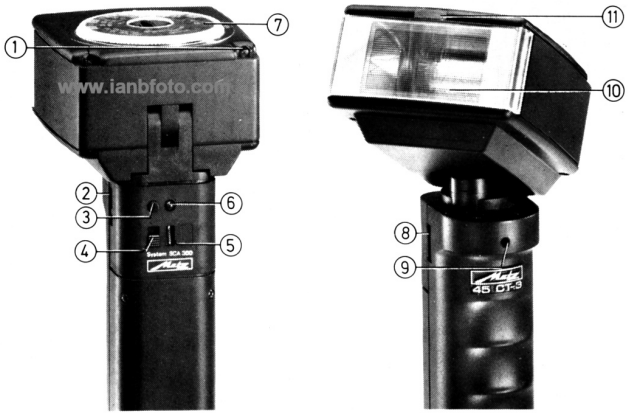
Metz

MECABLITZ
45 CT 3

OPERATING INSTRUCTIONS
INSTRUCCIONES DEL MANEJO



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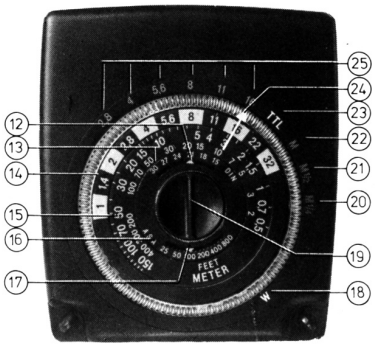

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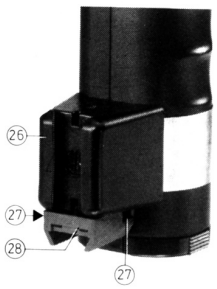

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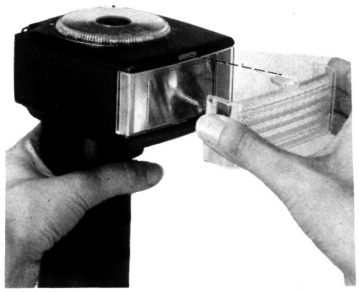

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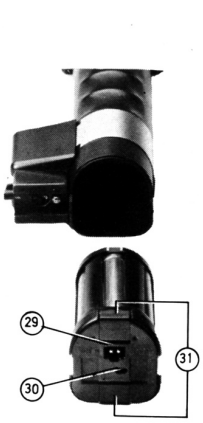
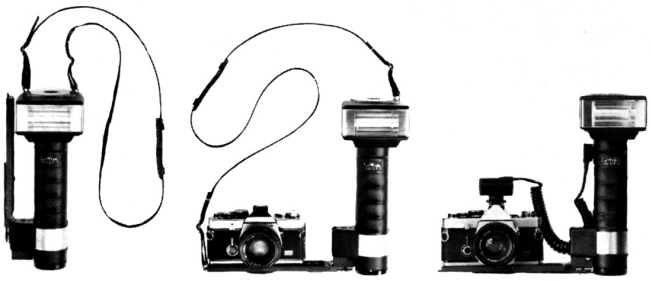


