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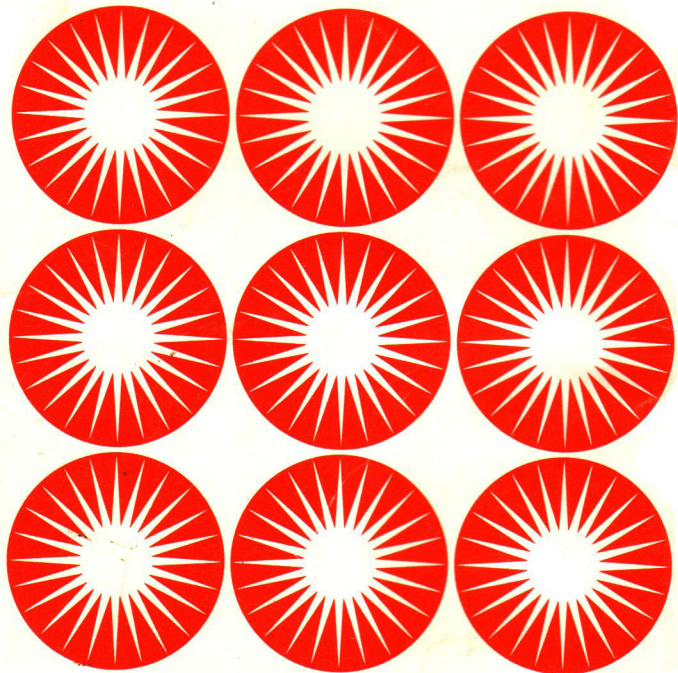
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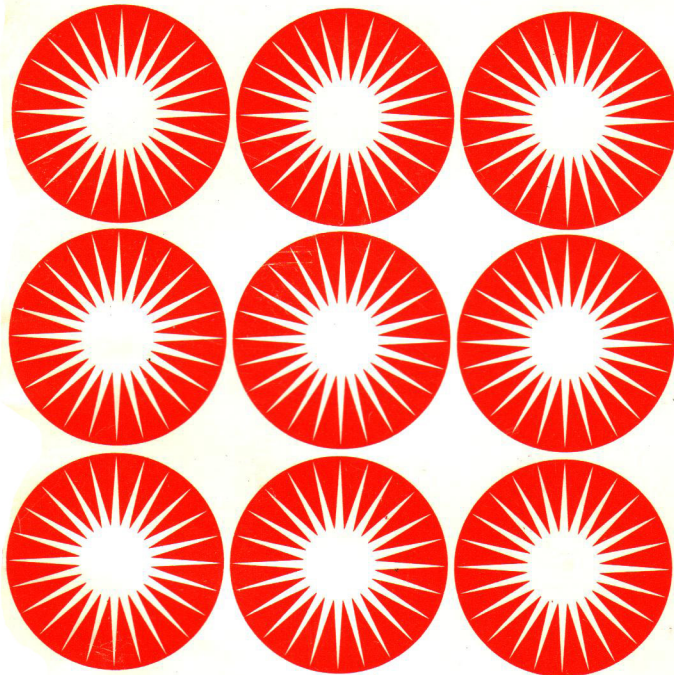


