

impact

lighting equipment and accessories



VC-500LR Monolight
INSTRUCTIONS

Congratulations on your purchase of the Impact VC-500LR Monolight. We feel that it will contribute much to your photographic skill and enjoyment. This light incorporates numerous advanced features, and was designed to provide many years of trouble-free service. Please read these operating instructions and safety precautions carefully before operating this equipment.

Features

- CMOS chip technology
- Large Liquid Crystal Display
- Five Stop Range – full power to 1/32 power in .10 f/stop increments
- Fast recycling and long flash duration
- Built-in optical slave
- Red Eye Reduction function
- “Auto Dump” excess power release circuitry
- Commonly available 1/4” plug flash sync input
- Fan cooled and overheat warning circuitry
- User-replaceable flash tube
- Lamp Saving Technology (for extended life of modeling lamp)

Power Requirements

This light is designed for use with 220V~240V AC power only, and is supplied with a 3-prong, grounded plug. Do not attempt to defeat this safety feature. If necessary, use only grounded extension cords rated for 10 amps or greater.

Warning

There are no user-serviceable parts inside the unit. Only qualified service engineers should access the inside of the case (Danger – high voltage parts inside). Avoid damage to both the flash tube and modeling lamp. If the modeling lamp or flash tube become cracked or damaged in any way, they should be replaced immediately. Do not use your flash unit in an environment where moisture or flammable vapor is likely to come in contact with the unit. Turn the power off and unplug the power cord when the unit is not in use. Always remove the modeling lamp and replace the protective cap when transporting the unit. Avoid strong light falling onto the slave cell as it will prevent efficient operation. If the unit blows a fuse, a replacement fuse can be inserted in the pull-out compartment on the back of the unit. To ensure long life of the flash capacitors, the flash unit should be powered up and fired several times at least every two months.

Preparing Your Monolight for Use

Contents of carton

Carefully remove the monolight from the box. You should have the following:

- 220V~240V flash head with protective cap and flash tube installed
- 250W modeling lamp
- 7" grid reflector
- sync cable
- power cable
- user manual



Mount on a stand

Select a stand or support system of suitable weight and dimensions to ensure stable operation of the unit.

Install Reflector & Modeling Lamp

(1) Remove the plastic cover from the latch on top of the flash head. Depress the latch, pressing it toward the back of the unit. Rotate the protective cap counter-clockwise. Pull the cap off and set aside. (2) Install the modeling lamp by screwing it into the threaded socket. **CAUTION:** Do not touch the lamp with your bare hands. Oil residue from your fingers can cause the surface of the lamp to heat unevenly and explode. Use white cotton gloves or a clean cloth. (3) Install the reflector where the protective cap was before. Align the three pegs on the reflector with the three slots, press the reflector in and rotate clockwise until it locks in place. The umbrella slot in the reflector should be at the bottom.

Note: Take care when fitting or removing reflectors or softboxes to not damage the flash tube assembly. The flash tube is very delicate. Always switch off the unit and disconnect the power before fitting or changing lamps, flash tubes, reflectors or softboxes.



Operating Instructions

Legend

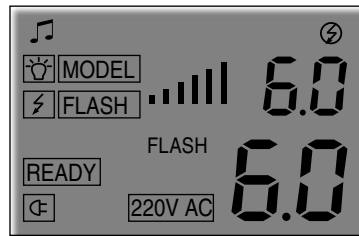
A – Liquid Crystal Display	K – Fuse Holder
B – Ready Beeper Indicator	L – Sync Cord Jack
C – Modeling Lamp Indicator	M – Power Switch
D – Error Indicator (shown off)	N – Power Regulator Knob
E – Flash Ready Indicator	O – Slave Sensor Control Button
F – Voltage Indicator	P – TEST Button
G – Photo Cell Indicators (shown off)	Q – Audible Beep Button
H – Modeling Lamp Readout	R – Modeling Lamp Independent Adjustment
I – Flash Power Readout	S – Power Socket
J – Autodump Indicator	T – Umbrella Holder

Power Supply

Before plugging the power cord into the wall socket, make certain that the power switch is set to the OFF (“0” position). Note: The VC-500LR monolight is designed to work on 220V~240V 50Hz AC current.