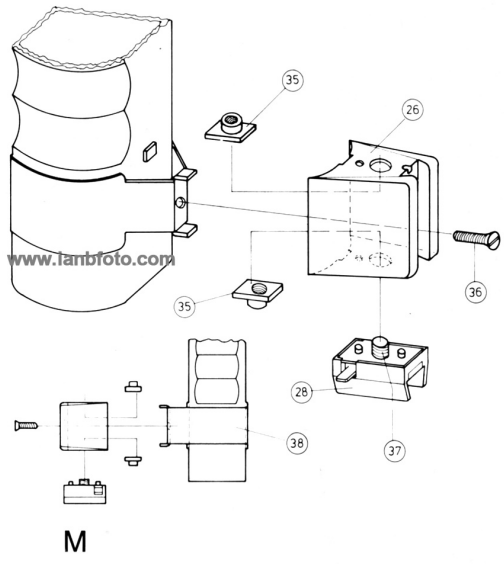
F

G

H



J K L



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Technical data

Guide No. for 21 DIN/100 ASA film:	
in metres:	45
in feet:	148
Guide No. in winder mode for 27 DIN/400 ASA film:	
in metres:	14
in feet:	46
Illumination (approx.):	horizontally 62°, vertically 42°
Illumination with wide-angle diffuser (approx.):	horizontally 65°, vertically 60°
Tiltable Quadrolight reflector:	horizontally 360° vertically 90° (6 settings)
Colour temperature (approx.):	5600 K
Auto mode with 6 working apertures:	2.8 – 4 – 5.6 – 8 – 11 – 16
Coverage angle of sensor (approx.):	25°
Power sources:	NiCad pack 45–40 6 alkaline manganese batteries of type IEC LR 6 (size AA) Mains unit N 22
NiCad pack charging time (approx.):	5 hours, also possible separately
Flash duration (approx.):	1/300* ... 1/20 000 second
for 1/2 light output (approx.):	1/1000
for 1/4 light output (approx):	1/2500
for winder mode (approx.):	1/10 000 second

Number of flashes (approx.)	
using NiCad pack:	50* ... 2000
using normal alkaline manganese batteries:	100* ... 2600
using high capacity alkaline batteries:	140 ... 3600
Recycling times (approx.)	
using NiCad packs:	7* ... 0,3 sec.
using normal alkaline manganese batteries:	13* ... 0,3 sec.
using high-capacity alkaline manganese batteries:	11* ... 0,3 sec.
using mains unit N 22:	18* ... 0,3 sec.
in winder mode (only using NiCad pack):	2 flashes/sec.
Synchronization:	Low-voltage thyristor triggering circuit
Dimensions (Height x Width x Depth) approx.:	247 x 92 x 102 mm
Weight (without power source) approx.:	650 g
Accessories supplied with	
Mecablitz 45 CT 3 Battery:	Bracket 45—36 or 32—36 Sync cable 45–47 Battery holder 45–39 Wide-angle diffuser 45–42
Mecablitz 45 CT 3-NC:	as for Mecablitz 45 CT 3 Battery, plus charging unit 402.12 or 700 ... 710 and NiCad pack 45–40
Special accessories:	see Section 9.2. (Fig. ⓐ...)

* in manual mode

Guide Number Table (for manual mode, full light output)

Film speed DIN	Film speed ASA	Guide number m-system	Guide number ft-system
9	6	11	37
10	8	13	42
11	10	14	47
12	12	16	53
13	16	18	59
14	20	20	66
15	25	23	74
16	32	25	83
17	40	28	93
18	50	32	105
19	64	36	118
20	80	40	132
21	100	45	148
22	125	50	166
23	160	57	186
24	200	64	209
25	250	71	235
26	320	80	263
27	400	90	295
28	500	101	331
29	650	113	372
30	800	127	417
31	1000	142	468
32	1250	160	525
33	1600	179	589
34	2000	201	661
35	2500	226	742
36	3200	253	832

The guide numbers LZ ... for the fractional light output ratios are obtained by multiplying the guide numbers LZ for full light output with the guide number factor F ...

LZ ... = LZ x F

Operating mode	Guide number factor
1/2 light output	$F_{1/2} = 0.7$
1/4 light output	$F_{1/4} = 0.5$
Winder	$F_W = 0.16$

Examples:

Guide number for 1/2 light output and 14 DIN/20 ASA film
$LZ_{1/2} = 20 \times 0.7 = 14$ (metres)
Guide number for winder mode and 33 DIN/1600 ASA film
$LZ_W = 179 \times 0.16 = 29$ (metres)