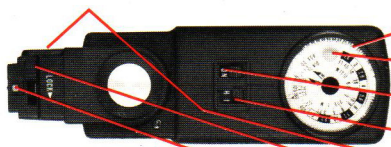
Vivitar

electronic flash

Model 192

Owner's Manual





1

Illuminated Calculator Dial

2

Ready Light

3

On-Off Switch

4

HI-LO Switch

5

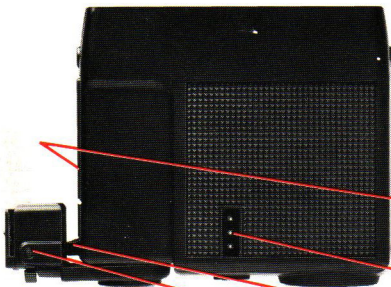
PC Cord Socket

6

Mounting Shoe Locking Lever

7

Open Flash Button



8

Auxillary PC Socket

9

NC-2 NiCad Battery Pack

10

Calculator Dial Illumination Button

11

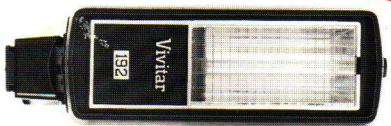
AC/Charge Unit Receptacle

12

Battery Compartment Release

13

Mounting Shoe



14

Wide Angle Attachment

15

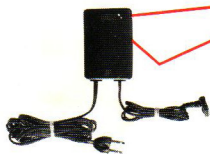
MV-3 AC/Charge Unit

16

AC Voltage Selector

17

Detachable PC Cord



Description of parts

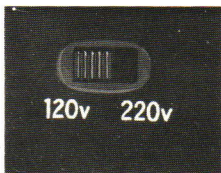
Table of contents

- 2-3 Short course of instructions
- 4-7 Detailed operating instructions
 - Battery operation
 - AC operation
- 7 Form the capacitor
- 7 The illuminated calculator dial
- 8 Attaching your flash to the camera
- 9 HI-LO power operation
- 9-11 Taking the picture
- 11 Cameras with built-in automatic flash control
- 11-12 Wide angle attachment
- 12-14 Helpful hints
 - Let it glow Flash fill
 - Shadows Simulating sunlight
 - Bounce flash Open flash
 - Mirrors Synchronization speed
 - Group shots
- 15 Multiple flash with Vivitar slave units
- 16 Specifications, Model 192

Short course of instructions

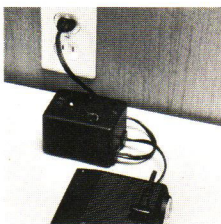
1

Set AC voltage selector on charger to proper line voltage [see page 5].



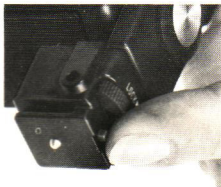
2

Charge unit for 1 hour [see page 5].



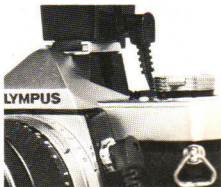
3

Flash unit 5 times to form capacitor [see page 7].



4

Mount flash on camera. Attach PC Cord to flash unit and "X" terminal on camera.



5

Set camera to correct shutter speed for electronic flash.



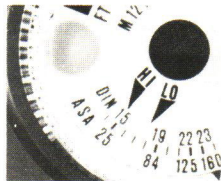
6

Set HI-LO switch based on light output needs [see page 9].



7

Set film speed on calculator dial opposite "HI" or "LO" indicator.



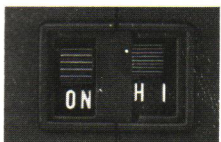
8

Determine distance from flash to subject and read f-stop opposite distance scale on calculator dial. Set f-stop on camera lens.



9

Slide On-Off switch to "ON" position. Focus camera. Take the picture when ready light glows.



Detailed operating instructions

BATTERY OPERATION

Your Vivitar 192 is supplied with an interchangeable NC-2 Nickel Cadmium Battery Pack already inserted into the unit. For convenience, additional NC-2 NiCad Battery Packs are available as accessories from your Vivitar Electronic Flash dealer allowing you to carry one or more fully recharged battery packs when traveling where AC outlets are not readily accessible.

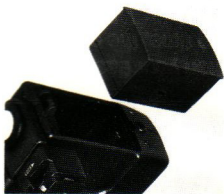
To insert a new NC-2 NiCad Battery Pack:

1
Move the Mounting Shoe (13) to the horizontal position.

2
Pull back on the Battery Compartment Release (12).

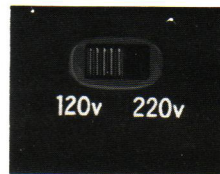
3
Remove discharged battery pack and insert new pack into the compartment as shown.

4
Push down on the battery pack until it locks securely in place.

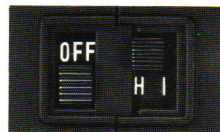


Charging the Batteries

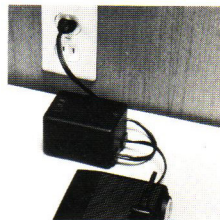
1
Set the AC Voltage Selector (16) on the AC/Charge Unit to match the line voltage you will use. CAUTION: The Selector must be set correctly to prevent damage to the charger.



2
Slide the On-Off Switch (3) to the "OFF" position.



3
Attach the charger cord to the flash unit (11) and plug the AC/Charge Unit into any standard AC wall outlet. The light on the charge unit will glow when proper connection has been made.



4
Charge the 192 for 1 hour. Once the batteries are charged, the charger will automatically switch down to a reduced charge rate and a built-in safety circuit will protect your flash from overcharging.

5
Remove the AC/Charge Unit and slide the On-Off Switch to "ON." When the Ready Light (2) glows your flash is ready to fire.



