 5: Adjusting procedure for TTL Easy-Mode

 We recommend the **TTL Easy-Mode** when using an **SCA 300** adapter. Distance indication in the LC display is not possible in this mode.

Adjusting procedure for TTL Easy-Mode:

- Adjust the camera according to the manufacturer's operating instructions.
- Fit the control unit (2) to the corresponding SCA adapter, and mount on the camera.
- Switch on the flashgun with the main switch (16).

1 Adjust the operating mode selector (28) to **EM**.

3. TTL flash mode

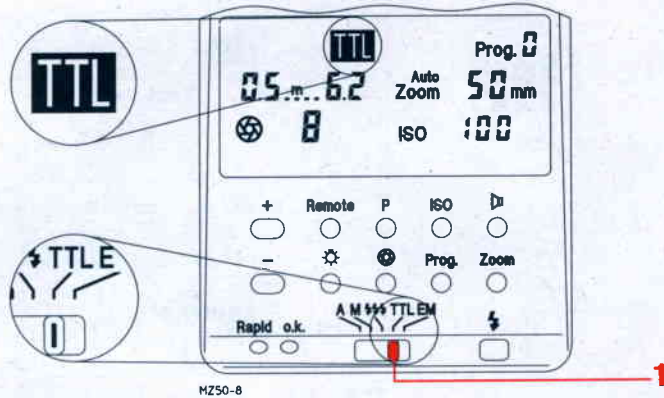



Fig. 6: Adjusting procedure for TTL flash mode

Adjusting procedure for TTL flash mode:

- Adjust the camera according to the manufacturer's operating instructions.
- Fit the control unit to the corresponding SCA adapter, and mount on the camera.
- Switch on the flashgun with the main switch (16).
- 1 Adjust the operating mode selector (28) to TTL.
- *Press the ISO button (30), and adjust the film speed with the + or - button (24).
- *Press the Zoom button (32), and adjust with the + or - button (24) the zoom value that was selected for the camera's lens.
- *Press the button (34), and use the + or - button (24) to adjust the aperture until the subject is located in the middle third of the indicated distance range. Set the resulting aperture also on the camera.
- If required press button P (29), and adjust the partial light output with the + or - button (24) (for Winder Mode see ch. 8, p. 25).

* Must be additionally adjusted on some cameras.

 **On some cameras the data for ISO and aperture are transferred to the control unit by way of the SCA 3000 adapter and cannot be changed manually.**

4. Automatic flash mode

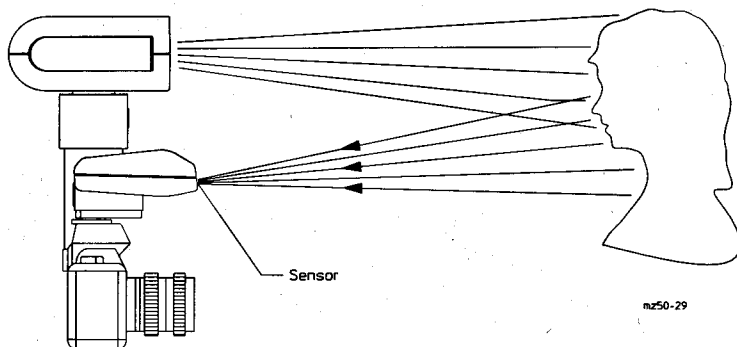


Fig. 7: Measuring procedure for automatic flash mode

In the automatic flash mode the sensor (4) of the control unit measures the light reflected from the subject. The flash is cut off as soon as sufficient light has been emitted for a correct exposure.

In this manner there is no need to calculate and adjust a new aperture when the distance is changed, provided that the subject remains within the indicated automatic flash range.

The sensor (4) of the control unit must be directed at the subject, regardless of the direction at which the main reflector (1) is pointing. The sensor has a measuring angle of approx. 25°, and it only measures the light emitted by the attached flashgun.

Partial light output levels can also be adjusted in automatic flash mode (see ch. 9.1, p. 26).

Between six and twelve working apertures are available in the automatic flash mode, depending upon the adjusted ISO film speed (Table 2 of the Technical Data).

Adjusting procedure for automatic exposure control:

- Adjust the camera according to the manufacturer's operating instructions.
- Switch on the flashgun with the main switch (16).
- 1 Adjust the operating mode selector (28) to A.
- *Press the ISO film speed button (30), and adjust the film speed with the + or - button (24).
- *Press the Zoom button (32), and adjust with the + or - button (24) the zoom value that was selected for the camera's lens.
- Press button \odot (34), and use the + or - button (24) to adjust the aperture until the subject is located in the middle third of the indicated distance range. Set the resulting aperture also on the camera.
- If required press button P (29), and adjust the partial light output with the + or - button (24) (see ch. 9, p. 26)

* Must be additionally adjusted on some cameras.

4. Automatic flash mode

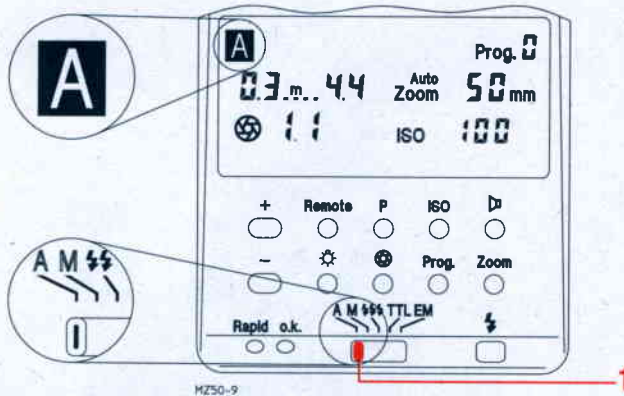


Fig. 8: Adjusting procedure for automatic flash mode

- ☞ **Some cameras automatically transmit the ISO, aperture and zoom values to the control unit also in the auto flash mode if an SCA 3000 adapter is used. No settings have to be adjusted on the control unit where this is the case.**

The permissible distance range and the corresponding aperture appear on the LC display.

- ☞ **The subject should be located within the middle third of this distance range as this gives the electronic control sufficient scope for compensation should this be necessary.**

There is a certain measure of overlap between the individual working apertures. As a result of this overlap it is always possible to place the subject within the middle third of the range.

- ☞ **CAUTION with zoom lenses!**

Due to their design they can cause a loss of light in the order of up to one f-stop. Furthermore, the effective aperture can also vary, depending upon the adjusted focal length. This must be compensated by manually correcting the aperture setting on the control unit!

5. Manual flash mode



Fig. 9: Shot with direct flash light

In this mode the flashgun will emit its full power, provided that partial light output has not been adjusted.

Adaptation to the picture shooting situation is by setting the corresponding aperture on the camera.

A single value for the flash-to-subject distance appears on the LC display while in manual flash mode.

If the displayed value does not coincide with the actual distance, then the aperture and/or partial light output level have to be changed accordingly (see ch. 9.2, p. 26).

The decisive points for partial light output are:

- The distance to the subject
- The required aperture
- The ISO film speed
- The zoom setting of the reflector

☞ The fine scaling of the partial light output levels ensures that the flash-to-subject distance can be adjusted in very small increments.

5. Manual flash mode

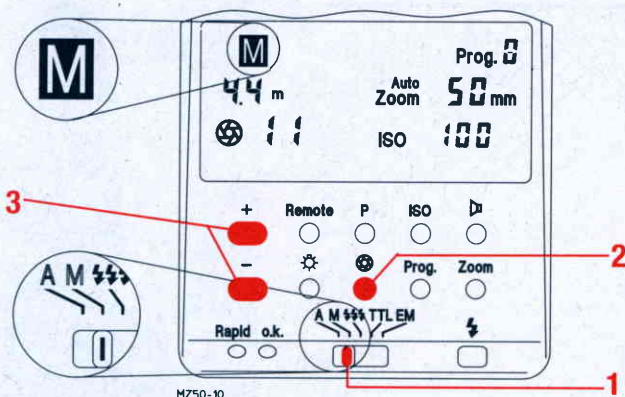




Fig. 10: Adjusting procedure for manual flash mode

Adjusting procedure for the manual flash mode:

- Adjust the camera according to the manufacturer's operating instructions.
- Switch on the flashgun with the main switch (16).
- 1** Adjust the operating mode selector (28) to M.
- *Press the **ISO** button (30), and adjust the film speed with the + or - button (24).
- *Press the **Zoom** button (32), and adjust with the + or - button (24) the zoom value that was selected for the camera's lens.
- 2** Press button  (34)
- 3** Change the aperture on the flashgun with the + or - button (24) so that the required distance is indicated on the LC display. Adjust this aperture value also on the camera.
- If required, press button **P** (29), and adjust the partial light output with the + or - button (24) (see ch. 9, p. 26).

 **Some cameras automatically transmit the aperture, ISO and zoom values if an SCA 3000 adapter is used. In such a case the aperture on the camera must be continuously changed until the required distance is indicated on the LC display of the control unit.**

* Must be additionally adjusted on some cameras.

6. Bounced flash

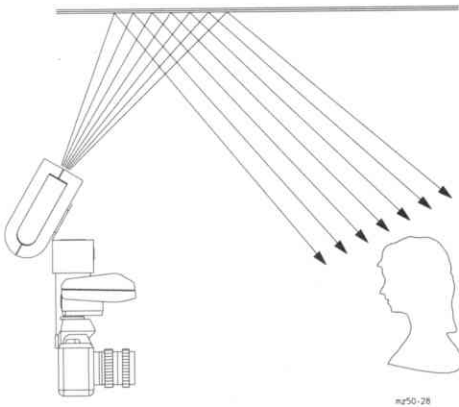


Fig. 11: Bounced flash (The photo was shot with the flash bounced off the right-hand wall)

Photos shot with full frontal flash are easily recognized by their harsh, dense shadows. This is often associated with a sharp drop of light from the foreground to the background.