2. Mecablitz 45 CT 3 features

The Mecablitz 45 CT 3 is obtainable in two variants, as the Mecablitz 45 CT 3-NC and as the Mecablitz 45 CT 3 Battery. The flash unit is the same with both variants. The difference is the power source accessory. The Mecablitz 45 CT 3 Battery flash unit can be converted to NiCad power pack operation (short flash recycling times) using the charger B 45 (= NiCad power pack and charging unit). Please see special accessories in Section 9. Your Mecablitz 45 CT 3 is a high performance flashgun of sophisticated technology. Its superior features include:
DEDICATED SYSTEM SCA 300 ⋈ . The adapters (special accessories) permit matching of the flash unit with the functions of the dedicated cameras made by Canon, Chinon, Contax, Cosina, Leica, Minolta, Nikon, Olympus, Pentax, Ricoh, Yashica , Hasselblad
Further SCA adapters are in preparation.
Universal tiltable Quadrolight reflector. This allows bounce flashing without sacrificing the advantages of automatic operation.
Wide-angle diffuser with automatic transfer of data display.
Automatic operation with six working apertures. This overcomes depth of field and setting problems.
Power saving thyristor light output control. This enables super short recycling times for close-ups and a high number of flashes per charge or battery pack.
Long flash confirmation (Auto check).
Clearly arranged control centre.
Manual mode with full, half and quarter light output and winder mode for series flash shots with winder cameras.
Operates with winder cameras.
Low-voltage thyristor triggering circuit.
Power supply using NiCad pack, batteries or mains unit N 22.
Comprehensive range of accessories.

Please read these operating instructions carefully so that you can make the best of the applications this unit and its system offers.

3. Operating instructions

3.1. Power supply

The Mecablitz 45 CT 3 can be selectively operated on NiCad packs, batteries or using the mains unit N 22.

3.1.1. NiCad pack and battery holder

Remove the NiCad pack or battery holder by squeezing both the knurled pushbuttons (31) and slide the NiCad pack or battery holder out of the grip. Upon inserting them the press buttons must likewise be sqeezed and allowed to lock into place by applying light pressure to the base of the power pack or battery holder **(Fig. "F").**

3.1.2. NiCad pack operation

Please charge the NiCad pack for approx. 5 hours prior to first use. The power pack can be charged either in the unit or separately.
Should you charge the power pack in the unit then the flash unit must not be left in the switched-on stage during charging.
The connection (29) for the charging unit is to be found on the base of the NiCad power pack. The adjacent charging lamp (30) illuminates during charging.
Charging from the mains outlet (Fig. "G")
Charging unit 402.12 or 700...710 is required for charging the NiCad power pack from the mains (only for alternating current of 50 ... 60 Hz). Please check that the correct mains voltage has been set on the charging unit. The voltage selector (32) is adjacent to the mains plug contacts on the rapid charging unit. The selector is adjustable by sliding it with a small screw driver. Insert the charging unit plug (33) into the connection in the casing base first, only then connect the charging unit to the mains socket. To achieve a fully charged power pack 5 hours are necessary for charging. Should the power pack not have been fully discharged then the charging time is appropriately shortened. In case of doubt recharging can be 5 hours. The power pack cannot be damaged by overcharging. However longer charging times than 5 hours should be avoided with respect to the long service life of the power pack.
Charging from a 12 V car battery
The NiCad power pack can be directly recharged from a 12 V car battery using the **car charging unit A 16** (special accessory). Because the car battery voltage increases with the engine running the charging times are appropriately different. The charging times for a fully flat power pack are:
approx. 6 hours for a non-running car engine
approx. 4 hours for a running car engine.

Self-discharging of the NiCad pack
The NiCad pack discharges even when not in use. The self-discharging rate at 20°C room temperature amounts to approx. 1 % per day which is the reason why the full number of flashes is not available after a certain storage time. When not in use we generally recommend a recharging period of approx. 5 hours once every quarter year.
Since the self-discharging rate increases with increasing temperature we recommend taking the charging unit on journeys into countries of higher temperatures.

3.1.3. Battery operation

Only use alkaline manganese batteries of size IEC LR 6 (AA). Batteries especially suited for flash operation are e.g. Berec Super Power, Daimon Super Power (LR 6), **Varta Photo V 1500 PX, Fuji Novel PHOTO LR 6** and similar (please note that the sequence of the above batteries has been made by alphabetical order).
Insertion and replacement of batteries (Fig. "H")
Remove battery holder from grip. After releasing both locks (34) of the battery holder base, the base can be removed. When inserting the batteries observe the polarity marks inside the holder. Then by applying pressure to the locks (34) slide in the holder base. Finally replace battery holder in the grip.
Attention
Electrolyte can leak out of run-down batteries which can lead to battery contact damage. Never leave run-down batteries in the battery compartment.
Likewise remove the batteries from the compartment when not using the unit for long periods of time. Keep exhausted batteries away from heat or flame.
Batteries cannot be recharged.

