

PRIOLITE

M500

Instruction manual

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Introduction

Dear photographer,

Thank you for selecting the **PRIOLITE** Compact Flash Unit.

As a young, aspiring company, **PRIOLITE** intends to use innovative technologies and its high-quality products to open up new market segments for professional photography.

Our devices are based on state-of-the-art technology and equipped with carefully selected components. Our production process is continuously monitored to ensure high quality and safety standards.

Before using this unit, please read the operating manual and safety instructions carefully to prevent damage to the device and maintain your warranty.

We wish you many successful years of productive and innovative work with our equipment.

Should you have questions about our products, please contact us!

Best regards, **PRIOLITE** GmbH

Description

PRIOLITE M500 is a radio-controllable compact unit for mains operation with a maximum output of 500 J. It is available for 230V operation and with multi-voltage technology. The power output ensues via 6 apertures, accurately controllable in 1/10 steps. Recycle time to maximum output is less than 2 seconds.

Delivery includes

- ◇ 1 **PRIOLITE** M500 compact flash unit
- ◇ 1 flash tube (pluggable)
- ◇ 1 cover dome
- ◇ 1 tilting head
- ◇ 1 each power and synchronization cable
- ◇ 1 protective cap for transport

Note: Kits (containing 2 M500 and accessories) include only 1 synchronization cable per kit.

Intended use

This compact flash unit is intended for use in professional photography in the studio or on location. Its purpose is the provision of electrical power for flash generation and flash generation itself. The unit may not be used for any other purpose.

Safety instructions



Compact flash units store energy in capacitors by collecting high voltages, which creates particular sources of danger. Before using this unit, read the following safety instructions and always comply with these instructions.

- ◇ Flash units may not be operated without supervision.
- ◇ Always use extreme care when handling the flash unit to prevent damage to the flash tube. A damaged flash tube poses a risk of severe injury or death, as you can come into contact with the voltage-carrying electrodes. In this case, switch off the unit immediately and disconnect it from the power supply. For safety reasons, you must wait at least 5 minutes after disconnecting the unit from the power supply to ensure that the capacitors have discharged via the internal safety circuit. The same applies to any type of maintenance work or before transports, which may be undertaken on the unit only when it has been switched off and disconnected from the power supply after the waiting period has expired.
- ◇ Contact with the capacitor voltage is life-threatening; thus, the opening of the casing and repairs on the compact unit may be carried out only by authorized customer service personnel.
- ◇ Only the supplied original **PRIOLITE** cables must be used. No junction boxes may be used for connecting several flash units. Flash units may be connected only to a power supply with an intact ground wire. Before each use, check to ensure that the casing as well as all cables, connectors and sockets are in good, undamaged condition. Otherwise operation of this device is forbidden; damaged units and/or cables must be repaired or replaced by authorized customer service personnel.
- ◇ Flash units may be operated only with a properly mounted cover dome, as halogen lamps and/or flash tubes can explode due to the development of overpressure.
- ◇ It is particularly important to protect the flash unit from moisture, splash water and impacts during use or transport. This unit is not designed for operation in dusty environments. Flash systems may not be used in potentially explosive areas; to prevent the risk of fire, do not store flammable materials (e.g. decorative materials, paper, etc.) in the immediate vicinity of the flash units.
- ◇ Do not insert any objects into the ventilation slots, power sockets or synchronization sockets. The ventilation slots must be kept clear during operation.
- ◇ Flash units mounted on pantographs or ceiling systems must be doubly secured against falling.
- ◇ Do not flash into your eyes from a short distance (under 5 meters), as this can injure your eyes. Do not look directly into the flash reflector; the flash could be inadvertently triggered.
- ◇ Ventilate closed rooms regularly to prevent illegal ozone levels, which can be generated by the use of high-performance flash units.