Quick Charge Feature

Your Vivitar 192 has the ability to deliver enough flashes to shoot an entire roll of film after only a few minutes of charging. The chart below shows the number of flashes obtainable as the charging time increases:

Charging Time (min.)	10	15	30	45	60
No. of Flashes (HI)	5	15	30	40	50
No. of Flashes (LO)	15	30	50	65	85

Battery Saving Circuit

Your flash unit has a built-in IC circuit that acts to *significantly* prolong battery life. When this circuit is in operation, the Ready Light ② will *BLINK*.

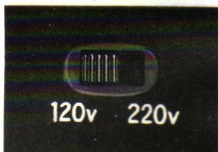
AC OPERATION

Your flash unit can be operated on either 120-volt or 220-volt AC current.

If your batteries are drained it may take a few minutes for the ready light to glow after connecting your unit into an AC outlet. Because the battery circuit is active even in AC mode, it is necessary to re-charge the batteries after extended AC operation.

1

Set the AC Voltage Selector on the AC/Charge Unit to match the line voltage you will use. CAUTION: The Selector must be set correctly to prevent damage to your unit.

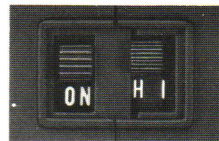


2

Attach the AC/Charge Unit to the flash unit and to any standard AC wall outlet. The light on the AC/Charge Unit will glow when proper connection has been made.

3

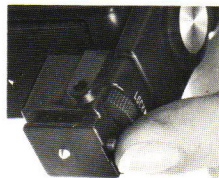
Slide the On-Off Switch to the "ON" position. When the Ready Light glows your flash is ready to be fired.



Form the capacitor

When your flash is new or when it has not been used for a long time, the capacitor may lose some of its ability to store electricity. When this occurs, you can "reform" the capacitor as follows:

After charging the batteries, or with the AC/Charge Unit plugged in to both flash and wall outlet, slide the On-Off Switch to "ON" and fire the flash using the Open Flash Button ⑦. Repeat this about 5 times allowing the Ready Light to glow 5 to 10 seconds after each flash.



The illuminated calculator dial

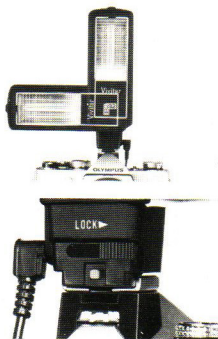
Your Vivitar 192 has an Illuminated Calculator Dial ① which is designed for use when you are taking pictures in dim light. To activate the lighted dial, press the Calculator Dial Illumination Button ⑩. The light will go out when the button is released.



Attaching your flash to the camera

1

Select vertical or horizontal operation and insert the Mounting Shoe ⑬ into the accessory clip on the camera. Lock the flash in place by moving the Locking Lever ⑥ in the direction of the arrow. Use vertically for half-frame 35mm cameras; horizontally for full-frame 35mm and instant-load 126 cameras.

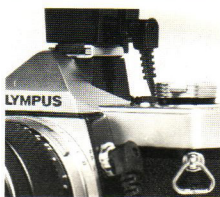


2

If your camera has a Hot Shoe it is not necessary to use the detachable PC Cord. Once attached to the camera, the flash is fully synchronized to the camera through the contacts in the shoe.

3

If your camera does not have a Hot Shoe, plug the pointed end of the PC Cord ⑰ into the Socket ⑤ on the flash. Attach the other end of the cord into the camera flash terminal marked "X." If an "X" terminal is not provided, set the camera synchronization switch to "X." (Refer to your camera instructions for specific information regarding your camera's flash synchronization.)

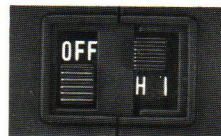


HI-LO power operation

Your Vivitar 192 has a HI-LO Switch ④ which allows you to select from two different power operations.

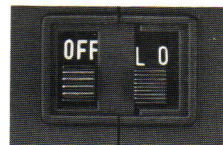
HI Power —

3400 BCPS. This setting is handy for shooting at a distance or when using slow speed film. At shorter distances, HI can be used to allow for smaller f-stops in order to increase depth of field.



LO Power —

1700 BCPS. This setting is good for shooting close-ups, and portraits where a shallow depth of field is desirable. It also has the advantage of a faster recycle time and greater number of flashes per charge.