This phenomenon can be avoided with **bounced flash** because the diffused light will produce a soft and uniform rendition of both the subject and the background. For this purpose the main reflector (**1**) is turned in such a manner that the flash is bounced off a suitable reflective surface (e.g. ceiling or walls of a room).

For this reason the reflector can be turned vertically and horizontally. The vertical lock-in positions for bounced flash are:

- 60°, 75° and 90° (simply tilt the reflector to the required angle)

The head can be swivelled horizontally by 270°, and locks into position at 90° and 180°.

☞ The distance values on the LC display disappear as soon as the reflector is tilted upwards or turned horizontally. This is because the spatial conditions and degree of reflection do not allow the specification of definite distances.

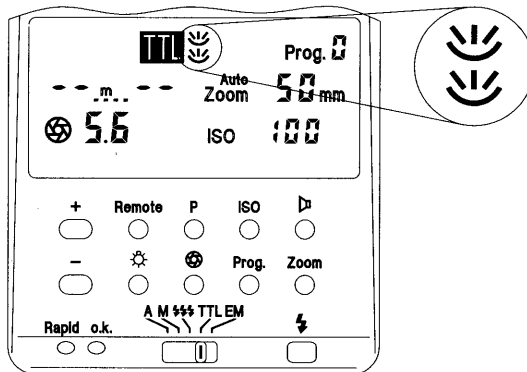
When swivelling the main reflector (**1**) it is essential to ensure that it is turned by a sufficiently wide angle so that direct light can no longer fall on the subject. Therefore, always swivel the reflector to at least the first lock-in position.

The diffused light bounced back from the reflective surfaces results in a soft illumination of the subject.

The reflecting surface must be white or have a neutral colour and it must not be structured (e.g. wooden beams in the ceiling) as this could cast shadows. For colour effects just select reflective surfaces in the required colour.

Use of the secondary reflector (**11**) is advantageous to avoid disturbing dense shadows with bounced flash, for instance under the eyes and nose with portraits.

6. Bounced flash



MZ50-16

Fig. 12: Bouncing the flash with switched-on secondary reflector

6.1 Bounced flash with secondary reflector switched on

The secondary reflector (11) provides frontal fill-in light in increments of 1/4, 1/2 and 1 with bounced flash.

The use of the secondary reflector is only expedient with bounced flash. The secondary reflector will only flash when the main reflector has been turned or tilted.

The secondary reflector (11) is switched on or off with switch (21). Symbols on the LC display indicate that the secondary reflector (11) has been switched on (fig.12).

When the secondary reflector is activated, 90% of the light will be emitted by the main reflector (1), and approx. 10% by the secondary reflector (11). The quoted percentages may vary somewhat when flash with partial light output is adjusted, and the secondary reflector (11) switched on. Light output can be reduced to 1/2 or 1/4 with switch (21) when the light output of the secondary reflector (11) is too high.

6.2 Bounced flash in automatic and TTL flash modes

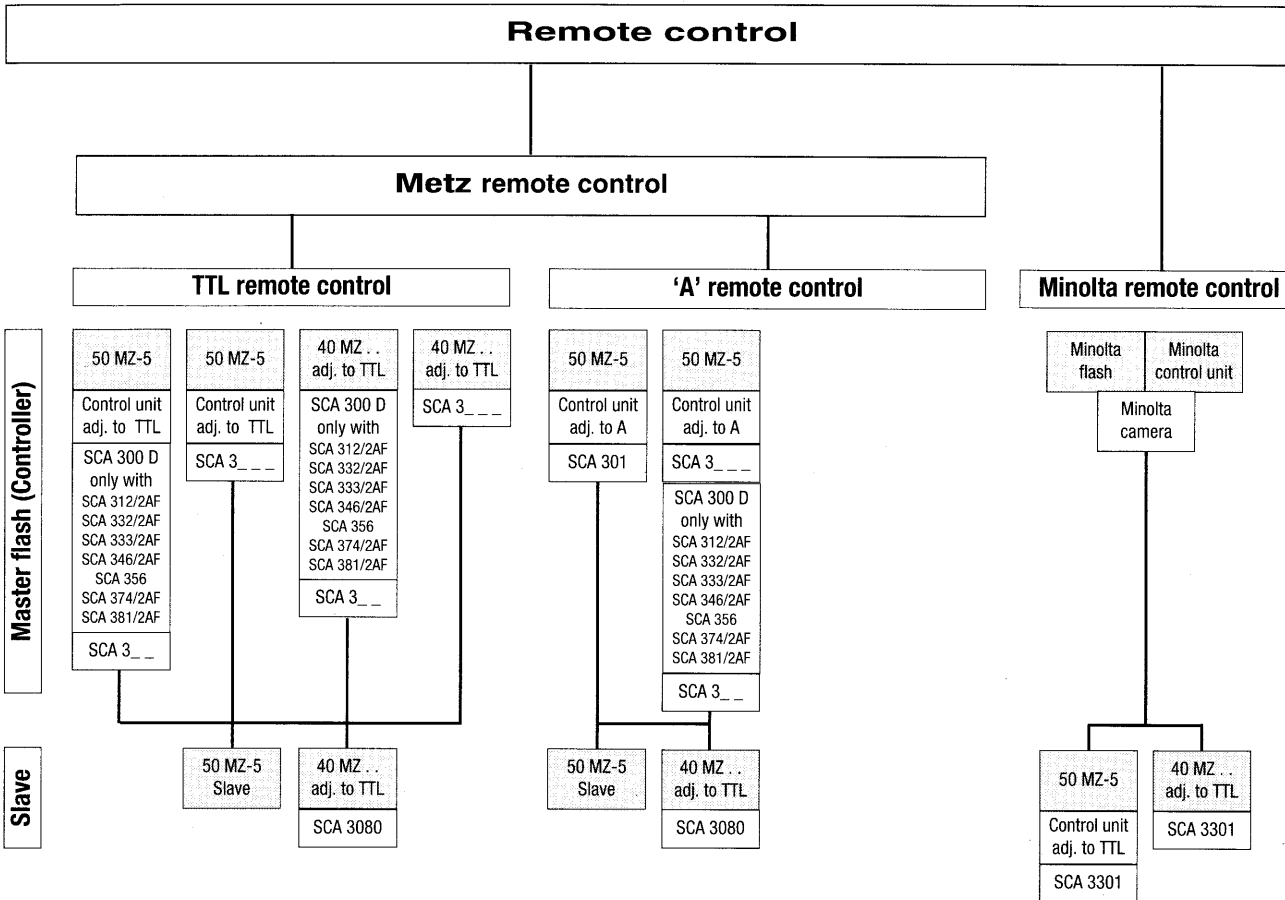
It is advisable to check prior to exposure whether the light is sufficient for the selected aperture. Please refer to ch. 13.2, p. 34, for the corresponding procedure.

6.3 Bounced flash in manual flash mode

The required camera aperture in the manual flash mode is best established with an exposure meter. Observe the following rule of thumb if an exposure meter is not available:

$$\text{Camera aperture} = \frac{\text{guide number}}{\text{light distance} \times 2}$$

to establish the guide value for the f-stop that can then be varied by ± 1 f-stop for the actual exposure.



7. Cordless remote control mode

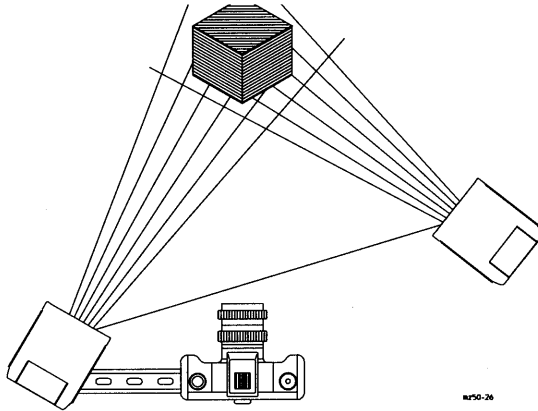


Fig. 13: Set-up for the remote control mode

Definition:

Here, 'remote control' means cordless firing of additional (slave) flashguns. The controlling master flash (controller) attached to the camera controls the additional flash units (slaves) with a start pulse in such a manner that automatic exposure control in TTL flash mode is extended to all slave flashguns.

The Metz remote control mode permits joint, cordless flash control of several off-camera flashguns of the type 40 MZ . . and 50 MZ-5.

For this purpose all additional slave units of the type 40 MZ . . must be fitted with an SCA 3080 slave adapter (Special Accessories). Additional slave flashguns of the type 50 MZ-5 do not require the SCA 3080 slave adapter.

☞ The mecablitz MZ 50-5 can be used as a slave when the plug of the control unit is disconnected.

For **close-ups** with a wide aperture setting and bright ambient light, it is quite possible that the start pulse of the control unit can be sufficient for correct exposure of the film without requiring any additional light output. The slave units are then not fired, or firing is delayed (ca. 0.7 sec.). Consequently, they will only indicate their operating readiness and do not contribute to the exposure of the film.

There are three ways to overcome the problem:

- Reduce the ambient light
- Stop down the aperture (e.g. f/8 instead of f/5.6)
- Select a film with a lower ISO film speed rating

Two different addresses can be selected on the control unit so that two remote systems in the same room cannot interfere with each other. The adjusted addresses are automatically transferred to the slave flashguns after a test flash.