Technical specifications of M500

Output:	500 J
Power supply:	230V / multi-voltage (95-240V, automatic adjustment)
Modeling lamp max.:	300 W halogen, 6.3 mm pin base
Flash recycling time:	<2 sec at full power
Flash duration t0.5 (sec):	1/2500
Color temperature (K):	5600
f-stop (1m distance, 7" reflector):	64.2
Weight without tilt head (kg):	3.2
Dimensions (cm x cm):	36 x 17
Code numbers:	02-0500-01 (multi-voltage); 02-0500-02 (230V)

Initial operation

Set-up and assembly

The compact flash units are equipped as standard with a tilting head. For set-up on tripods, pantographs or ceiling systems, this is screwed securely onto the appropriate tripod mount using the locking star screw on the side of the panner.

If the unit is suspended from a pantograph or ceiling rails during operation, a second secure connection is required in accordance with the applicable safety regulations. It is recommended that a steel cable suitable for this purpose (not included) be inserted through the opening of the handle and secured to a suitable lug on the suspension unit.

Adjustment options on the tilting head

You have the following options for adjusting the flash unit:

- ◇ The inclination angle can be precisely adjusted by means of the large thumbscrew. The rotation angle (360 °) is set using the tripod mounting screw.
- ◇ Using the lateral small thumbscrew on the opposite side, the flash unit can be shifted backwards or forwards in the rail profile; this might be useful for weight compensation (e.g., when attaching heavy accessories).



To prevent the unit from sliding off the rail and dropping down, the provided 6mm screw has to be inserted into the provided thread hole on the rear end of the rail.

Attachment and removal of the glass dome



The glass dome may be attached or removed only when the compact flash unit is switched off and disconnected from the power supply. Always ensure that the flash tube and modeling lamp remain intact and undamaged!

The cover dome is attached to the four pre-mounted springs. Place the cover dome so that it is level and push it gently down until it locks into place audibly. To remove the cover dome, tilt it slightly so that it detaches from two of the spring mounts. Then gently pull the cover dome straight up.

Connection of accessories

The compact flash unit must always be set up only at its final usage site and the corresponding light modifier attachment (reflector, soft box, umbrella, etc.) mounted before the unit is put into operation. Accordingly, the compact flash unit must always be switched off before the unit is repositioned or the light modifier is changed.



After longer periods of operation the flash unit and the attached accessories (particularly reflectors) can become very hot. To avoid burns upon contact, you should use suitable heat guards when handling the equipment or wait until it has cooled down. Due to the heat build-up, the compact flash unit must not be operated in the vicinity of flammable objects. Sufficient safety clearance with regard to decoration for photographic purposes must be ensured.

Connection of reflectors

To attach reflectors or softboxes, the clamps are put into the open position by pressing the reflector lever against the spring force until it hits the stop and keep it there. Now place the accessory evenly and flush to the unit (for accessories with Bowens S-type adapter, place the three flanges of the accessory that they fit into the corresponding recesses). Do not tilt accessory during this process. Then return the lever to its initial position moving with the spring force to lock the accessory into place. To remove the accessory, hold it firmly (caution - it could be very hot!), press the lever against the spring force to unlock it and remove the accessory.

The system is generally compatible with most reflectors of the Bowens / S-Line as well as for HENSEL reflectors, the clamps fit around the raised edge of the reflector from the outside. Should you have any questions concerning compatibility, please contact us.

Connection of softboxes

The **PRIOLITE** softboxes have a connector plate with 3 flanges (Bowens / S-Line principle). The flanges are inserted into the appropriate recesses as described in the "Connection of Reflectors" section above.

This unit is compatible only with the softboxes of the Bowens / S-Line.

Umbrella attachment

The umbrella to be attached is inserted into the rail at the bottom of the compact flash unit to the desired length and locked in place with the knurled screw.

Acclimatization

If the flash unit is to be set up at a new location with a different humidity level and/or temperature, the unit should stand for a while before operation in the room in which it is to be used. This should prevent the formation of leakage current which can develop due to precipitation.

Fuse protection

Outlets in the building should be equipped with at least 10 A fuse-protected power sockets. For fuse protection of the flash unit, please refer to section Maintenance.