Power Switch

Turn the power switch to the ON (“—”) position. A beep will sound and the LCD will show all of the current settings. We recommend charging the monolight for one hour prior to its initial use and after an extended period of inactivity (more than two weeks). If the unit is left unused for a few months, or the unit has been used predominately at low power settings, we recommend that the power be increased to the maximum and the unit left switched on (with the modeling lamp OFF) for at least 30 minutes, to help preserve the life of the capacitors.



Flash Settings

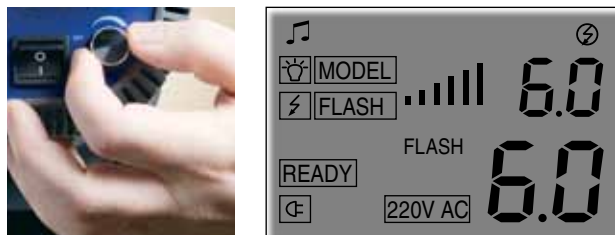
Flash Output

The flash power output is variable over a five f/stop range (six f/stops) from full power to 1/32 power in 1/10 f/stop increments. The power is displayed on the LCD screen in decimal form. The smaller top number represents the modeling lamp power, and the larger bottom number represents the flash power. Minimum setting is 1.0 and the maximum is 6.0. Rotating the regulator knob changes the value by 0.1 f-stop (a total of 50 values). If the current value is 5.6 and you want to reduce the power by one stop, set the power to 4.6.

Setting	Power
6.0	Full Power
5.0	1/2 Power
4.0	1/4 Power
3.0	1/8 Power
2.0	1/16 Power
1.0	1/32 Power

To Set the Flash and Modeling Light Output Together

Rotating the power regulator knob will adjust the power of both the flash and the modeling lamp unless you choose to set the power for each separately (more on that later). The READY icon will appear when the power is 80% recycled. We recommend you wait an extra second or two for 100% power. This will prolong the life of the capacitors. The flash is now ready to fire. To test, press the TEST button. When stepping down the power of the flash, the FLASH icon on the LCD screen will blink until the capacitors release the accumulated energy.



Modeling Lamp Settings

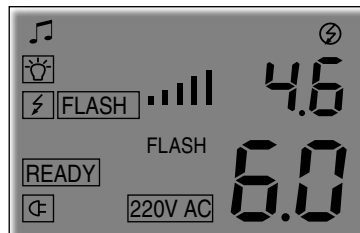
Lamp Saving Technology

The VC-500LR has built-in soft-start circuitry to ensure longer modeling lamp life. When the modelling lamp is turned on it will light up at a minimum brightness and slowly reach full brightness after a few seconds. This technology will allow the user to make fewer replacement lamp purchases over time.

Settings for the Modeling Lamp

By repeatedly pressing the regulator knob you can cycle through choices to set the same power for both the flash tube and the modeling lamp, to set the power for the flash and modeling lamp separately, or to have the modeling lamp off.

When both the flash icon and the modeling lamp icon are displayed, turning the regulator knob will affect the power to both the flash tube and the modeling lamp.



Display shows modeling light and flash power controlled separately.

To Set the Flash and Modeling Light Output Separately

Press the regulator knob once. Turning the regulator knob now will affect only the flash power. The modeling lamp will be on continuously and its power can be adjusted by pressing the UP and DOWN arrows on the panel. In this mode, the modeling icon will display, but not the "MODEL" word. As you press the UP and DOWN arrows, the value of the modeling lamp's power will change in the display.

Modeling Lamp Settings (continued)

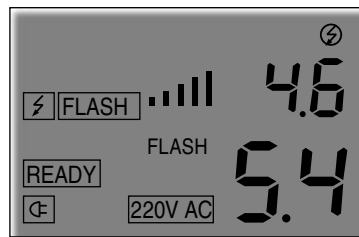
To Turn the Modeling Lamp Off

Pressing the regulator knob twice will turn the modeling lamp off. The modeling lamp icon will disappear. Turning the regulator knob now will affect only the flash power.