7.1 Cordless Metz TTL remote control

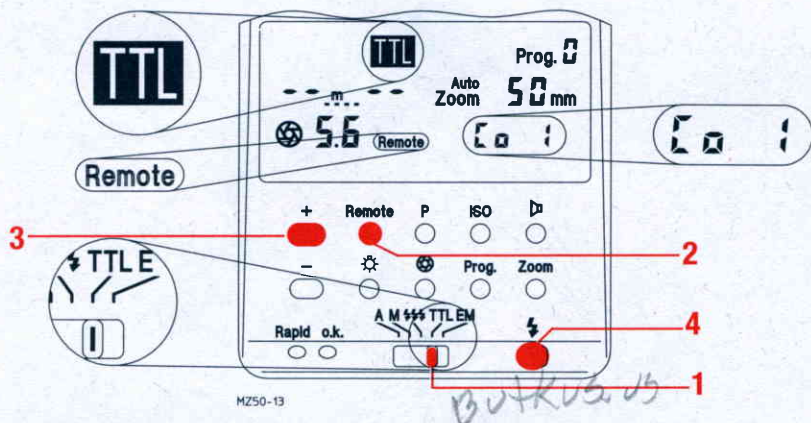


Fig. 14: Adjusting procedure for the Metz TTL remote control mode

Adjusting procedure for the Metz TTL remote control mode:

- Adjust the camera according to the manufacturer's operating instructions.
 - Set a shutter synch speed of 1/60th sec. or slower on the camera.
 - Switch on the master flash attached to the camera with the main switch (16).
- 1** Adjust the operating mode selector (28) to TTL.
 - 2** Press the **Remote** button (22) on the control unit mounted on the camera. The distance values on the LC display disappear.
 - 3** Select the controller address (data transfer channel) **Co 1** or **Co 2** with the - or + button (24).
 - Equip the **40 MZ . . slave flashguns** with an SCA 3080 slave adapter; switch on with the main switch and adjust to TTL. The 40 MZ . . slave flashguns have now been adjusted to slave mode. Switch on the **50 MZ-5 slaves** with the main switch. The zoom position of the main reflector can be adjusted to 4 settings, with switch **☉**: "0" = 28 mm, 1/4 = 35 mm, 1/2 = 50 mm and 1 = 85 mm. Await flash readiness of all flashguns.
 - 4** Press the manual firing button (35) on the control unit mounted on the camera, and fire a test flash so that the slave is adjusted to the controller address.
 - The slave flash unit will respond with a delayed flash, thereby indicating that it is ready for operation. All slave units simultaneously acknowledge operating readiness when several slaves are being jointly used. If a slave unit does not respond, this indicates that the sensor (13) in the slave's handle did not receive a light pulse. Turn the handle of the flashgun so that the sensor (13) can receive the light pulse from the master flash. Now repeat procedure No.4. A particularly short distance between master flash and slave may cause the sensor (4) to interrupt the emission of light before the information has reached the slave. In this case widen the distance between control unit and slave, or set a larger f-number, and repeat procedure No. 4.

7.1 Cordless Metz TTL remote control

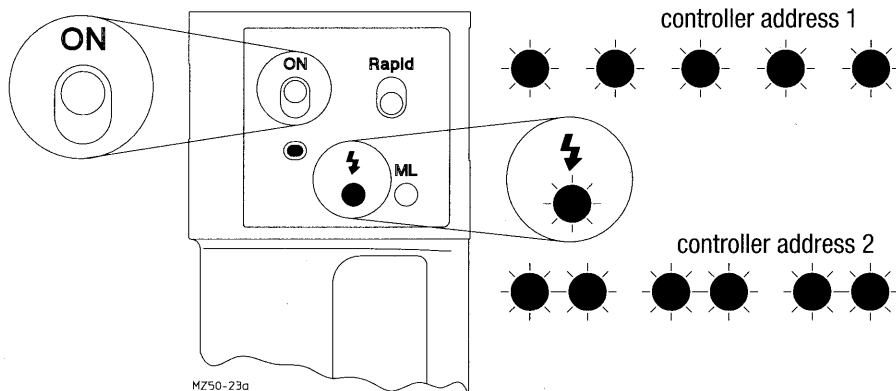


Fig. 15: Display for operation with slave units

A modelling light (approx. 4 sec.) is triggered with the ML (19) button (modelling light) to assess the overall lighting situation in remote control mode. All 50 MZ-5 slaves also generate a modelling light (see Section 13.9, page 40).

⚠ The secondary reflector and/or partial light output must not be switched on in remote control mode! The flashing symbols ☄ indicate the inadmissible secondary reflector setting. Partial light output levels cannot be adjusted.

Checking and changing the slave address:

The **Co1** or **Co2** controller address (data transfer channel) is permanently adjusted after a test flash has been fired as described in procedure No. 4. The flashing flash-readiness display on the 50 MZ-5 indicates the address to which the slave unit has been adjusted. Controller address Co1 has been adjusted if the flash-ready light (18) on the handle flashes in a single second cycle (- - - -); double flashing of the flash-ready light (18) in a single second cycle (-- -- -- --) indicates controller address Co2.

Changing the address setting:

- Switch off the slave unit for at least 5 seconds.
- Switch on the slave unit.
- Repeat the procedures No. 3 and No. 4 to reprogram the slave to a new address.

The acknowledgement of flash readiness in remote control mode is particularly important. Flash readiness has been reached when the flash-ready light (18) on the slave unit 50 MZ-5 flashes.

Switching off the Metz TTL remote control mode:

- Press the **Remote** button on the control unit twice.
- Switch off the slave for at least 5 seconds.

7.2 Cordless Metz automatic remote control mode

In the Metz automatic remote control mode the master flashgun at the camera controls the additional flashguns (slaves) in such a manner that the auto flash mode is transferred to all slave units. Exposure is controlled by the sensor (4) of the control unit. To implement this mode all 40 MZ . . slave flashguns must first be fitted with an SCA 3080 slave adapter (Special Accessories). 50 MZ-5 type slave flashguns do not require a slave adapter.

The Metz automatic remote control mode can be used with system, standard, old mechanical and medium-format cameras.

The only precondition is that all cameras feature a synch contact/socket, and are equipped with a 301 standard base or SCA adapter.

Adjusting procedure for the Metz automatic remote control mode:

- Adjust the camera to manual mode as explained in the manufacturer's operating instructions.
- Set a shutter synch speed of 1/60th sec. or slower on the camera.
- Switch on the master flashgun (controller) with the main switch (16). A 40 MZ . . cannot be used as master flashgun in conjunction with 50 MZ-5 flashguns.
- Adjust the operating mode selector (28) to **A**.
- Press the **Remote** button (22) on the control unit. The distance values on the LC display disappear.
- Select the controller address **Co 1** or **Co 2** with the **±** button (24).
- Equip the **40 MZ . . slave flashguns** with an SCA 3080 slave adapter; switch on with the main switch and adjust to TTL. The 40 MZ . . slave flashguns have now been adjusted to slave mode. Separate the **50 MZ-5 slaves** from the control unit, and switch on with the main switch. The zoom position of the main reflector can be adjusted to 4 settings, with switch **☞** : "0" = 28 mm, 1/4 = 35 mm, 1/2 = 50 mm and 1 = 85 mm.
- Press the manual firing button (35) on the control unit, and fire a test flash.
- The slave will respond with a delayed flash, thereby indicating that it is ready for operation. All slave units simultaneously acknowledge operating readiness when several slaves are being jointly used.

If you find that a slave unit does not respond, this may indicate that the sensor (13) in the slave's handle did not receive a light pulse. Turn the handle of the flashgun in such a manner that the sensor (13) can receive the light pulse from the master flash. Now fire another test flash. A particularly short distance between master flash and slave may cause the sensor (4) to interrupt the emission of light before the information has reached the slave. In this case widen the distance between control unit and slave, or set a larger f-number, and repeat procedure No. 4.

Proceed as described in ch. 7.1 **to check and change the slave address, and to switch off** the automatic remote mode. A modelling light (approx. 4 sec.) can be triggered with the modelling light button **ML (19)** on the master flashgun so that the overall lighting conditions in remote control mode can be assessed. All 50 MZ-5 slaves likewise emit a modelling light.

8. Winder mode

Definition:


The winder mode involves shooting a sequence of pictures at a rate of several frames per second. The winder mode uses partial light output levels. Table 3 of the Technical Data indicates which partial light output level is suited for a given frame frequency (frames per second = flashes per second).

8.1 Using the winder facility in manual flash mode

In the manual mode, the exposures are made with a fixed partial light output level selected in conformity with the winder data (Table 3 of Technical Data).

8.2 Using the winder facility in automatic and TTL flash mode

In this mode it is possible to ensure that a flash will be fired with each exposure of a series of pictures. For this purpose a partial light output level can be adjusted in conformity with the winder data (Table 3 of the Technical Data).

-  ***Shots that require less light are automatically controlled by the automatic or TTL light output system and are, therefore, correctly exposed.***
Shots that require more light than the adjusted partial light output level may be underexposed.

9. Working with partial light output levels

Definition:

Partial light output levels are manually adjustable fractions of full light output.

The recycling times are shorter when partial light output levels (see Table 1 of the Technical Data) are adjusted instead of full flash power. At the same time the guide number of the flashgun is diminished, together with the flash-to-subject distance and flash range, because only part of the flash power is emitted.

Partial light output is not possible in the remote control modes and with the "Rapid" function. The highest possible partial light output is always automatically adjusted in stroboscopic mode. Partial light output is not suitable with "Rapid" mode and is therefore excluded.

9.1 Partial light output levels in automatic flash mode

Partial light output may be adjusted in the auto mode to ensure that a flash is always triggered with each serial shot (winder mode).

The actual light output level for a given flash frequency and number of flashes is specified in Table 3 of the Technical Data.

9.2 Partial light output levels in manual flash mode

In some special situations it may be necessary to reduce the amount of light emitted by the flashgun because the selected flash-to-subject distance may make it necessary to adjust an excessively small aperture and thereby create an unwanted wide depth-of-field. This problem can be overcome by using the partial light output function.