Power connection / Switching on and off

M500 compact flash units are intended for 230V operation (230V version) or world-wide operation (multi-voltage version that automatically adjusts to the respective mains voltage (230V/115V)). The power cable included with delivery is plugged into the power socket at the lower back and then connected to the mains socket. Now the device can be turned on and off with the main switch, which is located in extension of the rail profile.



Flash units may be connected only to a power supply with an intact ground wire.

Overheating

All units are equipped with a fan to prevent damage to the flash tube and the unit itself during long series of flashes. Nonetheless, should overheating occur, an error message will appear on the LED display. The error message will be reset as soon as the unit has cooled down.

**M500
Operating Panel**



**Schematic
panel diagram with
function boxes**



Functions on the operating panel

PILOT function box (modeling lamp)

The operating mode of the modeling lamp is selected using the three buttons arranged in a column on the left. The active mode is indicated by the relevant control LED lighting up:

Full: The modeling lamp burns continuously at full power (max. 300 W).

Free: The modeling lamp can be adjusted independently of the flash output. To do this, hold down the “Free” button and set the desired output using the control knob (5.0 - 10).

Prop: The modeling lamp output is adjusted proportionally to the selected flash power output.



The modeling lamp must not be used as a substitute for studio lighting; it is only an aid for focusing the lens and to estimate the light and shadow progression of the flash.

Control knob (adjustment of flash power and modeling lamp in “free” mode)

The control knob is used to set the desired flash power in 1/10 steps over a range of 6 aperture values from 5.0 to 10; the values are shown on the LED display.

If the “Free” option is selected for the modeling lamp, the modeling lamp can also be freely adjusted here (see above). Upon release of the “Free” button, the LED display automatically returns to displaying the flash power.

RADIO function box (radio operation)

For remote radio operation, use the three radio buttons at the right.

On: If the ON button is activated (control LED lights up), the flash can be triggered and controlled by radio. The additional entry of TEAM and ID is required.

Team/ID: Select Team A, B, C, or D and an ID from 1 to 9 by using the control knob and pressing and holding down the relevant button. The selections will be shown on the display. A maximum of 36 flash units can be individually controlled with the appropriate combinations (4 x 9).



Team and ID can be changed only when the radio function is “ON”.

AUXILIARIES function box (additional functions)

Slave If the “Slave” button is activated, an external flash is triggered via the photocell (see the section entitled “Flash triggering” below).

FC IF FC (Flash Check) is activated, the modeling lamp goes out immediately after the flash and lights up again only after the unit has charged up to the selected level. This ensures correct charging as well as renewed flash readiness. The flash control ensures that the flash lamps light up when several flash units are used.

Audio: When the “Audio” button is activated, flash readiness is indicated by an acoustic signal.

Flash triggering

The flash can be triggered using the following options:

Flash triggering via the synchronization cable

The compact flash unit is connected to the camera using a synchronization cable with a 3.5 mm jack via the “Sync” socket. The synchronization voltage is 5 V.

The synchronization circuit was designed using state-of-the-art semiconductor technology. This enables reliable flash triggering even in older cameras with mechanical contacts.

However, due to the large number of different electronic circuits used in the cameras for synchronization control, we cannot assume any liability for any damage to the camera triggering the flash. You should therefore contact the camera manufacturer before using any cameras that are not generally commercially available.

Flash triggering via the photocell

The compact flash unit can also be triggered via the built-in photocell. Triggering then occurs when a flash from another unit “strikes” the first unit. This operating mode is activated by pressing the **Slave** button (control LED is on).

The photocell is designed as an impulse photocell. Thus, it works only when the striking flash has a higher f-number than the ambient light. You must therefore ensure that no excessively strong external light falls on the photocell. If this cannot be avoided, another method of triggering the flash must be selected.

Flash triggering via radio remote control

The compact flash unit is equipped with a built-in bi-directional radio module. To trigger the flash via radio, the radio remote control must be mounted on the hot shoe of the camera and then switched on using its main switch. You must also ensure that the **Team/ID** settings on the radio module and the flash unit match. The flash is triggered by activating the camera shutter.

Flash triggering via the TEST button

The flash can also be manually triggered on the unit by pressing the “TEST” button.