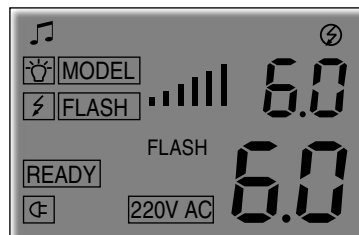
Pressing the AUDIO button will turn the audible beeper off and will set the modeling lamp to turn off automatically when the flash is fired. The modeling lamp will turn back on when the flash unit has recycled and is ready to fire. The beeper icon will not display under this setting.

Pressing the regulator knob a third time will return you to operating the flash and modeling lamp power simultaneously. The modeling light and flash icons will return, as will the words "MODEL" and "FLASH." The VC-500LR will retain your settings after you power the unit off.

Both increasing and decreasing the power settings generates heat inside the unit. Avoid repetitive power setting changes and you will extend the life of the unit, the flash tube, and modeling lamp.



Modeling light and ready beeper are OFF.



Modeling light and flash power are controlled simultaneously. Audio beep is ON.

Triggering the Flash

TEST Button

The simplest way to trigger the flash is to press the TEST button. This is useful when you need to discharge the power built up in the flash unit, for example just before replacing the flash tube (more on that later).

Sync Connection

The sync jack on the VC-500LR may be used for direct connection to a camera set to 'X' synchronization. A radio slave receiver may also be plugged into this socket.



Sync connection

Photocell

The VC-500LR features a photocell which allows the flash unit to be triggered by another flash or to be triggered by a second or third flash to allow for anti-red eye preflashes.

The photocell is located behind the red transparent cover on the top and at the back of the unit. The photocell is very sensitive but some experimentation with positioning may be necessary to ensure a reliable trigger, particularly if the cell is not in the direct line of sight of the triggering flash unit. Avoid directly illuminating the photocell from a continuous light source (such as ceiling lights or windows) since this can prevent correct operation. Very high ceilings can also affect the operation of the photocell.



Photocell

Photocell Settings

To Set the Photocell

By repeatedly pressing the SLAVE button you can cycle through choices to set the photocell to trigger the flash after one, two or three flashes are detected. Or you can set the photocell to OFF.

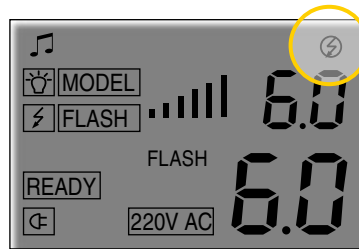
Photo Cell "1"

If you have selected "1" in the procedure above, the unit will autoflash immediately when another flash is activated in the same area. The "flash bolt" will show in the display with a small number "1."

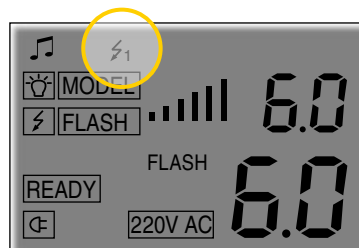
Photo Cell "2" and "3"

If you have selected "2" in "To Set the Photocell" above, the unit will autoflash on the second flash the photocell detects and will ignore the anti-red eye flash, also known as the "preflash."

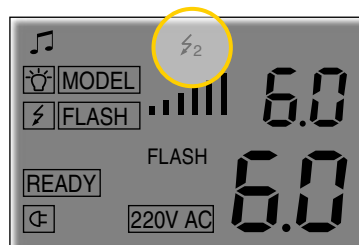
If you have selected "3" the unit will autoflash on the third flash detected by the photocell.



The photocell is OFF. No autoflash.



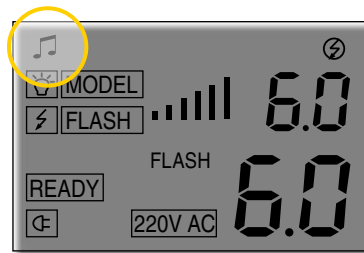
Autoflash set for the first flash detected.



Autoflash set for the second flash detected.

Audible Beep Settings

A beep will sound once, when the flash is recycled and ready to flash. You can turn this audible beeper on and off by pressing the AUDIO button on the back panel. The musical notes symbol will display if the beeper is on, and will not display if the beeper is off. When the beeper is off, the modeling lamp will turn off automatically when the flash is fired. The modeling lamp will turn back on when the flash unit has recycled and is ready to fire.