The partial light output levels are adjustable within very close increments. In this manner the distance value of the flashgun can be easily matched to the subject distance. This ensures professional flash exposures of difficult subjects (large differences in contrast and extreme degree of reflectivity) where automatic exposure cannot produce optimal results.

9.3 Macrophotography (close-ups)

For close-ups it is important to ensure that a certain minimum lighting distance is maintained to avoid overexposure. For exposures with extremely short flash-to-subject distances you will be well advised to work with small partial light output levels in manual mode.

Flash duration

The adjustable partial light output levels result in different flash durations (see Table 1 of the Technical Data). The specified flash durations only apply to single flashes in manual mode. In serial flash (winder or stroboscopic mode) the last flashes may have a longer flash duration. In the automatic and TTL modes the flash duration can be shorter if the automatic exposure control switches off the flash at an earlier moment. To adjust the flash duration follow the procedure described in 9.2.

9. Working with partial light output levels

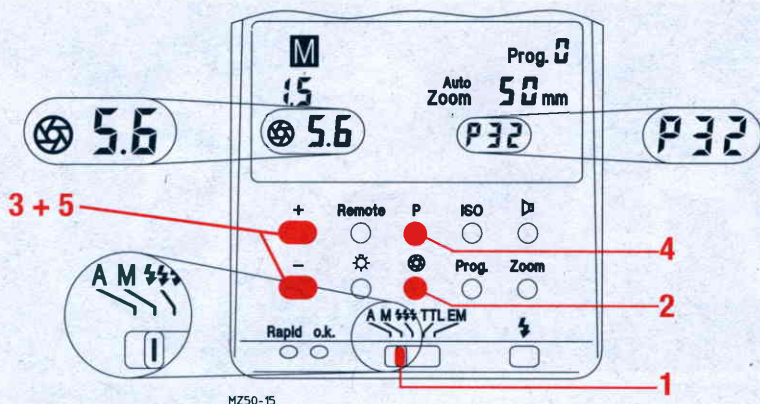


Fig. 16: Adjusting partial light output levels

Adjusting procedure for flash with partial light output:

- Adjust the camera according to the manufacturer's operating instructions.
- Switch on the flashgun with the main switch (16).

1 Adjust the operating mode selector (28) to A, TTL or M.

- * Press the ISO film speed button (30), and adjust the film speed with the + or - button (24).
- * Press the Zoom button (32), and adjust with the + or - button (24) the zoom value that was selected for the camera's lens.

2 Press button (34).

3 Use the + or - button (24) to continuously change the aperture on the control unit until the required f-stop appears on the LC display. Now adjust this f-stop also on the camera.

👉 *Some cameras automatically transmit the aperture, ISO and zoom values if an SCA 3000 adapter is used. In this case the aperture on the camera must be continuously changed until the required f-stop appears on the LC display of the control unit.*

4 Press the partial light output button P (29).

5 Continue changing the partial light output with the + or - button (24) until the required distance is displayed. P and the number are flashing alternately when P is smaller than 1/64.

- The partial light output level can be reset by briefly adjusting the operating mode selector (28) to another mode.

* Must be additionally adjusted on some cameras.

10. Stroboscopic flash mode

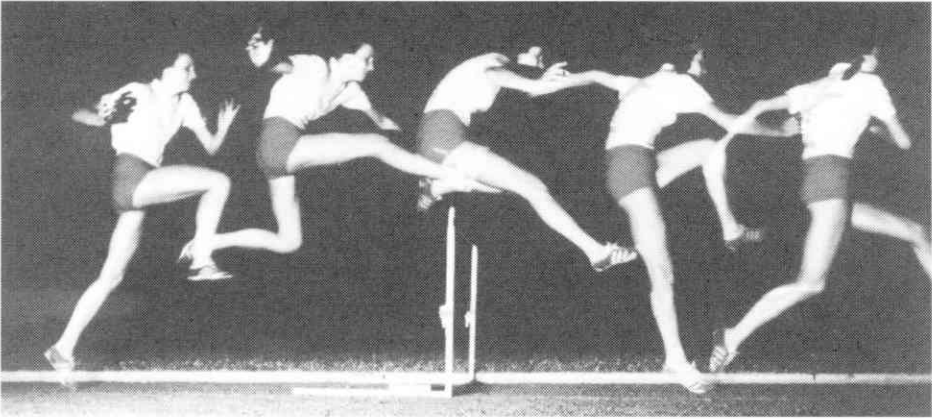


Fig. 17: The stroboscopic mode

In this mode several flash exposures can be made on the same frame. This is particularly interesting for motion studies and for special effects (fig. 17).

The stroboscopic mode fires several flashes at a certain flash frequency. Consequently, this function is only possible with a partial light output level of maximum 1/4 or less.

For a stroboscopic exposure it is possible to select a flash frequency (flashes per second) of 1...50 Hz in 1Hz increments, and a number of flashes of 2...30 in single increments.

The maximum possible partial light output level in stroboscopic mode is automatically adjusted (see Table 3 of the Technical Data). The partial light output level can be set manually to a minimum value of 1/256 to achieve short flash durations. The LC display indicates the distance applicable to the set parameters. The displayed distance value can be matched to the actual shooting distance by varying the f-stop or the partial light output level. The aperture displayed on the control unit must be adjusted on the camera when the **301 standard base** or an **SCA 300 adapter** is used. When the **SCA 3000 adapter** is being used, the control unit will automatically accept the aperture set on the camera, provided that the camera supplies the requisite information. The distance range can be extended by using a high-speed film.

The secondary reflector must not be switched on in stroboscopic mode!

The ☹ symbol on the LC display starts flashing if the secondary reflector is inadvertently switched on.

Adjusting procedure for stroboscopic mode:

- Adjust the camera to manual mode, as explained in the manufacturer's operating instructions, and select a matching shutter speed (see Table 4 of the Technical Data).
- Turn on the flashgun with the main switch (16).
- If the film speed has not yet been set on the control unit:

10. Stroboscopic flash mode

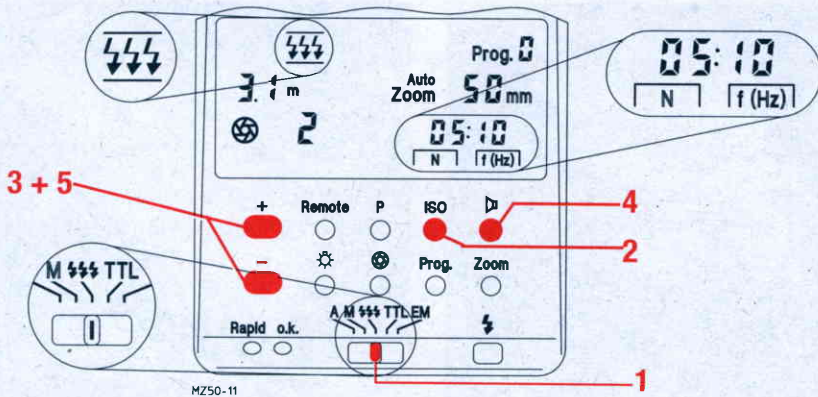


Fig. 18: Settings for the stroboscopic mode

- Adjust the operating mode selector (28) to A.
- Press the ISO button (30), and adjust the film speed with the + or - button (24).
- 1 Adjust the operating mode selector (28) to stroboscopic mode $\text{---}\text{---}\text{---}$.
- * Press the Zoom control button (32) and use the + or - button (24) to adjust the zoom set on the camera lens.
- 2 Press the N button (30) (double function of the ISO button).
- 3 Adjust the required number of flashes N with the + or - button (24).
- 4 Press the f(Hz) button (31) (double function of the buzzer button $\text{---}\text{---}$).
- 5 Use the + or - button (24) to adjust the required flash frequency f(Hz).
- * Press button --- (34), and use the + or - button (24) to select an f-stop that matches the distance to the subject (see LC display). This f-stop is then also set on the camera.
- If necessary, press the partial light output button P (29) and use the - button (24) to diminish the partial light output level still further.

* Must be additionally adjusted on some cameras.

👉 The distance to the moving subject is used as distance value. To avoid overexposure of the motionless background, it should be either very dark or far behind the moving subject. The best results are achieved at a low ambient light level.

Table 3 of the Technical Data specifies the maximum partial light output levels for the N-f(Hz) combinations.

Ensure that an adequately slow shutter speed is adjusted on the camera.

Table 4 of the Technical Data specifies the fastest shutter speeds for the N-f(Hz) combinations.

11. Fill-in flash in daylight



Fig. 19: Fill-in flash in daylight (left without - right with mecablitz)

The mecablitz can also be used for fill-in flash in daylight to soften harsh shadows and lower the contrast, thereby producing a more balanced exposure when shooting against the light. Various possibilities are open to the user for this purpose.

11.1 Fill-in flash in automatic mode

Use the camera, or a hand-held exposure meter, to establish the required aperture and shutter speed for a normal exposure. Ensure that the shutter speed either equals, or is slower than, the fastest flash synch speed (varies with the given camera model).

Example:

Established aperture = f/8; established shutter speed = 1/60th sec.

Flash synch speed of the camera, e.g. 1/100th sec. (see operating instructions for the given camera).

The two established values for aperture and shutter speed can be set on the camera because the camera's shutter speed is slower than the camera's flash synch speed.

To maintain a balanced range of highlights, for instance in order to retain the character of the shadows, it is advisable to select the automatic aperture on the control unit one setting lower than the aperture adjusted on the camera. In the above example the camera was adjusted to f/8. Consequently, we advise you to adjust f/5.6 as the aperture setting on the control unit.

👉 When shooting into the light, ensure that the backlight does not shine directly onto the control unit's sensor as this will confuse the electronics.

11. Fill-in flash in daylight

11.2 Fill-in flash in manual mode

The partial light output levels can be used in manual flash mode to achieve the brightening effect of fill-in flash.