Taking the picture

1

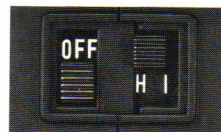
Set the camera shutter speed to 1/60, 1/30 or "X" —



Note: Refer to your camera instructions for the proper speed setting for electronic flash.

2

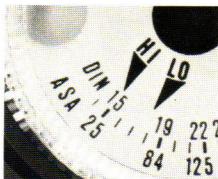
Set the HI-LO Switch ④ based on your light output needs.



3

Set the ASA or DIN film speed on the calculator dial opposite the HI or LO indicator mark.

Example: For Kodachrome II with flash set for HI operation, set the HI indicator mark to 25 (15).



4

Focus your camera and estimate the distance from the flash to the subject. You can usually do this "by eye" or you can refer to the distance indicated on the camera lens barrel after focusing.



5

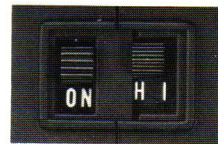
Read the f-stop indicated opposite the distance scale on the calculator dial and set this f-stop on your camera lens.

Example: If you are 15 feet from your subject and you are using Kodachrome II (ASA 25) with your flash on "HI" power, set the lens f-stop to f4.



6

Slide the On-Off Switch to "ON." Focus camera. Take the picture when the Ready Light glows.



Cameras with built-in automatic flash control

Many new cameras have a feature which automatically sets the correct exposures for flash as you focus. For the camera and Vivitar 192 to operate properly together you MUST set the proper guide number on the Guide Number Scale of your camera (refer to your camera instructions.)

The proper Flash Guide Numbers corresponding to both ASA and DIN film speeds are listed in the specifications, page 16.

Wide angle attachment

Your Vivitar 192 is supplied with a Wide Angle Attachment (14) which snaps on the front of your flash as shown. This increases the angle of illumination to a pattern of 70° horizontal, 65° vertical for use with extreme wide angle lenses.



Allow one full f-stop increase in exposure with this attachment on the flash. For example, if the Calculator Dial indicates f4, open your lens to f2.8.

Helpful hints

Let it glow!

Do not discharge (flash) your unit before putting it away. Just turn the unit off. *It's better to leave the Ready Light glowing.* The next time you use it, your flash unit will "reform" faster and this procedure will prolong the life of your equipment.

Shadows

To avoid harsh shadows in your pictures, position your subjects at least 3 to 4 feet from walls or use "bounce flash."

Bounce flash

You can soften the light, making it less harsh and less directional, by simply placing a handkerchief over the flash head and increasing the exposure. You can get even softer lighting by "bouncing" the light off a reflective surface onto your subject. White walls and ceilings that are not too high, large sheets of paper, and even bed sheets can be used as reflective surfaces.

Since bounce flash reduces the amount of light on your subject, open your camera lens 2 additional f-stops. You can determine exposure more accurately by measuring the distance from flash to reflector to subject and dividing the total into the guide number.

When using bounce flash, remove the flash unit from your camera and aim it at the reflective surface.

Mirrors

Never shoot flash pictures straight into mirrors, glass, or other highly reflective surfaces. Reflections will result and cause poor pictures. Stand at an angle so that any reflections will be directed away from the camera. *Hint:* If you can't see yourself in the mirror, you're safe.

Group shots

Don't lose some of your friends in the shadows! Be sure that the whole group is about the same distance from the camera. If you're not careful people closest to the camera will be overexposed or "washed out" and those furthest away will be underexposed because not enough light reached their spot in the picture.

Flash fill

Outdoors, electronic flash is used extensively by professionals to "fill-in" shadow areas. It softens hard shadows resulting from bright sunlight and is particularly useful with color film which can only record a limited contrast range.

Here is a simple procedure which you can modify according to your preference. Set your camera's shutter speed and f-stop for a proper exposure of the subject without flash. Keep in mind that only some shutter speeds can be synchronized with the flash. Divide the flash guide number

for the film you are using by the f-stop you have set. This will give you the flash to subject distance. Then, for a bright fill place the flash at that distance. For a more normal fill, move the flash back half again the distance; for a weaker fill (not recommended with color film) double the bright fill distance.

Simulating sunlight

There are times when the sun disappears, but the picture calls for sunlight. Your electronic flash can then be used as the main light and very successfully simulate sunlight.

When you wish to simulate sunlight outdoors in dull weather, first determine the proper exposure for the natural daylight and then stop down 1 full f-stop. Determine your normal flash to subject distance for that f-stop. Set your flash at that distance. The flash will then be the main light, and your reduced exposure on the natural light will convert it to fill light.