Audible beep is ON.



Use of Umbrellas and Softboxes



Umbrellas

An umbrella with a handle diameter of 8-10mm can be firmly secured in the umbrella holder. Firmly press the umbrella shaft through the holder. The locking knob is located on the side. Do not overtighten to avoid damaging the shaft of the umbrella. The reflector supplied with the VC-500LR features a slot through which you can feed the umbrella shaft.



Softboxes

Use of a heavy accessory such as a large softbox can make the flash unstable. However, it is possible to re-balance the flash by sliding the flash unit along its mounting bracket. Release the screw at the top of the mounting bracket. Slide the flash unit along its mounting bracket towards the front of the flash so that the head doesn't tilt down. Don't forget to retighten the screw. Make certain that your setup is stable before proceeding.

Changing the Flash Tube

Discharge the Flash Unit

The charge in the flash unit must be discharged before removing the flash tube. Make sure the flash unit is on. Push the TEST button on the rear panel of the flash. The unit will flash, discharging the power. Immediately turn off the power switch on the rear panel. Unplug the power cord from the power source. It is advisable to wait at least 30 minutes before touching or removing the flash tube.



Remove Old Flash Tube

First, remove the reflector. Then, using white cotton gloves or a clean cloth, remove the modeling lamp. You will need to remove the retention spring wrapped around the top of the flash tube. With needle-nose pliers, unhook the retention spring loop. Using white cotton gloves or a clean cloth, grip the base of the flash tube on each side. Carefully pull the flash tube from the flash unit.

Install New Flash Tube

Make sure the power switch is off and the power cord is disconnected from the source. Locate the two flash tube pin sockets above the modeling lamp socket. Using white cotton gloves or a clean cloth, push the pins of the flash tube into the sockets using firm, even pressure at the base of the flash tube. With needle-nose pliers, hook the retention spring over the hook above the flash tube. Re-insert the modeling lamp using white cotton gloves or a clean cloth. Re-install the reflector.

Changing the Fuse

A 6A fuse is mounted in the rear panel and protects the circuitry of the flash unit. Turn off the unit and disconnect the power supply before changing the fuse. Never replace with a fuse of a different type or rating. A spare 6A fuse is fitted within the fuse holder. Use a small screwdriver to release the fuse cover. Remove the old fuse, place the new fuse in the slot, then replace the fuse holder.



Protection Features

The VC-500LR is equipped with advanced overheating and overcharge warning and protection circuits to prevent damage to the internal electronics.

Overheating Protection

After a long shooting session at high output, the recycling time of the flash will increase automatically until the flash cools down to a safe level, and then will start working normally again.

Overvoltage and Overcurrent Protection

The flash is protected against unstable voltages. Overcurrent protection is especially useful when using a power pack.

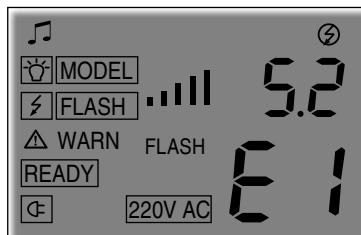
Best Practices

As with any flash unit, the useful life of the flash tube and the unit as a whole depends on the way it is used. Avoiding excessive heat is the key to long life.

- The fast recycling feature of the VC-series allows a rapid sequence of high power flashes. However, this feature should be used sparingly, since continuous rapid flashing can cause overheating and subsequent damage to the flash tube and possibly the internal electronics.
- Rapid sequences of flashes should always be followed by a reasonable cooling period, 10 to 20 minutes without flashing or at a substantially reduced rate. This flash is fitted with a cooling fan and will cool faster if left switched on with the modeling lamp off.
- Dimming or turning the modeling lamp off will reduce heat generation.
- Avoid rapid high power flashing when using restrictive reflectors such as snoots or grid reflectors, particularly if the unit is pointing downward.
- Do not flash over 12 shots per minute for over 10 minutes.
- Do not flash over 8 shots per minute for over 30 minutes.
- Take special care when shooting in a high-temperature environment.