Complete illumination of shadow areas

Use the camera, or a hand-held exposure meter, to establish the required aperture and adjust this value on both the camera and the control unit. The aperture adjusted on the camera is automatically transferred to the control unit when an SCA 3000 adapter is used in conjunction with a data compatible camera. The given flash range is indicated on the LC display. If the distance to the subject is shorter than the indicated flash range, then select a partial light output level to match the distance. For this purpose press the **P** button (29) and the **-** button (24) a number of times until the flash range and subject distance coincide.

Stepped brightening

Use the camera, or a hand-held exposure meter, to establish the required aperture and adjust this value both on the camera and the control unit. The aperture adjusted on the camera is automatically transferred to the control unit when an SCA 3000 adapter is used in conjunction with a data compatible camera. To diminish the brightening effect compared with complete illumination, adjust the partial light output levels in such a manner that the setting is advanced by 1/3rd of an f-stop with each depression of the button (see ch. 9, p. 26).

11.3 Fill-in flash in TTL mode

Some camera models automatically control fill-in flash when in program or automatic mode. Camera internal fill-in flash control varies greatly between modern camera models, making it impossible to give a precise description of the individual adjusting procedures. These are normally described in the operating instructions for the given camera. Shadows can also be brightened with a flashgun in TTL mode on cameras that do not feature a special fill-in flash program or setting. In such cases the effect of fill-in flash depends upon the characteristics of the camera's TTL metering system. Consequently, in many instances, it will be advisable to adjust automatic mode for fill-in flash.

12. Working with user programs

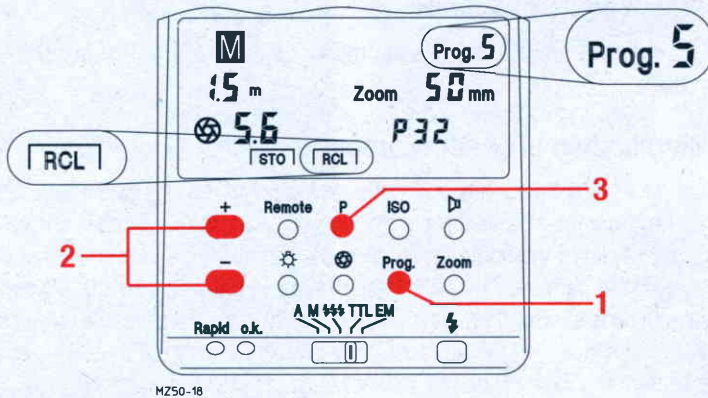


Fig. 20: Calling a stored user program

Definition:

Constantly recurring situations (e.g. birthday parties at home, etc.) are typical for flash photography. The meablitz 50 MZ-5 enables the user to store the flashgun settings for such standard situations in the form of user programs so that they can be instantly recalled at any time.

👉 User programs are only a practical proposition in conjunction with the 301 standard base or the SCA 300 adapter. When the SCA 3000 adapter is used on a system camera, the user program data - aperture, ISO film speed and the zoom setting - are matched to the current camera data, provided the camera supplies the requisite data.

This flashgun enables you to enter your own flash programs in nine program places (comparable to the drawers in a desk). Program 0 (Prog.0) is automatically loaded when the flashgun is switched on. Program 0 forms the work surface (comparable with the desktop) of the flashgun.

The data that were active when the flashgun was switched off are stored in Prog. 0.

Example: Certain settings have been adjusted on the flashgun for a flash exposure. When the flashgun is now switched off it will simultaneously store all the values indicated on the LC display. The same values will reappear when the flashgun is switched on again. For instance, if Prog. 5 was adjusted before the flashgun was switched off, then the data of this program are copied into Prog. 0 where they are once again available, in an unchanged form, when the flashgun is switched on again.

The 9 program places have been factory assigned in the manner indicated in Table 5 of the Technical Data.

12. Working with user programs

Adjusting procedure to store a program:

- Select the required settings (aperture, zoom, operating mode, etc.) for subsequent application.
- Press the **Prog.** button (**33**); „Prog.“ flashes.
The secondary functions **STO** and **RCL** assigned to the buttons **Remote (22)** and **P (29)** are only displayed after the **Prog.** button has been pressed.
The secondary functions are:
STO = Store the values indicated on the LC display.
RCL = Recall the stored data of a user program.
- Use the **+** or **-** button (**24**) to select the „Prog. ?“ program place where the settings are to be stored.
- Hold down the Remote (**STO**) (**22**) button (approx. 3 seconds) until the LC display becomes dark. A short brief audio signal is sounded when the buzzer is active (see fig. 25, page 37), after which the settings are stored.

The TTL Easy Mode cannot be adjusted as a user program.

If a new program place has been selected without subsequently pressing the buttons **STO** (store) (**22**) or **RCL** (recall) (**29**) (double function of the P button), then the original program will continue to function even though the last selected program place number is being displayed. To regain a correct display turn off the flashgun briefly and then on again.

Procedure for calling a stored program:

- 1** Press the **Prog.** button (**33**); „Prog.“ flashes.
- 2** Use the **+** or **-** button (**24**) to select the „Prog. ?“ program place.
- 3** Press the **P** (RCL) button (**29**).
The program is now loaded and can be used.

A flashing operating mode symbol on the LC display after a user program has been called indicates a deviating setting of the operating mode selector from the operating mode of the program. If the operating mode selector is not adjusted to the same operating mode, then the flashgun will perform the mode that is flashing on the LC display.

If, after a stored program has been recalled, a change is made, e.g. operating mode, then the program place indicated on the LC display will be changed to Prog. 0. The parameters of the previously loaded program place remain unchanged.

The factory-set flash programs can be overwritten with the user's own programs.

13. Special functions

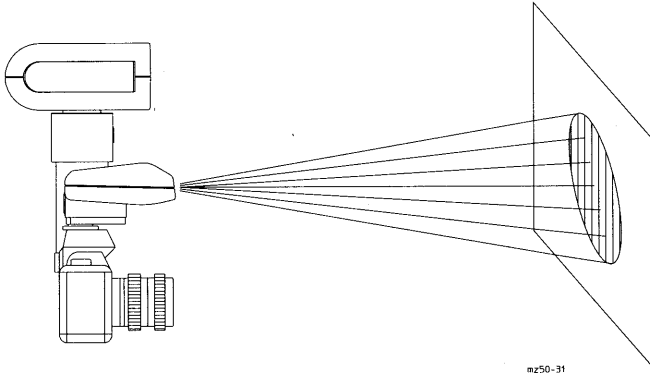


Fig. 21: The AF measuring beam

13.1 AF measuring beam

As the release or other sensory control of the camera is operated, the integrated AF measuring beam (3) is automatically activated in the event of a low lighting level or a low-contrast subject. The transmitted measuring beams are projected onto the subject (fig. 21). The camera's autofocus system uses the light reflected from the subject to measure image sharpness and focus the lens. The range of the AF measuring beam (3) is approx. 9 m with a 50 mm f/1.7 lens.

 ***This function is available with most AF cameras in conjunction with an SCA 3000 adapter.***

13.2 Auto-check display

The auto-check exposure o.k. (26) lights up only when the frame will be, or was, correctly exposed in the auto, TTL or EM mode.

In this manner it is possible to manually trigger a test flash while in auto mode so that the correct aperture can be established beforehand. This is particularly valuable with bounced (indirect) flash when reflection conditions are difficult to judge.

1 The test flash is triggered with the manual firing button (35) on the control unit (fig. 22). If the auto-check exposure o.k. (26) remains dark after the test flash, then adjust the next larger aperture or diminish the distance to the reflection surface or subject, and then repeat the test flash.

The f-stop established in this manner must also be set on the camera.

 ***To trigger a test flash, hold the camera and the control unit with sensor in the same manner as for the actual shot.***

13. Special functions

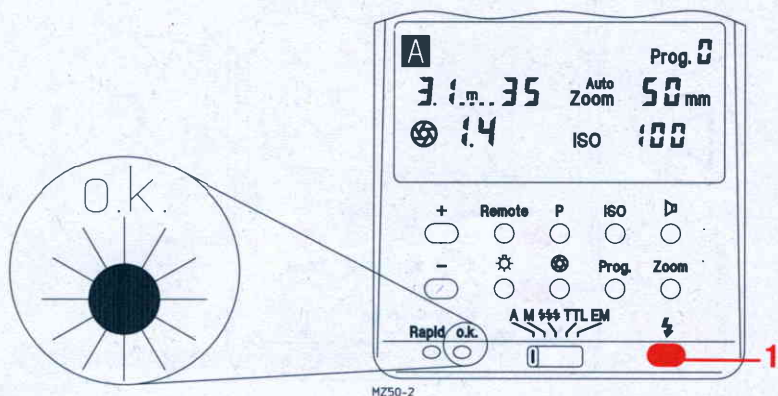


Fig. 22: Exposure o.k.

This facility can also be used with TTL mode without having to produce test exposures. The control unit is adjusted to automatic flash mode, and the correct aperture is then determined with a test flash in the previously described manner. The established aperture is transferred to the camera, and the control unit is then readjusted to TTL mode.

This procedure is relatively accurate with lenses of medium focal length of between 28 mm and 85 mm. But in borderline cases underexposure may occur with subsequent TTL exposure. In such an event the auto check exposure o.k. (26) remains dark after the shutter has been released. Select the next larger f-stop setting (e.g. f/8 instead of f/11), and repeat the exposure.

13.3 Warning displays and audible warning signals

Deviating settings between control unit and camera will cause the displayed value to flash, provided that the camera transmits such data and an SCA 3000 adapter is used. Such a deviation should be corrected in order to obtain a correct exposure (except for effect shots).