Open flash

This technique involves firing the flash independently while the camera shutter stays open. You can use it for a variety of creative effects. For example, while the shutter is open the film records both the image lit by the existing light and the image lit by the flash. You can capture both a sharp and a blurred image in the same picture to create a feeling of movement. Or, in a large dark interior you can open up the shutter and fire several electronic flashes from different positions until you have lit the entire scene.

Synchronization speed

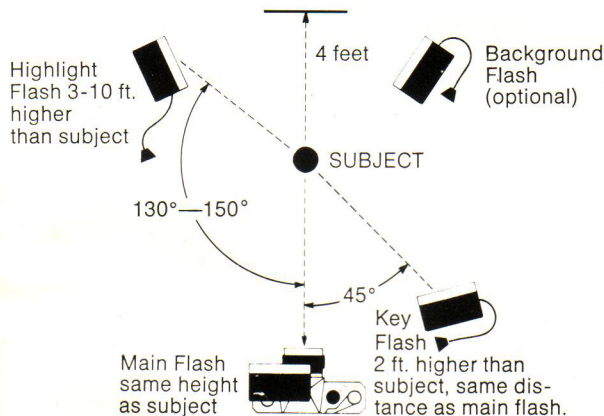
When taking flash pictures with your Vivitar electronic flash, always try to use the fastest possible shutter speed that provides full electronic flash synchronization (refer to your camera instructions for this information). This will eliminate "ghosts" or blurry images of brightly lit objects in the background.

Multiple flash with Vivitar slave units

When taking portraits or pictures of large groups, many photographers prefer to use more than one flash unit to produce a better light balance. To do this, you must be able to fire both the main flash and each remote flash simultaneously.

Vivitar Slave Units are solid state light sensitive devices which when attached to the PC cord of a remotely positioned flash unit automatically trigger the flash in perfect synchronization with the main flash unit without external cables or wires.

Example: Here is a typical arrangement using a main flash and three remote flash units to balance the light.



NOTE: Your Vivitar 192 has an Auxillary PC Socket (8) which can be used to attach wireless slave units without the need for a PC cord.

Vivitar Model 192 specifications

Guide numbers (ASA-Feet):

ASA film speed	25	64	80	100	125	160	200	400	800
HI operation	65	103	120	130	145	165	185	260	365
LO operation	45	74	82	92	103	117	130	184	261

Guide numbers (DIN-Meters):

DIN film speed	15	19	20	21	22	23	24	27	30
HI operation	20	30	35	40	45	50	55	80	110
LO operation	14	23	25	28	31	36	40	56	80

BCPS (Beam Candle Power

Seconds)	3400 (HI operation)
	1700 (LO operation)

Recycle times (approx)

HI operation	AC — 6 seconds
	DC — 6 seconds
LO operation	AC — 3 seconds
	DC — 3 seconds

Flash duration 1/1000 second (approx.)

Color temperature 6000° Kelvin

Angle of Illumination(s)

Normal 65° horizontal, 45° vertical

With Wide Angle Attachment 70° horizontal, 65° vertical

Operating positions Vertical and horizontal

Power sources DC — Interchangeable, rechargeable NiCad Battery Pack (NC-2)
AC — Multiple Voltage (120v/220v)

Battery saving circuit Built-in IC module automatically regulates power flow from batteries to capacitor

Flashes per charge HI operation—50+
LO operation—85+

Camera/Electronic Flash

synchronization connection(s) ... PC Cord, Hot Shoe

Weight with batteries 16 oz. (438 gr.)

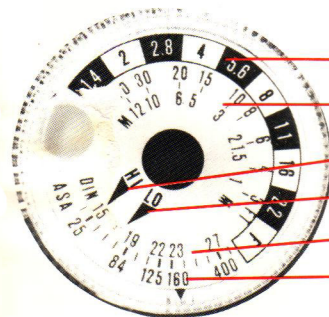
Dimensions 4 5/8" x 3 3/4" x 1 3/4"
(116mm x 96mm x 43mm)

Accessories included Wide Angle Attachment,
MV-3 Multiple Voltage
AC/Charge Unit
(120v/220v), pouch case

Accessories available NC-2 NiCad Battery Packs

Specifications subject to change without notice

The Vivitar Model 192 calculator dial



- f-stop scale
- distance scales
- HI indicator
- LO indicator
- DIN scale
- ASA scale

FILM SPEED SCALE

DIN	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
ASA	20	25	32	40	50	64	80	100	125	160	200	250	320	400	500