3.1.4. Mains operation

The mains unit N 22 available as an optional extra (in preparation) allows direct power supply from any electrical outlet. The socket (2) is at the side of the grip. The flash unit must first be switched off with the switch (4).
When taking series shots with more than 30 flashes in a sequence at full light output (manual mode or automatic mode within the maximum possible operating range) the following flash sequences should be observed so as to avoid thermal overload.
For **continuous operation** (e.g. time lapse photography), the recycling time should be at least 30 s.
For **operation at intervals,** fire a maximum of 10 flashes with the shortest recycling time and then wait for at least 4 minutes before recommencing and so on.

3.1.5. Switching on

Slide the ON/OFF switch (4) upwards (red mark visible).
The unit is ready for operation as soon as the flash ready light (5) starts glowing.
Switch-off of the Mecablitz flash unit for short pauses between flashes is not necessarily required. Five or six minutes of flash readiness correspond to a power use of one flash at full light output. The whine of the power pack can only be heard just after switch-on or after flashing. The frequency of the charged unit is above the human range of hearing. Please do not forget to switch off the unit after finishing with photography.
Attention
The switch (4) must be in the Off position (black mark visible)when using the mains unit N 22.

3.2. Synchronization and shutter speed

Your Mecablitz must always be connected to the X contact on the camera. Should your camera only have a hot shoe contact in the accessory shoe and otherwise no additional sync connection then use the SCA connecting cable 300 A and the standard base 301 obtainable as a special accessory.
When using SCA 300 system adapters, synchronization is made by means of the adapters. Please read the instructions of the camera manufacturer concerning shutter speeds. Should you set a faster speed than given with focal plane

shutters the result is shadows in the picture. Slower speeds can be set. We recommend 1/125 sec. for cameras with diaphragm shutters.

3.3. Illumination and wide-angle diffuser

Without wide-angle diffuser	62° horizontally, 42° vertically
Lenses for 24 x 36 mm:	35 mm focal length and longer
6 x 6 cm:	75 mm focal length and longer
Using wide-angle diffuser:	65° horizontally, 60° vertically
Lenses for 24 x 36 mm:	28 mm focal length and longer
6 x 6 cm:	50 mm focal length and longer

Use of the wide-angle diffuser reduces the guide number of the unit. The exposure is automatically set correctly also using the wide-angle diffuser. However, please note the changed working ranges. The working ranges are automatically changed and new data displayed on the control centre **(Fig. "C")** when employing the wide-angle diffuser **(Fig. "E").**
In most cases the flash shutter speed is automatically set upon reaching flash readiness when using dedicated cameras and the associated SCA 300 adapters.
In the manual mode please read scale (14) to obtain the camera aperture to be set for each distance given on scale (15) both of which are on the control centre **(Fig. "C").**
Shadows on the lower picture edge are noticeable for exposures with short distances due to **parallax** between the camera lens and flash unit reflector. This can be rectified by use of the **wide-angle diffuser** or the **camera bracket 45–35** or **60–28** (both special accessories). In such cases the reflector can be set at the same height as the lens using the camera bracket.

3.4. Colour temperature

The light of the Mecablitz is matched to a colour temperature of approx. 5600 K which is around the colour temperature of average day light. Thus flash photography can be made using daylight film without having to use filters. The manufacturers sometimes specify the use of a filter for special films.

4. Handling the flash unit

4.1. Carrying (Fig. "J")

Hang **carrying strap 45–31** in both carrying rings (1). Slide bracket into the vertical tapered groove of the holding block **(Fig. "D").**

4.2. Setting up for flashing (Fig. "L")

Insert bracket into the quick-fastener (28) of the holding block (26) and allow it to lock into place. Secure firmly using the small knurled nut. Secure camera to bracket using the large knurled nut. We recommend the use of the **bracket plate 202/4** (special accessory) for medium and large cameras. Connect sync or SCA cable to flash unit and camera. Please observe the camera operating instructions.
By means of the **carrying strap 45–31** which you have attached to the carrying rings (1) and the rings at the end ot the bracket you can now allow the flash ready combination to hang freely. Your hands are now free to take notices, for example, without being unprepared for taking photographs **(Fig. "K").**