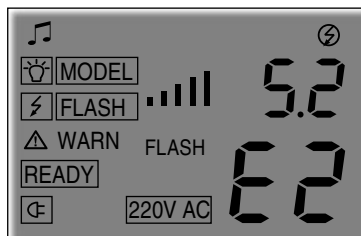
Error Codes

In the event of a malfunction, the LCD screen will display a blinking error code. The WARNING icon will also blink. In addition, errors codes E2 and E3 have a beep warning. Following is a short description of the three error codes and the necessary action to take.



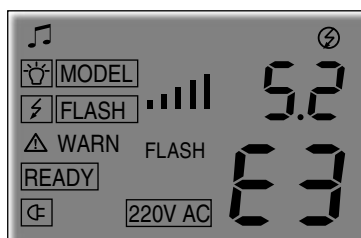
E1

Temperature Transducer problem. Turn the unit OFF immediately and contact the place where you purchased the flash.



E2

This error code can display after a long shooting session at high output or rapid sequence. Turn OFF the flash and allow it to rest for 30 minutes.



E3

This error code will display when the internal voltage of the flash is too high. Turn OFF the power immediately. After a few minutes turn on the flash again. If you still have the malfunction warning, turn OFF the unit and contact the place where you purchased the flash.

Safety and Maintenance Notes

Safety Notes

- Do not use your flash in an environment where moisture may come in contact with the unit.
- A fire hazard exists if flammable materials are placed in close proximity to the flash tube or the modeling lamp. Do not use your flash in an environment where flammable vapors are present.
- Do not restrict the ventilation holes when the flash is in use.
- Always switch off the power and disconnect the power cord before changing the fuse, modeling lamp or flash tube.
- Avoid placing cables where they can be tripped over. Replace damaged cords immediately.
- Never use a flash unit with damaged covers, moldings, flash tube or modeling lamp. If the unit is dropped or damaged, have it checked by a professional repair service before using.
- Due to the high-voltage circuitry inside this device, do not attempt to disassemble or repair the unit yourself.
- Keep out of the reach of children.

Maintenance Notes

- Turn the power off and unplug the power cord when the flash is not in use.
- We recommend charging the flash unit for one to two hours prior to its initial use and after an extended period of inactivity (more than two weeks).
- If the unit is left unused for a few months, or the unit has been used predominately at low power settings, we recommend that the power be increased to the maximum and the unit left switched on (with the modeling lamp OFF) occasionally for at least 30 minutes to help preserve the life of the capacitors.
- Avoid rapid, high-power flashing, especially when using restrictive reflectors such as snoots or grids. Excessive heat will shorten the lifespan of your flash unit, modeling lamp, and flash tube.

Specifications

VC-500LR Monolight

Power Output	500 W/S
Guide Number ¹	78
Output Control Range	Full to 1/32 in 1/10th f/stop increments
Recycling Time	1~3.4 seconds
Flash Duration	1/800 ~ 1/1200 second
Modeling Lamp	250W
Triggers	Sync cable, slave sensor, test button
Trigger Voltage	5V
Color Temperature	5600°K ±200°K
Flash Tube	Plug-in type, user replaceable
Cooling Fan	Yes
Auto Power Dump	Yes
Overvoltage Protection	Yes
Overcurrent Protection	Yes
Overheat Protection	Yes
Sync Cable	1/4" phono jack
Power Source	220V~240V 50Hz Automatic Voltage Regulation Circuit
Dimensions	12.6 x 5.1 x 5.1" (32 x 13 x 13 cm) – <i>without reflector</i>
Weight	6.2 lb (2.8 kg)

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¹Guide Number is calculated at 2m, ISO 100, 1/60, using the included reflector, and is a starting point. You should perform your own evaluations to determine the results you prefer.

Warranty

Impact provides a limited warranty that this product is free from defects in materials and workmanship to the original purchaser under normal use for a period of one (1) year from the original purchase date, Or thirty (30) days after replacement whichever occurs later. Impact's responsibility with respect to this limited warranty shall be limited solely to repair or replacement, at its option, of any product which fails during normal consumer use. This warranty does not extend to damage or failure which results from misuse, neglect, accident, alteration, abuse, improper installation or maintenance. To obtain a replacement during the time of this warranty, please return the defective item with proof of purchase along with an RMA number to the place of purchase. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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