If the camera settings are to be taken over, then press both the + and - buttons (24) on the control unit simultaneously when the numeral value is flashing on its own. The camera settings will now be immediately transferred to the control unit when the camera release is lightly depressed.

An audible warning signal, together with a flashing setting, indicates that the setting parameters deviate impermissibly so that a satisfactory exposure will not be achieved. The differences must be manually corrected!

13. Special functions

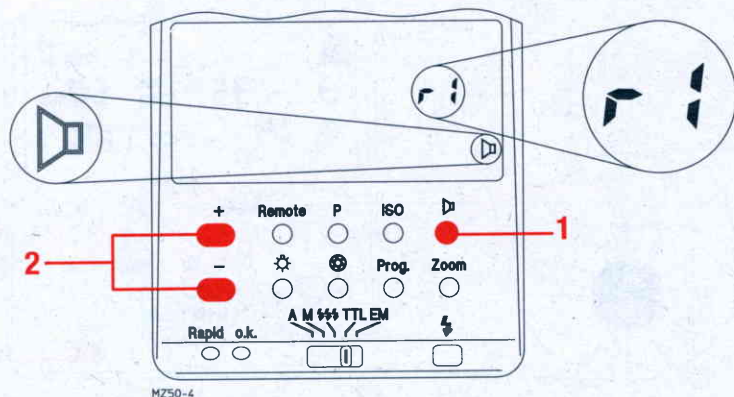


Fig. 23: Adjusting the acoustic flash-ready signal

13.4 The buzzer

The buzzer can be used to indicate certain flashgun functions acoustically. An acoustic signal may be selected to indicate the following situations:

- Flash readiness
- Correct film exposure
- Incorrect operation (alarm function)

An acoustic alarm is possible in the following situations:

- When, after calling a user program, a deviating ISO film speed is detected.
- When the control unit is adjusted to automatic flash mode, but the set values for aperture and ISO film speed will exceed the light control range. This aperture is then automatically adjusted to the next permissible f-stop.
- When, in the automatic flash mode, the ISO film speed or aperture are readjusted with the result that the light control range would be exceeded.
- When the camera transmits a focal length that is shorter than 24 mm.

Adjusting the acoustic signal for flash readiness:

1 Press button  (31) once.

The acoustic signal can be switched on with r1 or off with r0 (Fig. 23).

2 Select r1 or r0 with the + or - button (24).

13. Special functions

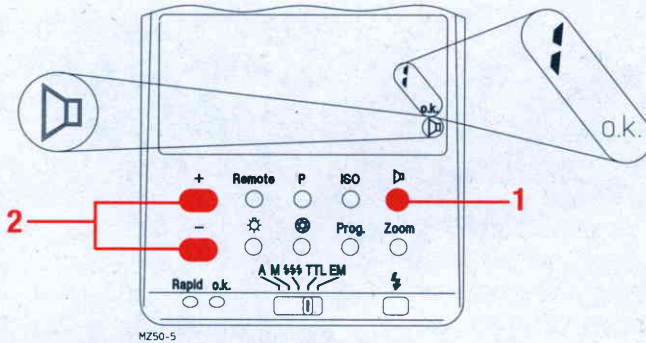


Fig. 24: Signal for acoustic exposure control

Adjusting the signal for acoustic exposure control:

- 1 Press button **D** (31) twice.
- 2 The signal for acoustic exposure control can be switched on or off with the + or - button (24).

Display for active acoustic exposure control signal: **1** and **o.k.** (fig. 24).

Display for switched off acoustic exposure control signal: **0** and **o.k.**

The intermittent acoustic signal changes into a continuous sound when flash readiness is reached during exposure **o.k.** **The acoustic signal is only possible in A, TTL and EM mode!**

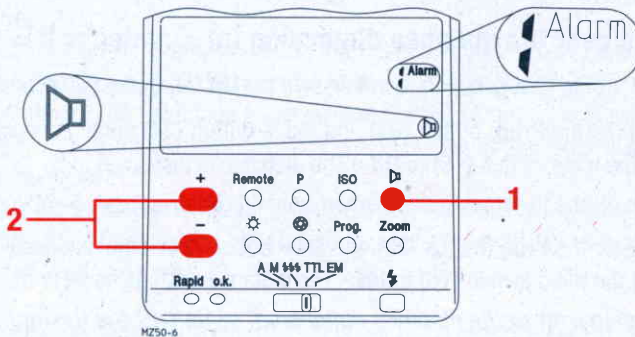


Fig. 25: Adjusting the alarm functions

Adjusting the alarm functions:

- 1 Press button **D** (31) three times.
 - 2 Switch the alarm function on or off with the + or - button (24).
- Alarm** and **1** appear on the display when the alarm function is active. **Alarm** and **0** appear on the display when the alarm function has been switched off.

13. Special functions

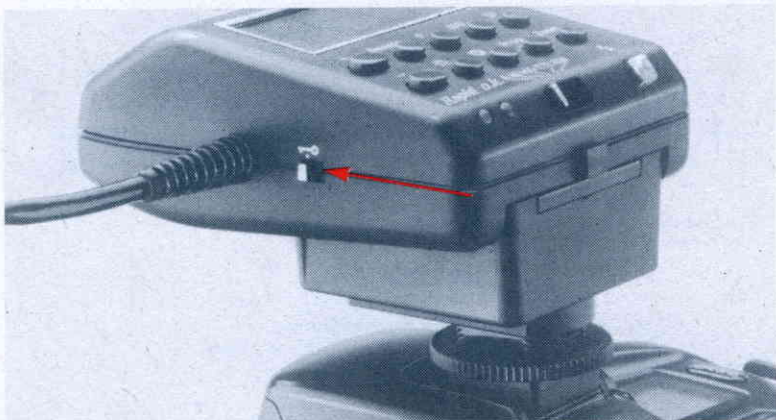



Fig. 26: Locking the controls

13.5 Locking the controls

Push the locking switch (23) forwards to lock the settings made on the control unit. This ensures that the settings cannot be inadvertently changed during operation. The LCD light button (27), the manual firing button (35) and the operating mode selector (28) are not locked. After the operating mode selector has been moved, the partial light output is always adjusted to P1 or to the maximum possible level.

13.6 Changing over the distance dimension (m = meter or ft = feet)

- to ft:**
- Switch off the flashgun with the main switch (16) for approx. 5 seconds.
 - Keep both the **Prog.** button (33) and the **+** button (24) simultaneously depressed.
 - Slide the main switch (16) to **ON** - The distance is displayed in **ft**.
- to m:**
- Switch off the flashgun with the main switch (16) for approx. 5 seconds.
 - Keep both the **Prog.** button (33) and the **-** button (24) simultaneously depressed.
 - Adjust the main switch (16) to **ON** - The distance will be shown in **m**.

 **After changing over to the distance dimension, switch off the flashgun for 5 seconds and then on again.**

Testing the display segments:

- Switch off the flashgun with the main switch (16) for approx. 5 seconds.
- Keep the LCD light button (27) depressed, and simultaneously slide the main switch (16) to **ON**. All segments of the LC display will be displayed.
- **Return to normal mode:** Switch off the flashgun with the main switch (16) for approx. 5 seconds.

13. Special functions

13.7 The zoom reflector (main reflector)

The camera can automatically adjust the zoom reflector **(1)** to the focal length of the lens, or this can be controlled manually with the manual **Zoom** button **(32)** and the **+** or **-** buttons **(24)**.

Zoom 24: Light pattern for wide-angle (for 35mm, from 24 mm focal length onwards)

Zoom 28: Light pattern for wide-angle (for 35mm, from 28 mm focal length onwards)

Zoom 35: Light pattern for wide-angle (for 35mm, from 35 mm focal length onwards)

Zoom 50: Light pattern for standard lens (for 35mm, from 50 mm focal length onwards)

Zoom 70: Light pattern for telephoto lens (for 35mm, from 70 mm focal length onwards)

Zoom 85: Light pattern for telephoto lens (for 35mm, from 85 mm focal length onwards)

Zoom 105: Light pattern for telephoto lens (for 35mm, from 105 mm focal length onwards)

For manual zoom control depress the **Zoom** button **(32)**, and adjust the required setting with the **+** or **-** button **(24)**.

 **Shadows can form at the edges of the picture if the zoom value indicated on the LC display is larger than the one adjusted on the camera.**

If the camera with SCA 3000 adapter automatically transfers the zoom position of the camera lens, then manual zoom reflector adjustment can be followed by reactivation of automatic zoom control by simultaneously depressing the **+** and **-** buttons **(24)**.

13.7.1 The Ex-Zoom mode (extended zoom)

The Ex-Zoom mode is only possible with system cameras that exchange data by way of the SCA 3000 adapter.

This mode was created for professional use during reporting work in dense crowds where jostling and knocks can easily jolt the camera or the main reflector slightly out of their normal position. In such instances the image angle covered by the camera's lens may well no longer coincide with the area illuminated by the flashgun with the result that a dense shadow can form on one side of the picture.

In the Ex-Zoom mode the zoom reflector position of the flashgun is always adjusted one increment further in the direction of wide-angle in relation to the focal length of the camera's lens to guarantee wider coverage.

Example: Camera lens 50 mm focal length; zoom reflector setting 35 mm

The flashgun's larger angle of coverage provides a higher safety margin for the illumination of the subject.

In normal operation the Ex-zoom mode produces a softer and more diffused lighting of the subject because more light is reflected back from the walls and ceiling.