4.3. Arranging the flash unit to the right-hand side of your camera (Fig. "M")

The standard design of your Mecablitz is for arranging it to the left-hand side of

the camera. The holding block on the bracket must be repositioned when an arrangement on the right-hand side of the camera is required.
Please see the exploded view drawing of the bracket.
We recommend the following procedure:
Remove camera bracket.
Remove screw ㊱ completely.
Remove holding block ㉖.
Slide tightening strap ㊳ downwards and re-attach such that the thread points to the left. Note the shape of the tightening strap.
Unscrew the quick-fastener ㉘.
Use screw ㊱ to firmly screw the holding block onto the tightening strap.
Screw on quick-fastener.
Threads of 1/4" and 3/8" are provided on the bracket for purposes of mounting the bracket on a tripod.

5. Automatic mode

5.1. General

When a flash is fired, the sensor built into the flash unit measures the light reflected from the subject and quenches the flash as soon as the right quantity of light has been received.
The following should be observed when taking flash shots in the automatic mode:

1. Make sure that the film speed is set properly.
2. Heed that the subject is within the auto flash range of the set automatic aperture.
3. For a good flash result the aperture selected on the camera lens must be identical to the auto working aperture on the flashgun.

5.2. Selection of automatic mode (see Fig. "C")

Set the film speed by turning the knob ⑲ such that the film speed on the DIN scale ⑬ is opposite the mark ⑫ (for ASA scale ⑯ and mark ⑰).
Set line ㉔ of the selector disk ⑦ to one of the six selectable automatic apertures ㉕. The line ㉔ links the set aperture with the related maximum working range on the range scale ⑮.
The unit is ready for flashing when the flash ready lamp ⑤ lights up.

5.3. Auto flash ranges/aperture calculator

Each of the automatic apertures has a specific auto flash range. A change in film speed will change the auto flash range, but not change the f number.
The maximum range can be read on the distance scale of the control centre (see 5.2.). The minimum range is not given and amounts to 10 % of the maximum range.
Note: The faster the film speed – the longer the auto flash range with the same aperture.
The slower the film speed – the shorter the auto flash range with the same aperture.
Exceeding the upper limit of the auto flash range may result in underexposure, falling below the lower limit will produce overexposure. Any subject lying

between the upper and lower limits of the auto flash range will be measured by the flash unit's automatic system and correctly exposed (the limits given do not apply to bounce flashing! See Section 7.).
For TTL controlled flash operation (Dedicated System SCA 300), please refer to the values given in the table attached to this manual.
As the ranges overlap you very often have the facility of selecting the optimum aperture for the composition of the picture.
All given distances are flash-to-subject distances. The camera-to-subject distance may be different.

5.4. Auto check

Illumination of the auto check signal ⑥ tells you that the exposure was correct. This feature is very useful in bounce flash applications for which the given working ranges do not apply. The firing of a trial flash by operation of the manual firing button ③ (holding the flash unit as for normal photography) enables you to find out if the available light output is sufficient for the aperture selected.
If the auto check signal fails to light up upon firing a trial flash stop the unit down to the next smaller f number or reduce the distance to the reflecting surface or subject. Then fire another trial flash.

5.5. Automatic mode examples

Example 1:
Flash-to-subject distance: 2.5 m (8 ft)
Film speed: 21 DIN
Proceed as follows:
Set the film speed with the knob ⑲. As the flash-to-subject distance is shorter than the shortest maximum distance of all six auto working apertures and longer than the longest minimum distance, you have the choice of selecting any one of the six apertures. Because of the better depth of field you will decide in favour of aperture f 16.
Set line ㉔ on the selector disk ⑦ to aperture f 16. Switch on unit with switch ④.

The unit is ready for flashing when the flash ready lamp ⑤ lights up.

Example 2:
Flash-to-subject distance: 6 m (20 ft)
Film speed: ASA 100
Proceed as follows:
Set the film speed with the knob ⑲. The flash-to-subject distance of 6 m allows the use of apertures f 5.6 – f 4 – f 2.8 taking the maximum working ranges into account.
Since you desire a shallow depth of field you will decide in favour of aperture f 2.8.
Set line ㉔ on the selector disk ⑦ to aperture f 2.8.
Switch on unit with switch ④. The unit is ready for flashing when the flash ready lamp ⑤ lights up.