Flash readiness

Flash readiness is signaled by

- ◇ the “TEST” button lighting up
- ◇ the glass dome over the photocell lighting up
- ◇ relighting of the modeling lamp when FC is activated
- ◇ an acoustic signal when the audio function is switched on

Automatic Power Drop (APD)

If the power setting is reduced, the stored energy is internally dissipated. No flash is triggered during this process. Compact flash units that are switched off are automatically discharged. It is also possible to reduce the energy quickly to the current value by triggering a test flash.

Maintenance

The following maintenance work may be carried out by the users themselves: replacing the fuses, the halogen modeling lamp and the plug-in flash tube.



Before each of these procedures, the flash unit must be switched off and disconnected from the power mains. You must then wait at least 5 minutes for safety reasons to ensure the discharge of the capacitors via the internal safety circuit.



Furthermore, before replacing the modeling lamp and/or the flash tube, you must wait for them to cool down.



To remove the cover dome, see the instructions above. The flash tube and modeling lamp must not be touched during this procedure (danger!). Always use extreme caution when handling an exposed halogen lamp and/or flash tube due to the existing overpressure.

Replacing a fuse

Fuses must never be “mended” or bridged. Use of the wrong type of fuses carries an increased risk of explosion of the halogen lamp when the spiral filaments burn out. The fuse ratings required depend on the type of halogen modeling lamp used. For 300 W halogen lamp use 10A time-lag fuses to be ordered from **PRIOLITE**. For replacing fuses, pull out the small drawer with the fuse symbol on it between main switch and main socket.

Replacing the modeling lamp

To replace the halogen lamp, carefully pull it out of the plug contact and replace it with a new one.



You must not touch the glass of the new halogen lamp with your hands, as this greatly shortens the service life of the lamp and increases the risk of explosion. A halogen lamp with a maximum of 300 W may be used as the modeling lamp.



Before putting it into operation, it must be ensured that the new modeling lamp has proper fuse protection in accordance with the applicable regulations (see “Replacing fuses” above).

Replacing the flash tube

The compact units are equipped with a plug-in Omega flash tube which can be replaced by the user if it becomes defective.



If the glass of the flash tube is broken, do not touch the electrodes in any case when you are replacing the flash tube! In this case you must use fully insulated pliers to remove the damaged flash tube!

First, unhook the trigger wire. Then, carefully pull the flash tube out of the plug connector and replace it with a new one (to be ordered from **PRIOLITE**). Then re-attach the trigger wire. Before using the unit once again the glass dome is to be mounted for safety reasons.

Regular inspection and repairs

Except for the work described in the “Maintenance” section, users may not perform any repairs on flash systems; these are to be carried out exclusively by authorized customer service personnel.

In accordance with country-specific safety regulations, inspection and maintenance of electrical systems and devices should be carried out at regular intervals. We recommend an annual inspection of the units to ensure operational safety and reliability and to maintain the value of the system.

Return to customer service

To prevent damage during transport and to ensure optimal protection of the units, we recommend that you always ship the devices in the original packaging.

Disposal

Disused and defective units must be disposed of in the electronic recycling.

Accessories

The following accessories are available:

- ◇ Radio remote control
- ◇ Lightformers (Reflectors, Grids, Softboxes, Octaforms, Striplights, Umbrellas)
- ◇ Stands, Bags
- ◇ Glass Domes, Flashtubes, Halogen lamps, Sync/Power cables

Declaration of Conformity

The company
PRIOLITE GmbH
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Germany
declares that the product

M 500

is in conformity with the following standards:

EN 61000-6-3:2007
EN 61000-6-2:2005 and
DIN EN 60335

according to the provisions of the Directives
2004/108/EG and 2006/95/EG

Place and date of issue:
Würzburg, 01-Juli-2013

A handwritten signature in black ink, appearing to read 'J. Renschke', is written over a large, faint watermark of the same signature.

Dipl.-Ing. Joachim Renschke
Geschäftsführer / Managing Director PRIOLITE GmbH

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