13. Special functions

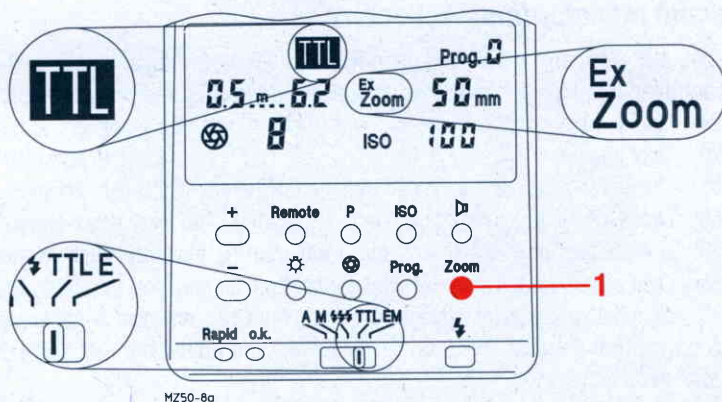


Fig. 27: Adjusting procedure for the Ex-Zoom mode

Adjusting procedure for the Ex-Zoom mode:

- Switch off the flashgun with the main switch (16) for approx. 5 seconds.
- 1** Hold down the zoom control button (32) on the control unit (2).
- Switch on the flashgun with the main switch (16).
- Release the zoom control button (32).
- **To switch off** the Ex-Zoom mode proceed in the same sequence.

13.8 The „Rapid“ function

The flash recycling time in A and TTL mode depends upon the amount of light required for the exposure. At full light output the recycling time is maximum 5 seconds. The "Rapid" function can be switched on if this flash recycling time is too long. The "Rapid" function is recommended for such instances where fast recycling times are more important than maximum flash output, e.g. when indoors. The "Rapid" function lowers the guide number by 1 rating, e.g. from the guide number 50 (at ISO 21/100° - Zoom 50 mm) to guide number 35 (at ISO 21/100° - Zoom 50 mm).

☞ Partial light outputs are not possible in the "Rapid" function!

13.9 The ML function (modelling light)

The **ML** (19) button triggers a modelling light of approx. 4 seconds. This is particularly useful in the remote control modes because it becomes possible to assess the shadow conditions (densities). If **ML** is triggered on the control unit, then only the type 50 MZ-5 slaves will simultaneously emit this modelling light. Press the **ML** button (19) for at least 2 seconds to trigger the modelling light. Release the **ML** button (19) when the modelling light is emitted. To interrupt light output press the **ML** (19) button once again.


☞ A fully charged battery is sufficient to trigger the modelling light some 60 times.

14. Exposure corrections

The automatic exposure systems are adjusted to a reflection factor of 25%, this being the average reflection factor for subjects shot with flash. Dark backgrounds that absorb a lot of light, or bright backgrounds that reflect a great deal of light (e.g. backlit scenes), can result in subject overexposure or underexposure, as the case may be.

14.1 Exposure correction in automatic flash mode

To compensate the above described effect, exposure can be corrected by opening or stopping down the camera's aperture. If the background is mainly bright, the sensor of the control unit will cut off the flash too soon with the result that the subject will be underexposed. With a dark background the flash is cut off too late so that the subject looks too light.

 ***Bright background:***

***Open the aperture by 1/2 to 1 f-stop
(e.g. from f/5.6 to f/4)***

 ***Dark background:***

***Close the aperture by 1/2 to 1 f-stop
(e.g. from f/8 to f/11)***

14.2 Exposure correction in TTL flash mode

Many cameras are provided with an adjusting element for exposure correction that can also be used in TTL flash mode.

 ***Please observe the corresponding explanations in the operating instructions for the camera.***

Here, exposure correction by changing the aperture on the lens is not possible. This is because the camera's automatic exposure system will regard the changed f-stop as a normal working aperture.

The wide angle diffuser can be used for shots at focal lengths of 20 mm (35 mm format) or 50 mm (6x6 format) and longer.

 **The reflector must be manually set to 24 mm zoom position.**

When using the wide angle diffuser, the guide number is 30. This results in the following distance ranges:

<u>Aperture</u>	<u>Distance range</u>	<u>Aperture</u>	<u>Distance range</u>
1	8,3. . ft . .98	8	1.0. . ft . .11,6
1,4	6,2. . ft . .69	11	0,8. . ft . . 8,3
2	4,4. . ft . .49	16	0,8. . ft . . 6,0
2,8	3,0. . ft . .34	22	0,8. . ft . . 4,0
4	2,1. . ft . .24	32	0,8. . ft . . 2,6
5,6	1,5. . ft . .16	45	0,8. . ft . . 1,8

15. Parallax compensation

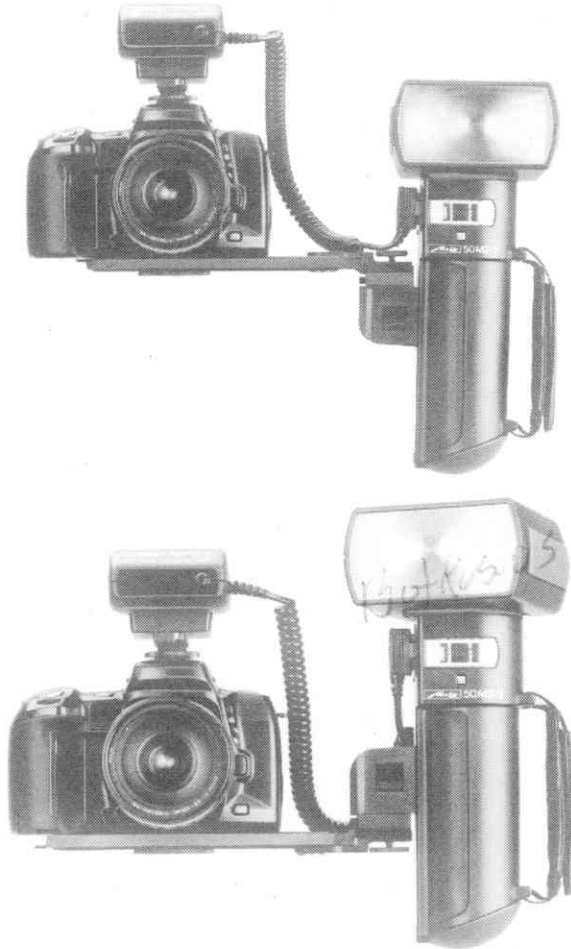


Fig. 28: Parallax compensation

The camera bracket can be reversed to compensate the difference in parallax between the camera lens and the main reflector (1) with close-ups and macrophotography.

Procedure:

- Detach the camera bracket from the camera.
- Slide the locking screw of the camera bracket to the threaded side of the elongated hole.
- Unscrew the locking screw from the camera bracket.
- Turn the locking screw around, and screw it back into the other side of the camera bracket.
- Return the camera.

16. Trouble-shooting hints

Meaningless displays?

Should the LC display indicate meaningless information, or the flashgun not work as it should in the individual modes, then proceed as follows to RESET the flashgun:

- Switch off the flashgun with the main switch (16).
- Wait for at least 5 seconds.
- Turn on the flashgun again with the main switch.

Settings cannot be (manually) changed?

The control unit does not react when buttons are pressed?

The locking switch (23) is adjusted to the front locking position. Slide back the switch to release the buttons.

Symbols on the LC display are flashing?

- Switch off the flashgun with the main switch (16) for approx. 5 seconds, and then switch on again.
or
- Wait until the symbols no longer flash, then press the + and - buttons on the control unit simultaneously. The current camera data will be taken over by the control unit the next time the camera's release is lightly pressed.

17. Care and maintenance

Remove dust and grime with a soft dry cloth, or a silicone-treated cloth. Do not use detergents as these may damage the plastic parts.

Forming the flash capacitor

The flash capacitor incorporated in the flashgun undergoes a physical change when the flashgun is not switched on for prolonged periods. For this reason it is necessary to switch on the flashgun for approx. 10 minutes every 3 months. The battery must supply sufficient power to light up the flash-ready light within one minute after the flashgun was switched on.

18. Technical data

Guide numbers at ISO 100/21°: 118 128 138 164 197 210 230 (feet)
In zoom position 24 28 35 50 70 85 105 (see Table 6, p. 50)

12 auto apertures

at ISO 100/21°: f/1 f/1.4 f/2 f/2.8 f/4 f/5.6 f/8⁺ f/11 f/16 f/22 f/32 f/45

Flash durations:

- approx. 1/200...1/20,000 sec. in **A** and **TTL** modes
- approx. 1/200 sec. in **M** mode at full light output

Sensor measuring angle: approx. 25°

Colour temperature: approx. 5600 K

Film speed: ISO 6 bis ISO 6400

Synchronization: low-voltage ignition

Number of flashes per battery charge: approx. 60 flashes at full light output

Flash recycling time 5 seconds (3 seconds in "Rapid" mode) at full light output in **M** mode.

Swivelling range and locking positions of zoom reflector:

Upwards 60° 75° 90°

Anti-clockwise 90° 180°

Clockwise 90°

Dimensions (w x h x d), approx.:

Flash handle 103 x 244 x 118 mm

Control unit 67 x 35 x 89 mm

Weight:

Flash handle without battery: approx. 880 g

Control unit: approx. 138 g

Control unit: approx. 138 g

Included:

Handle-mount flashgun, control unit, NiCad-Battery 50-40, charger*, 301 standard base (not with unit sets), operating instructions, cover plate, operating instructions for SCA 3000, SCA 300/3000 Table, camera bracket.

*charger types: 750 Japan, 752 Australien, 753 Commonwealth, 755 New-Zealand, 758 USA, 759 Europa.