6. Manual mode

In the manual mode, the setting of the camera aperture is dependent on the flash-to-subject distance and the guide number of the unit for the film speed used. **Every change in the flash-to-subject distance makes it necessary to change the aperture to be set on the camera.** The aperture to be set on the camera is best determined by means of the control centre **(Fig. "C").**

6.1. Setting and determining the camera aperture

Set film speed on control centre using knob ⑲. Turn selector disk ⑦ such that the line ㉔ is opposite the mark M ㉒. (Manual flash mode – full light output).
The aperture to be set on the camera is now read from scale ⑭ above the appropriate flash-to-subject distance on scale ⑮.
The distance display automatically considers the change in light output when using the **wide-angle diffuser.**
The flash unit is ready for use when the flash ready lamp ⑤ illuminates.
Example:
Film speed: 21 DIN
Set aperture: f 8
Displayed distance: 6 m
Use of the wide-angle diffuser changes the distance displayed from 6 m to 4 m.

Mathematical determination of aperture:

$$\text{Camera aperture to be set} = \frac{\text{Guide number}}{\text{Flash-to-subject distance}}$$

Taking the previous example:
Guide number for 21 DIN film from the guide number table: 45

$$\frac{\text{Guide number } 45}{\text{6 m (20 ft)}} = \text{camera aperture f 8}$$

If necessary, either round up or round down the result to the next aperture.
The aperture calculated in this manner has to be corrected when **using the wide-angle diffuser.** The next smallest aperture number must be set on the camera. In other words f 5.6 instead of f 8.

6.2. Light output ratios

Apart from full light output in the manual flash mode additional light output ratios of 1/2 ("M 1/2"), 1/4 ("M 1/4") and winder ("W 1/40" are available.
Each light output level corresponds to a certain fixed flash duration time.
Setting procedure:
Set the film speed using the knob ⑲ on the control centre **(Fig. "C").** Set the mark ㉔ using the selector disk ⑦ to the index "M 1/2" ㉑ or "M 1/4" ⑳ or "W" ⑱. Read off the camera aperture from the scale ⑭ adjacent to the flash-to-subject distance on the distance scale ⑮.

6.3. Examples on the use of the light output ratios

Example 1:
Supposing you wish to photograph a small subject using the manual flash mode under the following conditions.
Film speed: 21 DIN
Flash-to-subject distance: 1.5 m (5 ft)
Smallest aperture settable: f 16
When using the full light output a camera aperture of

$$\frac{\text{Guide number } 45}{\text{1.5 m (5 ft)}} = \text{f 30 ~ 32}$$

is required.
This is not settable on many cameras.
According to the guide number table with 1/4 light output the guide number is 23.
Thus the camera aperture becomes

$$\frac{\text{Guide number } 23}{\text{1.5 m (5 ft)}} = \text{15.3 ~ f 16}$$

This can be set.

Example 2:
A sharp image of a quickly moving subject shall be taken which requires a very short flash duration. In the automatic mode the flash duration times are not known which is rectified by selecting the manual light output level whose related flash duration is sufficiently short.

6.4. Winder mode

The winder mode is only possible using NiCad cells. This mode is a manual flash mode of reduced power. Up to two flashes/second can be fired.
Setting procedure:
Set film speed using the knob ⑲ on the control centre **(Fig. "C").** Set line ㉔ using the selector disk ⑦ to the index "W" ⑱.
Read off the camera aperture to be set from the scale ⑭ adjacent to the flash-to-subject distance on the distance scale ⑮.

7. Bounce flashes

Direct light sometimes produces hard shadows. This can be avoided by bouncing the flash. For this purpose, the reflector is tilted upwards so that the light is reflected off the ceiling or a suitable reflective surface to give soft overall illumination. The reflecting surface must have a neutral colour or be white, when taking colour shots. For colour effects, you may choose a reflecting surface in the desired colour.

7.1. Bounce flashes in the automatic mode

Make sure that the sensor is directed towards the subject. Check for correct aperture setting by firing trial flashes. Watch the auto check. See 5.4.
The cited auto flash ranges do not apply here.

7.2. Manual bounce flashing

Select manual mode (see section 6). In this mode the aperture calculator is not applicable.
A common rule of thumb for calculating the aperture setting required for taking shots in small rooms is:

$$\text{f number to be set on camera lens} = \frac{\text{Guide number}}{2 \times \text{flash-to-subject distance}}$$

8. DEDICATED SYSTEM SCA 300 ⋈

The adapters for the DEDICATED SYSTEM SCA 300 ⋈ (as special accessories) are available for various dedicated camera models to perform special dedicated flash functions.
Please see the operating instructions for the DEDICATED SYSTEM SCA 300 ⋈ to learn more about this.

9. General information, care and maintenance, special accessories

Please protect your Mecablitz from moisture and excessive heat.

9.1. Care and maintenance

Formation of the flash capacitor
The built-in flash capacitor changes physically when stored for long periods of time without the application of a voltage; it deforms. To prevent deformation the capacitor should therefore be activated every three months by switching the unit on for about 15 minutes without firing flashes or by operating it from the mains for 15 minutes using the mains unit N 22.
Recharging the NiCad pack
Prior to forming the flash capacitor we recommend recharging of the NiCad pack for five hours every three months to compensate for self-discharging.

Storage of batteries
Please remove the batteries from their compartment when not in use over long periods of time to avoid damage due to leaching.

The batteries cannot stand excessive heat such as direct sunshine or naked flames. The batteries cannot be recharged.

9.2. Special accessories

Please see Fig. (a) on the cover pages. Be careful not to connect any accessories not intended for use with the Mecablitz 45 CT 3.
Adapter for the DEDICATED SYSTEM SCA 300 ⋈ (without figure)
For flash operation with dedicated cameras. Please see separate operating instructions for the DEDICATED SYSTEM SCA 300 ⋈
Tele attachment 45–33, matching **bag 45–29** (a)
For flash photography using tele photo lenses. Almost doubles the guide number. Infrared pictures also possible.
Bounce diffuser 60–23/60–33 (b)
Handy bounce diffuser for illuminating subjects with soft directional light. Reflecting surface 252 mm x 203 mm.
Filter set 45–32 (c)
Includes four colour filters for illumination effects and a clear filter holder for taking foil filters of any colour.
Long sync cable 45–48 (1 m) (d)
Spiral sync cable 45–49 (d)
For photography work using "free flash" (flash unit separate from camera).
Sync extension cable 60–53 (1.25 m) and **60–54,** (5 m) (e)
For setting up the flash unit some distance from the camera.
Bracket adapter 45–35 (f)
For correcting parallax between reflector and camera with close-ups and wide-angle shots.
Bracket adapter 60–28 (not illustrated)
Similar to 45–35, however adjustable in height for matching winder cameras etc.
Bracket plate 202/4 (g)
For easy and reliable mounting of medium and large format cameras to the camera bracket.
Spacer 202/1 (h)
Enables the mounting of cameras with operating elements at the base to the camera bracket without preventing their actuation.
Mecalux 11 (j)
Allows optical, delay-free remote release of slave units by means of a flash triggered by the camera. Also responds to infrared. No battery necessary.
Car charging unit A 16 (k)
Enables power pack recharging from the cigarette lighter of a car for a 12 V supply.
Hand loop 45–27 (l)
Facilitates handling the flash unit or the combination of camera and flash unit.
Carrying strap 45–31 (m)
To facilitate carrying the combination of camera and flash unit ready for use or for carrying without the gadget bag.
Gadget bag 45–34 (n)
Suitable for flash unit and accessories.
Camera cable release 45–26 (o)

Enables triggering of the camera by the hand holding the flash unit. In this manner the other hand is free for continuous focusing corrections. The triggering arrangement can be made individually. The cable release can be mounted on the right or left hand side.
Camera electrical release 45–25 (not illustrated)
Similar to the camera cable release 45–26 but with switch for electrical triggering (e.g. winder).
Power pack 45–45 (p)
External NiCad pack power source of large capacity. Produces approx. 180 flashes with full output.
SCA connection cable 300 A + standard base 301 (q)
For Mecablitz 45 CT 3 synchronization on the camera accessory shoe with a hot shoe contact.
Charger B 45 (r)
NiCad pack and charging unit for connecting the Mecablitz 45 CT 3 Battery to NiCad pack operation.
Mains unit N 22 Electronically stabilized. Length of cable: 3 m. (s)

Subject to changes!