18. Technical data

Partial light output P = Flash power	LC-display	Flash duration in seconds	Guide No. (ft) at ISO 100, zoom 50 mm
1	1	1/200	164
1-1/3	1 ₋		
1/2 + 1/3	2 ₋		
1/2	2	1/500	116
1/2 - 1/3	2 ₋		
1/4 + 1/3	4 ₋		
1/4	4	1/1000	82
1/4 - 1/3	4 ₋		
1/8 + 1/3	8 ₋		
1/8	8	1/2000	58
1/8 - 1/3	8 ₋		
1/16 + 1/3	16 ₋		
1/16	16	1/4000	41
1/16 - 1/3	16 ₋		
1/32 + 1/3	32 ₋		
1/32	32	1/6000	29
1/32 - 1/3	32 ₋		
1/64 + 1/3	64 ₋		
1/64	64	1/10 000	20
1/64 - 1/3	64 ₋		
1/128 + 1/3	128 ₋		
1/128	128	1/15 000	14
1/128 - 1/3	128 ₋		
1/256 + 1/3	256 ₋		
1/256	256	1/20 000	10

Table 1: Flash durations at the individual partial light output levels

18. Technical data

ISO	APERTURE												
6-8	1	1,4	2	2,8	4	5,6	8	11					
10-12-16	1	1,4	2	2,8	4	5,6	8	11	16				
20-25-32	1	1,4	2	2,8	4	5,6	8	11	16	22			
40-50-64	1	1,4	2	2,8	4	5,6	8	11	16	22	32		
80-100-125	1	1,4	2	2,8	4	5,6	8	11	16	22	32	45	
160-200-250		1,4	2	2,8	4	5,6	8	11	16	22	32	45	
320-400-500			2	2,8	4	5,6	8	11	16	22	32	45	
640-800-1000				2,8	4	5,6	8	11	16	22	32	45	
1250-1600-2000					4	5,6	8	11	16	22	32	45	
2500-3200-4000						5,6	8	11	16	22	32	45	
5000-6400							8	11	16	22	32	45	

Table 2: Auto-working aperture ranges

		Flashes per second = f [Hz] 1 - 50					
Number of flashes[N]	2 - 4	1/8	1/8	1/8	1/8	1/8	1/8
	5 - 7	1/16	1/16	1/16	1/16	1/16	1/16
	8 - 12	1/32	1/32	1/32	1/32	1/32	1/32
	13 - 30	1/64	1/64	1/64	1/64	1/64	1/64
		Partial light output [P]					

Table 3: Maximum partial light output levels in stroboscopic mode


18. Technical data

Examples relating to Table 3:

You intend to produce a stroboscopic exposure with 7 flashes at a frequency of 3 flashes per second.

Procedure:

After having completed the first six settings described in „Adjusting procedure for stroboscopic mode“, press button **N (30)**. Adjust with the **+** or **-** button **(24)** the number of flash exposures - here 7. Now press button **f(Hz) (31)**, and select with the **+** or **-** button **(24)** the flash frequency - in this case 3. The maximum partial light output level is then automatically adjusted to 1/16. The partial light output level can also be manually adjusted to a smaller value.

 ***The values specified in the tables only apply to newly charged Nicad batteries. For batteries that have been used it is necessary to adjust the next lower main partial light output level (e.g. adjust 1/16 instead of 1/8) to ensure that the number of flashes is achieved with certainty.***

You have now adjusted the number of flashes = 7, and the flash frequency = 3, while the maximum partial light output level of 1/16 has been automatically adjusted. Table 4 (on the next page) indicates the camera shutter speed to be set on the camera.

18. Technical data

Camera shutter speed in seconds

Flashes/sec f [Hz]	Number of flashes												
	2	3	4	5	6	7	8	9	10	15	20	25	30
1	2	4	4	8	8	8	8	15	15	15	30	30	30
2	1	2	2	4	4	4	4	8	8	8	15	15	15
3	1	1	2	2	2	4	4	4	4	8	8	15	15
4	1/2	1	1	2	2	2	2	4	4	4	8	8	8
5	1/2	1	1	1	2	2	2	2	2	4	4	8	8
6	1/2	1/2	1	1	1	2	2	2	2	4	4	8	8
7	1/2	1/2	1	1	1	1	2	2	2	4	4	4	8
8	1/4	1/2	1/2	1	1	1	1	2	2	2	4	4	4
9	1/4	1/2	1/2	1	1	1	1	1	2	2	4	4	4
10	1/4	1/2	1/2	1/2	1	1	1	1	1	2	2	4	4
15	1/4	1/4	1/2	1/2	1/2	1/2	1	1	1	1	2	2	2
20	1/8	1/4	1/4	1/4	1/2	1/2	1/2	1/2	1/2	1	1	2	2
25	1/8	1/8	1/4	1/4	1/4	1/2	1/2	1/2	1/2	1	1	1	2
30	1/15	1/8	1/4	1/4	1/4	1/4	1/2	1/2	1/2	1/2	1	1	1
35	1/15	1/8	1/8	1/4	1/4	1/4	1/4	1/2	1/2	1/2	1	1	1
40	1/15	1/8	1/8	1/8	1/4	1/4	1/4	1/4	1/4	1/2	1/2	1	1
45	1/15	1/15	1/8	1/8	1/4	1/4	1/4	1/4	1/4	1/2	1/2	1	1
50	1/15	1/15	1/8	1/8	1/8	1/4	1/4	1/4	1/4	1/2	1/2	1/2	1

Table 4: Camera shutter speeds in stroboscopic mode

Prog.	Mode	Partial light output	Active alarm	Number of flashes (N)	Frequency f (Hz)	ISO	Zoom	Aperture	Remarks
1	TTL	P 1	yes	–	–	100	50	5,6	–
2	TTL	P 1	no	–	–	100	50	5,6	–
3	TTL	P 16	yes	–	–	100	50	5,6	–
4	A	P 1	yes	–	–	100	50	5,6	–
5	A	P 16	yes	–	–	100	50	5,6	–
6	M	P 32	no	–	–	100	50	5,6	5 frames/s
7	STROBO	P 16	yes, except exposure	5	1	100	50	5,6	–
8	STROBO	P 32	yes	10	5	100	50	5,6	–
9	M	P 2	yes	–	–	400	50	5,6	–

Table 5: Factory-assigned program places

18. Technical data

Film speed ISO	Zoom setting - Main reflector						
	24	28	35	50	70	85	105
6/9°	30	32	35	41	49	53	58
8/10°	33	36	39	46	55	59	65
10/11°	37	40	43	52	62	66	72
12/12°	42	45	49	58	70	74	81
16/13°	47	51	55	65	78	83	91
20/14°	53	57	61	73	88	94	102
25/15°	59	64	69	82	98	105	115
32/16°	66	72	77	92	111	118	129
40/17°	74	81	87	103	124	132	145
50/18°	83	91	98	116	139	148	163
64/19°	94	102	110	130	156	167	183
80/20°	105	114	123	146	176	187	205
100/21°	118	128	138	164	197	210	230
125/22°	132	144	155	184	221	236	258
160/23°	149	161	174	207	248	265	290
200/24°	167	181	195	232	279	297	325
250/25°	187	203	219	260	313	333	365
320/26°	210	228	246	292	351	374	410
400/27°	236	256	276	328	394	420	460
500/28°	265	287	310	368	442	471	516
650/29°	297	323	348	413	496	529	580
800/30°	334	362	390	464	557	594	651
1000/31°	375	406	438	521	625	667	730
1250/32°	421	456	492	584	702	748	820
1600/33°	472	512	552	656	788	840	920
2000/34°	530	575	620	736	885	943	1033
2500/35°	595	645	695	827	993	1058	1159
3200/36°	668	724	781	928	1114	1188	1301
4000/37°	749	813	876	1041	1251	1333	1460
5000/38°	841	912	984	1169	1404	1497	1639
6400/39°	944	1024	1104	1312	1576	1680	1840

Table 6: Guide numbers at ISO 100 film speed and maximum light output (P 1)

19. Special accessories

 ***Malfunctions and damage caused to the mecablitz 50 MZ-5 due to the use of accessories from other manufacturers are not covered by our guarantee!***

- Nicad battery 50-40 (Item No. 0005040)
- SCA Adapter System 300
For flash with system cameras (see separate operating instructions).
- SCA Adapter System 3000
For flash with system cameras with digital data transmission of the SCA function. Extended functional features compared with the SCA 300 System (see separate operating instructions).
- Slave Adapter 3080 (Item No. 0033080)
For visual and acoustic flash-readiness display in cordless remote control.
- Mecalux 11 (Item No. 0000011)
Sensor for optical, delay-free remote triggering of slave flashguns by the camera-triggered flash. Responds also to infrared light beam. Does not require batteries.
- Mecalux Holder 60-26 (Item No. 0006026)
To mount the Mecalux 11.
- Bracket 202/4 (Item No. 0000802)
To attach the flashgun to the side of the camera.
- Stabilizing Set 30-28 (Item No. 0003028)
For parallel flashgun mounting in conjunction with the camera bracket.
- Synch lead SCA 307 A (Item No. 0009307)
For off-camera flash control, and when using a camera bracket.
- Synch lead SCA 3007 A (Item No. 0033007)
With red-light module for off-camera flash control, and when using a camera bracket.
- Synch leads for 301 standard base:
 - Synch lead 36-50 (Item No. 0003650)
 - Synch lead 36-51 (1 m) (Item No. 0003651)
 - Coiled synch lead 36-52 (1.2 m) (Item No. 0003652)
 - Synch extension lead 60-53 (1.25 m) (Item No. 0006053)
 - Synch extension lead 60-54 (5 m) (Item No. 0006054)
- Power Pack P 50 (Item No. 0012950) for a higher number of flashes.
- Holding device 50-35 (Item No. 0050358)
for mecablitz 50 MZ-5 control unit for use with camera without accessory shoe.
- NiMH battery set 50-45 (Item No. 00129550)
Nickel metal hydrid battery with charger. An ecological, high-capacity alternative to the NiCad battery.
- Bounce diffusor 50-23 (Item No. 000050237)
To soften heavy shadows by reflected light.
- Colour filter set 50-32 (item No. 000050323)
Produce interesting colour effects when attached to the main reflector.

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